December 14, 2023

Tauren Beggs
Wisconsin Department of Natural Resources
2984 Shawano Ave
Green Bay, WI 54313

**Re: Remedial Progress and Results Report**
**Jagemann Plating Company, Inc.**
**1324 S. 26th Street**
**Manitowoc, WI 54220**
**BRRTS# 02-36-555544**

Dear Mr. Beggs:

EnviroForensics is providing the following Results Report which presents a description of recent site investigations and the results of laboratory analyses. This report also presents the progress of in-situ groundwater remedial efforts aimed at reducing the concentrations of trichloroethene (TCE) released to the environment from past industrial degreasing operations. This report provides data regarding the following recent investigative activities:

1. Sampling of select groundwater monitoring wells for per-polyflouroalkyl substances (PFAS) and 1,4-dioxane;
2. Sampling of select groundwater monitoring wells for concentrations of TCE and the degradation products of TCE per our past post-remediation monitoring plan;
3. Sampling of additional sub-slab ports inside the manufacturing facility and soil gas samples collected outside of the facility to determine the extent of sub-surface vapor impacts; and
4. Measurements of methane gas in monitoring wells and sub-slab ports.

**Continued Post-remedial Groundwater Sampling**

EnviroForensics has recently completed the fourth of eight planned rounds of post-remedial groundwater sampling. The sampling was performed according to our previously submitted Post-remedial Groundwater Monitoring Plan and included chlorinated volatile organic compounds (CVOCs), ethane, ethene, methane, and total organic carbon. The wells sampled included MW-1, MW-3, MW-8, MW-14, MW-15, TW-20, TW-21, TW-22, TW-23, TW-24, and Sumps 1 and 2. **Figure 1** shows the location of all site groundwater monitoring wells and sumps with the wells additionally sampled for PFAS compounds highlighted in red. This figure also includes groundwater elevations in blue and flow lines have been added to show the direction of

groundwater flow at the time of sampling. The purple boxes indicate the two main source areas of PFAS impacts in groundwater. **Tables 1** provides a history of post-remedial groundwater monitoring results and the associated laboratory reports for post-remedial monitoring are attached.

As can be seen in **Table 1**, the concentrations of TCE parent product are either stable or continuing to decline around the edges of the plume and in a suspected outside surface release area near MW-14. However, high concentrations of TCE appear to be persistent near well TW-20 which is located inside the facility near degreasing machines that formerly contained TCE.

The degradation daughter products cis-1,2-dichloroethene, and vinyl chloride have increased in well TW-20 and the end products ethane and ethene are being produced indicating that complete destruction of TCE continues. The persistence of TCE in well TW-20 may indicate that greater concentrations of TCE may exist in an area directly beneath the former TCE degreasing machine that was inaccessible to remedial injections. We are currently scheduled to monitor continued plume degradation quarterly for the next year. The next monitoring event will be late January 2024.

**PFAS and 1,4-dioxane Sampling**

Mist suppressants containing PFAS compounds have been utilized in past plating operations at the facility. There are two (2) localized hot spots of PFAS compounds in groundwater that roughly coincide with areas of TCE release. The two (2) colored boxes have been drawn on **Figure 1** to indicate areas where past PFAS concentrations have been the greatest. Past remedial actions were not directed at mitigating PFAS compounds, so the focus of our sampling efforts was to determine if the plume of PFAS compounds is widespread and if it has migrated down-gradient to the direction of groundwater flow and could potentially have moved off-site. The wells sampled included MW-4, MW-5, MW-6, MW-7, MW-17, MW-19, TW-27, and TW-28. These wells are highlighted in red on **Figure 1**.

**Table 2** has been prepared to include the recent analytical results. The results of the last sampling event performed by Robert E. Lee in either December of 2021 or June of 2022 have been added to **Figure 1**. A table of past PFAS analytical results prepared by Robert E. Lee is attached for observation of trends. The laboratory analytical reports are attached.

As can be seen in this documentation, several PFAS compounds were detected in all wells; however, most of the detected compounds were below any currently proposed groundwater enforcement standards (ES). The compounds PFOA and PFOS have an ES of 20 parts per trillion (ppt) either for the individual compounds or in combination. These are the primary compounds detected at concentrations exceeding either the proposed ES or the preventative

action limits (PAL) of 2 ppt. Another PFAS compound, Perfluorohexanesulfonic acid, was detected in several wells at concentrations exceeding the PAL as seen in **Table 2**.

The combined totals of PFOA and PFOS are shown in the analytical boxes on **Figure 1**. There was little change in the overall lateral extent of PFAS compounds in groundwater since the last sampling events performed by Robert E. Lee. The concentrations of combined PFOA and PFOS appear to be stable or in some cases lower during this sampling event as compared to the past sampling events. The PFAS compounds have generally diffused laterally away from the two source areas and spread in the direction of groundwater flow. The direction of groundwater flow is historically consistent and has generally been to the northeast towards the Manitowoc River, but the latest groundwater elevation data collected in October of this year indicate that there are also areas of flow that are directly to the east and directly to the north as can be seen on **Figure 1**. Concentrations of PFAS compounds detected in wells MW-4 (east) and TW-28 (north) bear that out. The lateral extents of PFAS compounds in groundwater have not yet been defined.

In addition, two (2) TCE source area wells (MW-14 and TW-20) were sampled for the emerging contaminant 1,4-dioxane. As can be seen in **Table 1** and the analytical laboratory reports, 1,4-dioxane was not detected in concentrations above the laboratory analytical detection limits in either of these monitoring wells.

**Extent of Sub-surface Vapor Impacts**

EnviroForensics recently installed two (2) additional vapor sampling ports within the facility to better define the extent of sub-surface vapor impacts to the north. These ports are labeled SSV-14 and SSV-15 and shown in red on attached **Figure 2**. Sub-slab vapor samples were collected from these ports using 1-liter Summa canisters. As can be seen in **Table 3** and the laboratory analytical reports, TCE was detected in sample SSV-14, but at a concentration below the large commercial VRSL. In addition, dichlorodifluoromethane was detected in SSV-14. This compound is typically related to refrigerants and does not currently have a VRSL standard. No other compounds were detected in either SSV-14 or SSV-15 at concentrations exceeding the laboratory detection limits. A paired indoor air and sub-slab monitoring event will be scheduled for the upcoming summer (non-heating) months.

Five (5) passive soil gas collectors were installed in outside areas labeled SG-1 through SG-5 and shown in red on **Figure 2**. The locations of the outside soil gas collectors were chosen to determine if there are areas of the site that will require institutional controls to protect against vapor intrusion that would be applied during the case closure process. The passive samplers were installed in areas covered by either asphalt or concrete paving which would trap vapors from escaping to the atmosphere and likely give higher concentrations than in unpaved areas. The passive samplers were left in place for approximately 14 days prior to removal for analysis. As can be seen in **Table 3**, and the Beacon Environmental laboratory analytical reports, there

were no detections of CVOC vapors in outside soil at concentrations exceeding the laboratory detection limits.

**Methane Gas Measurements**

A food source was injected to sustain microbial growth and subsurface reducing conditions during recent remedial actions. The food source is called 3DME and was provided by Regenisis. The digestion of this material by subsurface microbes (methanogens) will generate methane. Methane can build up in the subsurface groundwater and migrate upwards to settle below areas that are covered, in this case building foundations. Build-up of methane below the building slab and within indoor spaces can cause an explosion hazard if in concentrations near or exceeding the lower explosion limit (LEL). However, if there is sufficient oxygen in the vadose zone and there is sufficient distance between the water table and the building slab, then the methane can typically attenuate before a hazardous build-up occurs. Attenuation occurs through oxidation of the methane by soil microbes (methanotrophs) which convert the methane into carbon dioxide (J. LeMer and P. Roger, March 2001). Both types of microbial organisms degrade chlorinated compounds co-metabolically. Therefore, the presence of methane is a good indicator that microbial action to degrade site contaminants is a continuing process.

Of main concern is the potential for methane to build up beneath the building foundation, leak through to indoor air, and then build up within inside spaces to concentrations that could exceed the LEL and pose an explosion hazard. A secondary concern is that buried electrical lines could short or arc and ignite methane accumulated below the building foundation. A final concern is that the active sub-slab depressurization system (SSDS) could pull methane from beneath the slab in concentrations above the LEL that could come in contact with the blower electrical system and ignite.

EnviroForensics measured methane concentrations in several wells and sub-slab sampling ports during the recent site investigations. The locations of existing monitoring wells in relation to existing sub-slab vapor monitoring points can be seen on the attached Site Plan (Figure 1) prepared by Robert E. Lee. The table below provides a summary of the results.

| Methane Measurements | | | |
|---|---|---|---|
| **Location** | **% of LEL** | **Location** | **% of LEL** |
| MW-1 | Over the LEL | MW-19 | 0% |
| MW-2 | 1% | TW-20 | 10% |
| MW-3 | 0% | TW-21 | 3% |
| MW-4 | 0% | TW-22 | 0% |
| MW-5 | 0% | TW-23 | 0% |
| MW-6 | 0% | TW-24 | 0% |

| | | | |
|---|---|---|---|
| MW-7 | 0% | TW-25 | 0% |
| MW-8 | Over the LEL | TW-26 | 0% |
| MW-14 | 47% | TW-27 | 0% |
| MW-15 | 0% | TW-28 | 0% |
| MW-17 | 0% | SSV-2 | 0% |
| MW-18 | 0% | SSV-3 | 0% |
| | | SSV-4 | 0% |

As seen in the above table, elevated concentrations of methane were detected in three (3) of the groundwater monitoring wells. Very high concentrations were measured in wells MW-1, MW-8, and MW-14 which are located on the outside of the facility buildings. Monitoring wells are a direct pipe to the water table and there is no soil column to attenuate methane. The wells are fitted with a rubber grommeted cap which seals the well and does not allow the methane to escape, thus allowing it to build up in the well casing. Measurements were also taken in a few sub-slab vapor ports and methane was not detected at these locations as seen in the table above. In addition, several readings were taken of ambient air at various locations within the building and no methane was detected.

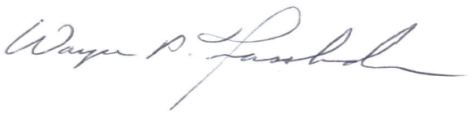
We will continue to monitor methane concentrations during our visits to sample groundwater and will measure methane concentrations at several additional sub-slab locations throughout the facility along with the SSDS exhaust. The next monitoring event will occur in January 2024.

Currently, we do not feel that there is a threat of methane ignition due to the following:

1. We consulted with the owner, Mr. Mike Jagemann regarding the locations of electrical utility lines and he stated that all electrical lines are above ground. This would eliminate the possibility of ignition below the building foundation slab;
2. The heating, ventilation, and air conditioning (HVAC) system along with mechanical systems that purify indoor air are continuously operated and maintained allowing adequate ventilation of both chlorinated volatile organic compounds and any methane that would be released from beneath the slab; and
3. The SSDS fan and electrical connections are located outside the building and not enclosed. If future measurements of methane in the SSDS exhaust are significant, then we may need to switch the blower to one that is intrinsically safe.

If you have any questions regarding the content of this report, please feel free to contact me at 262-490-6472, or wfassbender@enviroforensics.com.

Sincerely,
**EnviroForensics, LLC**

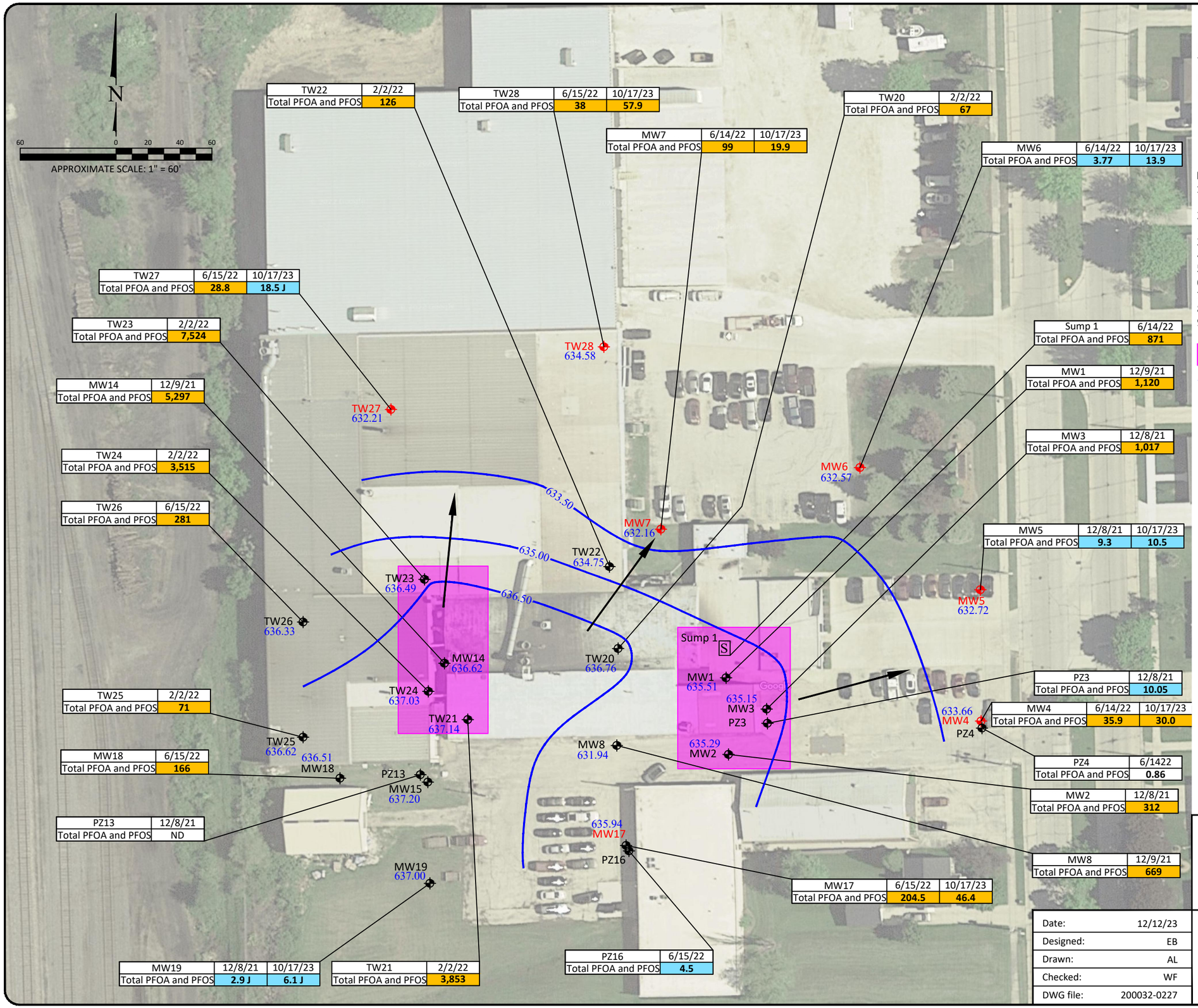


Wayne Fassbender, P.G.
*Senior Project Manager*

Copy: Mike Jagemann, Jagemann Plating

Attachments:

Figure 1: Groundwater Flow Map with Past PFAS and Locations of New Wells Sampled for PFAS
Figure 2: Location of New Vapor Monitoring Points
Robert E. Lee Figure 1 (Site Map)
Table 1: Post-remedial Groundwater Sampling Results
Table 2: PFAS Compounds in Groundwater
Table 3: Vapor Intrusion Analytical Results
Robert E. Lee Past PFAS Sampling Results
Synergy Analytical Laboratory Report (CVOCs and 1,4-dioxane)
PACE Analytical Laboratory Report (PFAS results)
Envision Air Analytical Laboratory Report (sub-slab vapor results)
Beacon Environmental Analytical Laboratory Report (passive soil-gas results)




# Legend

MW1 Monitoring well
TW21 Temporary monitoring well
PZ3 Piezometer
MW4 Monitoring well (Recently Sampled)

| Analyte | Public Health Preventive Action Limit | Public Health Enforcement Standard |
|---|---|---|
| Total PFOA and PFOS | 2 | 20 |

Note:
1. Bolded and orange shaded values exceed the Public Health Enforcement Standard
2. Bolded and blue shaded values exceed the Public Health Preventive Action Limit
3. Bolded values are above detection limits
4. J = Analyte concentration less that laboratory detection limits
5. Samples analyzed using Modified EPA Method 537
6. All results reported in units of nanograms per liter (ng/L)
7. PFOA = Perfluorooctanoic acid
8. PFOS = Perfluorooctane sulfonic acid
9. ND = Not detected

Primary source areas of PFAS

728.68 Groundwater elevation contour

728.69 Groundwater elevation (feet above mean sea level)

Approximate groundwater flow direction

GROUNDWATER FLOW MAP WITH PAST PFAS RESULTS AND LOCATION OF NEW WELLS SAMPLED FOR PFAS

Jagemann Plating Company
1324 South 26th Street
Manitowoc, Wisconsin

| | |
|---|---|
| Date: | 12/12/23 |
| Designed: | EB |
| Drawn: | AL |
| Checked: | WF |
| DWG file: | 200032-0227 |

ENVIRO forensics
825 North Capitol Avenue • Indianapolis, IN 46204
EnviroForensics.com

Figure 1

Project 200032


## Legend

- OA-1 ■ Outdoor air sample
- IA-1 ▲ Indoor air sample
- SSV-13 ⦿ Sub-slab vapor sample
- SG-1 ⦿ New Soil Gas sample
- SSV-14 ⦿ New Sub-slab vapor sample

LOCATION OF NEW VAPOR MONITORING POINTS

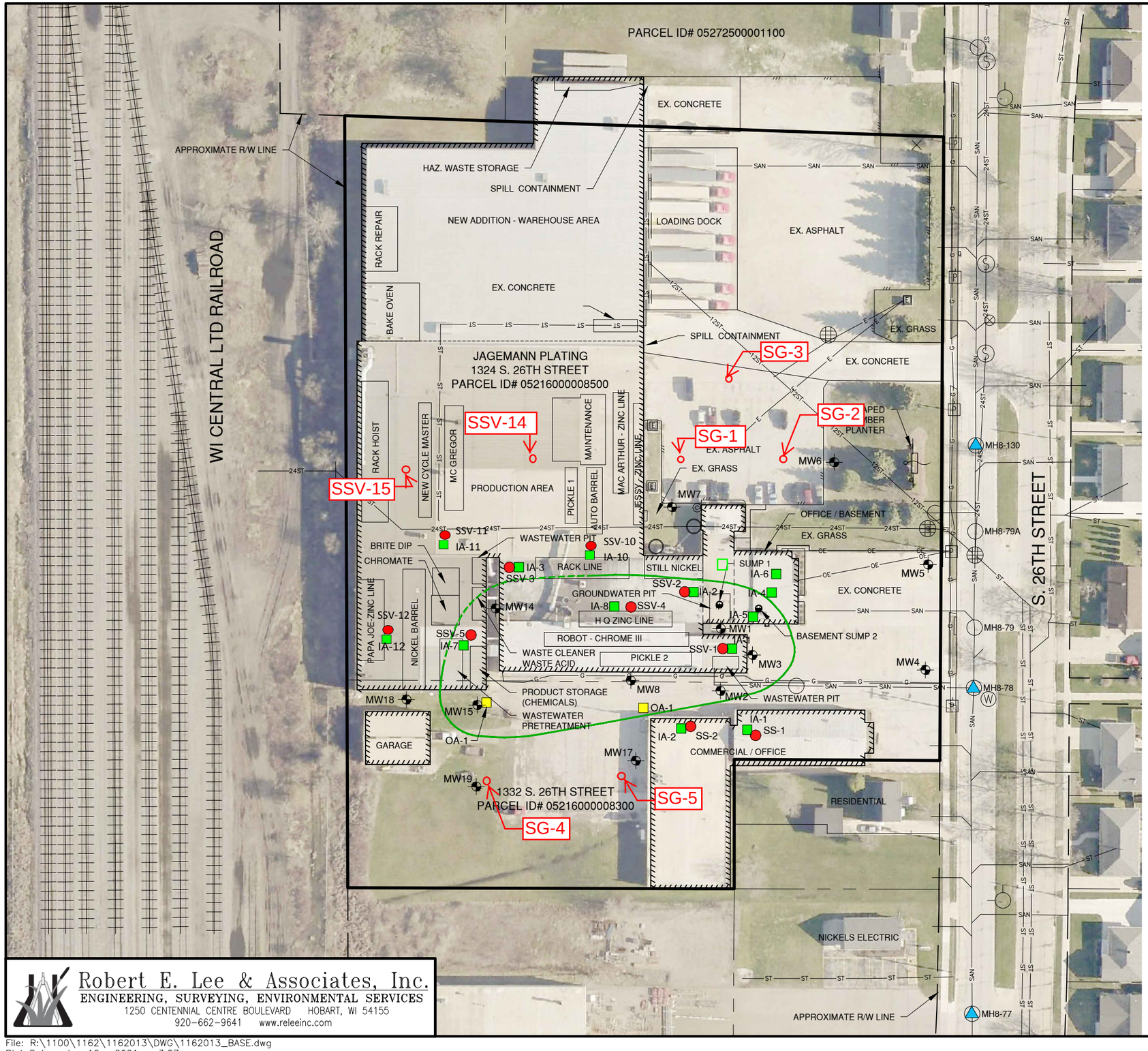
Jagemann Plating Company
1324 South 26th Street
Manitowoc, Wisconsin

| | |
|---|---|
| Date: | 11/7/23 |
| Designed: | EB |
| Drawn: | EB |
| Checked: | WF |
| DWG file: | 200032-0226 |

ENVIRO forensics
825 North Capitol Avenue • Indianapolis, IN 46204
EnviroForensics.com

Figure 2

Project 200032




## LEGEND

- PROPOSED INDOOR AIR LOCATION4
- PROPOSED SUB-SLAB VAPOR LOCATION
- MW1 — MONITORING WELL LOCATION
- PZ1 — PIEZOMETER LOCATION
- IA-1 — INDOOR AIR SAMPLE LOCATION OUTDOOR
- OA-1 — AIR SAMPLE LOCATION
- SSV-1 — SUB-SLAB VAPOR SAMPLE LOCATION
- MH8-78 — IN-PIPE SANITARY SEWER VAPOR SAMPLE
- SUMP
- EX. SANITARY MANHOLE
- EX. STORM SEWER MANHOLE
- EX. STORM SEWER CATCH BASIN
- EX. FIRE HYDRANT
- EX. WATER VALVE
- EX. WATER MANHOLE
- EX. ELECTRIC PEDESTAL
- EX. POWER POLE
- ST — EX. STORM SEWER
- SAN — EX. SANITARY SEWER
- W — EX. WATERMAIN
- G — EX. GAS LINE
- E — EX. ELECTRIC LINE
- T — EX. TELEPHONE LINE
- F — EX. FIBER OPTICS LINE
- PROPERTY LINE
- RIGHT OF WAY LINE
- SITE BOUNDARY LINE
- ESTIMATED EXTENT OF GROUNDWATER CONTAMINATION IN EXCESS OF ENFORCEMENT STANDARD (DASHED WHERE INFERRED)

# JAGEMANN PLATING COMPANY
# 1324 S. 26TH STREET
# MANITOWOC, WI

## SITE PLAN

FIGURE 1

Robert E. Lee & Associates, Inc.
ENGINEERING, SURVEYING, ENVIRONMENTAL SERVICES
1250 CENTENNIAL CENTRE BOULEVARD HOBART, WI 54155
920-662-9641 www.releeinc.com

File: R:\1100\1162\1162013\DWG\1162013_BASE.dwg
Plot Date: Jun 16, 2021 - 3:07pm

Table 1
Post-remedial Groundwater Sampling Results
Jagemann Plating

| Monitoring Well Sample ID | Date Sampled | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | Vinyl chloride | 1,1-Dichloroethane | 1,1-Dichloroethene | 1,4-Dioxane | Ethane | Ethene | Methane | Total Organic Carbon (mg/L) | Chromium, Hexavalent | Chromium, Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Enforcement Standard** | | **5** | **70** | **100** | **0.2** | **850** | **7** | **3** | | | | | **70** | **100** |
| **Preventative Action Limit** | | **0.5** | **7** | **20** | **0.02** | **85** | **0.7** | **0.3** | | | | | **7** | **10** |
| MW-1 | 12/30/2016 Pre | **390** | **148** | **9.0** | **125** | | | | | | | | | |
| | 3/28/2019 Pre | **703** | **252** | **23.6** | **430** | | | | | | | | | |
| | 6/20/2019 Pre | **895** | **316** | **24.6** | **410** | | | | | | | | | |
| | 6/24/2021 Pre | **946** | **400** | **33.5** | **697** | | | | | | | | | |
| | 6/16/2022 Pre | **902** | **442** | **41.6** | **750** | **4.9 J** | **24.8** | | **90.6** | **26.9** | **1,090** | **30** | | |
| | 8/22/2022 Pilot | < 3.8 | **2,140** | **47** | **390** | | | | **37.8** | **9.58** | **428** | **1,380** | | |
| | 10/6/2022 Pilot | **0.40** | **46** | **99** | **41** | | | | **191** | **3.38** | **112** | **406** | | |
| | 1/31/2023 Post | < 0.32 | **1.1** | **3.2** | **3.3** | **8.2** | < 0.29 | | **33.3** | **1,170** | **1,760** | **514** | | |
| | 4/20/2023 | < 0.190 | **3.08** | **1.69** | **2.85** | **6.77** | < 0.188 | | **44.8** | **1,280** | **7,690** | **345** | | |
| | 4/20/2023 DUP | **0.395 J** | **3.03** | **1.71** | **3.27** | **7.14** | < 0.188 | | NA | NA | NA | NA | | |
| | 7/25/2023 | < 0.38 | < 0.32 | < 0.5 | **0.57 J** | **6.77** | < 0.43 | | **50.2** | <5 | **4,865** | **99.1** | | |
| | 7/25/2023 DUP | < 0.38 | **0.43 J** | **0.52 J** | **1.22** | **1.27 J** | < 0.43 | | NA | NA | NA | NA | | |
| | 10/17/2023 | < 0.38 | **4.0** | < 0.5 | **7.4** | **1.02 J** | < 0.43 | | **51.4** | < 5 | **6,202** | **36.4** | | |
| | 10/17/2023 DUP | **0.53 J** | **6.1** | **1.39 J** | **4.5** | **0.75 J** | < 0.43 | | NA | NA | NA | NA | | |
| MW-3 | 6/24/2021 Pre | **67.30** | **54.7** | **1.2** | **3.6** | < 0.3 | **1.9** | | | | | | | |
| | 1/31/2023 Post | **39.80** | **63.7** | **2.2** | **5.2** | < 0.3 | **1.6** | | | | **2.3 J** | | | |
| | 4/20/2023 | **34.1** | **53.5** | **1.8** | **5.65** | < 0.100 | **1.47** | | < 4.07 | < 4.26 | **62.4** | NA | | |
| | 7/25/2023 | **29.6** | **58** | **3.5** | **12.80** | < 0.43 | **1.35 J** | | < 0.5 | < 0.5 | < 1 | NA | | |
| | 10/17/2023 | **24.4** | **95** | **3.09** | **38** | < 0.43 | **3.3** | | < 0.5 | < 0.5 | **380** | NA | | |
| MW-8 | 6/24/2021 Pre | **61.2** | **586** | **59.3** | **111** | < 3.0 | < 5.8 | | | | | | | |
| | 1/31/2023 Post | **23.10** | **377** | **57.6** | **98.3** | < 1.5 | < 2.9 | | **3.4 J** | **2.2 J** | **42.2** | | | |
| | 4/20/2023 | **1.15** | **16.7** | **0.149 J** | **13.7** | < 0.100 | **1.87** | | < 4.07 | < 4.26 | **524** | NA | | |
| | 7/25/2023 | **1.97** | **22.2** | < 0.5 | **14.4** | < 0.43 | **2.18** | | <0.5 | < 0.5 | < 1 | NA | | |
| | 10/17/2023 | < 0.38 | < 0.32 | **15.6** | **3.3** | < 0.43 | < 0.43 | | **85.6** | < 5 | **4,869** | NA | | |
| MW-14 | 12/30/2016 Pre | **36,000** | **31,400** | **870** | **5,900** | | | | | | | | | |
| | 3/28/2019 Pre | **12,800** | **14,000** | **669** | **5,150** | | | | | | | | | |
| | 6/20/2019 Pre | **15,000** | **16,500** | **824** | **5,540** | | | | | | | | | |
| | 6/24/2021 Pre | **16,200** | **17,600** | **861** | **6,410** | | | | | | | | | |
| | 6/16/2022 Pre | **28,100** | **32,200** | **2,530** | **8,300** | < 73.9 | **150 J** | | **5,190** | **283** | **2,720** | **8.98** | | |
| | 8/22/2022 Pilot | **4,800** | **40,000** | **810** | **17,000** | | | | **3,400** | **249** | **1,400** | **1,770** | | |
| | 10/6/2022 Pilot | < 190 | **11,500** | **880** | **62,000** | | | | **3,260** | **103** | **391** | **799** | | |
| | 1/31/2023 Post | **58.5 J** | **9,760** | **513** | **41,500** | < 37.0 | < 72.8 | | **145** | **5,520** | **957** | **2,600** | | |
| | 4/20/2023 | **17.1** | **22,600** | **544** | **32,500** | < 2.50 | **16.4** | | **430** | **14,600** | **5,660** | **1,550** | | |
| | 4/20/2023 DUP | < 190 | **9,830** | **601** | **46,100** | < 2.5 | **20.6** | | NA | NA | NA | NA | | |
| | 7/25/2023 | < 76 | **2,650** | **244 J** | **17,700** | < 86 | < 86 | | **1,167** | <0.5 | **362** | **3,070** | | |
| | 7/25/2023 DUP | < 380 | **3,200** | < 500 | **20,100** | < 430 | < 430 | | NA | NA | NA | NA | | |
| | 10/17/2023 | < 380 | **390 J** | < 500 | **16,300** | < 430 | < 430 | <0.17 | **13,303** | < 5 | **4,573** | **1,020** | | |
| | 10/17/2023 DUP | < 38 | **710** | **180 J** | **19,300** | < 43 | < 43 | NA | NA | NA | NA | NA | | |
| MW-15 | 6/24/2021 Pre | **370** | **162** | **4.7** | **233** | < 0.59 | **73.0** | | | | | | | |
| | 1/31/2023 Post | **17.3** | **520** | **3.9 J** | **59.7** | < 1.5 | **11.6** | | **29.1** | **31.3** | **554.0** | | | |
| | 4/20/2023 | < 0.190 | **0.571** | < 0.149 | **0.979** | < 0.100 | < 0.188 | | < 4.07 | < 4.26 | < 2.91 | NA | | |
| | 7/25/2023 | < 7.6 | **600** | **23 J** | **212** | < 8.6 | < 8.6 | | < 0.5 | < 0.5 | **69.4** | NA | | |
| | 10/17/2023 | < 7.6 | **55** | < 10 | **40** | < 8.6 | < 8.6 | | **65.3** | < 5 | **4,632** | NA | | |
| TW-20 | 6/16/2022 Pre | **69,200** | **160,000** | **2,050** | **40,100** | **542 J** | **687.0** | | | | | | | |
| | 1/31/2023 Post | **251,000** | **82,100** | **482** | **9,360** | < 118 | **838.0** | | **182** | **919** | **126** | **1,600** | | |
| | 4/21/2023 | **210,000** | **42,900** | **367** | **11,300** | **73.7 J** | **865** | | **154** | **1,720** | **95.2** | **315** | | |
| | 7/25/2023 | **104,000** | **128,000** | **3,150** | **14,800** | **171.0** | **196** | | **232** | **17.2** | **163** | **224** | | |
| | 10/18/2023 | **182,000** | **201,000** | **1,300 J** | **42,000** | **500 J** | **580 J** | <0.17 | **1,612** | **20.8** | **109** | **233** | | |
| TW-21 | 2/2/2022 Pre | **345** | **842** | **129** | **166** | < 3.0 | **14.8** | | | | | | | |
| | 1/31/2023 Post | < 0.32 | **421** | **45.9** | **104** | < 0.3 | < 0.58 | | **19.5** | **97.2** | **1,390** | **983** | | |
| | 4/21/2023 | **0.505 J** | **17.2** | **4.81** | **17.0** | < 0.100 | < 0.188 | | **52.7** | **683** | **12,700** | **1,080** | | |
| | 7/25/2023 | **16.7** | **36** | **6.9 J** | **46** | < 2.15 | < 2.15 | | **143** | < 5 | **2,423** | **269** | | |
| | 10/18/2023 | **11.9** | **74** | **10.9** | **72** | < 2.15 | < 2.15 | | **207** | < 5 | **4,475** | **93.0** | | |
| TW-22 | 2/2/2022 Pre | **8.1** | **126** | **9.9** | **166** | **0.94 J** | < 1.2 | | | | | | | |
| | 1/31/2023 Post | **3.1** | **150** | **15.2** | **550** | **0.61 J** | < 1.2 | | **2.8 J** | **6.8** | **40.1** | | | |
| | 4/20/2023 | **1.08** | **73.3** | **9.30** | **656** | **0.165 J** | < 0.188 | | < 4.07 | < 4.26 | **74.5** | NA | | |
| | 7/25/2023 | **7.4 J** | **96** | **5.3 J** | **220** | < 4.3 | < 4.3 | | < 0.5 | < 0.5 | **10.8** | NA | | |
| | 10/18/2023 | **4.8 J** | **164** | **16.5 J** | **510** | < 4.3 | < 4.3 | | **4.08** | < 0.5 | **40.1** | NA | | |
| TW-23 | 2/2/2022 Pre | **109** | **163** | **1.3 J** | **19.9** | < 0.59 | **10.9** | | | | | | | |
| | 1/31/2023 Post | **72.9** | **197** | **0.82 J** | **10.9** | < 0.3 | **13.4** | | **1.7 J** | **0.56 J** | **25.0** | | | |
| | 4/20/2023 | **36.7** | **260** | **1.72** | **34.9** | < 0.100 | **17.5** | | < 4.07 | < 4.26 | **305** | NA | | |
| | 7/25/2023 | **6.7 J** | **73** | < 5 | **11.4** | < 4.3 | < 4.3 | | **15.6** | < 0.5 | **842** | NA | | |
| | 10/18/2023 | < 3.8 | **43** | < 5 | **25.2** | < 4.3 | < 4.3 | | **< 5** | < 5 | **3,973** | NA | | |
| TW-24 | 2/2/2022 Pre | **125** | **84.1** | **4.2** | **409** | < 0.3 | **34.3** | | | | | | | |
| | 1/31/2023 Post | **1,380** | **1,750** | **66.9** | **692** | < 7.4 | **76.7** | | **9.5** | **158** | **38.6** | | | |
| | 4/20/2023 | < 0.190 | **1,760** | **93.3** | **527** | **0.128 J** | **110** | | **59.3** | **1,030** | **138** | NA | | |
| | 7/25/2023 | **420** | **630** | **37.0** | **114** | < 4.3 | **13.4 J** | | **186** | < 0.5 | **19.1** | NA | | |
| | 10/18/2023 | **360** | **510** | **17.6 J** | **132** | < 4.3 | **19.1** | | **523** | < 0.5 | **164** | NA | | |
| SUMP-1 | 6/14/2022 Pre | **23.9** | **26.2** | **0.88 J** | **2.5** | < 0.3 | < 0.58 | | | | | | | **186** |
| | 1/31/2023 Post | **16.5** | **8.2** | **< 0.53** | **0.49 J** | < 0.3 | < 0.58 | | | | | | | |
| | 4/21/2023 | **53.9** | **212** | **6.24** | **288** | **1.10** | **1.87** | | | | | | | |
| | 7/26/2023 | **136** | **117** | < 5 | **5.2 J** | < 4.3 | < 4.3 | | | | | | **132** | **407** |
| | 10/19/2023 | **12.9** | **7.7** | < 0.5 | < 0.15 | < 0.43 | < 0.43 | | | | | | | |
| SUMP-2 | 6/15/2011 Pre | **72.0** | **45.3** | **2.0** | **0.31 J** | < 0.75 | < 0.57 | | | | | | | **520** |
| | 1/31/2023 Post | **31.6** | **17.5** | < 0.53 | < 0.17 | < 0.3 | < 0.58 | | | | | | | |
| | 4/21/2023 | **17.0** | **13.6** | **0.468 J** | < 0.234 | **0.117 J** | < 0.188 | | | | | | | |
| | 7/26/2023 | **61** | **22.6** | **0.56 J** | **0.34 J** | < 0.43 | < 0.43 | | | | | | **159** | **304** |
| | 10/19/2023 | **35** | **13.5** | < 0.5 | < 0.15 | < 0.43 | < 0.43 | | | | | | | |

All results are in micrograms per liter µg/l, except TOC reported in mg/l
Pre: the most recent concentrations prior to the start of any remedial injections
Pilot: concentrations in select wells following remedial pilot study injections
Post: concentrations following full-scale remedial injections
Bold font indicates that the analyte was detected.
Blue Coloring: Concentration exceeds the groundwater preventative action limit (PAL)
Orange Coloring: Concentration exceeds the groundwater enforcement standard (ES)
Blue Coloring: Concentration exceeds the groundwater preventative action limit (PAL)
"J" Flag: Analyte was detected at a concentration above the detection limits but was below the laboratory limits of quantification
NA: Not Analyzed

Table 2
PFAS Compounds in Groundwater
Jagemann Plating

| Monitoring Well | Sample Date | 11Cl-PF3OUdS | 4:2 FTS | 6:2 FTS | 8:2 FTS | 9Cl-PF3ONS | ADONA | HFPO-DA | N-EtFOSAA | N-EtFOSA | N-EtFOSE | N-MeFOSAA | N-MeFOSA | N-MeFOSE | PFBS - Perfluorobutanesulfonic acid | PFDA - Perfluorodecanoic acid | PFHxA - Perfluorohexanoic acid | PFBA | PFDS | PFDoS | PFHpS | PFNS | PFOSA | PFPeA | PFPeS | PFDoA - Perfluorododecanoic acid | PFHpA - Perfluoroheptanoic acid | PFHxS - Perfluorohexanesulfonic acid | PFNA - Perfluorononanoic acid | PFOS - Perfluorooctanesulfonic acid | PFOA - Perfluorooctanoic acid | PFTeDA - Perfluorotetradecanoic acid | PFTrDA - Perfluorotridecanoic acid | PFUnA - Perfluoroundecanoic acid |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Proposed Groundwater Enforcement Standard** | | NE | NE | NE | NE | NE | 3,000 | 300 | 20 | 20 | 20 | NE | NE | NE | 450,000 | 300 | 150,000 | 10,000 | NE | NE | NE | NE | 20 | NE | NE | 500 | NE | 40 | 30 | 20* | 20* | 10,000 | NE | 3,000 |
| **Proposed Groundwater Preventative Action Limit** | | NE | NE | NE | NE | NE | 600 | 30 | 2 | 2 | 2 | NE | NE | NE | 90,000 | 60 | 30,000 | 2,000 | NE | NE | NE | NE | 2 | NE | NE | 100 | NE | 4 | 3 | 2* | 2* | 2,000 | NE | 600 |
| MW-4 | 10/17/2023 | <0.44 | <0.60 | <0.73 | <0.51 | <0.44 | <0.42 | <3.2 | <0.76 | <0.68 | <0.49 | <0.44 | <0.80 | <0.63 | **29.7** | <0.70 | **1.2 J** | **11.4** | <0.59 | <0.63 | <0.59 | <0.84 | <0.36 | **0.75 J** | **0.61 J** | <0.63 | **1.0 J** | **2.1** | <0.47 | **23.8** | **6.2** | <0.55 | <0.60 | <0.60 |
| MW-5 | 10/17/2023 | <0.80 | <1.1 | <1.3 | <0.94 | <0.80 | <0.76 | <5.9 | <1.4 | <1.2 | <0.89 | <0.80 | <1.5 | <1.1 | **8.9** | <1.3 | **1.3 J** | **9.4** | <1.1 | <1.2 | <1.1 | <1.5 | <0.65 | <0.78 | **1.7 J** | <1.1 | <1.0 | **3.3 J** | <0.87 | **4.8** | **5.7** | <1.0 | <1.1 | <1.1 |
| MW-6 | 10/17/2023 | <0.42 | <0.58 | <0.70 | <0.50 | <0.42 | <0.40 | <3.1 | <0.74 | <0.66 | <0.47 | <0.42 | <0.78 | <0.61 | **14.8** | <0.68 | **0.87 J** | **7.8** | <0.57 | <0.61 | <0.57 | <0.82 | <0.35 | **1.1 J** | **1.2 J** | <0.61 | <0.54 | **0.97 J** | <0.46 | **12** | **1.9** | <0.53 | <0.58 | <0.58 |
| MW-7 | 10/17/2023 | <0.59 | <0.81 | <0.98 | <0.69 | <0.59 | <0.56 | <4.4 | <1.0 | <0.92 | <0.66 | <0.59 | <1.1 | <0.85 | **314** | <0.94 | **8.1** | **48.6** | <0.80 | <0.86 | <0.80 | <1.1 | <0.48 | **17.2** | **4.4** | <0.85 | **3.0** | **7.8** | <0.64 | **13.0** | **6.9** | <0.75 | <0.81 | <0.81 |
| DUP-1 | 10/17/2023 | <0.43 | <0.59 | <0.71 | <0.50 | <0.43 | <0.41 | <3.2 | <0.75 | <0.66 | <0.48 | <0.43 | <0.79 | <0.62 | **233** | <0.68 | **6.0** | **35.3** | <0.58 | <0.62 | <0.58 | <0.83 | <0.35 | **15.4** | **3.0** | <0.62 | **2.2** | **5.7** | <0.46 | **13.1** | **5.4** | <0.54 | <0.58 | <0.59 |
| MW-17 | 10/17/2023 | <0.51 | <0.71 | <0.86 | <0.61 | <0.51 | <0.49 | <3.8 | <0.90 | <0.80 | <0.58 | <0.51 | <0.95 | <0.74 | **267** | **1.0 J** | **2.5** | **31.3** | <0.70 | <0.75 | <0.70 | <1.0 | <0.42 | **11.0** | <0.58 | <0.74 | **2.7** | **1.7 J** | <0.56 | **43.6** | **2.8** | <0.65 | <0.70 | <0.71 |
| MW-19 | 10/17/2023 | <2.1 | <2.9 | <3.5 | <2.5 | <2.1 | <2.0 | <15.7 | <3.7 | <3.3 | <2.4 | <2.1 | <3.9 | <3.1 | **9.3 J** | <3.4 | **2.4 J** | **5.2 J** | <2.9 | <3.1 | <2.9 | <4.1 | <1.7 | **2.2 J** | <2.4 | <3.1 | <2.7 | <2.9 | <2.3 | **2.0 J** | **4.1 J** | <2.7 | <2.9 | <2.9 |
| TW-27 | 10/17/2023 | <1.0 | <1.4 | <1.7 | <1.2 | <1.0 | <0.96 | <7.5 | <1.8 | <1.6 | <1.1 | <1.0 | <1.9 | <1.5 | **161** | <1.6 | **2.2 J** | **24.1** | <1.4 | <1.5 | <1.4 | <1.9 | <0.83 | **4.9** | **4.2 J** | <1.5 | <1.3 | **5.9** | <1.1 | **14.3** | **4.2 J** | <1.3 | <1.4 | <1.4 |
| TW-28 | 10/17/2023 | <0.41 | <0.56 | <0.68 | <0.48 | <0.41 | <0.39 | <3.0 | <0.72 | <0.63 | <0.46 | <0.41 | <0.75 | <0.59 | **155** | <0.65 | **4.3** | **20.0** | <0.55 | <0.59 | **1.0 J** | <0.79 | <0.34 | **9.3** | **4.2** | <0.59 | **2.0** | **11.3** | <0.44 | **47.2** | **10.7** | <0.52 | <0.56 | <0.56 |
| Field Blank | 10/17/2023 | <0.41 | <0.57 | <0.68 | <0.48 | <0.41 | <0.39 | <3.0 | <0.72 | <0.64 | <0.46 | <0.41 | <0.76 | <0.59 | <0.28 | <0.65 | <0.66 | <0.69 | <0.56 | <0.60 | <0.56 | <0.79 | <0.34 | <0.40 | <0.47 | <0.59 | <0.53 | <0.57 | <0.45 | <0.35 | <0.38 | <0.52 | <0.56 | <0.57 |

**Notes:**

All concentrations reported in units of nanograms per liter (ng/L)

**Bolded** and blue shaded values are above proposed groundwater preventative action limits

**Bolded** and orange shaded values are above proposed groundwater enforcement standards

**Bolded** values are above detection limits

***** Proposed groundwater standard applies to individual compound or combined PFOA and PFOS

J = Analyte concentration detected between the laboratory level of detection and the level of quantification

NA = Not Analyzed

NR = Not reported due to failure of laboratory QC

NE = Not Established

# Table A.1.c Groundwater Analytical Results
# Jagemann Plating Co., Inc.
# 1324 S. 26th Street; Manitowoc, WI

| Parameters | CAS Number | Cycle 10 &11 Recommended Ch. NR 140 ES | Cycle 10 & 11 Recommended Ch. NR 140 PAL | MW-1 | MW-2 | MW-3 | PZ-3 | MW-4 | PZ-4 | MW-5 | MW-6 | MW-7 | MW-8 | PZ-13 | PZ-16 | MW-14 | MW-17 | MW-18 | MW-19 | Sump 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 12/09/21 | 12/08/21 | 12/08/21 | 12/08/21 | 6/14/22 | 6/14/22 | 12/08/21 | 6/14/22 | 6/14/22 | 12/09/21 | 12/08/21 | 6/15/22 | 12/09/21 | 6/15/22 | 6/15/22 | 12/08/21 | 6/14/22 |
| **Perfluoroalkyl & Polyfluoroalkyl Substances (PFAS) Results (ng/L)** | | | | | | | | | | | | | | | | | | | | |
| *Perfluoroalkyl Carboxylates/Carboxylic Acids (PFCA)* | | | | | | | | | | | | | | | | | | | | |
| Perfluoro-n-butanoic acid (PFBA) | 375-22-4 | 10,000 | 2,000 | 16 | 49 | 27 | ND | 12 | ND | 5.1 | 9.5 | 27 | 14 | ND | 10 | 25 | 19 | 15 | 4.6 | 11 |
| Perfluoro-n-pentanoic acid (PFPeA) | 2706-90-3 | --- | --- | 11 | 23 | 49 | ND | 1.5 J | ND | ND | 1.3 J | 10 | 4.5 | ND | 9.7 | 18 | 4.7 | 9 | 2.6 J | 12 |
| Perfluoro-n-hexanoic acid (PFHxA) | 307-24-4 | 150,000 | 30,000 | 16 | 5.7 | 20 | ND | 2.2 | ND | ND | 1.2 J | 6.3 | 7.9 | ND | 3.5 | 52 | 2.8 | 6.5 | 1.9 J | 10 |
| Perfluoro-n-heptanoic acid (PFHpA) | 375-85-9 | --- | --- | 6.7 | 5.1 | 7.3 J | ND | 1.8 J | ND | 0.57 J | 0.58 J | 3.2 | 5.9 | ND | 1.5 J | 26 | 2.6 | 7.9 | 0.63 J | 5.4 |
| Perfluoro-n-octanoic acid (PFOA) | 335-67-1 | 20* | 2* | **20** | ***12*** | ***17*** | 0.85 J | ***3.9*** | ND | ***4.3*** | ***3*** | ***11*** | ***19*** | ND | 1.8 J | **97** | ***4.5*** | **26** | ***2.9 J*** | ***11*** |
| Perfluoro-n-nonanoic acid (PFNA) | 375-95-1 | 30 | 3 | 0.83 J | 0.69 J | ND | ND | 0.81 J | ND | ND | ND | ND | ND | ND | ND | 0.70 J | ***3.1*** | ND | ND | 1.8 J |
| Perfluoro-n-decanoic acid (PFDA) | 335-76-2 | 300 | 60 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 13 | ND | ND | 1.3 J |
| Perfluoro-n-undecanoic acid (PFUnDA) | 2058-94-8 | 3,000 | 600 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Perfluoro-n-dodecanoic acid (PFDoA) | 307-55-1 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Perfluoro-n-tridecanoic acid (PFTrDA) | 72629-94-8 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Perfluoro-n-tetradecanoic acid (PFTeDA) | 376-06-7 | 10,000 | 2,000 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| *Perfluoroalkyl Sulfonates/Sulfonic Acids (PFSA)* | | | | | | | | | | | | | | | | | | | | |
| Perfluoro-1-butanesulfonic acid (PFBS) | 375-73-5 | 450,000 | 90,000 | 760 | 280 | 170 | 0.55 J | 4.9 | 0.67 J | 3.8 | 9.3 | 240 D | 110 | ND | 27 | 180 | 230 D | 28 | 6.9 | 130 D |
| Perfluoro-1-pentanesulfonic acid (PFPeS) | 2706-91-4 | --- | --- | 48 | 5 | 11 J | ND | ND | ND | ND | ND | 3 | 53 | ND | ND | 86 | ND | 9.2 | 0.62 J | 4.9 |
| Perfluorohexanesulfonic acid (PFHxS) | 355-46-4 | 40 | 4 | **120** | ***21*** | **51** | ND | ND | ND | 1.4 J | ND | ***15*** | **190** | ND | ND | **350** | 1.5 J | **51** | 0.95 J | ***18*** |
| Perfluoro-1-heptanesulfonic acid (PFHpS) | 375-92-8 | --- | --- | 20 | 4.4 | 14 J | ND | ND | ND | ND | ND | 2.6 | 25 | ND | ND | 120 | 0.42 J | 7.2 | ND | 7.4 |
| Perfluorooctanesulfonicacid (PFOS) | 1763-23-1 | 20* | 2* | **1,100** | **300** | **1,000** | ***9.2*** | **32** | 0.86 J | ***5*** | 0.77 J | **88** | **650** | ND | ***2.7*** | **5,200** | **200 D** | **140** | ND | **860 D** |
| Perfluoro-1-nonesulfonic acid (PFNS) | 68259-12-1 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 1.1 J | ND | ND | ND | ND |
| Perfluoro-1-decanesulfonic acid (PFDS) | 335-77-3 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Perfluorododecanesulfonic acid (PFDOS) | 79780-39-5 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| *Perfluoroalkane Sulfonamides/Sufonamidoacetic Acids, Sulfonamidoethanols (FASA)* | | | | | | | | | | | | | | | | | | | | |
| Perfluoro-1-octanesulfonamide (PFOSA) | 754-91-6 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 2.7 J | ND |
| N-methylperfluoro-1-octanesulfonamide (MeFOSA) | 31506-32-8 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| N-ethylperfluoro-1-octanesulfonamide (EtFOSA) | 4151-50-2 | 20* | 2* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA) | 2355-31-9 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| N-ethylperfluoro -1-octanesulfonamidoacetic acid (EtFOSAA) | 2991-50-6 | 20* | 2* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE) | 24448-09-7 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE) | 1691-99-2 | 20* | 2* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| *Fluorotelomer Substances (FTS)* | | | | | | | | | | | | | | | | | | | | |
| 1H, 1H, 2H, 2H-perfluorohexane sulfonic acid (4:2FTS) | 757124-72-4 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS) | 27619-97-2 | --- | --- | ND | 17 | 19 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | 20 | ND | 2.1 | ND | 1.7 J |
| 1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2FTS) | 39108-34-4 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| *Replacement Chemicals* | | | | | | | | | | | | | | | | | | | | |
| Hexafluoropropylene oxide dimer acid (GenX) | 13252-13-6 | 300 | 30 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4,8-dioxa-3H-perfluorononanioc acid (DONA) | 919005-14-4 | 3 | 0.6 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS) | 756426-58-1 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | 763051-92-9 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| | | | | | | | | | | | | | | | | | | | | |
| **Total PFOA and PFOS** | | 20* | 2* | **1,120** | **312** | **1,017** | ***10.05*** | **35.9** | 0.86 | ***9.3*** | ***3.77*** | **99** | **669** | ND | ***4.5*** | **5,297** | **204.5** | **166** | ***2.9 J*** | **871** |
| **Total EtFOSE, EtFOSA, and EtFOSAA** | | 20* | 2* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

***Key/Notes:***

WI DNR PFAS List - 33 Comounds laboratory analysis was completed using Modified USEPA Method 537

* = Wisconsin Department of Health Services recommends a combined standard for EtFOSE, EtFOSA, and EtFOSAA; and PFOS and PFOA.

ng/L = nanogram per liter

J = Results were below the calibration range

D = Results were taken from secondary dilutions of the sample extracts to bring results witin calibration range

I = Incorrect isotope ratios were obtained

Q = Surrogate failure

--- = No Recommendations by WDNR for a Ch. 140 PAL or ES standard

ND = Not Detected

Highlighted bold values exceed the current recommended Ch. NR 140 Enforcement Standards (ES) for individual and/or combined values

*Underlined Ibold talics v*alues exceed the current recommended Ch. NR 140 Preventive Action Limits (PAL) for individual and/or combined values

# Table A.1.c Groundwater Analytical Results
# Jagemann Plating Co., Inc.
# 1324 S. 26th Street; Manitowoc, WI

| Parameters | CAS Number | Cycle 10 &11 Recommended Ch. NR 140 ES | Cycle 10 & 11 Recommended Ch. NR 140 PAL | TW-20 | TW-21 | TW-22 | TW-23 | TW-24 | TW-25 | TW-26 | TW-27 | TW-28 | Trip Blank | FBR (Field Reagent Blank) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 2/02/22 | 2/02/22 | 2/02/22 | 2/02/22 | 2/02/22 | 2/02/22 | 6/15/22 | 6/15/22 | 6/15/22 | 12/09/21 | 12/09/21 | 2/02/22 | 6/14/22 |
| **Perfluoroalkyl & Polyfluoroalkyl Substances (PFAS) Results (ng/L)** | | | | | | | | | | | | | | | | |
| *Perfluoroalkyl Carboxylates/Carboxylic Acids (PFCA)* | | | | | | | | | | | | | | | | |
| Perfluoro-n-butanoic acid (PFBA) | 375-22-4 | 10,000 | 2,000 | ND | 11 J | 31 | 37 | 2.5 J | 8.5 | 9.8 | 21 | 18 | ND | ND | ND | ND |
| Perfluoro-n-pentanoic acid (PFPeA) | 2706-90-3 | --- | --- | ND | ND | 14 | 120 | 4.4 | 6.6 | 21.0 | 4.2 | 6.3 | ND | ND | ND | ND |
| Perfluoro-n-hexanoic acid (PFHxA) | 307-24-4 | 150,000 | 30,000 | ND | ND | 14 | 35 | 5.5 | 11 | 20 | 2.5 | 3.7 | ND | ND | ND | ND |
| Perfluoro-n-heptanoic acid (PFHpA) | 375-85-9 | --- | --- | 2.7 J | 8.4 J | 8.7 | 39 | 3.1 J | 17 | 19 | 1.9 J | 2.4 | ND | ND | ND | ND |
| Perfluoro-n-octanoic acid (PFOA) | 335-67-1 | 20* | 2* | ***10*** | **53 J** | **31** | **24** | ***15*** | ***14*** | **71** | ***9.8*** | ***13*** | ND | ND | ND | ND |
| Perfluoro-n-nonanoic acid (PFNA) | 375-95-1 | 30 | 3 | ND | ND | ND | ***5.2*** | 2.9 J | ND | 6.7 | ND | ND | ND | ND | ND | ND |
| Perfluoro-n-decanoic acid (PFDA) | 335-76-2 | 300 | 60 | ND | ND | ND | 1.3 J | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Perfluoro-n-undecanoic acid (PFUnDA) | 2058-94-8 | 3,000 | 600 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Perfluoro-n-dodecanoic acid (PFDoA) | 307-55-1 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Perfluoro-n-tridecanoic acid (PFTrDA) | 72629-94-8 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Perfluoro-n-tetradecanoic acid (PFTeDA) | 376-06-7 | 10,000 | 2,000 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| *Perfluoroalkyl Sulfonates/Sulfonic Acids (PFSA)* | | | | | | | | | | | | | | | | |
| Perfluoro-1-butanesulfonic acid (PFBS) | 375-73-5 | 450,000 | 90,000 | 110 | 130 | 310 | 50 | 38 | 170 | 94 | 100 | 140 | ND | ND | ND | ND |
| Perfluoro-1-pentanesulfonic acid (PFPeS) | 2706-91-4 | --- | --- | ND | 32 J | 20 | 6.6 | 6.5 | 11 | 7.6 | 5.2 | 4.2 | ND | ND | ND | ND |
| Perfluorohexanesulfonic acid (PFHxS) | 355-46-4 | 40 | 4 | ***11*** | **160** | **54** | **75** | ***34*** | ***30*** | **93** | ***10*** | ***14*** | ND | ND | ND | ND |
| Perfluoro-1-heptanesulfonic acid (PFHpS) | 375-92-8 | --- | --- | 1.0 J | 78 | 5.1 | 52 | 30 | 1.2 J | 38 | 1.1 J | 1.2 J | ND | ND | ND | ND |
| Perfluorooctanesulfonicacid (PFOS) | 1763-23-1 | 20* | 2* | **57** | **3,800** | **95** | **7,500** | **3,500** | **57** | **210 D** | ***19*** | **25** | ND | ND | ND | ND |
| Perfluoro-1-nonesulfonic acid (PFNS) | 68259-12-1 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Perfluoro-1-decanesulfonic acid (PFDS) | 335-77-3 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Perfluorododecanesulfonic acid (PFDOS) | 79780-39-5 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| *Perfluoroalkane Sulfonamides/Sufonamidoacetic Acids, Sulfonamidoethanols (FASA)* | | | | | | | | | | | | | | | | |
| Perfluoro-1-octanesulfonamide (PFOSA) | 754-91-6 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| N-methylperfluoro-1-octanesulfonamide (MeFOSA) | 31506-32-8 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| N-ethylperfluoro-1-octanesulfonamide (EtFOSA) | 4151-50-2 | 20* | 2* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA) | 2355-31-9 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| N-ethylperfluoro -1-octanesulfonamidoacetic acid (EtFOSAA) | 2991-50-6 | 20* | 2* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE) | 24448-09-7 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE) | 1691-99-2 | 20* | 2* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| *Fluorotelomer Substances (FTS)* | | | | | | | | | | | | | | | | |
| 1H, 1H, 2H, 2H-perfluorohexane sulfonic acid (4:2FTS) | 757124-72-4 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS) | 27619-97-2 | --- | --- | 2.0 J | ND | ND | 41 | 16 | 8.2 J | 34 I | ND | ND | ND | ND | ND | ND |
| 1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2FTS) | 39108-34-4 | --- | --- | ND | ND | ND | 3.9 JQ | 3.7 J | ND | 5.5 | ND | ND | ND | ND | ND | ND |
| *Replacement Chemicals* | | | | | | | | | | | | | | | | |
| Hexafluoropropylene oxide dimer acid (GenX) | 13252-13-6 | 300 | 30 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4,8-dioxa-3H-perfluorononanioc acid (DONA) | 919005-14-4 | 3 | 0.6 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS) | 756426-58-1 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | 763051-92-9 | --- | --- | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| | | | | | | | | | | | | | | | | |
| **Total PFOA and PFOS** | | 20* | 2* | **67** | **3,853** | **126** | **7,524** | **3,515** | **71** | **281** | **28.8** | **38** | ND | ND | ND | ND |
| **Total EtFOSE, EtFOSA, and EtFOSAA** | | 20* | 2* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

***Key/Notes:***

WI DNR PFAS List - 33 Comounds laboratory analysis was completed using Modified USEPA Method 537

* = Wisconsin Department of Health Services recommends a combined standard for EtFOSE, EtFOSA, and EtFOSAA; and PFOS and PFOA.

ng/L = nanogram per liter

J = Results were below the calibration range

D = Results were taken from secondary dilutions of the sample extracts to bring results witin calibration range

I = Incorrect isotope ratios were obtained

Q = Surrogate failure

--- = No Recommendations by WDNR for a Ch. 140 PAL or ES standard

ND = Not Detected

Highlighted bold values exceed the current recommended Ch. NR 140 Enforcement Standards (ES) for individual and/or combined values

*Underlined Ibold talics v* alues exceed the current recommended Ch. NR 140 Preventive Action Limits (PAL) for individual and/or combined values

Table 3
Vapor Inrusion Analytical Results
Jagemann Plating
Manitowoc, Wisconsin
EnviroForensics Project No. 200032

| Sample Idetification | Sample Location | Sample Type | Mitigation? | Date Sampled | Tetrachloroethene | Trichlorethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethlyene | Vinyl Chloride | Dichlorodifluoromethane |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **INDOOR/ OUTDOOR AIR** | | | | | | | | | | | |
| **Large Commercial Vapor Action Level (VAL)** | | | | | **180** | **8.8** | **NL** | **180** | **880** | **28** | **NL** |
| IA-1 | Former Waste Water Treatment Plant Room | SUMMA | No | 2/9/2014 | NA | **0.89** | ND | ND | ND | **0.39** | ND |
| | | | Yes | 1/10/2022 | <0.44 | <0.30 | <0.30 | <0.26 | <0.21 | <0.13 | ND |
| | | Passive 8 Hour | | 1/10/2022 | <9.59 | <8.12 | <7.54 | <7.54 | <11.7 | <9.42 | ND |
| | | Passive 5 Day | | 1/14/2022 | <0.803 | <0.680 | <0.631 | <0.631 | <0.982 | <0.789 | ND |
| IA-2 | East Side Chromium Dip Line Area | SUMMA | No | 2/9/2014 | NA | **1.7** | ND | ND | ND | ND | ND |
| | | | Yes | 1/10/2022 | <0.45 | <0.30 | <0.30 | <0.26 | <0.21 | <0.13 | ND |
| | | Passive 8 Hour | | 1/10/2022 | <9.42 | <7.97 | <7.40 | <7.40 | <11.5 | <9.25 | ND |
| | | Passive 5 Day | | 1/14/2022 | **1.53 J** | <0.679 | <0.630 | <0.630 | <0.981 | <0.788 | ND |
| IA-3 | West Side Chromium Dip Line and Pickling Line Area | SUMMA | No | 2/9/2014 | NA | ND | ND | ND | ND | ND | ND |
| | | | Yes | 1/10/2022 | <0.46 | <0.31 | <0.31 | <0.27 | <0.22 | <0.14 | ND |
| | | Passive 8 Hour | | 1/10/2022 | <9.59 | <8.12 | <7.54 | <7.54 | <11.7 | <9.42 | ND |
| | | Passive 5 Day | | 1/14/2022 | **2.94** | <0.680 | <0.632 | <0.632 | <0.983 | <0.790 | ND |
| IA-4 | First Floor Office Area | SUMMA | No | 2/9/2014 | NA | **9.2** | **5.2** | ND | ND | ND | ND |
| | | | Yes | 3/27/2021 | NA | 0.56 J | <0.22 | <0.26 | <0.20 | <0.13 | ND |
| | | | | 1/10/2022 | <0.43 | **1.2** | <0.28 | <0.25 | <0.20 | <0.13 | ND |
| | | Passive 8 Hour | | 1/10/2022 | <9.46 | <8.00 | <7.43 | <7.43 | <11.6 | <9.29 | ND |
| | | Passive 5 Day | | 1/14/2022 | <0.799 | **0.714** | <0.628 | <0.628 | <0.977 | <0.785 | ND |
| IA-5 | Basement Storage Area Adjacent to Mecanical Room | SUMMA | No | 2/9/2014 | NA | **14.4** | **9.0** | ND | ND | ND | ND |
| | | | Yes | 3/27/2021 | NA | <0.32 | <0.21 | <0.25 | <0.19 | <0.13 | ND |
| | | | | 1/10/2022 | <0.42 | **0.74 J** | <0.28 | <0.24 | <0.20 | <0.12 | ND |
| | | Passive 8 Hour | | 1/10/2022 | <9.55 | <8.08 | <7.51 | <7.51 | <11.7 | <9.38 | ND |
| | | Passive 5 Day | | 1/14/2022 | <0.800 | <0.677 | <0.628 | <0.628 | <0.977 | <0.785 | ND |
| IA-6 | Basement Office Area | SUMMA | No | 2/9/2014 | NA | **13.9** | **8.3** | ND | ND | ND | ND |
| | | | Yes | 3/27/2021 | NA | <0.32 | <0.21 | <0.25 | <0.19 | <0.13 | ND |
| | | | | 1/10/2022 | <0.43 | **0.79 J** | <0.28 | <0.25 | <0.20 | <0.13 | ND |
| | | Passive 8 Hour | | 1/10/2022 | <9.48 | <8.02 | <7.45 | <7.45 | <11.6 | <9.31 | ND |
| | | Passive 5 Day | | 1/14/2022 | <0.800 | <0.677 | <0.628 | <0.628 | <0.978 | <0.786 | ND |
| IA-6/8 | Central Portion of South Manufacturing Area | SUMMA | Yes | 5/19/2021 | NA | **3.5** | **0.56 J** | <0.26 | <0.21 | <0.13 | ND |
| IA-7 | West Portion of South Manufacturing Area | SUMMA | Yes | 5/19/2021 | NA | **0.46 J** | **0.35 J** | <0.27 | <0.22 | **0.43** | ND |
| | | | | 1/10/2022 | <0.46 | <0.31 | <0.31 | <0.27 | <0.22 | <0.14 | ND |
| | | Passive 8 Hour | | 1/10/2022 | <10.2 | <8.60 | <7.99 | <7.99 | <12.4 | <9.98 | ND |
| | | Passive 5 Day | | 1/14/2022 | **0.810 J** | <0.680 | <0.631 | <0.631 | <0.982 | <0.789 | ND |
| IA-8 | North of the H Q Zinc Line | SUMMA | Yes | 1/10/2022 | <0.43 | **2.4** | **0.39 J** | <0.25 | <0.20 | <0.13 | ND |
| | | Passive 8 Hour | | 1/10/2022 | <10.0 | <8.49 | <7.88 | <7.88 | <12.3 | <9.85 | ND |
| | | Passive 5 Day | | 1/14/2022 | **1.71** | **1.39** | <0.631 | <0.631 | <0.981 | <0.789 | ND |
| IA-9 | Break Room | SUMMA | Yes | 1/10/2022 | <0.41 | <0.27 | <0.27 | <0.23 | <0.19 | <0.12 | ND |
| | | Passive 8 Hour | | 1/10/2022 | <9.48 | <8.02 | <7.45 | <7.45 | <11.6 | <9.31 | ND |
| | | Passive 5 Day | | 1/14/2022 | <0.797 | <0.674 | <0.626 | <0.626 | <0.974 | <0.783 | ND |
| IA-10 | South of Auto Barrel | SUMMA | Yes | 1/10/2022 | <0.44 | <0.30 | <0.30 | <0.26 | <0.21 | <0.13 | ND |
| | | Passive 8 Hour | | 1/10/2022 | <9.80 | <8.29 | <7.70 | <7.70 | <12.0 | <9.62 | ND |
| | | Passive 5 Day | | 1/14/2022 | **4.31** | <0.680 | <0.631 | <0.631 | <0.982 | <0.789 | ND |
| IA-11 | North of Brite Dip | SUMMA | Yes | 1/10/2022 | <0.45 | <0.30 | <0.30 | <0.26 | <0.21 | <0.13 | ND |
| | | Passive 8 Hour | | 1/10/2022 | <9.84 | <8.33 | <7.73 | <7.73 | <12.0 | <9.66 | ND |
| | | Passive 5 Day | | 1/14/2022 | **2.32** | <0.681 | <0.633 | <0.633 | <0.984 | <0.791 | ND |
| IA-12 | Between Papa Joe Zinc Line and Nickel Barrel | SUMMA | Yes | 1/10/2022 | <0.44 | <0.30 | <0.30 | <0.26 | <0.21 | **4.5** | ND |
| | | Passive 8 Hour | | 1/10/2022 | <9.72 | <8.22 | <7.63 | <7.63 | <11.9 | <9.54 | ND |
| | | Passive 5 Day | | 1/14/2022 | **0.841** | <0.682 | <0.633 | <0.633 | <0.985 | **<0.791** | ND |
| OA-1 | Southwest of Chromuin Dip Line Building (upwind) | SUMMA | No | 2/9/2014 | ND | ND | ND | ND | ND | ND | ND |

Table 3
Vapor Inrusion Analytical Results
Jagemann Plating
Manitowoc, Wisconsin
EnviroForensics Project No. 200032

| Sample Idetification | Sample Location | Sample Type | Mitigation? | Date Sampled | Tetrachloroethene | Trichlorethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1-Dichloroethlyene | Vinyl Chloride | Dichlorodifluoromethane |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SUB SLAB VAPOR** | | | | | | | | | | | |
| **Large Commercial Vapor Risk Screening Level (VRSL)** | | | | | **18,000** | **880** | **NL** | **18,000** | **88,000** | **2,800** | **NL** |
| SSV-1 | Former Waste Water Treatment Plant Room | SUMMA | No | 2/9/2014 | NA | **1,530** | **540** | **57.5** | **26.9** | **86.7** | ND |
| | | | Yes | 3/27/2021 | NA | **461** | **1,100** | **68.3** | **9.9 J** | **7.2 J** | ND |
| | | | | 1/14/2022 | **4.6** | **212** | **111** | **29.2** | **8.3** | **118** | ND |
| SSV-2 | East Side Chromium Dip Line Area | SUMMA | No | 2/9/2014 | NA | **2,920** | **965** | **39.3** | **14.9 J** | **4.6 J** | ND |
| | | | Yes | 3/27/2021 | NA | **6,080** | **1,050** | **67.8** | ND | **17.8** | ND |
| | | | | 1/14/2022 | **4.5** | **635** | **95,000** | **25.9** | **11.9** | **2.0** | ND |
| SSV-3 | West Side Chromium Dip Line and Pickling Line Area | SUMMA | No | 2/9/2014 | NA | **57.7** | **25.3** | ND | ND | **21.1** | ND |
| | | | Yes | 3/27/2021 | NA | **8.4** | **8.6** | <0.24 | <0.19 | <0.12 | ND |
| | | | | 1/14/2022 | <2100 | **1,520,000** | **95,000** | **1,290 J** | <991 | <623 | ND |
| SSV-4 | Central Portion of South Manufacturing Area | SUMMA | Yes | 3/27/2021 | NA | **15,300,000** | **3,210,000** | **65,400** | **23,900** | **8,880** | ND |
| | | | | 5/19/2021 | NA | **31,700,000** | **6,330,000** | **162,000** | **94,100** | **117,000** | ND |
| | | | | 1/14/2022 | <2100 | **5,150,000** | **1,370,000** | | | | ND |
| SSV-5 | West Portion of South Manufacturing Area | SUMMA | Yes | 3/27/2021 | NA | **9,870** | **1,290** | **344** | **478** | **1,070** | ND |
| | | | | 5/19/2021 | NA | **5,850** | **1,060** | **294** | **522** | **1,450** | ND |
| | | | | 1/14/2022 | <1050 | **509,000** | **29,900** | **<603** | **586 J** | **2,380** | ND |
| SSV-11 | North of Brite Dip | SUMMA | Yes | 1/14/2022 | **30.7 J** | **65,100** | **1,960** | **27.2 J** | **60.3** | **44.9** | ND |
| SSV-12 | Between Papa Joe Zinc Line and Nickel Barrel | SUMMA | Yes | 1/14/2022 | **74.6** | **91,200** | **5,160** | **47.5** | **21.7J J** | **9.6 J** | ND |
| SSV-13 | Eastern Portion of the Southern Production Area | SUMMA | Yes | 1/30/2023 | **56.3** | **227,000** | **63,700** | **10,200** | NA | **124,000** | NA |
| SSV-14 | Directly north of the Production Area | SUMMA | Yes | 10/19/2023 | <31.9 | **294** | <198 | <396 | <1,980 | <12.8 | **619** |
| SSV-15 | Between Rack Hoist and New Cycle Master | SUMMA | Yes | 10/19/2023 | <31.9 | <10.7 | <198 | <396 | <1,980 | <12.8 | <495 |
| **SSDS Effluent** | | | | | | | | | | | |
| EP-1 | SSDS Effluent | SUMMA | Yes | 1/26/2022 | **4.9** | **36.9** | **19.3** | **1.1 J** | **0.27 J** | NA | NA |
| **Soil Gas VAPOR** | | | | | | | | | | | |
| **Large Commercial Soil Gas Risk Screening Level (SGVRSL)** | | | | | **180,000** | **8,800** | **NL** | **180,000** | **880,000** | **28,000** | **NL** |
| SG-1 | ~ 40 ft north of MW-7 | Passive 15 Day | | 11/1/2023 | <1.22 | <1.52 | <0.94 | <1.14 | <1.52 | <0.62 | <0.62 |
| SG-1 DUP | | Passive 15 Day | | 11/1/2023 | <1.22 | <1.52 | <0.94 | <1.14 | <1.52 | <0.62 | <0.62 |
| SG-2 | ~ 40 ft west of MW-6 | Passive 15 Day | | 11/1/2023 | <1.22 | <1.52 | <0.94 | <1.14 | <1.52 | <0.62 | <0.62 |
| SG-3 | ~ 80 ft northeast of SG-1 | Passive 15 Day | | 11/1/2023 | <1.22 | <1.52 | <0.94 | <1.14 | <1.52 | <0.62 | <0.62 |
| SG-4 | ~ 5 ft east of MW-19 | Passive 15 Day | | 11/1/2023 | <1.22 | <1.52 | <0.94 | <1.14 | <1.52 | <0.62 | <0.62 |
| SG-5 | ~ 10 ft southwest of MW-17 | Passive 15 Day | | 11/1/2023 | <1.22 | <1.52 | <0.94 | <1.14 | <1.52 | <0.62 | <0.62 |

**Notes:**

Results reported in micrograms per cubic meter ($\mu g/m^3$)
Summa samples analyzed according to EPA Method TO-15
Passive samples analyzed according to EPA Method TO-17
The Vapor Risk Screeing/Action Levels are calculated in accordance with WDNR Publication RR-800 and subsequent guidance documents.
IA = Indoor Air
OA = Outdoor Air
SSV= Sub-slab vapor
**Bolded** values are above detection limits
**Bolded** and Orange shaded concentration exceed the Large Commercial Vapor Action Level or Screening Levels
ND = Not detected over laboratory detection limits
NA = Not Analyzed
NL = No Screening Level Established
J = Analyte concentration detected between the laboratory Reporting Limit and the laboratory Method Detection Limit

# *Synergy Environmental Lab, LLC.*

**1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631**


WAYNE FASSBENDER
ENVIROFORENSICS
825 N. CAPITOL AVENUE
INDIANAPOLIS, IN 46204

**Report Date** *01-Nov-23*

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087A
**Sample ID** 200032-MW-1
**Sample Matrix** Water
**Sample Date** 10/17/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| Organic | | | | | | | | | | |
| GASES | | | | | | | | | | |
| Ethane | 51.4 | ug/l | 5 | 15 | 10 | 8015 | | 10/24/2023 | ZJW | 1 |
| Ethene | < 5 | ug/l | 5 | 15 | 10 | 8015 | | 10/24/2023 | ZJW | 1 |
| Methane | 6202 | ug/l | 10 | 30 | 10 | 8015 | | 10/24/2023 | ZJW | 1 |
| VOC's | | | | | | | | | | |
| Benzene | < 0.3 | ug/l | 0.3 | 1.25 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Bromobenzene | < 0.34 | ug/l | 0.34 | 1.4 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Bromodichloromethane | < 0.36 | ug/l | 0.36 | 1.47 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Bromoform | < 0.42 | ug/l | 0.42 | 1.72 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| tert-Butylbenzene | < 0.37 | ug/l | 0.37 | 1.49 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| sec-Butylbenzene | < 0.33 | ug/l | 0.33 | 1.34 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| n-Butylbenzene | < 0.71 | ug/l | 0.71 | 2.9 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Carbon Tetrachloride | < 0.34 | ug/l | 0.34 | 1.39 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Chlorobenzene | < 0.29 | ug/l | 0.29 | 1.19 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Chloroethane | < 0.62 | ug/l | 0.62 | 2.54 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Chloroform | < 0.33 | ug/l | 0.33 | 1.33 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Chloromethane | < 0.74 | ug/l | 0.74 | 3.03 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 2-Chlorotoluene | < 0.34 | ug/l | 0.34 | 1.37 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 4-Chlorotoluene | < 0.4 | ug/l | 0.4 | 1.63 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2-Dibromo-3-chloropropane | < 0.74 | ug/l | 0.74 | 3.01 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Dibromochloromethane | < 0.36 | ug/l | 0.36 | 1.46 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,4-Dichlorobenzene | < 0.49 | ug/l | 0.49 | 2.01 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,3-Dichlorobenzene | < 0.35 | ug/l | 0.35 | 1.44 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2-Dichlorobenzene | < 0.4 | ug/l | 0.4 | 1.65 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Dichlorodifluoromethane | < 0.3 | ug/l | 0.3 | 1.23 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2-Dichloroethane | < 0.43 | ug/l | 0.43 | 1.75 | 1 | 8260B | | 10/20/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087A
**Sample ID** 200032-MW-1
**Sample Matrix** Water
**Sample Date** 10/17/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | 1.02 "J" | ug/l | 0.43 | 1.74 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,1-Dichloroethene | < 0.43 | ug/l | 0.43 | 1.76 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| cis-1,2-Dichloroethene | 4.0 | ug/l | 0.32 | 1.29 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| trans-1,2-Dichloroethene | < 0.5 | ug/l | 0.5 | 2.02 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2-Dichloropropane | < 0.39 | ug/l | 0.39 | 1.58 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,3-Dichloropropane | < 0.38 | ug/l | 0.38 | 1.55 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| trans-1,3-Dichloropropene | < 0.41 | ug/l | 0.41 | 1.67 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| cis-1,3-Dichloropropene | < 0.41 | ug/l | 0.41 | 1.67 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Di-isopropyl ether | < 0.48 | ug/l | 0.48 | 1.96 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| EDB (1,2-Dibromoethane) | < 0.39 | ug/l | 0.39 | 1.59 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Ethylbenzene | < 0.33 | ug/l | 0.33 | 1.37 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Hexachlorobutadiene | < 0.81 | ug/l | 0.81 | 3.44 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Isopropylbenzene | < 0.34 | ug/l | 0.34 | 1.38 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| p-Isopropyltoluene | < 0.47 | ug/l | 0.47 | 1.91 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Methylene chloride | < 0.79 | ug/l | 0.79 | 3.23 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Methyl tert-butyl ether (MTBE) | < 0.47 | ug/l | 0.47 | 1.91 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Naphthalene | < 1.4 | ug/l | 1.4 | 5.56 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| n-Propylbenzene | < 0.39 | ug/l | 0.39 | 1.6 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,1,2,2-Tetrachloroethane | < 0.43 | ug/l | 0.43 | 1.77 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,1,1,2-Tetrachloroethane | < 0.55 | ug/l | 0.55 | 2.25 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Tetrachloroethene | < 0.47 | ug/l | 0.47 | 1.91 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Toluene | < 0.33 | ug/l | 0.33 | 1.35 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2,4-Trichlorobenzene | < 0.63 | ug/l | 0.63 | 2.57 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2,3-Trichlorobenzene | < 1.4 | ug/l | 1.4 | 5.94 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,1,1-Trichloroethane | < 0.33 | ug/l | 0.33 | 1.34 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,1,2-Trichloroethane | < 0.42 | ug/l | 0.42 | 1.72 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Trichloroethene (TCE) | < 0.38 | ug/l | 0.38 | 1.55 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Trichlorofluoromethane | < 0.33 | ug/l | 0.33 | 1.35 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2,4-Trimethylbenzene | < 0.35 | ug/l | 0.35 | 1.44 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,3,5-Trimethylbenzene | < 0.41 | ug/l | 0.41 | 1.66 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Vinyl Chloride | 7.4 | ug/l | 0.15 | 0.61 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| m&p-Xylene | < 0.64 | ug/l | 0.64 | 2.63 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| o-Xylene | < 0.37 | ug/l | 0.37 | 1.51 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| SUR - 1,2-Dichloroethane-d4 | 101 | REC % | | | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| SUR - 4-Bromofluorobenzene | 111 | REC % | | | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| SUR - Dibromofluoromethane | 108 | REC % | | | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| SUR - Toluene-d8 | 99 | REC % | | | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Wet Chemistry | | | | | | | | | | |
| General | | | | | | | | | | |
| Total Organic Carbon | 36.4 | mg/l | 0.28 | 0.94 | 1 | SM 5310B | | 10/30/2023 | SL | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087B
**Sample ID** 200032-MW-3
**Sample Matrix** Water
**Sample Date** 10/17/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| **Organic** | | | | | | | | | | |
| **GASES** | | | | | | | | | | |
| Ethane | < 0.5 | ug/l | 0.5 | 1.5 | 1 | 8015 | | 10/24/2023 | ZJW | 1 |
| Ethene | < 0.5 | ug/l | 0.5 | 1.5 | 1 | 8015 | | 10/24/2023 | ZJW | 1 |
| Methane | 380 | ug/l | 1 | 3 | 1 | 8015 | | 10/24/2023 | ZJW | 1 |
| **VOC's** | | | | | | | | | | |
| Benzene | < 0.3 | ug/l | 0.3 | 1.25 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Bromobenzene | < 0.34 | ug/l | 0.34 | 1.4 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Bromodichloromethane | < 0.36 | ug/l | 0.36 | 1.47 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Bromoform | < 0.42 | ug/l | 0.42 | 1.72 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| tert-Butylbenzene | < 0.37 | ug/l | 0.37 | 1.49 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| sec-Butylbenzene | < 0.33 | ug/l | 0.33 | 1.34 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| n-Butylbenzene | < 0.71 | ug/l | 0.71 | 2.9 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Carbon Tetrachloride | < 0.34 | ug/l | 0.34 | 1.39 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Chlorobenzene | < 0.29 | ug/l | 0.29 | 1.19 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Chloroethane | < 0.62 | ug/l | 0.62 | 2.54 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Chloroform | < 0.33 | ug/l | 0.33 | 1.33 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Chloromethane | < 0.74 | ug/l | 0.74 | 3.03 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 2-Chlorotoluene | < 0.34 | ug/l | 0.34 | 1.37 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 4-Chlorotoluene | < 0.4 | ug/l | 0.4 | 1.63 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2-Dibromo-3-chloropropane | < 0.74 | ug/l | 0.74 | 3.01 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Dibromochloromethane | < 0.36 | ug/l | 0.36 | 1.46 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,4-Dichlorobenzene | < 0.49 | ug/l | 0.49 | 2.01 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,3-Dichlorobenzene | < 0.35 | ug/l | 0.35 | 1.44 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2-Dichlorobenzene | < 0.4 | ug/l | 0.4 | 1.65 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Dichlorodifluoromethane | 6.5 | ug/l | 0.3 | 1.23 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2-Dichloroethane | < 0.43 | ug/l | 0.43 | 1.75 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,1-Dichloroethane | < 0.43 | ug/l | 0.43 | 1.74 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,1-Dichloroethene | 3.3 | ug/l | 0.43 | 1.76 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| cis-1,2-Dichloroethene | 95 | ug/l | 0.32 | 1.29 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| trans-1,2-Dichloroethene | 3.09 | ug/l | 0.5 | 2.02 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2-Dichloropropane | < 0.39 | ug/l | 0.39 | 1.58 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,3-Dichloropropane | < 0.38 | ug/l | 0.38 | 1.55 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| trans-1,3-Dichloropropene | < 0.41 | ug/l | 0.41 | 1.67 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| cis-1,3-Dichloropropene | < 0.41 | ug/l | 0.41 | 1.67 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Di-isopropyl ether | < 0.48 | ug/l | 0.48 | 1.96 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| EDB (1,2-Dibromoethane) | < 0.39 | ug/l | 0.39 | 1.59 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Ethylbenzene | < 0.33 | ug/l | 0.33 | 1.37 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Hexachlorobutadiene | < 0.81 | ug/l | 0.81 | 3.44 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Isopropylbenzene | < 0.34 | ug/l | 0.34 | 1.38 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| p-Isopropyltoluene | < 0.47 | ug/l | 0.47 | 1.91 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Methylene chloride | < 0.79 | ug/l | 0.79 | 3.23 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Methyl tert-butyl ether (MTBE) | < 0.47 | ug/l | 0.47 | 1.91 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Naphthalene | < 1.4 | ug/l | 1.4 | 5.56 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| n-Propylbenzene | < 0.39 | ug/l | 0.39 | 1.6 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,1,2,2-Tetrachloroethane | < 0.43 | ug/l | 0.43 | 1.77 | 1 | 8260B | | 10/20/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087B
**Sample ID** 200032-MW-3
**Sample Matrix** Water
**Sample Date** 10/17/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | < 0.55 | ug/l | 0.55 | 2.25 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Tetrachloroethene | < 0.47 | ug/l | 0.47 | 1.91 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Toluene | < 0.33 | ug/l | 0.33 | 1.35 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2,4-Trichlorobenzene | < 0.63 | ug/l | 0.63 | 2.57 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2,3-Trichlorobenzene | < 1.4 | ug/l | 1.4 | 5.94 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,1,1-Trichloroethane | < 0.33 | ug/l | 0.33 | 1.34 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,1,2-Trichloroethane | < 0.42 | ug/l | 0.42 | 1.72 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Trichloroethene (TCE) | 24.4 | ug/l | 0.38 | 1.55 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Trichlorofluoromethane | < 0.33 | ug/l | 0.33 | 1.35 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2,4-Trimethylbenzene | < 0.35 | ug/l | 0.35 | 1.44 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,3,5-Trimethylbenzene | < 0.41 | ug/l | 0.41 | 1.66 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Vinyl Chloride | 38 | ug/l | 0.15 | 0.61 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| m&p-Xylene | < 0.64 | ug/l | 0.64 | 2.63 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| o-Xylene | < 0.37 | ug/l | 0.37 | 1.51 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| SUR - 4-Bromofluorobenzene | 96 | REC % | | | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| SUR - Dibromofluoromethane | 95 | REC % | | | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| SUR - 1,2-Dichloroethane-d4 | 103 | REC % | | | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| SUR - Toluene-d8 | 96 | REC % | | | 1 | 8260B | | 10/20/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087C
**Sample ID** 200032-MW-8
**Sample Matrix** Water
**Sample Date** 10/17/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| **Organic** | | | | | | | | | | |
| **GASES** | | | | | | | | | | |
| Ethane | 85.6 | ug/l | 5 | 15 | 10 | 8015 | | 10/24/2023 | ZJW | 1 |
| Ethene | < 5 | ug/l | 5 | 15 | 10 | 8015 | | 10/24/2023 | ZJW | 1 |
| Methane | 4869 | ug/l | 10 | 30 | 10 | 8015 | | 10/24/2023 | ZJW | 1 |
| **VOC's** | | | | | | | | | | |
| Benzene | < 0.3 | ug/l | 0.3 | 1.25 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Bromobenzene | < 0.34 | ug/l | 0.34 | 1.4 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Bromodichloromethane | < 0.36 | ug/l | 0.36 | 1.47 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Bromoform | < 0.42 | ug/l | 0.42 | 1.72 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| tert-Butylbenzene | < 0.37 | ug/l | 0.37 | 1.49 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| sec-Butylbenzene | < 0.33 | ug/l | 0.33 | 1.34 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| n-Butylbenzene | < 0.71 | ug/l | 0.71 | 2.9 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Carbon Tetrachloride | < 0.34 | ug/l | 0.34 | 1.39 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Chlorobenzene | < 0.29 | ug/l | 0.29 | 1.19 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Chloroethane | < 0.62 | ug/l | 0.62 | 2.54 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Chloroform | < 0.33 | ug/l | 0.33 | 1.33 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Chloromethane | < 0.74 | ug/l | 0.74 | 3.03 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 2-Chlorotoluene | < 0.34 | ug/l | 0.34 | 1.37 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 4-Chlorotoluene | < 0.4 | ug/l | 0.4 | 1.63 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2-Dibromo-3-chloropropane | < 0.74 | ug/l | 0.74 | 3.01 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Dibromochloromethane | < 0.36 | ug/l | 0.36 | 1.46 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,4-Dichlorobenzene | < 0.49 | ug/l | 0.49 | 2.01 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,3-Dichlorobenzene | < 0.35 | ug/l | 0.35 | 1.44 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2-Dichlorobenzene | < 0.4 | ug/l | 0.4 | 1.65 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Dichlorodifluoromethane | < 0.3 | ug/l | 0.3 | 1.23 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2-Dichloroethane | < 0.43 | ug/l | 0.43 | 1.75 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,1-Dichloroethane | < 0.43 | ug/l | 0.43 | 1.74 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,1-Dichloroethene | < 0.43 | ug/l | 0.43 | 1.76 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| cis-1,2-Dichloroethene | < 0.32 | ug/l | 0.32 | 1.29 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| trans-1,2-Dichloroethene | 15.6 | ug/l | 0.5 | 2.02 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2-Dichloropropane | < 0.39 | ug/l | 0.39 | 1.58 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,3-Dichloropropane | < 0.38 | ug/l | 0.38 | 1.55 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| trans-1,3-Dichloropropene | < 0.41 | ug/l | 0.41 | 1.67 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| cis-1,3-Dichloropropene | < 0.41 | ug/l | 0.41 | 1.67 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Di-isopropyl ether | < 0.48 | ug/l | 0.48 | 1.96 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| EDB (1,2-Dibromoethane) | < 0.39 | ug/l | 0.39 | 1.59 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Ethylbenzene | < 0.33 | ug/l | 0.33 | 1.37 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Hexachlorobutadiene | < 0.81 | ug/l | 0.81 | 3.44 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Isopropylbenzene | < 0.34 | ug/l | 0.34 | 1.38 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| p-Isopropyltoluene | < 0.47 | ug/l | 0.47 | 1.91 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Methylene chloride | < 0.79 | ug/l | 0.79 | 3.23 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Methyl tert-butyl ether (MTBE) | < 0.47 | ug/l | 0.47 | 1.91 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Naphthalene | < 1.4 | ug/l | 1.4 | 5.56 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| n-Propylbenzene | < 0.39 | ug/l | 0.39 | 1.6 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,1,2,2-Tetrachloroethane | < 0.43 | ug/l | 0.43 | 1.77 | 1 | 8260B | | 10/20/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087C
**Sample ID** 200032-MW-8
**Sample Matrix** Water
**Sample Date** 10/17/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | < 0.55 | ug/l | 0.55 | 2.25 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Tetrachloroethene | < 0.47 | ug/l | 0.47 | 1.91 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Toluene | < 0.33 | ug/l | 0.33 | 1.35 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2,4-Trichlorobenzene | < 0.63 | ug/l | 0.63 | 2.57 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2,3-Trichlorobenzene | < 1.4 | ug/l | 1.4 | 5.94 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,1,1-Trichloroethane | < 0.33 | ug/l | 0.33 | 1.34 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,1,2-Trichloroethane | < 0.42 | ug/l | 0.42 | 1.72 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Trichloroethene (TCE) | < 0.38 | ug/l | 0.38 | 1.55 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Trichlorofluoromethane | < 0.33 | ug/l | 0.33 | 1.35 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2,4-Trimethylbenzene | < 0.35 | ug/l | 0.35 | 1.44 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,3,5-Trimethylbenzene | < 0.41 | ug/l | 0.41 | 1.66 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Vinyl Chloride | 3.3 | ug/l | 0.15 | 0.61 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| m&p-Xylene | < 0.64 | ug/l | 0.64 | 2.63 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| o-Xylene | < 0.37 | ug/l | 0.37 | 1.51 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| SUR - 1,2-Dichloroethane-d4 | 100 | REC % | | | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| SUR - 4-Bromofluorobenzene | 104 | REC % | | | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| SUR - Dibromofluoromethane | 99 | REC % | | | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| SUR - Toluene-d8 | 102 | REC % | | | 1 | 8260B | | 10/20/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087D
**Sample ID** 200032-MW-14
**Sample Matrix** Water
**Sample Date** 10/17/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| **Organic** | | | | | | | | | | |
| **GASES** | | | | | | | | | | |
| Ethane | 13303 | ug/l | 5 | 15 | 10 | 8015 | | 10/24/2023 | ZJW | 1 |
| Ethene | < 5 | ug/l | 5 | 15 | 10 | 8015 | | 10/24/2023 | ZJW | 1 |
| Methane | 4573 | ug/l | 10 | 30 | 10 | 8015 | | 10/24/2023 | ZJW | 1 |
| **Semi Volatiles** | | | | | | | | | | |
| 1,4-Dioxane | < 0.17 | ug/l | 0.17 | 0.64 | 1 | 625 | 10/24/2023 | 10/24/2023 | NJC | 1 |
| 2-Fluorobiphenyl-surrogate | 10.1 | REC % | | | 1 | 625 | 10/24/2023 | 10/24/2023 | NJC | 1 |
| Nitrobenzene-d5-surrogate | 5.4 | REC % | | | 1 | 625 | 10/24/2023 | 10/24/2023 | NJC | 1 |
| p-Terphenyl-d14-surrogate | 8.6 | REC % | | | 1 | 625 | 10/24/2023 | 10/24/2023 | NJC | 1 |
| **VOC's** | | | | | | | | | | |
| Benzene | < 300 | ug/l | 300 | 1250 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Bromobenzene | < 340 | ug/l | 340 | 1400 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Bromodichloromethane | < 360 | ug/l | 360 | 1470 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Bromoform | < 420 | ug/l | 420 | 1720 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| tert-Butylbenzene | < 370 | ug/l | 370 | 1490 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| sec-Butylbenzene | < 330 | ug/l | 330 | 1340 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| n-Butylbenzene | < 710 | ug/l | 710 | 2900 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Carbon Tetrachloride | < 340 | ug/l | 340 | 1390 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Chlorobenzene | < 290 | ug/l | 290 | 1190 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Chloroethane | < 620 | ug/l | 620 | 2540 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Chloroform | < 330 | ug/l | 330 | 1330 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Chloromethane | < 740 | ug/l | 740 | 3030 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 2-Chlorotoluene | < 340 | ug/l | 340 | 1370 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 4-Chlorotoluene | < 400 | ug/l | 400 | 1630 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dibromo-3-chloropropane | < 740 | ug/l | 740 | 3010 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Dibromochloromethane | < 360 | ug/l | 360 | 1460 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,4-Dichlorobenzene | < 490 | ug/l | 490 | 2010 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,3-Dichlorobenzene | < 350 | ug/l | 350 | 1440 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dichlorobenzene | < 400 | ug/l | 400 | 1650 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Dichlorodifluoromethane | < 300 | ug/l | 300 | 1230 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dichloroethane | < 430 | ug/l | 430 | 1750 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1-Dichloroethane | < 430 | ug/l | 430 | 1740 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1-Dichloroethene | < 430 | ug/l | 430 | 1760 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| cis-1,2-Dichloroethene | 390 "J" | ug/l | 320 | 1290 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| trans-1,2-Dichloroethene | < 500 | ug/l | 500 | 2020 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dichloropropane | < 390 | ug/l | 390 | 1580 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,3-Dichloropropane | < 380 | ug/l | 380 | 1550 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| trans-1,3-Dichloropropene | < 410 | ug/l | 410 | 1670 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| cis-1,3-Dichloropropene | < 410 | ug/l | 410 | 1670 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Di-isopropyl ether | < 480 | ug/l | 480 | 1960 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| EDB (1,2-Dibromoethane) | < 390 | ug/l | 390 | 1590 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Ethylbenzene | < 330 | ug/l | 330 | 1370 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Hexachlorobutadiene | < 810 | ug/l | 810 | 3440 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Isopropylbenzene | < 340 | ug/l | 340 | 1380 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| p-Isopropyltoluene | < 470 | ug/l | 470 | 1910 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087D
**Sample ID** 200032-MW-14
**Sample Matrix** Water
**Sample Date** 10/17/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| Methylene chloride | < 790 | ug/l | 790 | 3230 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Methyl tert-butyl ether (MTBE) | < 470 | ug/l | 470 | 1910 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Naphthalene | < 1400 | ug/l | 1400 | 5560 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| n-Propylbenzene | < 390 | ug/l | 390 | 1600 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,2,2-Tetrachloroethane | < 430 | ug/l | 430 | 1770 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,1,2-Tetrachloroethane | < 550 | ug/l | 550 | 2250 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Tetrachloroethene | < 470 | ug/l | 470 | 1910 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Toluene | < 330 | ug/l | 330 | 1350 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2,4-Trichlorobenzene | < 630 | ug/l | 630 | 2570 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2,3-Trichlorobenzene | < 1400 | ug/l | 1400 | 5940 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,1-Trichloroethane | < 330 | ug/l | 330 | 1340 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,2-Trichloroethane | < 420 | ug/l | 420 | 1720 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Trichloroethene (TCE) | < 380 | ug/l | 380 | 1550 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Trichlorofluoromethane | < 330 | ug/l | 330 | 1350 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2,4-Trimethylbenzene | < 350 | ug/l | 350 | 1440 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,3,5-Trimethylbenzene | < 410 | ug/l | 410 | 1660 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Vinyl Chloride | 16300 | ug/l | 150 | 610 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| m&p-Xylene | < 640 | ug/l | 640 | 2630 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| o-Xylene | < 370 | ug/l | 370 | 1510 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - 1,2-Dichloroethane-d4 | 100 | REC % | | | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - 4-Bromofluorobenzene | 114 | REC % | | | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - Dibromofluoromethane | 99 | REC % | | | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - Toluene-d8 | 102 | REC % | | | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Wet Chemistry | | | | | | | | | | |
| General | | | | | | | | | | |
| Total Organic Carbon | 1020 | mg/l | 14 | 47 | 50 | SM 5310B | | 10/30/2023 | SL | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087E
**Sample ID** 200032-MW-15
**Sample Matrix** Water
**Sample Date** 10/17/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| **Organic** | | | | | | | | | | |
| **GASES** | | | | | | | | | | |
| Ethane | 65.3 | ug/l | 5 | 15 | 10 | 8015 | | 10/24/2023 | ZJW | 1 |
| Ethene | < 5 | ug/l | 5 | 15 | 10 | 8015 | | 10/24/2023 | ZJW | 1 |
| Methane | 4632 | ug/l | 10 | 30 | 10 | 8015 | | 10/24/2023 | ZJW | 1 |
| **VOC's** | | | | | | | | | | |
| Benzene | < 6 | ug/l | 6 | 25 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Bromobenzene | < 6.8 | ug/l | 6.8 | 28 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Bromodichloromethane | < 7.2 | ug/l | 7.2 | 29.4 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Bromoform | < 8.4 | ug/l | 8.4 | 34.4 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| tert-Butylbenzene | < 7.4 | ug/l | 7.4 | 29.8 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| sec-Butylbenzene | < 6.6 | ug/l | 6.6 | 26.8 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| n-Butylbenzene | < 14.2 | ug/l | 14.2 | 58 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Carbon Tetrachloride | < 6.8 | ug/l | 6.8 | 27.8 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Chlorobenzene | < 5.8 | ug/l | 5.8 | 23.8 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Chloroethane | < 12.4 | ug/l | 12.4 | 50.8 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Chloroform | < 6.6 | ug/l | 6.6 | 26.6 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Chloromethane | < 14.8 | ug/l | 14.8 | 60.6 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| 2-Chlorotoluene | < 6.8 | ug/l | 6.8 | 27.4 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| 4-Chlorotoluene | < 8 | ug/l | 8 | 32.6 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dibromo-3-chloropropane | < 14.8 | ug/l | 14.8 | 60.2 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Dibromochloromethane | < 7.2 | ug/l | 7.2 | 29.2 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,4-Dichlorobenzene | < 9.8 | ug/l | 9.8 | 40.2 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,3-Dichlorobenzene | < 7 | ug/l | 7 | 28.8 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dichlorobenzene | < 8 | ug/l | 8 | 33 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Dichlorodifluoromethane | < 6 | ug/l | 6 | 24.6 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dichloroethane | < 8.6 | ug/l | 8.6 | 35 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1-Dichloroethane | < 8.6 | ug/l | 8.6 | 34.8 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1-Dichloroethene | < 8.6 | ug/l | 8.6 | 35.2 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| cis-1,2-Dichloroethene | 55 | ug/l | 6.4 | 25.8 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| trans-1,2-Dichloroethene | < 10 | ug/l | 10 | 40.4 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dichloropropane | < 7.8 | ug/l | 7.8 | 31.6 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,3-Dichloropropane | < 7.6 | ug/l | 7.6 | 31 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| trans-1,3-Dichloropropene | < 8.2 | ug/l | 8.2 | 33.4 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| cis-1,3-Dichloropropene | < 8.2 | ug/l | 8.2 | 33.4 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Di-isopropyl ether | < 9.6 | ug/l | 9.6 | 39.2 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| EDB (1,2-Dibromoethane) | < 7.8 | ug/l | 7.8 | 31.8 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Ethylbenzene | < 6.6 | ug/l | 6.6 | 27.4 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Hexachlorobutadiene | < 16.2 | ug/l | 16.2 | 68.8 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Isopropylbenzene | < 6.8 | ug/l | 6.8 | 27.6 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| p-Isopropyltoluene | < 9.4 | ug/l | 9.4 | 38.2 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Methylene chloride | < 15.8 | ug/l | 15.8 | 64.6 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Methyl tert-butyl ether (MTBE) | < 9.4 | ug/l | 9.4 | 38.2 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Naphthalene | < 28 | ug/l | 28 | 111.2 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| n-Propylbenzene | < 7.8 | ug/l | 7.8 | 32 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,2,2-Tetrachloroethane | < 8.6 | ug/l | 8.6 | 35.4 | 20 | 8260B | | 10/21/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087E
**Sample ID** 200032-MW-15
**Sample Matrix** Water
**Sample Date** 10/17/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | < 11 | ug/l | 11 | 45 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Tetrachloroethene | < 9.4 | ug/l | 9.4 | 38.2 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Toluene | < 6.6 | ug/l | 6.6 | 27 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2,4-Trichlorobenzene | < 12.6 | ug/l | 12.6 | 51.4 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2,3-Trichlorobenzene | < 28 | ug/l | 28 | 118.8 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,1-Trichloroethane | < 6.6 | ug/l | 6.6 | 26.8 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,2-Trichloroethane | < 8.4 | ug/l | 8.4 | 34.4 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Trichloroethene (TCE) | < 7.6 | ug/l | 7.6 | 31 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Trichlorofluoromethane | < 6.6 | ug/l | 6.6 | 27 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2,4-Trimethylbenzene | < 7 | ug/l | 7 | 28.8 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,3,5-Trimethylbenzene | < 8.2 | ug/l | 8.2 | 33.2 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| Vinyl Chloride | 40 | ug/l | 3 | 12.2 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| m&p-Xylene | < 12.8 | ug/l | 12.8 | 52.6 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| o-Xylene | < 7.4 | ug/l | 7.4 | 30.2 | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - Dibromofluoromethane | 95 | REC % | | | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - Toluene-d8 | 98 | REC % | | | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - 4-Bromofluorobenzene | 106 | REC % | | | 20 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - 1,2-Dichloroethane-d4 | 104 | REC % | | | 20 | 8260B | | 10/21/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087F
**Sample ID** 200032-TW-20
**Sample Matrix** Water
**Sample Date** 10/18/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| **Organic** | | | | | | | | | | |
| **GASES** | | | | | | | | | | |
| Ethane | 1612 | ug/l | 0.5 | 1.5 | 1 | 8015 | | 10/24/2023 | ZJW | 1 |
| Ethene | 20.8 | ug/l | 0.5 | 1.5 | 1 | 8015 | | 10/24/2023 | ZJW | 1 |
| Methane | 109 | ug/l | 1 | 3 | 1 | 8015 | | 10/24/2023 | ZJW | 1 |
| **Semi Volatiles** | | | | | | | | | | |
| 1,4-Dioxane | < 0.17 | ug/l | 0.17 | 0.64 | 1 | 625 | 10/24/2023 | 10/24/2023 | NJC | 1 |
| 2-Fluorobiphenyl-surrogate | 19.2 | REC % | | | 1 | 625 | 10/24/2023 | 10/24/2023 | NJC | 1 |
| Nitrobenzene-d5-surrogate | 22.5 | REC % | | | 1 | 625 | 10/24/2023 | 10/24/2023 | NJC | 1 |
| p-Terphenyl-d14-surrogate | 20.2 | REC % | | | 1 | 625 | 10/24/2023 | 10/24/2023 | NJC | 1 |
| **VOC's** | | | | | | | | | | |
| Benzene | < 300 | ug/l | 300 | 1250 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Bromobenzene | < 340 | ug/l | 340 | 1400 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Bromodichloromethane | < 360 | ug/l | 360 | 1470 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Bromoform | < 420 | ug/l | 420 | 1720 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| tert-Butylbenzene | < 370 | ug/l | 370 | 1490 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| sec-Butylbenzene | < 330 | ug/l | 330 | 1340 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| n-Butylbenzene | < 710 | ug/l | 710 | 2900 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Carbon Tetrachloride | < 340 | ug/l | 340 | 1390 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Chlorobenzene | < 290 | ug/l | 290 | 1190 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Chloroethane | < 620 | ug/l | 620 | 2540 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Chloroform | < 330 | ug/l | 330 | 1330 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Chloromethane | < 740 | ug/l | 740 | 3030 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 2-Chlorotoluene | < 340 | ug/l | 340 | 1370 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 4-Chlorotoluene | < 400 | ug/l | 400 | 1630 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dibromo-3-chloropropane | < 740 | ug/l | 740 | 3010 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Dibromochloromethane | < 360 | ug/l | 360 | 1460 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,4-Dichlorobenzene | < 490 | ug/l | 490 | 2010 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,3-Dichlorobenzene | < 350 | ug/l | 350 | 1440 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dichlorobenzene | < 400 | ug/l | 400 | 1650 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Dichlorodifluoromethane | < 300 | ug/l | 300 | 1230 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dichloroethane | < 430 | ug/l | 430 | 1750 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1-Dichloroethane | 500 "J" | ug/l | 430 | 1740 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1-Dichloroethene | 580 "J" | ug/l | 430 | 1760 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| cis-1,2-Dichloroethene | 201000 | ug/l | 320 | 1290 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| trans-1,2-Dichloroethene | 1300 "J" | ug/l | 500 | 2020 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dichloropropane | < 390 | ug/l | 390 | 1580 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,3-Dichloropropane | < 380 | ug/l | 380 | 1550 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| trans-1,3-Dichloropropene | < 410 | ug/l | 410 | 1670 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| cis-1,3-Dichloropropene | < 410 | ug/l | 410 | 1670 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Di-isopropyl ether | < 480 | ug/l | 480 | 1960 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| EDB (1,2-Dibromoethane) | < 390 | ug/l | 390 | 1590 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Ethylbenzene | < 330 | ug/l | 330 | 1370 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Hexachlorobutadiene | < 810 | ug/l | 810 | 3440 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Isopropylbenzene | < 340 | ug/l | 340 | 1380 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| p-Isopropyltoluene | < 470 | ug/l | 470 | 1910 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087F
**Sample ID** 200032-TW-20
**Sample Matrix** Water
**Sample Date** 10/18/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| Methylene chloride | < 790 | ug/l | 790 | 3230 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Methyl tert-butyl ether (MTBE) | < 470 | ug/l | 470 | 1910 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Naphthalene | < 1400 | ug/l | 1400 | 5560 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| n-Propylbenzene | < 390 | ug/l | 390 | 1600 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,2,2-Tetrachloroethane | < 430 | ug/l | 430 | 1770 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,1,2-Tetrachloroethane | < 550 | ug/l | 550 | 2250 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Tetrachloroethene | < 470 | ug/l | 470 | 1910 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Toluene | < 330 | ug/l | 330 | 1350 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2,4-Trichlorobenzene | < 630 | ug/l | 630 | 2570 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2,3-Trichlorobenzene | < 1400 | ug/l | 1400 | 5940 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,1-Trichloroethane | < 330 | ug/l | 330 | 1340 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,2-Trichloroethane | < 420 | ug/l | 420 | 1720 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Trichloroethene (TCE) | 182000 | ug/l | 380 | 1550 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Trichlorofluoromethane | < 330 | ug/l | 330 | 1350 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2,4-Trimethylbenzene | < 350 | ug/l | 350 | 1440 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,3,5-Trimethylbenzene | < 410 | ug/l | 410 | 1660 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| Vinyl Chloride | 42000 | ug/l | 150 | 610 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| m&p-Xylene | < 640 | ug/l | 640 | 2630 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| o-Xylene | < 370 | ug/l | 370 | 1510 | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - 4-Bromofluorobenzene | 100 | REC % | | | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - Dibromofluoromethane | 100 | REC % | | | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - Toluene-d8 | 97 | REC % | | | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - 1,2-Dichloroethane-d4 | 104 | REC % | | | 1000 | 8260B | | 10/21/2023 | CJR | 1 |
| **Wet Chemistry** | | | | | | | | | | |
| **General** | | | | | | | | | | |
| Total Organic Carbon | 233 | mg/l | 2.8 | 9.4 | 10 | SM 5310B | | 10/30/2023 | SL | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087G
**Sample ID** 200032-TW-21
**Sample Matrix** Water
**Sample Date** 10/18/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| **Organic** | | | | | | | | | | |
| **GASES** | | | | | | | | | | |
| Ethane | 207 | ug/l | 5 | 15 | 10 | 8015 | | 10/24/2023 | ZJW | 1 |
| Ethene | < 5 | ug/l | 5 | 15 | 10 | 8015 | | 10/24/2023 | ZJW | 1 |
| Methane | 4475 | ug/l | 10 | 30 | 10 | 8015 | | 10/24/2023 | ZJW | 1 |
| **VOC's** | | | | | | | | | | |
| Benzene | < 1.5 | ug/l | 1.5 | 6.25 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Bromobenzene | < 1.7 | ug/l | 1.7 | 7 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Bromodichloromethane | < 1.8 | ug/l | 1.8 | 7.35 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Bromoform | < 2.1 | ug/l | 2.1 | 8.6 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| tert-Butylbenzene | < 1.85 | ug/l | 1.85 | 7.45 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| sec-Butylbenzene | < 1.65 | ug/l | 1.65 | 6.7 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| n-Butylbenzene | < 3.55 | ug/l | 3.55 | 14.5 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Carbon Tetrachloride | < 1.7 | ug/l | 1.7 | 6.95 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Chlorobenzene | < 1.45 | ug/l | 1.45 | 5.95 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Chloroethane | < 3.1 | ug/l | 3.1 | 12.7 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Chloroform | < 1.65 | ug/l | 1.65 | 6.65 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Chloromethane | < 3.7 | ug/l | 3.7 | 15.15 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| 2-Chlorotoluene | < 1.7 | ug/l | 1.7 | 6.85 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| 4-Chlorotoluene | < 2 | ug/l | 2 | 8.15 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dibromo-3-chloropropane | < 3.7 | ug/l | 3.7 | 15.05 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Dibromochloromethane | < 1.8 | ug/l | 1.8 | 7.3 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,4-Dichlorobenzene | < 2.45 | ug/l | 2.45 | 10.05 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,3-Dichlorobenzene | < 1.75 | ug/l | 1.75 | 7.2 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dichlorobenzene | < 2 | ug/l | 2 | 8.25 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Dichlorodifluoromethane | < 1.5 | ug/l | 1.5 | 6.15 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dichloroethane | < 2.15 | ug/l | 2.15 | 8.75 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1-Dichloroethane | < 2.15 | ug/l | 2.15 | 8.7 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1-Dichloroethene | < 2.15 | ug/l | 2.15 | 8.8 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| cis-1,2-Dichloroethene | 74 | ug/l | 1.6 | 6.45 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| trans-1,2-Dichloroethene | 10.9 | ug/l | 2.5 | 10.1 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dichloropropane | < 1.95 | ug/l | 1.95 | 7.9 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,3-Dichloropropane | < 1.9 | ug/l | 1.9 | 7.75 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| trans-1,3-Dichloropropene | < 2.05 | ug/l | 2.05 | 8.35 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| cis-1,3-Dichloropropene | < 2.05 | ug/l | 2.05 | 8.35 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Di-isopropyl ether | < 2.4 | ug/l | 2.4 | 9.8 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| EDB (1,2-Dibromoethane) | < 1.95 | ug/l | 1.95 | 7.95 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Ethylbenzene | < 1.65 | ug/l | 1.65 | 6.85 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Hexachlorobutadiene | < 4.05 | ug/l | 4.05 | 17.2 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Isopropylbenzene | < 1.7 | ug/l | 1.7 | 6.9 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| p-Isopropyltoluene | < 2.35 | ug/l | 2.35 | 9.55 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Methylene chloride | < 3.95 | ug/l | 3.95 | 16.15 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Methyl tert-butyl ether (MTBE) | < 2.35 | ug/l | 2.35 | 9.55 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Naphthalene | < 7 | ug/l | 7 | 27.8 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| n-Propylbenzene | < 1.95 | ug/l | 1.95 | 8 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,2,2-Tetrachloroethane | < 2.15 | ug/l | 2.15 | 8.85 | 5 | 8260B | | 10/21/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087G
**Sample ID** 200032-TW-21
**Sample Matrix** Water
**Sample Date** 10/18/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | < 2.75 | ug/l | 2.75 | 11.25 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Tetrachloroethene | < 2.35 | ug/l | 2.35 | 9.55 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Toluene | 4.2 "J" | ug/l | 1.65 | 6.75 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2,4-Trichlorobenzene | < 3.15 | ug/l | 3.15 | 12.85 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2,3-Trichlorobenzene | < 7 | ug/l | 7 | 29.7 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,1-Trichloroethane | < 1.65 | ug/l | 1.65 | 6.7 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,2-Trichloroethane | < 2.1 | ug/l | 2.1 | 8.6 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Trichloroethene (TCE) | 11.9 | ug/l | 1.9 | 7.75 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Trichlorofluoromethane | < 1.65 | ug/l | 1.65 | 6.75 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2,4-Trimethylbenzene | < 1.75 | ug/l | 1.75 | 7.2 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,3,5-Trimethylbenzene | < 2.05 | ug/l | 2.05 | 8.3 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Vinyl Chloride | 72 | ug/l | 0.75 | 3.05 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| m&p-Xylene | < 3.2 | ug/l | 3.2 | 13.15 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| o-Xylene | < 1.85 | ug/l | 1.85 | 7.55 | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - 1,2-Dichloroethane-d4 | 92 | REC % | | | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - 4-Bromofluorobenzene | 103 | REC % | | | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - Dibromofluoromethane | 95 | REC % | | | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - Toluene-d8 | 97 | REC % | | | 5 | 8260B | | 10/21/2023 | CJR | 1 |
| Wet Chemistry | | | | | | | | | | |
| General | | | | | | | | | | |
| Total Organic Carbon | 93.0 | mg/l | 2.8 | 9.4 | 10 | SM 5310B | | 10/30/2023 | SL | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087H
**Sample ID** 200032-TW-22
**Sample Matrix** Water
**Sample Date** 10/18/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| Organic | | | | | | | | | | |
| GASES | | | | | | | | | | |
| Ethane | 4.08 | ug/l | 0.5 | 1.5 | 1 | 8015 | | 10/24/2023 | ZJW | 1 |
| Ethene | < 0.5 | ug/l | 0.5 | 1.5 | 1 | 8015 | | 10/24/2023 | ZJW | 1 |
| Methane | 40.1 | ug/l | 1 | 3 | 1 | 8015 | | 10/24/2023 | ZJW | 1 |
| VOC's | | | | | | | | | | |
| Benzene | < 3 | ug/l | 3 | 12.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Bromobenzene | < 3.4 | ug/l | 3.4 | 14 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Bromodichloromethane | < 3.6 | ug/l | 3.6 | 14.7 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Bromoform | < 4.2 | ug/l | 4.2 | 17.2 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| tert-Butylbenzene | < 3.7 | ug/l | 3.7 | 14.9 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| sec-Butylbenzene | < 3.3 | ug/l | 3.3 | 13.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| n-Butylbenzene | < 7.1 | ug/l | 7.1 | 29 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Carbon Tetrachloride | < 3.4 | ug/l | 3.4 | 13.9 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Chlorobenzene | < 2.9 | ug/l | 2.9 | 11.9 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Chloroethane | < 6.2 | ug/l | 6.2 | 25.4 | 10 | 8260B | | 10/21/2023 | CJR | 2 |
| Chloroform | < 3.3 | ug/l | 3.3 | 13.3 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Chloromethane | < 7.4 | ug/l | 7.4 | 30.3 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 2-Chlorotoluene | < 3.4 | ug/l | 3.4 | 13.7 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 4-Chlorotoluene | < 4 | ug/l | 4 | 16.3 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dibromo-3-chloropropane | < 7.4 | ug/l | 7.4 | 30.1 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Dibromochloromethane | < 3.6 | ug/l | 3.6 | 14.6 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,4-Dichlorobenzene | < 4.9 | ug/l | 4.9 | 20.1 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,3-Dichlorobenzene | < 3.5 | ug/l | 3.5 | 14.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dichlorobenzene | < 4 | ug/l | 4 | 16.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Dichlorodifluoromethane | < 3 | ug/l | 3 | 12.3 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dichloroethane | < 4.3 | ug/l | 4.3 | 17.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1-Dichloroethane | < 4.3 | ug/l | 4.3 | 17.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1-Dichloroethene | < 4.3 | ug/l | 4.3 | 17.6 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| cis-1,2-Dichloroethene | 164 | ug/l | 3.2 | 12.9 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| trans-1,2-Dichloroethene | 16.5 "J" | ug/l | 5 | 20.2 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dichloropropane | < 3.9 | ug/l | 3.9 | 15.8 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,3-Dichloropropane | < 3.8 | ug/l | 3.8 | 15.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| trans-1,3-Dichloropropene | < 4.1 | ug/l | 4.1 | 16.7 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| cis-1,3-Dichloropropene | < 4.1 | ug/l | 4.1 | 16.7 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Di-isopropyl ether | < 4.8 | ug/l | 4.8 | 19.6 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| EDB (1,2-Dibromoethane) | < 3.9 | ug/l | 3.9 | 15.9 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Ethylbenzene | < 3.3 | ug/l | 3.3 | 13.7 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Hexachlorobutadiene | < 8.1 | ug/l | 8.1 | 34.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Isopropylbenzene | < 3.4 | ug/l | 3.4 | 13.8 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| p-Isopropyltoluene | < 4.7 | ug/l | 4.7 | 19.1 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Methylene chloride | < 7.9 | ug/l | 7.9 | 32.3 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Methyl tert-butyl ether (MTBE) | < 4.7 | ug/l | 4.7 | 19.1 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Naphthalene | < 14 | ug/l | 14 | 55.6 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| n-Propylbenzene | < 3.9 | ug/l | 3.9 | 16 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,2,2-Tetrachloroethane | < 4.3 | ug/l | 4.3 | 17.7 | 10 | 8260B | | 10/21/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087H
**Sample ID** 200032-TW-22
**Sample Matrix** Water
**Sample Date** 10/18/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | < 5.5 | ug/l | 5.5 | 22.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Tetrachloroethene | < 4.7 | ug/l | 4.7 | 19.1 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Toluene | < 3.3 | ug/l | 3.3 | 13.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2,4-Trichlorobenzene | < 6.3 | ug/l | 6.3 | 25.7 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2,3-Trichlorobenzene | < 14 | ug/l | 14 | 59.4 | 10 | 8260B | | 10/21/2023 | CJR | 2 |
| 1,1,1-Trichloroethane | < 3.3 | ug/l | 3.3 | 13.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,2-Trichloroethane | < 4.2 | ug/l | 4.2 | 17.2 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Trichloroethene (TCE) | 4.8 "J" | ug/l | 3.8 | 15.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Trichlorofluoromethane | < 3.3 | ug/l | 3.3 | 13.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2,4-Trimethylbenzene | < 3.5 | ug/l | 3.5 | 14.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,3,5-Trimethylbenzene | < 4.1 | ug/l | 4.1 | 16.6 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Vinyl Chloride | 510 | ug/l | 1.5 | 6.1 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| m&p-Xylene | < 6.4 | ug/l | 6.4 | 26.3 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| o-Xylene | < 3.7 | ug/l | 3.7 | 15.1 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - 1,2-Dichloroethane-d4 | 103 | REC % | | | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - 4-Bromofluorobenzene | 96 | REC % | | | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - Dibromofluoromethane | 101 | REC % | | | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - Toluene-d8 | 98 | REC % | | | 10 | 8260B | | 10/21/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087I
**Sample ID** 200032-TW-23
**Sample Matrix** Water
**Sample Date** 10/18/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| **Organic** | | | | | | | | | | |
| **GASES** | | | | | | | | | | |
| Ethane | < 5 | ug/l | 5 | 15 | 10 | 8015 | | 10/24/2023 | ZJW | 1 |
| Ethene | < 5 | ug/l | 5 | 15 | 10 | 8015 | | 10/24/2023 | ZJW | 1 |
| Methane | 3973 | ug/l | 10 | 30 | 10 | 8015 | | 10/24/2023 | ZJW | 1 |
| **VOC's** | | | | | | | | | | |
| Benzene | < 3 | ug/l | 3 | 12.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Bromobenzene | < 3.4 | ug/l | 3.4 | 14 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Bromodichloromethane | < 3.6 | ug/l | 3.6 | 14.7 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Bromoform | < 4.2 | ug/l | 4.2 | 17.2 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| tert-Butylbenzene | < 3.7 | ug/l | 3.7 | 14.9 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| sec-Butylbenzene | < 3.3 | ug/l | 3.3 | 13.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| n-Butylbenzene | < 7.1 | ug/l | 7.1 | 29 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Carbon Tetrachloride | < 3.4 | ug/l | 3.4 | 13.9 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Chlorobenzene | < 2.9 | ug/l | 2.9 | 11.9 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Chloroethane | < 6.2 | ug/l | 6.2 | 25.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Chloroform | < 3.3 | ug/l | 3.3 | 13.3 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Chloromethane | < 7.4 | ug/l | 7.4 | 30.3 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 2-Chlorotoluene | < 3.4 | ug/l | 3.4 | 13.7 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 4-Chlorotoluene | < 4 | ug/l | 4 | 16.3 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dibromo-3-chloropropane | < 7.4 | ug/l | 7.4 | 30.1 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Dibromochloromethane | < 3.6 | ug/l | 3.6 | 14.6 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,4-Dichlorobenzene | < 4.9 | ug/l | 4.9 | 20.1 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,3-Dichlorobenzene | < 3.5 | ug/l | 3.5 | 14.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dichlorobenzene | < 4 | ug/l | 4 | 16.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Dichlorodifluoromethane | < 3 | ug/l | 3 | 12.3 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dichloroethane | < 4.3 | ug/l | 4.3 | 17.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1-Dichloroethane | < 4.3 | ug/l | 4.3 | 17.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1-Dichloroethene | < 4.3 | ug/l | 4.3 | 17.6 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| cis-1,2-Dichloroethene | 43 | ug/l | 3.2 | 12.9 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| trans-1,2-Dichloroethene | < 5 | ug/l | 5 | 20.2 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dichloropropane | < 3.9 | ug/l | 3.9 | 15.8 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,3-Dichloropropane | < 3.8 | ug/l | 3.8 | 15.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| trans-1,3-Dichloropropene | < 4.1 | ug/l | 4.1 | 16.7 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| cis-1,3-Dichloropropene | < 4.1 | ug/l | 4.1 | 16.7 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Di-isopropyl ether | < 4.8 | ug/l | 4.8 | 19.6 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| EDB (1,2-Dibromoethane) | < 3.9 | ug/l | 3.9 | 15.9 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Ethylbenzene | < 3.3 | ug/l | 3.3 | 13.7 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Hexachlorobutadiene | < 8.1 | ug/l | 8.1 | 34.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Isopropylbenzene | < 3.4 | ug/l | 3.4 | 13.8 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| p-Isopropyltoluene | < 4.7 | ug/l | 4.7 | 19.1 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Methylene chloride | < 7.9 | ug/l | 7.9 | 32.3 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Methyl tert-butyl ether (MTBE) | < 4.7 | ug/l | 4.7 | 19.1 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Naphthalene | < 14 | ug/l | 14 | 55.6 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| n-Propylbenzene | < 3.9 | ug/l | 3.9 | 16 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,2,2-Tetrachloroethane | < 4.3 | ug/l | 4.3 | 17.7 | 10 | 8260B | | 10/21/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087I
**Sample ID** 200032-TW-23
**Sample Matrix** Water
**Sample Date** 10/18/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | < 5.5 | ug/l | 5.5 | 22.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Tetrachloroethene | < 4.7 | ug/l | 4.7 | 19.1 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Toluene | < 3.3 | ug/l | 3.3 | 13.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2,4-Trichlorobenzene | < 6.3 | ug/l | 6.3 | 25.7 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2,3-Trichlorobenzene | < 14 | ug/l | 14 | 59.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,1-Trichloroethane | < 3.3 | ug/l | 3.3 | 13.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,2-Trichloroethane | < 4.2 | ug/l | 4.2 | 17.2 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Trichloroethene (TCE) | < 3.8 | ug/l | 3.8 | 15.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Trichlorofluoromethane | < 3.3 | ug/l | 3.3 | 13.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2,4-Trimethylbenzene | < 3.5 | ug/l | 3.5 | 14.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,3,5-Trimethylbenzene | < 4.1 | ug/l | 4.1 | 16.6 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Vinyl Chloride | 25.2 | ug/l | 1.5 | 6.1 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| m&p-Xylene | < 6.4 | ug/l | 6.4 | 26.3 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| o-Xylene | < 3.7 | ug/l | 3.7 | 15.1 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - Dibromofluoromethane | 97 | REC % | | | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - 4-Bromofluorobenzene | 115 | REC % | | | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - 1,2-Dichloroethane-d4 | 95 | REC % | | | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - Toluene-d8 | 100 | REC % | | | 10 | 8260B | | 10/21/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087J
**Sample ID** 200032-TW-24
**Sample Matrix** Water
**Sample Date** 10/18/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| Organic | | | | | | | | | | |
| GASES | | | | | | | | | | |
| Ethane | 523 | ug/l | 0.5 | 1.5 | 1 | 8015 | | 10/24/2023 | ZJW | 1 |
| Ethene | < 0.5 | ug/l | 0.5 | 1.5 | 1 | 8015 | | 10/24/2023 | ZJW | 1 |
| Methane | 164 | ug/l | 1 | 3 | 1 | 8015 | | 10/24/2023 | ZJW | 1 |
| VOC's | | | | | | | | | | |
| Benzene | < 3 | ug/l | 3 | 12.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Bromobenzene | < 3.4 | ug/l | 3.4 | 14 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Bromodichloromethane | < 3.6 | ug/l | 3.6 | 14.7 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Bromoform | < 4.2 | ug/l | 4.2 | 17.2 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| tert-Butylbenzene | < 3.7 | ug/l | 3.7 | 14.9 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| sec-Butylbenzene | < 3.3 | ug/l | 3.3 | 13.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| n-Butylbenzene | < 7.1 | ug/l | 7.1 | 29 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Carbon Tetrachloride | < 3.4 | ug/l | 3.4 | 13.9 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Chlorobenzene | < 2.9 | ug/l | 2.9 | 11.9 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Chloroethane | < 6.2 | ug/l | 6.2 | 25.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Chloroform | 5.3 "J" | ug/l | 3.3 | 13.3 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Chloromethane | < 7.4 | ug/l | 7.4 | 30.3 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 2-Chlorotoluene | < 3.4 | ug/l | 3.4 | 13.7 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 4-Chlorotoluene | < 4 | ug/l | 4 | 16.3 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dibromo-3-chloropropane | < 7.4 | ug/l | 7.4 | 30.1 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Dibromochloromethane | < 3.6 | ug/l | 3.6 | 14.6 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,4-Dichlorobenzene | < 4.9 | ug/l | 4.9 | 20.1 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,3-Dichlorobenzene | < 3.5 | ug/l | 3.5 | 14.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dichlorobenzene | < 4 | ug/l | 4 | 16.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Dichlorodifluoromethane | 22 | ug/l | 3 | 12.3 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dichloroethane | < 4.3 | ug/l | 4.3 | 17.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1-Dichloroethane | < 4.3 | ug/l | 4.3 | 17.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1-Dichloroethene | 19.1 | ug/l | 4.3 | 17.6 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| cis-1,2-Dichloroethene | 510 | ug/l | 3.2 | 12.9 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| trans-1,2-Dichloroethene | 17.6 "J" | ug/l | 5 | 20.2 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2-Dichloropropane | < 3.9 | ug/l | 3.9 | 15.8 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,3-Dichloropropane | < 3.8 | ug/l | 3.8 | 15.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| trans-1,3-Dichloropropene | < 4.1 | ug/l | 4.1 | 16.7 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| cis-1,3-Dichloropropene | < 4.1 | ug/l | 4.1 | 16.7 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Di-isopropyl ether | < 4.8 | ug/l | 4.8 | 19.6 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| EDB (1,2-Dibromoethane) | < 3.9 | ug/l | 3.9 | 15.9 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Ethylbenzene | < 3.3 | ug/l | 3.3 | 13.7 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Hexachlorobutadiene | < 8.1 | ug/l | 8.1 | 34.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Isopropylbenzene | < 3.4 | ug/l | 3.4 | 13.8 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| p-Isopropyltoluene | < 4.7 | ug/l | 4.7 | 19.1 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Methylene chloride | 9.3 "J" | ug/l | 7.9 | 32.3 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Methyl tert-butyl ether (MTBE) | < 4.7 | ug/l | 4.7 | 19.1 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Naphthalene | < 14 | ug/l | 14 | 55.6 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| n-Propylbenzene | < 3.9 | ug/l | 3.9 | 16 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,2,2-Tetrachloroethane | < 4.3 | ug/l | 4.3 | 17.7 | 10 | 8260B | | 10/21/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087J
**Sample ID** 200032-TW-24
**Sample Matrix** Water
**Sample Date** 10/18/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | < 5.5 | ug/l | 5.5 | 22.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Tetrachloroethene | < 4.7 | ug/l | 4.7 | 19.1 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Toluene | < 3.3 | ug/l | 3.3 | 13.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2,4-Trichlorobenzene | < 6.3 | ug/l | 6.3 | 25.7 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2,3-Trichlorobenzene | < 14 | ug/l | 14 | 59.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,1-Trichloroethane | < 3.3 | ug/l | 3.3 | 13.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,1,2-Trichloroethane | < 4.2 | ug/l | 4.2 | 17.2 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Trichloroethene (TCE) | 360 | ug/l | 3.8 | 15.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Trichlorofluoromethane | < 3.3 | ug/l | 3.3 | 13.5 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,2,4-Trimethylbenzene | < 3.5 | ug/l | 3.5 | 14.4 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| 1,3,5-Trimethylbenzene | < 4.1 | ug/l | 4.1 | 16.6 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| Vinyl Chloride | 132 | ug/l | 1.5 | 6.1 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| m&p-Xylene | < 6.4 | ug/l | 6.4 | 26.3 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| o-Xylene | < 3.7 | ug/l | 3.7 | 15.1 | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - 1,2-Dichloroethane-d4 | 95 | REC % | | | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - 4-Bromofluorobenzene | 104 | REC % | | | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - Dibromofluoromethane | 97 | REC % | | | 10 | 8260B | | 10/21/2023 | CJR | 1 |
| SUR - Toluene-d8 | 98 | REC % | | | 10 | 8260B | | 10/21/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087K
**Sample ID** 200032-SUMP-1
**Sample Matrix** Water
**Sample Date** 10/19/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| Organic | | | | | | | | | | |
| VOC's | | | | | | | | | | |
| Benzene | < 0.3 | ug/l | 0.3 | 1.25 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Bromobenzene | < 0.34 | ug/l | 0.34 | 1.4 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Bromodichloromethane | < 0.36 | ug/l | 0.36 | 1.47 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Bromoform | < 0.42 | ug/l | 0.42 | 1.72 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| tert-Butylbenzene | < 0.37 | ug/l | 0.37 | 1.49 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| sec-Butylbenzene | < 0.33 | ug/l | 0.33 | 1.34 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| n-Butylbenzene | < 0.71 | ug/l | 0.71 | 2.9 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Carbon Tetrachloride | < 0.34 | ug/l | 0.34 | 1.39 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Chlorobenzene | < 0.29 | ug/l | 0.29 | 1.19 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Chloroethane | < 0.62 | ug/l | 0.62 | 2.54 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Chloroform | < 0.33 | ug/l | 0.33 | 1.33 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Chloromethane | < 0.74 | ug/l | 0.74 | 3.03 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 2-Chlorotoluene | < 0.34 | ug/l | 0.34 | 1.37 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 4-Chlorotoluene | < 0.4 | ug/l | 0.4 | 1.63 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,2-Dibromo-3-chloropropane | < 0.74 | ug/l | 0.74 | 3.01 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Dibromochloromethane | < 0.36 | ug/l | 0.36 | 1.46 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,4-Dichlorobenzene | < 0.49 | ug/l | 0.49 | 2.01 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,3-Dichlorobenzene | < 0.35 | ug/l | 0.35 | 1.44 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,2-Dichlorobenzene | < 0.4 | ug/l | 0.4 | 1.65 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Dichlorodifluoromethane | < 0.3 | ug/l | 0.3 | 1.23 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,2-Dichloroethane | < 0.43 | ug/l | 0.43 | 1.75 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,1-Dichloroethane | < 0.43 | ug/l | 0.43 | 1.74 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,1-Dichloroethene | < 0.43 | ug/l | 0.43 | 1.76 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| cis-1,2-Dichloroethene | 7.7 | ug/l | 0.32 | 1.29 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| trans-1,2-Dichloroethene | < 0.5 | ug/l | 0.5 | 2.02 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,2-Dichloropropane | < 0.39 | ug/l | 0.39 | 1.58 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,3-Dichloropropane | < 0.38 | ug/l | 0.38 | 1.55 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| trans-1,3-Dichloropropene | < 0.41 | ug/l | 0.41 | 1.67 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| cis-1,3-Dichloropropene | < 0.41 | ug/l | 0.41 | 1.67 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Di-isopropyl ether | < 0.48 | ug/l | 0.48 | 1.96 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| EDB (1,2-Dibromoethane) | < 0.39 | ug/l | 0.39 | 1.59 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Ethylbenzene | < 0.33 | ug/l | 0.33 | 1.37 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Hexachlorobutadiene | < 0.81 | ug/l | 0.81 | 3.44 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Isopropylbenzene | < 0.34 | ug/l | 0.34 | 1.38 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| p-Isopropyltoluene | < 0.47 | ug/l | 0.47 | 1.91 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Methylene chloride | < 0.79 | ug/l | 0.79 | 3.23 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Methyl tert-butyl ether (MTBE) | < 0.47 | ug/l | 0.47 | 1.91 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Naphthalene | < 1.4 | ug/l | 1.4 | 5.56 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| n-Propylbenzene | < 0.39 | ug/l | 0.39 | 1.6 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,1,2,2-Tetrachloroethane | < 0.43 | ug/l | 0.43 | 1.77 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,1,1,2-Tetrachloroethane | < 0.55 | ug/l | 0.55 | 2.25 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Tetrachloroethene | < 0.47 | ug/l | 0.47 | 1.91 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Toluene | < 0.33 | ug/l | 0.33 | 1.35 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,2,4-Trichlorobenzene | < 0.63 | ug/l | 0.63 | 2.57 | 1 | 8260B | | 10/23/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087K
**Sample ID** 200032-SUMP-1
**Sample Matrix** Water
**Sample Date** 10/19/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichlorobenzene | < 1.4 | ug/l | 1.4 | 5.94 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,1,1-Trichloroethane | < 0.33 | ug/l | 0.33 | 1.34 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,1,2-Trichloroethane | < 0.42 | ug/l | 0.42 | 1.72 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Trichloroethene (TCE) | 12.9 | ug/l | 0.38 | 1.55 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Trichlorofluoromethane | < 0.33 | ug/l | 0.33 | 1.35 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,2,4-Trimethylbenzene | < 0.35 | ug/l | 0.35 | 1.44 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,3,5-Trimethylbenzene | < 0.41 | ug/l | 0.41 | 1.66 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Vinyl Chloride | < 0.15 | ug/l | 0.15 | 0.61 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| m&p-Xylene | < 0.64 | ug/l | 0.64 | 2.63 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| o-Xylene | < 0.37 | ug/l | 0.37 | 1.51 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| SUR - Dibromofluoromethane | 97 | REC % | | | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| SUR - Toluene-d8 | 94 | REC % | | | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| SUR - 4-Bromofluorobenzene | 105 | REC % | | | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| SUR - 1,2-Dichloroethane-d4 | 102 | REC % | | | 1 | 8260B | | 10/23/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087L
**Sample ID** 200032-SUMP-2
**Sample Matrix** Water
**Sample Date** 10/19/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| Organic | | | | | | | | | | |
| VOC's | | | | | | | | | | |
| Benzene | < 0.3 | ug/l | 0.3 | 1.25 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Bromobenzene | < 0.34 | ug/l | 0.34 | 1.4 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Bromodichloromethane | < 0.36 | ug/l | 0.36 | 1.47 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Bromoform | < 0.42 | ug/l | 0.42 | 1.72 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| tert-Butylbenzene | < 0.37 | ug/l | 0.37 | 1.49 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| sec-Butylbenzene | < 0.33 | ug/l | 0.33 | 1.34 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| n-Butylbenzene | < 0.71 | ug/l | 0.71 | 2.9 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Carbon Tetrachloride | < 0.34 | ug/l | 0.34 | 1.39 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Chlorobenzene | < 0.29 | ug/l | 0.29 | 1.19 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Chloroethane | < 0.62 | ug/l | 0.62 | 2.54 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Chloroform | < 0.33 | ug/l | 0.33 | 1.33 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Chloromethane | < 0.74 | ug/l | 0.74 | 3.03 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 2-Chlorotoluene | < 0.34 | ug/l | 0.34 | 1.37 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 4-Chlorotoluene | < 0.4 | ug/l | 0.4 | 1.63 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2-Dibromo-3-chloropropane | < 0.74 | ug/l | 0.74 | 3.01 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Dibromochloromethane | < 0.36 | ug/l | 0.36 | 1.46 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,4-Dichlorobenzene | < 0.49 | ug/l | 0.49 | 2.01 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,3-Dichlorobenzene | < 0.35 | ug/l | 0.35 | 1.44 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2-Dichlorobenzene | < 0.4 | ug/l | 0.4 | 1.65 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Dichlorodifluoromethane | < 0.3 | ug/l | 0.3 | 1.23 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2-Dichloroethane | < 0.43 | ug/l | 0.43 | 1.75 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,1-Dichloroethane | < 0.43 | ug/l | 0.43 | 1.74 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,1-Dichloroethene | < 0.43 | ug/l | 0.43 | 1.76 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| cis-1,2-Dichloroethene | 13.5 | ug/l | 0.32 | 1.29 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| trans-1,2-Dichloroethene | < 0.5 | ug/l | 0.5 | 2.02 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2-Dichloropropane | < 0.39 | ug/l | 0.39 | 1.58 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,3-Dichloropropane | < 0.38 | ug/l | 0.38 | 1.55 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| trans-1,3-Dichloropropene | < 0.41 | ug/l | 0.41 | 1.67 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| cis-1,3-Dichloropropene | < 0.41 | ug/l | 0.41 | 1.67 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Di-isopropyl ether | < 0.48 | ug/l | 0.48 | 1.96 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| EDB (1,2-Dibromoethane) | < 0.39 | ug/l | 0.39 | 1.59 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Ethylbenzene | < 0.33 | ug/l | 0.33 | 1.37 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Hexachlorobutadiene | < 0.81 | ug/l | 0.81 | 3.44 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Isopropylbenzene | < 0.34 | ug/l | 0.34 | 1.38 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| p-Isopropyltoluene | < 0.47 | ug/l | 0.47 | 1.91 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Methylene chloride | < 0.79 | ug/l | 0.79 | 3.23 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Methyl tert-butyl ether (MTBE) | < 0.47 | ug/l | 0.47 | 1.91 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Naphthalene | < 1.4 | ug/l | 1.4 | 5.56 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| n-Propylbenzene | < 0.39 | ug/l | 0.39 | 1.6 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,1,2,2-Tetrachloroethane | < 0.43 | ug/l | 0.43 | 1.77 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,1,1,2-Tetrachloroethane | < 0.55 | ug/l | 0.55 | 2.25 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Tetrachloroethene | < 0.47 | ug/l | 0.47 | 1.91 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Toluene | < 0.33 | ug/l | 0.33 | 1.35 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2,4-Trichlorobenzene | < 0.63 | ug/l | 0.63 | 2.57 | 1 | 8260B | | 10/20/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087L
**Sample ID** 200032-SUMP-2
**Sample Matrix** Water
**Sample Date** 10/19/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichlorobenzene | < 1.4 | ug/l | 1.4 | 5.94 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,1,1-Trichloroethane | < 0.33 | ug/l | 0.33 | 1.34 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,1,2-Trichloroethane | < 0.42 | ug/l | 0.42 | 1.72 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Trichloroethene (TCE) | 35 | ug/l | 0.38 | 1.55 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Trichlorofluoromethane | < 0.33 | ug/l | 0.33 | 1.35 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,2,4-Trimethylbenzene | < 0.35 | ug/l | 0.35 | 1.44 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| 1,3,5-Trimethylbenzene | < 0.41 | ug/l | 0.41 | 1.66 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| Vinyl Chloride | < 0.15 | ug/l | 0.15 | 0.61 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| m&p-Xylene | < 0.64 | ug/l | 0.64 | 2.63 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| o-Xylene | < 0.37 | ug/l | 0.37 | 1.51 | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| SUR - 4-Bromofluorobenzene | 113 | REC % | | | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| SUR - Dibromofluoromethane | 101 | REC % | | | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| SUR - Toluene-d8 | 102 | REC % | | | 1 | 8260B | | 10/20/2023 | CJR | 1 |
| SUR - 1,2-Dichloroethane-d4 | 103 | REC % | | | 1 | 8260B | | 10/20/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087M
**Sample ID** 200032-DUP-1
**Sample Matrix** Water
**Sample Date** 10/17/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| Organic | | | | | | | | | | |
| VOC's | | | | | | | | | | |
| Benzene | < 30 | ug/l | 30 | 125 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| Bromobenzene | < 34 | ug/l | 34 | 140 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| Bromodichloromethane | < 36 | ug/l | 36 | 147 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| Bromoform | < 42 | ug/l | 42 | 172 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| tert-Butylbenzene | < 37 | ug/l | 37 | 149 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| sec-Butylbenzene | < 33 | ug/l | 33 | 134 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| n-Butylbenzene | < 71 | ug/l | 71 | 290 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| Carbon Tetrachloride | < 34 | ug/l | 34 | 139 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| Chlorobenzene | < 29 | ug/l | 29 | 119 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| Chloroethane | < 62 | ug/l | 62 | 254 | 100 | 8260B | | 10/24/2023 | CJR | 2 |
| Chloroform | < 33 | ug/l | 33 | 133 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| Chloromethane | < 74 | ug/l | 74 | 303 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| 2-Chlorotoluene | < 34 | ug/l | 34 | 137 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| 4-Chlorotoluene | < 40 | ug/l | 40 | 163 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| 1,2-Dibromo-3-chloropropane | < 74 | ug/l | 74 | 301 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| Dibromochloromethane | < 36 | ug/l | 36 | 146 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| 1,4-Dichlorobenzene | < 49 | ug/l | 49 | 201 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| 1,3-Dichlorobenzene | < 35 | ug/l | 35 | 144 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| 1,2-Dichlorobenzene | < 40 | ug/l | 40 | 165 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| Dichlorodifluoromethane | < 30 | ug/l | 30 | 123 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| 1,2-Dichloroethane | < 43 | ug/l | 43 | 175 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| 1,1-Dichloroethane | < 43 | ug/l | 43 | 174 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| 1,1-Dichloroethene | < 43 | ug/l | 43 | 176 | 100 | 8260B | | 10/24/2023 | CJR | 2 |
| cis-1,2-Dichloroethene | 710 | ug/l | 32 | 129 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| trans-1,2-Dichloroethene | 180 "J" | ug/l | 50 | 202 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| 1,2-Dichloropropane | < 39 | ug/l | 39 | 158 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| 1,3-Dichloropropane | < 38 | ug/l | 38 | 155 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| trans-1,3-Dichloropropene | < 41 | ug/l | 41 | 167 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| cis-1,3-Dichloropropene | < 41 | ug/l | 41 | 167 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| Di-isopropyl ether | < 48 | ug/l | 48 | 196 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| EDB (1,2-Dibromoethane) | < 39 | ug/l | 39 | 159 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| Ethylbenzene | < 33 | ug/l | 33 | 137 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| Hexachlorobutadiene | < 81 | ug/l | 81 | 344 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| Isopropylbenzene | < 34 | ug/l | 34 | 138 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| p-Isopropyltoluene | < 47 | ug/l | 47 | 191 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| Methylene chloride | < 79 | ug/l | 79 | 323 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| Methyl tert-butyl ether (MTBE) | < 47 | ug/l | 47 | 191 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| Naphthalene | < 140 | ug/l | 140 | 556 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| n-Propylbenzene | < 39 | ug/l | 39 | 160 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| 1,1,2,2-Tetrachloroethane | < 43 | ug/l | 43 | 177 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| 1,1,1,2-Tetrachloroethane | < 55 | ug/l | 55 | 225 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| Tetrachloroethene | < 47 | ug/l | 47 | 191 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| Toluene | < 33 | ug/l | 33 | 135 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| 1,2,4-Trichlorobenzene | < 63 | ug/l | 63 | 257 | 100 | 8260B | | 10/24/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087M
**Sample ID** 200032-DUP-1
**Sample Matrix** Water
**Sample Date** 10/17/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichlorobenzene | < 140 | ug/l | 140 | 594 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| 1,1,1-Trichloroethane | < 33 | ug/l | 33 | 134 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| 1,1,2-Trichloroethane | < 42 | ug/l | 42 | 172 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| Trichloroethene (TCE) | < 38 | ug/l | 38 | 155 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| Trichlorofluoromethane | < 33 | ug/l | 33 | 135 | 100 | 8260B | | 10/24/2023 | CJR | 2 |
| 1,2,4-Trimethylbenzene | < 35 | ug/l | 35 | 144 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| 1,3,5-Trimethylbenzene | < 41 | ug/l | 41 | 166 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| Vinyl Chloride | 19300 | ug/l | 15 | 61 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| m&p-Xylene | < 64 | ug/l | 64 | 263 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| o-Xylene | < 37 | ug/l | 37 | 151 | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| SUR - 1,2-Dichloroethane-d4 | 101 | REC % | | | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| SUR - 4-Bromofluorobenzene | 98 | REC % | | | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| SUR - Dibromofluoromethane | 105 | REC % | | | 100 | 8260B | | 10/24/2023 | CJR | 1 |
| SUR - Toluene-d8 | 99 | REC % | | | 100 | 8260B | | 10/24/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087N
**Sample ID** 200032-DUP-2
**Sample Matrix** Water
**Sample Date** 10/17/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| Organic | | | | | | | | | | |
| VOC's | | | | | | | | | | |
| Benzene | < 0.3 | ug/l | 0.3 | 1.25 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Bromobenzene | < 0.34 | ug/l | 0.34 | 1.4 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Bromodichloromethane | < 0.36 | ug/l | 0.36 | 1.47 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Bromoform | < 0.42 | ug/l | 0.42 | 1.72 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| tert-Butylbenzene | < 0.37 | ug/l | 0.37 | 1.49 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| sec-Butylbenzene | < 0.33 | ug/l | 0.33 | 1.34 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| n-Butylbenzene | < 0.71 | ug/l | 0.71 | 2.9 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Carbon Tetrachloride | < 0.34 | ug/l | 0.34 | 1.39 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Chlorobenzene | < 0.29 | ug/l | 0.29 | 1.19 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Chloroethane | < 0.62 | ug/l | 0.62 | 2.54 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Chloroform | < 0.33 | ug/l | 0.33 | 1.33 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Chloromethane | < 0.74 | ug/l | 0.74 | 3.03 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 2-Chlorotoluene | < 0.34 | ug/l | 0.34 | 1.37 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 4-Chlorotoluene | < 0.4 | ug/l | 0.4 | 1.63 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,2-Dibromo-3-chloropropane | < 0.74 | ug/l | 0.74 | 3.01 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Dibromochloromethane | < 0.36 | ug/l | 0.36 | 1.46 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,4-Dichlorobenzene | < 0.49 | ug/l | 0.49 | 2.01 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,3-Dichlorobenzene | < 0.35 | ug/l | 0.35 | 1.44 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,2-Dichlorobenzene | < 0.4 | ug/l | 0.4 | 1.65 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Dichlorodifluoromethane | < 0.3 | ug/l | 0.3 | 1.23 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,2-Dichloroethane | < 0.43 | ug/l | 0.43 | 1.75 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,1-Dichloroethane | 0.75 "J" | ug/l | 0.43 | 1.74 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,1-Dichloroethene | < 0.43 | ug/l | 0.43 | 1.76 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| cis-1,2-Dichloroethene | 6.1 | ug/l | 0.32 | 1.29 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| trans-1,2-Dichloroethene | 1.39 "J" | ug/l | 0.5 | 2.02 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,2-Dichloropropane | < 0.39 | ug/l | 0.39 | 1.58 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,3-Dichloropropane | < 0.38 | ug/l | 0.38 | 1.55 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| trans-1,3-Dichloropropene | < 0.41 | ug/l | 0.41 | 1.67 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| cis-1,3-Dichloropropene | < 0.41 | ug/l | 0.41 | 1.67 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Di-isopropyl ether | < 0.48 | ug/l | 0.48 | 1.96 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| EDB (1,2-Dibromoethane) | < 0.39 | ug/l | 0.39 | 1.59 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Ethylbenzene | < 0.33 | ug/l | 0.33 | 1.37 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Hexachlorobutadiene | < 0.81 | ug/l | 0.81 | 3.44 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Isopropylbenzene | < 0.34 | ug/l | 0.34 | 1.38 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| p-Isopropyltoluene | 0.74 "J" | ug/l | 0.47 | 1.91 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Methylene chloride | < 0.79 | ug/l | 0.79 | 3.23 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Methyl tert-butyl ether (MTBE) | < 0.47 | ug/l | 0.47 | 1.91 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Naphthalene | < 1.4 | ug/l | 1.4 | 5.56 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| n-Propylbenzene | < 0.39 | ug/l | 0.39 | 1.6 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,1,2,2-Tetrachloroethane | < 0.43 | ug/l | 0.43 | 1.77 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,1,1,2-Tetrachloroethane | < 0.55 | ug/l | 0.55 | 2.25 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Tetrachloroethene | < 0.47 | ug/l | 0.47 | 1.91 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Toluene | < 0.33 | ug/l | 0.33 | 1.35 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,2,4-Trichlorobenzene | < 0.63 | ug/l | 0.63 | 2.57 | 1 | 8260B | | 10/23/2023 | CJR | 1 |

**Project Name** JAGEMANN PLATING **Invoice #** E43087
**Project #** 200032

**Lab Code** 5043087N
**Sample ID** 200032-DUP-2
**Sample Matrix** Water
**Sample Date** 10/17/2023

| | Result | Unit | LOD | LOQ | Dil | Method | Ext Date | Run Date | Analyst | Code |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,3-Trichlorobenzene | < 1.4 | ug/l | 1.4 | 5.94 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,1,1-Trichloroethane | < 0.33 | ug/l | 0.33 | 1.34 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,1,2-Trichloroethane | < 0.42 | ug/l | 0.42 | 1.72 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Trichloroethene (TCE) | 0.53 "J" | ug/l | 0.38 | 1.55 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Trichlorofluoromethane | < 0.33 | ug/l | 0.33 | 1.35 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,2,4-Trimethylbenzene | < 0.35 | ug/l | 0.35 | 1.44 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| 1,3,5-Trimethylbenzene | < 0.41 | ug/l | 0.41 | 1.66 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| Vinyl Chloride | 4.5 | ug/l | 0.15 | 0.61 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| m&p-Xylene | < 0.64 | ug/l | 0.64 | 2.63 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| o-Xylene | < 0.37 | ug/l | 0.37 | 1.51 | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| SUR - Toluene-d8 | 97 | REC % | | | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| SUR - 1,2-Dichloroethane-d4 | 95 | REC % | | | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| SUR - 4-Bromofluorobenzene | 109 | REC % | | | 1 | 8260B | | 10/23/2023 | CJR | 1 |
| SUR - Dibromofluoromethane | 98 | REC % | | | 1 | 8260B | | 10/23/2023 | CJR | 1 |

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

| *Code* | *Comment* |
|---|---|
| 1 | Laboratory QC within limits. |
| 2 | Relative percent difference failed for laboratory spiked samples. |

SL denotes sub contract lab - Certification #399089350

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

**Authorized Signature**

**CHAIN OF CUSTODY RECORD**

# Synergy
## Environmental Lab, LLC

www.synergy-lab.net
1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • mrsynergy@wi.twcbc.com

Chain # 53073
Page 1 of 2

**Sample Handling Request**
____Rush Analysis Date Required: _____
**(Rushes accepted only with prior authorization)**
____Normal Turn Around

Lab I.D. #
QUOTE #: 2023-0308
Project #: 200032
Sampler: (signature)

Project (Name / Location): Jagemann Plating 200032, Manitowoc, WI

| | |
|---|---|
| Reports To: W. Fassbender \| N. Morris | Invoice To: Same |
| Company Enviroforensics | Company |
| Address 825 N. Capitol Ave | Address |
| City State Zip Indianapolis, IN 46204 | City, State Zip |
| Phone 317-972-7870 | Phone |
| Email Wfassbender@enviroforensics.com NMorris@enviroforensics.com | Email |

| Lab I.D. | Sample I.D. | Collection Date | Collection Time | Filtered Y/N | No. of Containers | Sample Type (Matrix)* | Preservation | DRO (Mod DRO Sep 95) | GRO (Mod GRO Sep 95) | LEAD | NITRATE/NITRITE | OIL & GREASE | PAH (EPA 8270) | PCB | PVOC (EPA 8021) | PVOC + NAPHTHALENE | SULFATE | TOTAL SUSPENDED SOLIDS | VOC DW (EPA 524.2) | VOC (EPA 8260) | VOC AIR (TO - 15) | 8-RCRA METALS | MEE | TOC | 1,4 Dioxane | | | | PID/ FID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SO[3087 A | 200032-MW-1 | 10/17/23 | 16:25 | N | 5 | GW | HCl | | | | | | | | | | | | | X | | | X | X | | | | | |
| B | 200032-MW-3 | 10/17/23 | 15:50 | \| | 4 | GW | HCl | | | | | | | | | | | | | X | | | X | | | | | | |
| C | 200032-MW-8 | 10/17/23 | 15:10 | \| | 4 | GW | HCl | | | | | | | | | | | | | X | | | X | | | | | | |
| D | 200032-MW-14 | 10/17/23 | 14:10 | \| | 6 | GW | HCl | | | | | | | | | | | | | X | | | X | X | X | | | | |
| E | 200032-MW-15 | 10/17/23 | 13:40 | \| | 4 | GW | HCl | | | | | | | | | | | | | X | | | X | | | | | | |
| F | 200032-TW-20 | 10/18/23 | 16:10 | \| | 6 | GW | HCl | | | | | | | | | | | | | X | | | X | X | X | | | | |
| G | 200032-TW-21 | 10/18/23 | 9:55 | \| | 5 | GW | HCl | | | | | | | | | | | | | X | | | X | X | | | | | |
| H | 200032-TW-22 | 10/18/23 | 15:30 | \| | 4 | GW | HCl | | | | | | | | | | | | | X | | | X | | | | | | |
| I | 200032-TW-23 | 10/18/23 | 11:25 | \| | 4 | GW | HCl | | | | | | | | | | | | | X | | | X | | | | | | |
| J | 200032-TW-24 | 10/18/23 | 10:45 | \| | 4 | GW | HCl | | | | | | | | | | | | | X | | | X | | | | | | |
| K | 200032-Sump-1 | 10/19/23 | 8:45 | \| | 3 | GW | HCl | | | | | | | | | | | | | X | | | | | | | | | |
| L | 200032-Sump-2 | 10/19/23 | 8:35 | ⊥ | 3 | GW | HCl | | | | | | | | | | | | | X | | | | | | | | | |

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge, etc.)

Sample times are CT

A MW-8 Sample HCl Dumped due reactivity with GW

Sample Integrity - To be completed by receiving lab.
Method of Shipment: CS
Temp. of Temp. Blank: _____ °C On Ice: _____
Cooler seal intact upon receipt: ✓ Yes ____ No

| Relinquished By: (sign) | Time | Date | Received By: (sign) | Time | Date |
|---|---|---|---|---|---|
| | 14:30 | 10/19/23 | Kyle Larson | 2:30 | 10/19 |
| | | | | | |

Received in Laboratory By: Time: 730 Date: 10/20/23

**CHAIN OF CUSTODY RECORD**

# Synergy Environmental Lab, LLC

www.synergy-lab.net
1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • mrsynergy@wi.twcbc.com

Chain # 53072

Page 2 of 2

**Sample Handling Request**

____Rush Analysis Date Required: _____
**(Rushes accepted only with prior authorization)**
____Normal Turn Around

Lab I.D. #

QUOTE #: 2023-0368

Project #: 200032

Sampler: (signature)

Project (Name / Location): Jagemann Plating Manitowoc WI

| | |
|---|---|
| Reports To: W. Fassbender / N. Morris | Invoice To: Same |
| Company Enviroforensics | Company " |
| Address 825 N. Capitol Ave | Address " |
| City State Zip Indianapolis, IN | City State Zip " |
| Phone 317-972-7870 | Phone " |
| Email wfassbender@enviroforensics.com NMorris@enviroforensics.com | Email " |

| Lab I.D. | Sample I.D. | Collection Date | Collection Time | Filtered Y/N | No. of Containers | Sample Type (Matrix)* | Preservation | DRO (Mod DRO Sep 95) | GRO (Mod GRO Sep 95) | LEAD | NITRATE/NITRITE | OIL & GREASE | PAH (EPA 8270) | PCB | PVOC (EPA 8021) | PVOC + NAPHTHALENE | SULFATE | TOTAL SUSPENDED SOLIDS | VOC DW (EPA 524.2) | VOC (EPA 8260) | VOC AIR (TO - 15) | 8-RCRA METALS | PID/FID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 543087 M | 200032-Dup-1 | 10/17/23 | — | N | 3 | GW | HCl | | | | | | | | | | | | | X | | | |
| N | 200032-Dup-2 | 10/17/23 | — | N | 3 | GW | HCl | | | | | | | | | | | | | X | | | |

Analysis Requested / Other Analysis

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge, etc.)

Sample Integrity - To be completed by receiving lab.

Method of Shipment: CS

Temp. of Temp. Blank: _____ °C On Ice: X

Cooler seal intact upon receipt: X Yes ____ No

| Relinquished By: (sign) | Time | Date | Received By: (sign) | Time | Date |
|---|---|---|---|---|---|
| | 14:30 | 10/19 | | 0:30P | 10/19 |
| | | | | | |

Received in Laboratory By: Time: 730 Date: 10/20/23

**Pace Analytical Services, LLC**
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

December 04, 2023

Wayne Fassbender
Enviroforensics
N16 W23390 Stone Ridge Drive
Suite G
Waukesha, WI 53188

RE: Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

Dear Wayne Fassbender:

Enclosed are the analytical results for sample(s) received by the laboratory on October 20, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Baton Rouge

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

Sincerely,

Dan Milewsky
dan.milewsky@pacelabs.com
(920)469-2436
Project Manager

Enclosures

**Pace Analytical Services, LLC**
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

## CERTIFICATIONS

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

**Pace Analytical Services Baton Rouge**
7979 Innovation Park Drive Ste A, Baton Rouge, LA 70820-7402
Louisiana Dept of Enviromental Quality (NELAC/LELAP): 01979
Florida Dept of Health (NELAC/FELAP): E87854
DoD ELAP (A2LA) #: 6429.01
Alabama DEM #: 41900
Alaska DEC-DW #: LA00024
Alaska DEC CS-LAP #: 21-001
Arkansas DEQ #: 88-0655
California ELAP #: 3063
Georgia DPD #: C050
Hawaii DOH State Laboratories Division
Illinois EPA #: 200048
Kansas DoHE #: E-10354
Kentucky DEP UST Branch #: 123054
Louisiana DOH #: LA036
Minnesota DOH #: 2233799
Mississippi State Dept of Health
Montana Department of Environmental Quality
Nebraska DHHS #: NE-OS-35.21
Nevada DCNR DEP #: LA00024
New York DOH #: 12149
North Carolina DEQ - WW & GW #: 618
North Dakota DEQ #: R195
Ohio EPA #: 87782
Oklahoma Dept of Environmental Quality #: 9403
Oregon ELAP #: 4168
Pennsylvania Dept of Environmental Protection #: 68-05973
South Carolina DHEC #: 73006001
Texas CEQ #: T104704178-23-15
Utah DOH #: LA00024
Virginia DCLS #: 6460215
Washington Dept of Ecology #: C929
Wisconsin DNR #: 399139510

**Pace Analytical Services, LLC**
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

## SAMPLE SUMMARY

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| **40269875001** | **200032-MW-5** | Water | 10/17/23 08:30 | 10/20/23 08:00 |
| **40269875002** | **200032-MW-4** | Water | 10/17/23 08:55 | 10/20/23 08:00 |
| **40269875003** | **200032-MW-6** | Water | 10/17/23 09:30 | 10/20/23 08:00 |
| **40269875004** | **200032-MW-7** | Water | 10/17/23 09:45 | 10/20/23 08:00 |
| **40269875005** | **200032-FB** | Water | 10/17/23 09:47 | 10/20/23 08:00 |
| **40269875006** | **200032-MW-17** | Water | 10/17/23 10:10 | 10/20/23 08:00 |
| **40269875007** | **200032-MW-19** | Water | 10/17/23 10:30 | 10/20/23 08:00 |
| **40269875008** | **200032-TW-27** | Water | 10/18/23 12:40 | 10/20/23 08:00 |
| **40269875009** | **200032-TW-28** | Water | 10/17/23 11:25 | 10/20/23 08:00 |
| **40269875010** | **200032-DUP-1** | Water | 10/17/23 11:35 | 10/20/23 08:00 |

## REPORT OF LABORATORY ANALYSIS

**Pace Analytical Services, LLC**
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

## SAMPLE ANALYTE COUNT

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **40269875001** | **200032-MW-5** | EPA 537 Mod | BRC | 33 | PASI-BR |
| **40269875002** | **200032-MW-4** | EPA 537 Mod | BRC | 33 | PASI-BR |
| **40269875003** | **200032-MW-6** | EPA 537 Mod | BRC, SA | 33 | PASI-BR |
| **40269875004** | **200032-MW-7** | EPA 537 Mod | BRC | 33 | PASI-BR |
| **40269875005** | **200032-FB** | EPA 537 Mod | BRC | 33 | PASI-BR |
| **40269875006** | **200032-MW-17** | EPA 537 Mod | SA | 33 | PASI-BR |
| **40269875007** | **200032-MW-19** | EPA 537 Mod | BRC | 33 | PASI-BR |
| **40269875008** | **200032-TW-27** | EPA 537 Mod | SA | 33 | PASI-BR |
| **40269875009** | **200032-TW-28** | EPA 537 Mod | BRC | 33 | PASI-BR |
| **40269875010** | **200032-DUP-1** | EPA 537 Mod | SA | 33 | PASI-BR |

PASI-BR = Pace Analytical Services - Baton Rouge

**Pace Analytical Services, LLC**
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

## SUMMARY OF DETECTION

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

| Lab Sample ID / Method | Client Sample ID / Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|---|
| **40269875001** | **200032-MW-5** | | | | | |
| EPA 537 Mod | Perfluorobutanesulfonic acid | 8.9 | ng/L | 3.5 | 11/01/23 19:52 | |
| EPA 537 Mod | Perfluorohexanoic acid | 1.3J | ng/L | 3.5 | 11/01/23 19:52 | |
| EPA 537 Mod | PFBA | 9.4 | ng/L | 3.5 | 11/01/23 19:52 | |
| EPA 537 Mod | PFPeS | 1.7J | ng/L | 3.5 | 11/01/23 19:52 | |
| EPA 537 Mod | Perfluorohexanesulfonic acid | 3.3J | ng/L | 3.5 | 11/01/23 19:52 | |
| EPA 537 Mod | Perfluorooctanesulfonic acid | 4.8 | ng/L | 3.5 | 11/01/23 19:52 | |
| EPA 537 Mod | Perfluorooctanoic acid | 5.7 | ng/L | 3.5 | 11/01/23 19:52 | |
| **40269875002** | **200032-MW-4** | | | | | |
| EPA 537 Mod | Perfluorobutanesulfonic acid | 29.7 | ng/L | 1.9 | 11/01/23 20:07 | |
| EPA 537 Mod | Perfluorohexanoic acid | 1.2J | ng/L | 1.9 | 11/01/23 20:07 | |
| EPA 537 Mod | PFBA | 11.4 | ng/L | 1.9 | 11/01/23 20:07 | |
| EPA 537 Mod | PFPeA | 0.75J | ng/L | 1.9 | 11/01/23 20:07 | |
| EPA 537 Mod | PFPeS | 0.61J | ng/L | 1.9 | 11/01/23 20:07 | |
| EPA 537 Mod | Perfluoroheptanoic acid | 1.0J | ng/L | 1.9 | 11/01/23 20:07 | |
| EPA 537 Mod | Perfluorohexanesulfonic acid | 2.1 | ng/L | 1.9 | 11/01/23 20:07 | |
| EPA 537 Mod | Perfluorooctanesulfonic acid | 23.8 | ng/L | 1.9 | 11/01/23 20:07 | |
| EPA 537 Mod | Perfluorooctanoic acid | 6.2 | ng/L | 1.9 | 11/01/23 20:07 | |
| **40269875003** | **200032-MW-6** | | | | | |
| EPA 537 Mod | Perfluorobutanesulfonic acid | 14.8 | ng/L | 1.9 | 11/17/23 17:22 | |
| EPA 537 Mod | Perfluorohexanoic acid | 0.87J | ng/L | 1.9 | 11/17/23 17:22 | |
| EPA 537 Mod | PFBA | 7.8 | ng/L | 1.9 | 11/17/23 17:22 | |
| EPA 537 Mod | PFPeA | 1.1J | ng/L | 1.9 | 11/17/23 17:22 | |
| EPA 537 Mod | PFPeS | 1.2J | ng/L | 1.9 | 11/17/23 17:22 | |
| EPA 537 Mod | Perfluorohexanesulfonic acid | 0.97J | ng/L | 1.9 | 11/17/23 17:22 | |
| EPA 537 Mod | Perfluorooctanesulfonic acid | 12.0 | ng/L | 2.0 | 11/01/23 20:21 | |
| EPA 537 Mod | Perfluorooctanoic acid | 1.9 | ng/L | 1.9 | 11/17/23 17:22 | |
| **40269875004** | **200032-MW-7** | | | | | |
| EPA 537 Mod | Perfluorobutanesulfonic acid | 314 | ng/L | 2.6 | 11/01/23 20:36 | |
| EPA 537 Mod | Perfluorohexanoic acid | 8.1 | ng/L | 2.6 | 11/01/23 20:36 | |
| EPA 537 Mod | PFBA | 48.6 | ng/L | 2.6 | 11/01/23 20:36 | |
| EPA 537 Mod | PFPeA | 17.2 | ng/L | 2.6 | 11/01/23 20:36 | |
| EPA 537 Mod | PFPeS | 4.4 | ng/L | 2.6 | 11/01/23 20:36 | |
| EPA 537 Mod | Perfluoroheptanoic acid | 3.0 | ng/L | 2.6 | 11/01/23 20:36 | |
| EPA 537 Mod | Perfluorohexanesulfonic acid | 7.8 | ng/L | 2.6 | 11/01/23 20:36 | |
| EPA 537 Mod | Perfluorooctanesulfonic acid | 13.0 | ng/L | 2.6 | 11/01/23 20:36 | |
| EPA 537 Mod | Perfluorooctanoic acid | 6.9 | ng/L | 2.6 | 11/01/23 20:36 | |
| **40269875006** | **200032-MW-17** | | | | | |
| EPA 537 Mod | Perfluorobutanesulfonic acid | 267 | ng/L | 2.3 | 11/17/23 17:37 | |
| EPA 537 Mod | Perfluorodecanoic acid | 1.0J | ng/L | 2.3 | 11/17/23 17:37 | |
| EPA 537 Mod | Perfluorohexanoic acid | 2.5 | ng/L | 2.3 | 11/17/23 17:37 | |
| EPA 537 Mod | PFBA | 31.3 | ng/L | 2.3 | 11/17/23 17:37 | |
| EPA 537 Mod | PFPeA | 11.0 | ng/L | 2.3 | 11/17/23 17:37 | |
| EPA 537 Mod | Perfluoroheptanoic acid | 2.7 | ng/L | 2.3 | 11/17/23 17:37 | |
| EPA 537 Mod | Perfluorohexanesulfonic acid | 1.7J | ng/L | 2.3 | 11/17/23 17:37 | |
| EPA 537 Mod | Perfluorooctanesulfonic acid | 43.6 | ng/L | 2.3 | 11/17/23 17:37 | |

## REPORT OF LABORATORY ANALYSIS

**Pace Analytical Services, LLC**
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

## SUMMARY OF DETECTION

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

| Lab Sample ID / Method | Client Sample ID / Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|---|
| **40269875006** | **200032-MW-17** | | | | | |
| EPA 537 Mod | Perfluorooctanoic acid | 2.8 | ng/L | 2.3 | 11/17/23 17:37 | |
| **40269875007** | **200032-MW-19** | | | | | |
| EPA 537 Mod | Perfluorobutanesulfonic acid | 9.3J | ng/L | 9.4 | 11/01/23 21:20 | B |
| EPA 537 Mod | Perfluorohexanoic acid | 2.4J | ng/L | 9.4 | 11/01/23 21:20 | |
| EPA 537 Mod | PFBA | 5.2J | ng/L | 9.4 | 11/01/23 21:20 | |
| EPA 537 Mod | PFPeA | 2.2J | ng/L | 9.4 | 11/01/23 21:20 | |
| EPA 537 Mod | Perfluorooctanesulfonic acid | 2.0J | ng/L | 9.4 | 11/01/23 21:20 | |
| EPA 537 Mod | Perfluorooctanoic acid | 4.1J | ng/L | 9.4 | 11/01/23 21:20 | B |
| **40269875008** | **200032-TW-27** | | | | | |
| EPA 537 Mod | Perfluorobutanesulfonic acid | 161 | ng/L | 4.5 | 10/30/23 17:48 | |
| EPA 537 Mod | Perfluorohexanoic acid | 2.2J | ng/L | 4.5 | 10/30/23 17:48 | |
| EPA 537 Mod | PFBA | 24.1 | ng/L | 4.5 | 10/30/23 17:48 | |
| EPA 537 Mod | PFPeA | 4.9 | ng/L | 4.5 | 10/30/23 17:48 | |
| EPA 537 Mod | PFPeS | 4.2J | ng/L | 4.5 | 10/30/23 17:48 | |
| EPA 537 Mod | Perfluorohexanesulfonic acid | 5.9 | ng/L | 4.5 | 10/30/23 17:48 | |
| EPA 537 Mod | Perfluorooctanesulfonic acid | 14.3 | ng/L | 4.5 | 10/30/23 17:48 | |
| EPA 537 Mod | Perfluorooctanoic acid | 4.2J | ng/L | 4.5 | 10/30/23 17:48 | |
| **40269875009** | **200032-TW-28** | | | | | |
| EPA 537 Mod | Perfluorobutanesulfonic acid | 155 | ng/L | 1.8 | 11/01/23 21:34 | |
| EPA 537 Mod | Perfluorohexanoic acid | 4.3 | ng/L | 1.8 | 11/01/23 21:34 | |
| EPA 537 Mod | PFBA | 20.0 | ng/L | 1.8 | 11/01/23 21:34 | |
| EPA 537 Mod | PFHpS | 1.0J | ng/L | 1.8 | 11/01/23 21:34 | |
| EPA 537 Mod | PFPeA | 9.3 | ng/L | 1.8 | 11/01/23 21:34 | |
| EPA 537 Mod | PFPeS | 4.2 | ng/L | 1.8 | 11/01/23 21:34 | |
| EPA 537 Mod | Perfluoroheptanoic acid | 2.0 | ng/L | 1.8 | 11/01/23 21:34 | |
| EPA 537 Mod | Perfluorohexanesulfonic acid | 11.3 | ng/L | 1.8 | 11/01/23 21:34 | |
| EPA 537 Mod | Perfluorooctanesulfonic acid | 47.2 | ng/L | 1.8 | 11/01/23 21:34 | |
| EPA 537 Mod | Perfluorooctanoic acid | 10.7 | ng/L | 1.8 | 11/01/23 21:34 | |
| **40269875010** | **200032-DUP-1** | | | | | |
| EPA 537 Mod | Perfluorobutanesulfonic acid | 233 | ng/L | 1.9 | 10/30/23 17:33 | |
| EPA 537 Mod | Perfluorohexanoic acid | 6.0 | ng/L | 1.9 | 10/30/23 17:33 | |
| EPA 537 Mod | PFBA | 35.3 | ng/L | 1.9 | 10/30/23 17:33 | |
| EPA 537 Mod | PFPeA | 15.4 | ng/L | 1.9 | 10/30/23 17:33 | |
| EPA 537 Mod | PFPeS | 3.0 | ng/L | 1.9 | 10/30/23 17:33 | |
| EPA 537 Mod | Perfluoroheptanoic acid | 2.2 | ng/L | 1.9 | 10/30/23 17:33 | |
| EPA 537 Mod | Perfluorohexanesulfonic acid | 5.7 | ng/L | 1.9 | 10/30/23 17:33 | |
| EPA 537 Mod | Perfluorooctanesulfonic acid | 13.1 | ng/L | 1.9 | 10/30/23 17:33 | |
| EPA 537 Mod | Perfluorooctanoic acid | 5.4 | ng/L | 1.9 | 10/30/23 17:33 | |

## REPORT OF LABORATORY ANALYSIS

**Pace Analytical Services, LLC**
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## ANALYTICAL RESULTS

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

**Sample: 200032-MW-5** **Lab ID: 40269875001** Collected: 10/17/23 08:30 Received: 10/20/23 08:00 Matrix: Water

| Parameters | Results | Units | LOQ | LOD | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **PFAS in Water-EPA 537 Mod** | Analytical Method: EPA 537 Mod Preparation Method: EPA 537 Mod<br>Pace Analytical Services - Baton Rouge | | | | | | | | |
| 11Cl-PF3OUdS | **<0.80** | ng/L | 3.5 | 0.80 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 763051-92-9 | |
| 4:2 FTS | **<1.1** | ng/L | 3.5 | 1.1 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 757124-72-4 | L1 |
| 6:2 FTS | **<1.3** | ng/L | 3.5 | 1.3 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 27619-97-2 | L1 |
| 8:2 FTS | **<0.94** | ng/L | 3.5 | 0.94 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 39108-34-4 | L1 |
| 9Cl-PF3ONS | **<0.80** | ng/L | 3.5 | 0.80 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 756426-58-1 | |
| ADONA | **<0.76** | ng/L | 3.5 | 0.76 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 919005-14-4 | |
| HFPO-DA | **<5.9** | ng/L | 17.7 | 5.9 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 13252-13-6 | L1 |
| NEtFOSAA | **<1.4** | ng/L | 7.1 | 1.4 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 2991-50-6 | |
| NEtFOSA | **<1.2** | ng/L | 7.1 | 1.2 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 4151-50-2 | 3q,L1 |
| NEtFOSE | **<0.89** | ng/L | 7.1 | 0.89 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 1691-99-2 | N2 |
| NMeFOSAA | **<0.80** | ng/L | 7.1 | 0.80 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 2355-31-9 | L1 |
| NMeFOSA | **<1.5** | ng/L | 7.1 | 1.5 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 31506-32-8 | 3q,L1 |
| NMeFOSE | **<1.1** | ng/L | 7.1 | 1.1 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 24448-09-7 | L1,N2 |
| Perfluorobutanesulfonic acid | **8.9** | ng/L | 3.5 | 0.55 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 375-73-5 | |
| Perfluorodecanoic acid | **<1.3** | ng/L | 3.5 | 1.3 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 335-76-2 | |
| Perfluorohexanoic acid | **1.3J** | ng/L | 3.5 | 0.83 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 307-24-4 | |
| PFBA | **9.4** | ng/L | 3.5 | 1.3 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 375-22-4 | |
| PFDS | **<1.1** | ng/L | 3.5 | 1.1 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 335-77-3 | |
| PFDoS | **<1.2** | ng/L | 3.5 | 1.2 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 79780-39-5 | |
| PFHpS | **<1.1** | ng/L | 3.5 | 1.1 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 375-92-8 | |
| PFNS | **<1.5** | ng/L | 3.5 | 1.5 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 68259-12-1 | |
| PFOSA | **<0.65** | ng/L | 3.5 | 0.65 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 754-91-6 | |
| PFPeA | **<0.78** | ng/L | 3.5 | 0.78 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 2706-90-3 | |
| PFPeS | **1.7J** | ng/L | 3.5 | 0.90 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 2706-91-4 | |
| Perfluorododecanoic acid | **<1.1** | ng/L | 3.5 | 1.1 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 307-55-1 | |
| Perfluoroheptanoic acid | **<1.0** | ng/L | 3.5 | 1.0 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 375-85-9 | |
| Perfluorohexanesulfonic acid | **3.3J** | ng/L | 3.5 | 1.1 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 355-46-4 | |
| Perfluorononanoic acid | **<0.87** | ng/L | 3.5 | 0.87 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 375-95-1 | |
| Perfluorooctanesulfonic acid | **4.8** | ng/L | 3.5 | 0.67 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 1763-23-1 | |
| Perfluorooctanoic acid | **5.7** | ng/L | 3.5 | 0.74 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 335-67-1 | |
| Perfluorotetradecanoic acid | **<1.0** | ng/L | 3.5 | 1.0 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 376-06-7 | 3q |
| Perfluorotridecanoic acid | **<1.1** | ng/L | 3.5 | 1.1 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 72629-94-8 | |
| Perfluoroundecanoic acid | **<1.1** | ng/L | 3.5 | 1.1 | 1 | 10/27/23 11:59 | 11/01/23 19:52 | 2058-94-8 | |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

**Sample: 200032-MW-4** **Lab ID: 40269875002** Collected: 10/17/23 08:55 Received: 10/20/23 08:00 Matrix: Water

| Parameters | Results | Units | LOQ | LOD | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **PFAS in Water-EPA 537 Mod** | Analytical Method: EPA 537 Mod Preparation Method: EPA 537 Mod<br>Pace Analytical Services - Baton Rouge | | | | | | | | |
| 11Cl-PF3OUdS | **<0.44** | ng/L | 1.9 | 0.44 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 763051-92-9 | |
| 4:2 FTS | **<0.60** | ng/L | 1.9 | 0.60 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 757124-72-4 | L1 |
| 6:2 FTS | **<0.73** | ng/L | 1.9 | 0.73 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 27619-97-2 | L1 |
| 8:2 FTS | **<0.51** | ng/L | 1.9 | 0.51 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 39108-34-4 | L1 |
| 9Cl-PF3ONS | **<0.44** | ng/L | 1.9 | 0.44 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 756426-58-1 | |
| ADONA | **<0.42** | ng/L | 1.9 | 0.42 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 919005-14-4 | |
| HFPO-DA | **<3.2** | ng/L | 9.7 | 3.2 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 13252-13-6 | L1 |
| NEtFOSAA | **<0.76** | ng/L | 3.9 | 0.76 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 2991-50-6 | |
| NEtFOSA | **<0.68** | ng/L | 3.9 | 0.68 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 4151-50-2 | 3q,L1 |
| NEtFOSE | **<0.49** | ng/L | 3.9 | 0.49 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 1691-99-2 | 3q,N2 |
| NMeFOSAA | **<0.44** | ng/L | 3.9 | 0.44 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 2355-31-9 | L1 |
| NMeFOSA | **<0.80** | ng/L | 3.9 | 0.80 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 31506-32-8 | 3q,L1 |
| NMeFOSE | **<0.63** | ng/L | 3.9 | 0.63 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 24448-09-7 | 3q,L1, N2 |
| Perfluorobutanesulfonic acid | **29.7** | ng/L | 1.9 | 0.30 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 375-73-5 | |
| Perfluorodecanoic acid | **<0.70** | ng/L | 1.9 | 0.70 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 335-76-2 | |
| Perfluorohexanoic acid | **1.2J** | ng/L | 1.9 | 0.45 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 307-24-4 | |
| PFBA | **11.4** | ng/L | 1.9 | 0.74 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 375-22-4 | |
| PFDS | **<0.59** | ng/L | 1.9 | 0.59 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 335-77-3 | |
| PFDoS | **<0.63** | ng/L | 1.9 | 0.63 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 79780-39-5 | |
| PFHpS | **<0.59** | ng/L | 1.9 | 0.59 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 375-92-8 | |
| PFNS | **<0.84** | ng/L | 1.9 | 0.84 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 68259-12-1 | |
| PFOSA | **<0.36** | ng/L | 1.9 | 0.36 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 754-91-6 | |
| PFPeA | **0.75J** | ng/L | 1.9 | 0.43 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 2706-90-3 | |
| PFPeS | **0.61J** | ng/L | 1.9 | 0.49 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 2706-91-4 | |
| Perfluorododecanoic acid | **<0.63** | ng/L | 1.9 | 0.63 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 307-55-1 | |
| Perfluoroheptanoic acid | **1.0J** | ng/L | 1.9 | 0.56 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 375-85-9 | |
| Perfluorohexanesulfonic acid | **2.1** | ng/L | 1.9 | 0.60 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 355-46-4 | |
| Perfluorononanoic acid | **<0.47** | ng/L | 1.9 | 0.47 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 375-95-1 | |
| Perfluorooctanesulfonic acid | **23.8** | ng/L | 1.9 | 0.37 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 1763-23-1 | |
| Perfluorooctanoic acid | **6.2** | ng/L | 1.9 | 0.41 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 335-67-1 | |
| Perfluorotetradecanoic acid | **<0.55** | ng/L | 1.9 | 0.55 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 376-06-7 | |
| Perfluorotridecanoic acid | **<0.60** | ng/L | 1.9 | 0.60 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 72629-94-8 | |
| Perfluoroundecanoic acid | **<0.60** | ng/L | 1.9 | 0.60 | 1 | 10/27/23 11:59 | 11/01/23 20:07 | 2058-94-8 | |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

**Sample: 200032-MW-6** **Lab ID: 40269875003** Collected: 10/17/23 09:30 Received: 10/20/23 08:00 Matrix: Water

| Parameters | Results | Units | LOQ | LOD | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **PFAS in Water-EPA 537 Mod** | Analytical Method: EPA 537 Mod Preparation Method: EPA 537 Mod<br>Pace Analytical Services - Baton Rouge | | | | | | | | |
| 11Cl-PF3OUdS | **<0.42** | ng/L | 1.9 | 0.42 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 763051-92-9 | |
| 4:2 FTS | **<0.58** | ng/L | 1.9 | 0.58 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 757124-72-4 | |
| 6:2 FTS | **<0.70** | ng/L | 1.9 | 0.70 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 27619-97-2 | |
| 8:2 FTS | **<0.50** | ng/L | 1.9 | 0.50 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 39108-34-4 | |
| 9Cl-PF3ONS | **<0.42** | ng/L | 1.9 | 0.42 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 756426-58-1 | |
| ADONA | **<0.40** | ng/L | 1.9 | 0.40 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 919005-14-4 | |
| HFPO-DA | **<3.1** | ng/L | 9.4 | 3.1 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 13252-13-6 | |
| NEtFOSAA | **<0.74** | ng/L | 3.8 | 0.74 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 2991-50-6 | |
| NEtFOSA | **<0.66** | ng/L | 3.8 | 0.66 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 4151-50-2 | |
| NEtFOSE | **<0.47** | ng/L | 3.8 | 0.47 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 1691-99-2 | N2 |
| NMeFOSAA | **<0.42** | ng/L | 3.8 | 0.42 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 2355-31-9 | |
| NMeFOSA | **<0.78** | ng/L | 3.8 | 0.78 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 31506-32-8 | |
| NMeFOSE | **<0.61** | ng/L | 3.8 | 0.61 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 24448-09-7 | N2 |
| Perfluorobutanesulfonic acid | **14.8** | ng/L | 1.9 | 0.29 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 375-73-5 | |
| Perfluorodecanoic acid | **<0.68** | ng/L | 1.9 | 0.68 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 335-76-2 | |
| Perfluorohexanoic acid | **0.87J** | ng/L | 1.9 | 0.44 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 307-24-4 | |
| PFBA | **7.8** | ng/L | 1.9 | 0.71 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 375-22-4 | |
| PFDS | **<0.57** | ng/L | 1.9 | 0.57 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 335-77-3 | |
| PFDoS | **<0.61** | ng/L | 1.9 | 0.61 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 79780-39-5 | |
| PFHpS | **<0.57** | ng/L | 1.9 | 0.57 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 375-92-8 | |
| PFNS | **<0.82** | ng/L | 1.9 | 0.82 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 68259-12-1 | |
| PFOSA | **<0.35** | ng/L | 1.9 | 0.35 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 754-91-6 | |
| PFPeA | **1.1J** | ng/L | 1.9 | 0.41 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 2706-90-3 | |
| PFPeS | **1.2J** | ng/L | 1.9 | 0.48 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 2706-91-4 | |
| Perfluorododecanoic acid | **<0.61** | ng/L | 1.9 | 0.61 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 307-55-1 | |
| Perfluoroheptanoic acid | **<0.54** | ng/L | 1.9 | 0.54 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 375-85-9 | |
| Perfluorohexanesulfonic acid | **0.97J** | ng/L | 1.9 | 0.58 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 355-46-4 | |
| Perfluorononanoic acid | **<0.46** | ng/L | 1.9 | 0.46 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 375-95-1 | |
| Perfluorooctanesulfonic acid | **12.0** | ng/L | 2.0 | 0.37 | 1 | 10/27/23 11:59 | 11/01/23 20:21 | 1763-23-1 | |
| Perfluorooctanoic acid | **1.9** | ng/L | 1.9 | 0.39 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 335-67-1 | |
| Perfluorotetradecanoic acid | **<0.53** | ng/L | 1.9 | 0.53 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 376-06-7 | |
| Perfluorotridecanoic acid | **<0.58** | ng/L | 1.9 | 0.58 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 72629-94-8 | |
| Perfluoroundecanoic acid | **<0.58** | ng/L | 1.9 | 0.58 | 1 | 11/14/23 06:32 | 11/17/23 17:22 | 2058-94-8 | |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

**Sample: 200032-MW-7** **Lab ID: 40269875004** Collected: 10/17/23 09:45 Received: 10/20/23 08:00 Matrix: Water

| Parameters | Results | Units | LOQ | LOD | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **PFAS in Water-EPA 537 Mod** | Analytical Method: EPA 537 Mod Preparation Method: EPA 537 Mod<br>Pace Analytical Services - Baton Rouge | | | | | | | | |
| 11Cl-PF3OUdS | **<0.59** | ng/L | 2.6 | 0.59 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 763051-92-9 | |
| 4:2 FTS | **<0.81** | ng/L | 2.6 | 0.81 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 757124-72-4 | L1 |
| 6:2 FTS | **<0.98** | ng/L | 2.6 | 0.98 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 27619-97-2 | L1 |
| 8:2 FTS | **<0.69** | ng/L | 2.6 | 0.69 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 39108-34-4 | L1 |
| 9Cl-PF3ONS | **<0.59** | ng/L | 2.6 | 0.59 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 756426-58-1 | |
| ADONA | **<0.56** | ng/L | 2.6 | 0.56 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 919005-14-4 | |
| HFPO-DA | **<4.4** | ng/L | 13.1 | 4.4 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 13252-13-6 | L1 |
| NEtFOSAA | **<1.0** | ng/L | 5.2 | 1.0 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 2991-50-6 | |
| NEtFOSA | **<0.92** | ng/L | 5.2 | 0.92 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 4151-50-2 | 3q,L1 |
| NEtFOSE | **<0.66** | ng/L | 5.2 | 0.66 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 1691-99-2 | N2 |
| NMeFOSAA | **<0.59** | ng/L | 5.2 | 0.59 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 2355-31-9 | L1 |
| NMeFOSA | **<1.1** | ng/L | 5.2 | 1.1 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 31506-32-8 | 3q,L1 |
| NMeFOSE | **<0.85** | ng/L | 5.2 | 0.85 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 24448-09-7 | L1,N2 |
| Perfluorobutanesulfonic acid | **314** | ng/L | 2.6 | 0.41 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 375-73-5 | |
| Perfluorodecanoic acid | **<0.94** | ng/L | 2.6 | 0.94 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 335-76-2 | |
| Perfluorohexanoic acid | **8.1** | ng/L | 2.6 | 0.62 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 307-24-4 | |
| PFBA | **48.6** | ng/L | 2.6 | 1.0 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 375-22-4 | |
| PFDS | **<0.80** | ng/L | 2.6 | 0.80 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 335-77-3 | |
| PFDoS | **<0.86** | ng/L | 2.6 | 0.86 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 79780-39-5 | |
| PFHpS | **<0.80** | ng/L | 2.6 | 0.80 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 375-92-8 | |
| PFNS | **<1.1** | ng/L | 2.6 | 1.1 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 68259-12-1 | |
| PFOSA | **<0.48** | ng/L | 2.6 | 0.48 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 754-91-6 | |
| PFPeA | **17.2** | ng/L | 2.6 | 0.58 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 2706-90-3 | |
| PFPeS | **4.4** | ng/L | 2.6 | 0.67 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 2706-91-4 | |
| Perfluorododecanoic acid | **<0.85** | ng/L | 2.6 | 0.85 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 307-55-1 | |
| Perfluoroheptanoic acid | **3.0** | ng/L | 2.6 | 0.76 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 375-85-9 | |
| Perfluorohexanesulfonic acid | **7.8** | ng/L | 2.6 | 0.81 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 355-46-4 | |
| Perfluorononanoic acid | **<0.64** | ng/L | 2.6 | 0.64 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 375-95-1 | |
| Perfluorooctanesulfonic acid | **13.0** | ng/L | 2.6 | 0.50 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 1763-23-1 | |
| Perfluorooctanoic acid | **6.9** | ng/L | 2.6 | 0.55 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 335-67-1 | |
| Perfluorotetradecanoic acid | **<0.75** | ng/L | 2.6 | 0.75 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 376-06-7 | |
| Perfluorotridecanoic acid | **<0.81** | ng/L | 2.6 | 0.81 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 72629-94-8 | |
| Perfluoroundecanoic acid | **<0.81** | ng/L | 2.6 | 0.81 | 1 | 10/27/23 11:59 | 11/01/23 20:36 | 2058-94-8 | |

## REPORT OF LABORATORY ANALYSIS

**Pace Analytical Services, LLC**
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## ANALYTICAL RESULTS

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

**Sample: 200032-FB** **Lab ID: 40269875005** Collected: 10/17/23 09:47 Received: 10/20/23 08:00 Matrix: Water

| Parameters | Results | Units | LOQ | LOD | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **PFAS in Water-EPA 537 Mod** | Analytical Method: EPA 537 Mod Preparation Method: EPA 537 Mod<br>Pace Analytical Services - Baton Rouge | | | | | | | | |
| 11Cl-PF3OUdS | **<0.41** | ng/L | 1.8 | 0.41 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 763051-92-9 | |
| 4:2 FTS | **<0.57** | ng/L | 1.8 | 0.57 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 757124-72-4 | L1 |
| 6:2 FTS | **<0.68** | ng/L | 1.8 | 0.68 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 27619-97-2 | L1 |
| 8:2 FTS | **<0.48** | ng/L | 1.8 | 0.48 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 39108-34-4 | L1 |
| 9Cl-PF3ONS | **<0.41** | ng/L | 1.8 | 0.41 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 756426-58-1 | |
| ADONA | **<0.39** | ng/L | 1.8 | 0.39 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 919005-14-4 | |
| HFPO-DA | **<3.0** | ng/L | 9.1 | 3.0 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 13252-13-6 | L1 |
| NEtFOSAA | **<0.72** | ng/L | 3.7 | 0.72 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 2991-50-6 | |
| NEtFOSA | **<0.64** | ng/L | 3.7 | 0.64 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 4151-50-2 | 3q,L1 |
| NEtFOSE | **<0.46** | ng/L | 3.7 | 0.46 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 1691-99-2 | N2 |
| NMeFOSAA | **<0.41** | ng/L | 3.7 | 0.41 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 2355-31-9 | L1 |
| NMeFOSA | **<0.76** | ng/L | 3.7 | 0.76 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 31506-32-8 | 3q,L1 |
| NMeFOSE | **<0.59** | ng/L | 3.7 | 0.59 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 24448-09-7 | L1,N2 |
| Perfluorobutanesulfonic acid | **<0.28** | ng/L | 1.8 | 0.28 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 375-73-5 | |
| Perfluorodecanoic acid | **<0.66** | ng/L | 1.8 | 0.66 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 335-76-2 | |
| Perfluorohexanoic acid | **<0.43** | ng/L | 1.8 | 0.43 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 307-24-4 | |
| PFBA | **<0.69** | ng/L | 1.8 | 0.69 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 375-22-4 | |
| PFDS | **<0.56** | ng/L | 1.8 | 0.56 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 335-77-3 | |
| PFDoS | **<0.60** | ng/L | 1.8 | 0.60 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 79780-39-5 | |
| PFHpS | **<0.56** | ng/L | 1.8 | 0.56 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 375-92-8 | |
| PFNS | **<0.79** | ng/L | 1.8 | 0.79 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 68259-12-1 | |
| PFOSA | **<0.34** | ng/L | 1.8 | 0.34 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 754-91-6 | |
| PFPeA | **<0.40** | ng/L | 1.8 | 0.40 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 2706-90-3 | |
| PFPeS | **<0.47** | ng/L | 1.8 | 0.47 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 2706-91-4 | |
| Perfluorododecanoic acid | **<0.59** | ng/L | 1.8 | 0.59 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 307-55-1 | |
| Perfluoroheptanoic acid | **<0.53** | ng/L | 1.8 | 0.53 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 375-85-9 | |
| Perfluorohexanesulfonic acid | **<0.57** | ng/L | 1.8 | 0.57 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 355-46-4 | |
| Perfluorononanoic acid | **<0.45** | ng/L | 1.8 | 0.45 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 375-95-1 | |
| Perfluorooctanesulfonic acid | **<0.35** | ng/L | 1.8 | 0.35 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 1763-23-1 | |
| Perfluorooctanoic acid | **<0.38** | ng/L | 1.8 | 0.38 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 335-67-1 | |
| Perfluorotetradecanoic acid | **<0.52** | ng/L | 1.8 | 0.52 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 376-06-7 | |
| Perfluorotridecanoic acid | **<0.56** | ng/L | 1.8 | 0.56 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 72629-94-8 | |
| Perfluoroundecanoic acid | **<0.57** | ng/L | 1.8 | 0.57 | 1 | 10/27/23 11:59 | 11/01/23 20:50 | 2058-94-8 | |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

**Sample: 200032-MW-17** **Lab ID: 40269875006** Collected: 10/17/23 10:10 Received: 10/20/23 08:00 Matrix: Water

| Parameters | Results | Units | LOQ | LOD | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **PFAS in Water-EPA 537 Mod** | Analytical Method: EPA 537 Mod Preparation Method: EPA 537 Mod<br>Pace Analytical Services - Baton Rouge | | | | | | | | |
| 11Cl-PF3OUdS | **<0.51** | ng/L | 2.3 | 0.51 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 763051-92-9 | |
| 4:2 FTS | **<0.71** | ng/L | 2.3 | 0.71 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 757124-72-4 | 1q |
| 6:2 FTS | **<0.86** | ng/L | 2.3 | 0.86 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 27619-97-2 | |
| 8:2 FTS | **<0.61** | ng/L | 2.3 | 0.61 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 39108-34-4 | |
| 9Cl-PF3ONS | **<0.51** | ng/L | 2.3 | 0.51 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 756426-58-1 | |
| ADONA | **<0.49** | ng/L | 2.3 | 0.49 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 919005-14-4 | |
| HFPO-DA | **<3.8** | ng/L | 11.4 | 3.8 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 13252-13-6 | |
| NEtFOSAA | **<0.90** | ng/L | 4.6 | 0.90 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 2991-50-6 | |
| NEtFOSA | **<0.80** | ng/L | 4.6 | 0.80 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 4151-50-2 | |
| NEtFOSE | **<0.58** | ng/L | 4.6 | 0.58 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 1691-99-2 | N2 |
| NMeFOSAA | **<0.51** | ng/L | 4.6 | 0.51 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 2355-31-9 | |
| NMeFOSA | **<0.95** | ng/L | 4.6 | 0.95 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 31506-32-8 | |
| NMeFOSE | **<0.74** | ng/L | 4.6 | 0.74 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 24448-09-7 | N2 |
| Perfluorobutanesulfonic acid | **267** | ng/L | 2.3 | 0.35 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 375-73-5 | |
| Perfluorodecanoic acid | **1.0J** | ng/L | 2.3 | 0.82 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 335-76-2 | |
| Perfluorohexanoic acid | **2.5** | ng/L | 2.3 | 0.54 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 307-24-4 | |
| PFBA | **31.3** | ng/L | 2.3 | 0.87 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 375-22-4 | |
| PFDS | **<0.70** | ng/L | 2.3 | 0.70 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 335-77-3 | |
| PFDoS | **<0.75** | ng/L | 2.3 | 0.75 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 79780-39-5 | |
| PFHpS | **<0.70** | ng/L | 2.3 | 0.70 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 375-92-8 | |
| PFNS | **<1.0** | ng/L | 2.3 | 1.0 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 68259-12-1 | |
| PFOSA | **<0.42** | ng/L | 2.3 | 0.42 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 754-91-6 | |
| PFPeA | **11.0** | ng/L | 2.3 | 0.50 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 2706-90-3 | |
| PFPeS | **<0.58** | ng/L | 2.3 | 0.58 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 2706-91-4 | |
| Perfluorododecanoic acid | **<0.74** | ng/L | 2.3 | 0.74 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 307-55-1 | |
| Perfluoroheptanoic acid | **2.7** | ng/L | 2.3 | 0.66 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 375-85-9 | |
| Perfluorohexanesulfonic acid | **1.7J** | ng/L | 2.3 | 0.71 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 355-46-4 | |
| Perfluorononanoic acid | **<0.56** | ng/L | 2.3 | 0.56 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 375-95-1 | |
| Perfluorooctanesulfonic acid | **43.6** | ng/L | 2.3 | 0.43 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 1763-23-1 | |
| Perfluorooctanoic acid | **2.8** | ng/L | 2.3 | 0.48 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 335-67-1 | |
| Perfluorotetradecanoic acid | **<0.65** | ng/L | 2.3 | 0.65 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 376-06-7 | |
| Perfluorotridecanoic acid | **<0.70** | ng/L | 2.3 | 0.70 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 72629-94-8 | |
| Perfluoroundecanoic acid | **<0.71** | ng/L | 2.3 | 0.71 | 1 | 11/14/23 06:32 | 11/17/23 17:37 | 2058-94-8 | |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

**Sample: 200032-MW-19** **Lab ID: 40269875007** Collected: 10/17/23 10:30 Received: 10/20/23 08:00 Matrix: Water

| Parameters | Results | Units | LOQ | LOD | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **PFAS in Water-EPA 537 Mod** | Analytical Method: EPA 537 Mod Preparation Method: EPA 537 Mod<br>Pace Analytical Services - Baton Rouge | | | | | | | | |
| 11Cl-PF3OUdS | **<2.1** | ng/L | 9.4 | 2.1 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 763051-92-9 | |
| 4:2 FTS | **<2.9** | ng/L | 9.4 | 2.9 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 757124-72-4 | L1 |
| 6:2 FTS | **<3.5** | ng/L | 9.4 | 3.5 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 27619-97-2 | L1 |
| 8:2 FTS | **<2.5** | ng/L | 9.4 | 2.5 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 39108-34-4 | L1 |
| 9Cl-PF3ONS | **<2.1** | ng/L | 9.4 | 2.1 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 756426-58-1 | |
| ADONA | **<2.0** | ng/L | 9.4 | 2.0 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 919005-14-4 | |
| HFPO-DA | **<15.7** | ng/L | 47.1 | 15.7 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 13252-13-6 | L1 |
| NEtFOSAA | **<3.7** | ng/L | 18.8 | 3.7 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 2991-50-6 | |
| NEtFOSA | **<3.3** | ng/L | 18.8 | 3.3 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 4151-50-2 | 3q,L1 |
| NEtFOSE | **<2.4** | ng/L | 18.8 | 2.4 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 1691-99-2 | 3q,N2 |
| NMeFOSAA | **<2.1** | ng/L | 18.8 | 2.1 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 2355-31-9 | L1 |
| NMeFOSA | **<3.9** | ng/L | 18.8 | 3.9 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 31506-32-8 | 3q,L1 |
| NMeFOSE | **<3.1** | ng/L | 18.8 | 3.1 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 24448-09-7 | 3q,L1, N2 |
| Perfluorobutanesulfonic acid | **9.3J** | ng/L | 9.4 | 1.5 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 375-73-5 | B |
| Perfluorodecanoic acid | **<3.4** | ng/L | 9.4 | 3.4 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 335-76-2 | |
| Perfluorohexanoic acid | **2.4J** | ng/L | 9.4 | 2.2 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 307-24-4 | |
| PFBA | **5.2J** | ng/L | 9.4 | 3.6 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 375-22-4 | |
| PFDS | **<2.9** | ng/L | 9.4 | 2.9 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 335-77-3 | |
| PFDoS | **<3.1** | ng/L | 9.4 | 3.1 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 79780-39-5 | |
| PFHpS | **<2.9** | ng/L | 9.4 | 2.9 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 375-92-8 | |
| PFNS | **<4.1** | ng/L | 9.4 | 4.1 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 68259-12-1 | |
| PFOSA | **<1.7** | ng/L | 9.4 | 1.7 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 754-91-6 | |
| PFPeA | **2.2J** | ng/L | 9.4 | 2.1 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 2706-90-3 | |
| PFPeS | **<2.4** | ng/L | 9.4 | 2.4 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 2706-91-4 | |
| Perfluorododecanoic acid | **<3.1** | ng/L | 9.4 | 3.1 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 307-55-1 | |
| Perfluoroheptanoic acid | **<2.7** | ng/L | 9.4 | 2.7 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 375-85-9 | |
| Perfluorohexanesulfonic acid | **<2.9** | ng/L | 9.4 | 2.9 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 355-46-4 | |
| Perfluorononanoic acid | **<2.3** | ng/L | 9.4 | 2.3 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 375-95-1 | |
| Perfluorooctanesulfonic acid | **2.0J** | ng/L | 9.4 | 1.8 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 1763-23-1 | |
| Perfluorooctanoic acid | **4.1J** | ng/L | 9.4 | 2.0 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 335-67-1 | B |
| Perfluorotetradecanoic acid | **<2.7** | ng/L | 9.4 | 2.7 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 376-06-7 | |
| Perfluorotridecanoic acid | **<2.9** | ng/L | 9.4 | 2.9 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 72629-94-8 | |
| Perfluoroundecanoic acid | **<2.9** | ng/L | 9.4 | 2.9 | 5 | 10/27/23 11:59 | 11/01/23 21:20 | 2058-94-8 | |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

**Sample: 200032-TW-27** **Lab ID: 40269875008** Collected: 10/18/23 12:40 Received: 10/20/23 08:00 Matrix: Water

| Parameters | Results | Units | LOQ | LOD | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **PFAS in Water-EPA 537 Mod** | Analytical Method: EPA 537 Mod Preparation Method: EPA 537 Mod<br>Pace Analytical Services - Baton Rouge | | | | | | | | |
| 11Cl-PF3OUdS | **<1.0** | ng/L | 4.5 | 1.0 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 763051-92-9 | |
| 4:2 FTS | **<1.4** | ng/L | 4.5 | 1.4 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 757124-72-4 | |
| 6:2 FTS | **<1.7** | ng/L | 4.5 | 1.7 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 27619-97-2 | |
| 8:2 FTS | **<1.2** | ng/L | 4.5 | 1.2 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 39108-34-4 | |
| 9Cl-PF3ONS | **<1.0** | ng/L | 4.5 | 1.0 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 756426-58-1 | |
| ADONA | **<0.96** | ng/L | 4.5 | 0.96 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 919005-14-4 | |
| HFPO-DA | **<7.5** | ng/L | 22.4 | 7.5 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 13252-13-6 | |
| NEtFOSAA | **<1.8** | ng/L | 8.9 | 1.8 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 2991-50-6 | |
| NEtFOSA | **<1.6** | ng/L | 8.9 | 1.6 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 4151-50-2 | 3q |
| NEtFOSE | **<1.1** | ng/L | 8.9 | 1.1 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 1691-99-2 | 3q,N2 |
| NMeFOSAA | **<1.0** | ng/L | 8.9 | 1.0 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 2355-31-9 | |
| NMeFOSA | **<1.9** | ng/L | 8.9 | 1.9 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 31506-32-8 | 3q |
| NMeFOSE | **<1.5** | ng/L | 8.9 | 1.5 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 24448-09-7 | N2 |
| Perfluorobutanesulfonic acid | **161** | ng/L | 4.5 | 0.69 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 375-73-5 | |
| Perfluorodecanoic acid | **<1.6** | ng/L | 4.5 | 1.6 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 335-76-2 | |
| Perfluorohexanoic acid | **2.2J** | ng/L | 4.5 | 1.1 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 307-24-4 | |
| PFBA | **24.1** | ng/L | 4.5 | 1.7 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 375-22-4 | |
| PFDS | **<1.4** | ng/L | 4.5 | 1.4 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 335-77-3 | |
| PFDoS | **<1.5** | ng/L | 4.5 | 1.5 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 79780-39-5 | |
| PFHpS | **<1.4** | ng/L | 4.5 | 1.4 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 375-92-8 | |
| PFNS | **<1.9** | ng/L | 4.5 | 1.9 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 68259-12-1 | |
| PFOSA | **<0.83** | ng/L | 4.5 | 0.83 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 754-91-6 | |
| PFPeA | **4.9** | ng/L | 4.5 | 0.98 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 2706-90-3 | |
| PFPeS | **4.2J** | ng/L | 4.5 | 1.1 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 2706-91-4 | |
| Perfluorododecanoic acid | **<1.5** | ng/L | 4.5 | 1.5 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 307-55-1 | |
| Perfluoroheptanoic acid | **<1.3** | ng/L | 4.5 | 1.3 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 375-85-9 | |
| Perfluorohexanesulfonic acid | **5.9** | ng/L | 4.5 | 1.4 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 355-46-4 | |
| Perfluorononanoic acid | **<1.1** | ng/L | 4.5 | 1.1 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 375-95-1 | |
| Perfluorooctanesulfonic acid | **14.3** | ng/L | 4.5 | 0.85 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 1763-23-1 | |
| Perfluorooctanoic acid | **4.2J** | ng/L | 4.5 | 0.94 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 335-67-1 | |
| Perfluorotetradecanoic acid | **<1.3** | ng/L | 4.5 | 1.3 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 376-06-7 | 3q |
| Perfluorotridecanoic acid | **<1.4** | ng/L | 4.5 | 1.4 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 72629-94-8 | |
| Perfluoroundecanoic acid | **<1.4** | ng/L | 4.5 | 1.4 | 1 | 10/29/23 15:44 | 10/30/23 17:48 | 2058-94-8 | |

## REPORT OF LABORATORY ANALYSIS

**Pace Analytical Services, LLC**
1241 Bellevue Street - Suite 9
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## ANALYTICAL RESULTS

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

**Sample: 200032-TW-28** **Lab ID: 40269875009** Collected: 10/17/23 11:25 Received: 10/20/23 08:00 Matrix: Water

| Parameters | Results | Units | LOQ | LOD | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **PFAS in Water-EPA 537 Mod** | Analytical Method: EPA 537 Mod Preparation Method: EPA 537 Mod<br>Pace Analytical Services - Baton Rouge | | | | | | | | |
| 11Cl-PF3OUdS | **<0.41** | ng/L | 1.8 | 0.41 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 763051-92-9 | |
| 4:2 FTS | **<0.56** | ng/L | 1.8 | 0.56 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 757124-72-4 | L1 |
| 6:2 FTS | **<0.68** | ng/L | 1.8 | 0.68 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 27619-97-2 | L1 |
| 8:2 FTS | **<0.48** | ng/L | 1.8 | 0.48 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 39108-34-4 | L1 |
| 9Cl-PF3ONS | **<0.41** | ng/L | 1.8 | 0.41 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 756426-58-1 | |
| ADONA | **<0.39** | ng/L | 1.8 | 0.39 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 919005-14-4 | |
| HFPO-DA | **<3.0** | ng/L | 9.1 | 3.0 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 13252-13-6 | L1 |
| NEtFOSAA | **<0.72** | ng/L | 3.6 | 0.72 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 2991-50-6 | |
| NEtFOSA | **<0.63** | ng/L | 3.6 | 0.63 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 4151-50-2 | 3q,L1 |
| NEtFOSE | **<0.46** | ng/L | 3.6 | 0.46 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 1691-99-2 | 3q,N2 |
| NMeFOSAA | **<0.41** | ng/L | 3.6 | 0.41 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 2355-31-9 | L1 |
| NMeFOSA | **<0.75** | ng/L | 3.6 | 0.75 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 31506-32-8 | 3q,L1 |
| NMeFOSE | **<0.59** | ng/L | 3.6 | 0.59 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 24448-09-7 | 3q,L1, N2 |
| Perfluorobutanesulfonic acid | **155** | ng/L | 1.8 | 0.28 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 375-73-5 | |
| Perfluorodecanoic acid | **<0.65** | ng/L | 1.8 | 0.65 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 335-76-2 | |
| Perfluorohexanoic acid | **4.3** | ng/L | 1.8 | 0.43 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 307-24-4 | |
| PFBA | **20.0** | ng/L | 1.8 | 0.69 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 375-22-4 | |
| PFDS | **<0.55** | ng/L | 1.8 | 0.55 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 335-77-3 | |
| PFDoS | **<0.59** | ng/L | 1.8 | 0.59 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 79780-39-5 | |
| PFHpS | **1.0J** | ng/L | 1.8 | 0.55 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 375-92-8 | |
| PFNS | **<0.79** | ng/L | 1.8 | 0.79 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 68259-12-1 | |
| PFOSA | **<0.34** | ng/L | 1.8 | 0.34 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 754-91-6 | |
| PFPeA | **9.3** | ng/L | 1.8 | 0.40 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 2706-90-3 | |
| PFPeS | **4.2** | ng/L | 1.8 | 0.46 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 2706-91-4 | |
| Perfluorododecanoic acid | **<0.59** | ng/L | 1.8 | 0.59 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 307-55-1 | 3q |
| Perfluoroheptanoic acid | **2.0** | ng/L | 1.8 | 0.53 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 375-85-9 | |
| Perfluorohexanesulfonic acid | **11.3** | ng/L | 1.8 | 0.56 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 355-46-4 | |
| Perfluorononanoic acid | **<0.44** | ng/L | 1.8 | 0.44 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 375-95-1 | |
| Perfluorooctanesulfonic acid | **47.2** | ng/L | 1.8 | 0.34 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 1763-23-1 | |
| Perfluorooctanoic acid | **10.7** | ng/L | 1.8 | 0.38 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 335-67-1 | |
| Perfluorotetradecanoic acid | **<0.52** | ng/L | 1.8 | 0.52 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 376-06-7 | 3q |
| Perfluorotridecanoic acid | **<0.56** | ng/L | 1.8 | 0.56 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 72629-94-8 | 3q |
| Perfluoroundecanoic acid | **<0.56** | ng/L | 1.8 | 0.56 | 1 | 10/27/23 11:59 | 11/01/23 21:34 | 2058-94-8 | |

## REPORT OF LABORATORY ANALYSIS

**Pace Analytical Services, LLC**
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## ANALYTICAL RESULTS

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

**Sample: 200032-DUP-1** **Lab ID: 40269875010** Collected: 10/17/23 11:35 Received: 10/20/23 08:00 Matrix: Water

| Parameters | Results | Units | LOQ | LOD | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **PFAS in Water-EPA 537 Mod** | Analytical Method: EPA 537 Mod Preparation Method: EPA 537 Mod<br>Pace Analytical Services - Baton Rouge | | | | | | | | |
| 11Cl-PF3OUdS | **<0.43** | ng/L | 1.9 | 0.43 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 763051-92-9 | |
| 4:2 FTS | **<0.59** | ng/L | 1.9 | 0.59 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 757124-72-4 | |
| 6:2 FTS | **<0.71** | ng/L | 1.9 | 0.71 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 27619-97-2 | |
| 8:2 FTS | **<0.50** | ng/L | 1.9 | 0.50 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 39108-34-4 | |
| 9Cl-PF3ONS | **<0.43** | ng/L | 1.9 | 0.43 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 756426-58-1 | |
| ADONA | **<0.41** | ng/L | 1.9 | 0.41 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 919005-14-4 | |
| HFPO-DA | **<3.2** | ng/L | 9.5 | 3.2 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 13252-13-6 | |
| NEtFOSAA | **<0.75** | ng/L | 3.8 | 0.75 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 2991-50-6 | |
| NEtFOSA | **<0.66** | ng/L | 3.8 | 0.66 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 4151-50-2 | |
| NEtFOSE | **<0.48** | ng/L | 3.8 | 0.48 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 1691-99-2 | N2 |
| NMeFOSAA | **<0.43** | ng/L | 3.8 | 0.43 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 2355-31-9 | |
| NMeFOSA | **<0.79** | ng/L | 3.8 | 0.79 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 31506-32-8 | |
| NMeFOSE | **<0.62** | ng/L | 3.8 | 0.62 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 24448-09-7 | N2 |
| Perfluorobutanesulfonic acid | **233** | ng/L | 1.9 | 0.29 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 375-73-5 | |
| Perfluorodecanoic acid | **<0.68** | ng/L | 1.9 | 0.68 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 335-76-2 | |
| Perfluorohexanoic acid | **6.0** | ng/L | 1.9 | 0.45 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 307-24-4 | |
| PFBA | **35.3** | ng/L | 1.9 | 0.72 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 375-22-4 | |
| PFDS | **<0.58** | ng/L | 1.9 | 0.58 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 335-77-3 | |
| PFDoS | **<0.62** | ng/L | 1.9 | 0.62 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 79780-39-5 | |
| PFHpS | **<0.58** | ng/L | 1.9 | 0.58 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 375-92-8 | |
| PFNS | **<0.83** | ng/L | 1.9 | 0.83 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 68259-12-1 | |
| PFOSA | **<0.35** | ng/L | 1.9 | 0.35 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 754-91-6 | |
| PFPeA | **15.4** | ng/L | 1.9 | 0.42 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 2706-90-3 | |
| PFPeS | **3.0** | ng/L | 1.9 | 0.48 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 2706-91-4 | |
| Perfluorododecanoic acid | **<0.62** | ng/L | 1.9 | 0.62 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 307-55-1 | |
| Perfluoroheptanoic acid | **2.2** | ng/L | 1.9 | 0.55 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 375-85-9 | |
| Perfluorohexanesulfonic acid | **5.7** | ng/L | 1.9 | 0.59 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 355-46-4 | |
| Perfluorononanoic acid | **<0.46** | ng/L | 1.9 | 0.46 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 375-95-1 | |
| Perfluorooctanesulfonic acid | **13.1** | ng/L | 1.9 | 0.36 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 1763-23-1 | |
| Perfluorooctanoic acid | **5.4** | ng/L | 1.9 | 0.40 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 335-67-1 | |
| Perfluorotetradecanoic acid | **<0.54** | ng/L | 1.9 | 0.54 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 376-06-7 | |
| Perfluorotridecanoic acid | **<0.58** | ng/L | 1.9 | 0.58 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 72629-94-8 | |
| Perfluoroundecanoic acid | **<0.59** | ng/L | 1.9 | 0.59 | 1 | 10/29/23 15:44 | 10/30/23 17:33 | 2058-94-8 | |

## REPORT OF LABORATORY ANALYSIS

**Pace Analytical Services, LLC**
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## QUALITY CONTROL DATA

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

QC Batch: 305494
QC Batch Method: EPA 537 Mod
Analysis Method: EPA 537 Mod
Analysis Description: PFAS in Water-EPA 537 Mod
Laboratory: Pace Analytical Services - Baton Rouge
Associated Lab Samples: 40269875001, 40269875002, 40269875003, 40269875004, 40269875005, 40269875007, 40269875009

METHOD BLANK: 1462146 Matrix: Water
Associated Lab Samples: 40269875001, 40269875002, 40269875003, 40269875004, 40269875005, 40269875007, 40269875009

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 11Cl-PF3OUdS | ng/L | <0.90 | 4.0 | 11/01/23 15:44 | |
| 4:2 FTS | ng/L | <1.2 | 4.0 | 11/01/23 15:44 | |
| 6:2 FTS | ng/L | <1.5 | 4.0 | 11/01/23 15:44 | |
| 8:2 FTS | ng/L | <1.1 | 4.0 | 11/01/23 15:44 | |
| 9Cl-PF3ONS | ng/L | <0.90 | 4.0 | 11/01/23 15:44 | |
| ADONA | ng/L | <0.86 | 4.0 | 11/01/23 15:44 | |
| HFPO-DA | ng/L | <6.7 | 20.0 | 11/01/23 15:44 | |
| NEtFOSA | ng/L | <1.4 | 8.0 | 11/01/23 15:44 | 2q |
| NEtFOSAA | ng/L | <1.6 | 8.0 | 11/01/23 15:44 | |
| NEtFOSE | ng/L | <1.0 | 8.0 | 11/01/23 15:44 | 2q,N2 |
| NMeFOSA | ng/L | <1.7 | 8.0 | 11/01/23 15:44 | 2q |
| NMeFOSAA | ng/L | <0.90 | 8.0 | 11/01/23 15:44 | |
| NMeFOSE | ng/L | <1.3 | 8.0 | 11/01/23 15:44 | 2q,N2 |
| Perfluorobutanesulfonic acid | ng/L | <0.62 | 4.0 | 11/01/23 15:44 | |
| Perfluorodecanoic acid | ng/L | <1.4 | 4.0 | 11/01/23 15:44 | |
| Perfluorododecanoic acid | ng/L | <1.3 | 4.0 | 11/01/23 15:44 | |
| Perfluoroheptanoic acid | ng/L | <1.2 | 4.0 | 11/01/23 15:44 | |
| Perfluorohexanesulfonic acid | ng/L | <1.2 | 4.0 | 11/01/23 15:44 | |
| Perfluorohexanoic acid | ng/L | <0.94 | 4.0 | 11/01/23 15:44 | |
| Perfluorononanoic acid | ng/L | <0.98 | 4.0 | 11/01/23 15:44 | |
| Perfluorooctanesulfonic acid | ng/L | <0.76 | 4.0 | 11/01/23 15:44 | |
| Perfluorooctanoic acid | ng/L | <0.84 | 4.0 | 11/01/23 15:44 | |
| Perfluorotetradecanoic acid | ng/L | <1.1 | 4.0 | 11/01/23 15:44 | |
| Perfluorotridecanoic acid | ng/L | <1.2 | 4.0 | 11/01/23 15:44 | |
| Perfluoroundecanoic acid | ng/L | <1.2 | 4.0 | 11/01/23 15:44 | |
| PFBA | ng/L | <1.5 | 4.0 | 11/01/23 15:44 | |
| PFDoS | ng/L | <1.3 | 4.0 | 11/01/23 15:44 | |
| PFDS | ng/L | <1.2 | 4.0 | 11/01/23 15:44 | |
| PFHpS | ng/L | <1.2 | 4.0 | 11/01/23 15:44 | |
| PFNS | ng/L | <1.7 | 4.0 | 11/01/23 15:44 | |
| PFOSA | ng/L | <0.74 | 4.0 | 11/01/23 15:44 | |
| PFPeA | ng/L | <0.88 | 4.0 | 11/01/23 15:44 | |
| PFPeS | ng/L | <1.0 | 4.0 | 11/01/23 15:44 | |

LABORATORY CONTROL SAMPLE & LCSD: 1462147 1462148

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| 11Cl-PF3OUdS | ng/L | 75.6 | 95.4 | 79.2 | 126 | 105 | 70-130 | 19 | 30 | |
| 4:2 FTS | ng/L | 74.8 | 100 | 88.4 | 134 | 118 | 70-130 | 12 | 30 | L1 |

**Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.**

## REPORT OF LABORATORY ANALYSIS

**Pace Analytical Services, LLC**
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## QUALITY CONTROL DATA

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

LABORATORY CONTROL SAMPLE & LCSD: 1462147 1462148

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| 6:2 FTS | ng/L | 76 | 102 | 90.1 | 134 | 119 | 70-130 | 12 | 30 | L1 |
| 8:2 FTS | ng/L | 76.8 | 101 | 90.6 | 132 | 118 | 70-130 | 11 | 30 | L1 |
| 9Cl-PF3ONS | ng/L | 74.8 | 94.7 | 81.9 | 127 | 110 | 70-130 | 14 | 30 | |
| ADONA | ng/L | 75.6 | 95.0 | 83.1 | 126 | 110 | 70-130 | 13 | 30 | |
| HFPO-DA | ng/L | 160 | 214 | 181 | 134 | 113 | 70-130 | 17 | 30 | L1 |
| NEtFOSA | ng/L | 80 | 113 | 84.2 | 141 | 105 | 70-130 | 29 | 30 | 2q,L1 |
| NEtFOSAA | ng/L | 80 | 101 | 92.6 | 126 | 116 | 70-130 | 9 | 30 | |
| NEtFOSE | ng/L | 80 | 101 | 84.3 | 127 | 105 | 70-130 | 18 | 30 | 2q,N2 |
| NMeFOSA | ng/L | 80 | 102 | 80.6 | 127 | 101 | 70-130 | 23 | 30 | 2q |
| NMeFOSAA | ng/L | 80 | 106 | 87.7 | 132 | 110 | 70-130 | 19 | 30 | L1 |
| NMeFOSE | ng/L | 80 | 113 | 99.4 | 142 | 124 | 70-130 | 13 | 30 | 2q,L1,N2 |
| Perfluorobutanesulfonic acid | ng/L | 70.8 | 91.5 | 80.1 | 129 | 113 | 70-130 | 13 | 30 | |
| Perfluorodecanoic acid | ng/L | 80 | 100 | 90.9 | 125 | 114 | 70-130 | 10 | 30 | |
| Perfluorododecanoic acid | ng/L | 80 | 104 | 90.7 | 130 | 113 | 70-130 | 14 | 30 | |
| Perfluoroheptanoic acid | ng/L | 80 | 103 | 88.4 | 129 | 111 | 70-130 | 15 | 30 | |
| Perfluorohexanesulfonic acid | ng/L | 73.2 | 94.6 | 79.6 | 129 | 109 | 70-130 | 17 | 30 | |
| Perfluorohexanoic acid | ng/L | 80 | 100 | 90.4 | 125 | 113 | 70-130 | 10 | 30 | |
| Perfluorononanoic acid | ng/L | 80 | 101 | 89.4 | 127 | 112 | 70-130 | 13 | 30 | |
| Perfluorooctanesulfonic acid | ng/L | 74.4 | 97.0 | 82.6 | 130 | 111 | 70-130 | 16 | 30 | |
| Perfluorooctanoic acid | ng/L | 80 | 104 | 89.3 | 130 | 112 | 70-130 | 15 | 30 | |
| Perfluorotetradecanoic acid | ng/L | 80 | 104 | 91.6 | 130 | 114 | 70-130 | 12 | 30 | |
| Perfluorotridecanoic acid | ng/L | 80 | 102 | 87.1 | 127 | 109 | 70-130 | 16 | 30 | |
| Perfluoroundecanoic acid | ng/L | 80 | 102 | 89.4 | 127 | 112 | 70-130 | 13 | 30 | |
| PFBA | ng/L | 80 | 104 | 90.7 | 130 | 113 | 70-130 | 14 | 30 | |
| PFDoS | ng/L | 77.6 | 100 | 80.0 | 129 | 103 | 70-130 | 23 | 30 | |
| PFDS | ng/L | 77.2 | 99.9 | 78.6 | 129 | 102 | 70-130 | 24 | 30 | |
| PFHpS | ng/L | 76.4 | 98.9 | 83.3 | 129 | 109 | 70-130 | 17 | 30 | |
| PFNS | ng/L | 76.8 | 99.3 | 85.3 | 129 | 111 | 70-130 | 15 | 30 | |
| PFOSA | ng/L | 80 | 103 | 91.8 | 129 | 115 | 70-130 | 12 | 30 | |
| PFPeA | ng/L | 80 | 103 | 89.9 | 129 | 112 | 70-130 | 13 | 30 | |
| PFPeS | ng/L | 75.2 | 95.3 | 82.9 | 127 | 110 | 70-130 | 14 | 30 | |

LABORATORY CONTROL SAMPLE: 1462196

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 11Cl-PF3OUdS | ng/L | 7.5 | 7.7 | 102 | 70-130 | |
| 4:2 FTS | ng/L | 7.5 | 8.5 | 112 | 70-130 | |
| 6:2 FTS | ng/L | 7.6 | 9.2 | 122 | 70-130 | |
| 8:2 FTS | ng/L | 7.7 | 8.8 | 115 | 70-130 | |
| 9Cl-PF3ONS | ng/L | 7.5 | 8.0 | 106 | 70-130 | |
| ADONA | ng/L | 7.5 | 7.8 | 104 | 70-130 | |
| HFPO-DA | ng/L | 16 | 17.8J | 111 | 70-130 | |
| NEtFOSA | ng/L | 8 | 12.0 | 150 | 70-130 | 2q,L1 |
| NEtFOSAA | ng/L | 8 | 9.9 | 124 | 70-130 | |
| NEtFOSE | ng/L | 8 | 7.6J | 95 | 70-130 | 2q,N2 |

**Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.**

## REPORT OF LABORATORY ANALYSIS

**Pace Analytical Services, LLC**
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

## QUALITY CONTROL DATA

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

LABORATORY CONTROL SAMPLE: 1462196

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| NMeFOSA | ng/L | 8 | 14.5 | 181 | 70-130 | 2q,L1 |
| NMeFOSAA | ng/L | 8 | 9.5 | 119 | 70-130 | |
| NMeFOSE | ng/L | 8 | 9.9 | 124 | 70-130 | 2q,N2 |
| Perfluorobutanesulfonic acid | ng/L | 7 | 7.9 | 112 | 70-130 | |
| Perfluorodecanoic acid | ng/L | 8 | 8.6 | 107 | 70-130 | |
| Perfluorododecanoic acid | ng/L | 8 | 8.7 | 109 | 70-130 | |
| Perfluoroheptanoic acid | ng/L | 8 | 8.3 | 104 | 70-130 | |
| Perfluorohexanesulfonic acid | ng/L | 7.4 | 8.3 | 112 | 70-130 | |
| Perfluorohexanoic acid | ng/L | 8 | 8.4 | 105 | 70-130 | |
| Perfluorononanoic acid | ng/L | 8 | 8.4 | 105 | 70-130 | |
| Perfluorooctanesulfonic acid | ng/L | 7.4 | 8.4 | 113 | 70-130 | |
| Perfluorooctanoic acid | ng/L | 8 | 8.9 | 111 | 70-130 | |
| Perfluorotetradecanoic acid | ng/L | 8 | 8.6 | 108 | 70-130 | |
| Perfluorotridecanoic acid | ng/L | 8 | 8.4 | 105 | 70-130 | |
| Perfluoroundecanoic acid | ng/L | 8 | 8.4 | 105 | 70-130 | |
| PFBA | ng/L | 8 | 8.8 | 110 | 70-130 | |
| PFDoS | ng/L | 7.8 | 7.4 | 95 | 70-130 | |
| PFDS | ng/L | 7.7 | 7.9 | 103 | 70-130 | |
| PFHpS | ng/L | 7.7 | 8.0 | 104 | 70-130 | |
| PFNS | ng/L | 7.7 | 8.6 | 112 | 70-130 | |
| PFOSA | ng/L | 8 | 8.6 | 108 | 70-130 | |
| PFPeA | ng/L | 8 | 8.6 | 107 | 70-130 | |
| PFPeS | ng/L | 7.5 | 7.5 | 99 | 70-130 | |

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## REPORT OF LABORATORY ANALYSIS

**Pace Analytical Services, LLC**
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

## QUALITY CONTROL DATA

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

QC Batch: 305603
QC Batch Method: EPA 537 Mod
Analysis Method: EPA 537 Mod
Analysis Description: PFAS in Water-EPA 537 Mod
Laboratory: Pace Analytical Services - Baton Rouge
Associated Lab Samples: 40269875008, 40269875010

METHOD BLANK: 1462964 Matrix: Water
Associated Lab Samples: 40269875008, 40269875010

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 11Cl-PF3OUdS | ng/L | <0.90 | 4.0 | 10/30/23 14:29 | |
| 4:2 FTS | ng/L | <1.2 | 4.0 | 10/30/23 14:29 | |
| 6:2 FTS | ng/L | <1.5 | 4.0 | 10/30/23 14:29 | |
| 8:2 FTS | ng/L | <1.1 | 4.0 | 10/30/23 14:29 | |
| 9Cl-PF3ONS | ng/L | <0.90 | 4.0 | 10/30/23 14:29 | |
| ADONA | ng/L | <0.86 | 4.0 | 10/30/23 14:29 | |
| HFPO-DA | ng/L | <6.7 | 20.0 | 10/30/23 14:29 | |
| NEtFOSA | ng/L | <1.4 | 8.0 | 10/30/23 14:29 | 2q |
| NEtFOSAA | ng/L | <1.6 | 8.0 | 10/30/23 14:29 | |
| NEtFOSE | ng/L | <1.0 | 8.0 | 10/30/23 14:29 | N2 |
| NMeFOSA | ng/L | <1.7 | 8.0 | 10/30/23 14:29 | 2q |
| NMeFOSAA | ng/L | <0.90 | 8.0 | 10/30/23 14:29 | |
| NMeFOSE | ng/L | <1.3 | 8.0 | 10/30/23 14:29 | N2 |
| Perfluorobutanesulfonic acid | ng/L | <0.62 | 4.0 | 10/30/23 14:29 | |
| Perfluorodecanoic acid | ng/L | <1.4 | 4.0 | 10/30/23 14:29 | |
| Perfluorododecanoic acid | ng/L | <1.3 | 4.0 | 10/30/23 14:29 | |
| Perfluoroheptanoic acid | ng/L | <1.2 | 4.0 | 10/30/23 14:29 | |
| Perfluorohexanesulfonic acid | ng/L | <1.2 | 4.0 | 10/30/23 14:29 | |
| Perfluorohexanoic acid | ng/L | <0.94 | 4.0 | 10/30/23 14:29 | |
| Perfluorononanoic acid | ng/L | <0.98 | 4.0 | 10/30/23 14:29 | |
| Perfluorooctanesulfonic acid | ng/L | <0.76 | 4.0 | 10/30/23 14:29 | |
| Perfluorooctanoic acid | ng/L | <0.84 | 4.0 | 10/30/23 14:29 | |
| Perfluorotetradecanoic acid | ng/L | <1.1 | 4.0 | 10/30/23 14:29 | |
| Perfluorotridecanoic acid | ng/L | <1.2 | 4.0 | 10/30/23 14:29 | |
| Perfluoroundecanoic acid | ng/L | <1.2 | 4.0 | 10/30/23 14:29 | |
| PFBA | ng/L | <1.5 | 4.0 | 10/30/23 14:29 | |
| PFDoS | ng/L | <1.3 | 4.0 | 10/30/23 14:29 | |
| PFDS | ng/L | <1.2 | 4.0 | 10/30/23 14:29 | |
| PFHpS | ng/L | <1.2 | 4.0 | 10/30/23 14:29 | |
| PFNS | ng/L | <1.7 | 4.0 | 10/30/23 14:29 | |
| PFOSA | ng/L | 0.90J | 4.0 | 10/30/23 14:29 | |
| PFPeA | ng/L | <0.88 | 4.0 | 10/30/23 14:29 | |
| PFPeS | ng/L | <1.0 | 4.0 | 10/30/23 14:29 | |

LABORATORY CONTROL SAMPLE & LCSD: 1462965 1462966

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| 11Cl-PF3OUdS | ng/L | 75.6 | 71.5 | 67.1 | 95 | 89 | 70-130 | 6 | 30 | |
| 4:2 FTS | ng/L | 74.8 | 77.1 | 73.3 | 103 | 98 | 70-130 | 5 | 30 | |

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## REPORT OF LABORATORY ANALYSIS

**Pace Analytical Services, LLC**
1241 Bellevue Street - Suite 9
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(920)469-2436

## QUALITY CONTROL DATA

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

LABORATORY CONTROL SAMPLE & LCSD: 1462965 1462966

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| 6:2 FTS | ng/L | 76 | 82.7 | 78.6 | 109 | 103 | 70-130 | 5 | 30 | |
| 8:2 FTS | ng/L | 76.8 | 82.5 | 79.8 | 107 | 104 | 70-130 | 3 | 30 | |
| 9Cl-PF3ONS | ng/L | 74.8 | 73.7 | 72.0 | 98 | 96 | 70-130 | 2 | 30 | |
| ADONA | ng/L | 75.6 | 75.9 | 73.2 | 100 | 97 | 70-130 | 4 | 30 | |
| HFPO-DA | ng/L | 160 | 162 | 159 | 101 | 100 | 70-130 | 2 | 30 | |
| NEtFOSA | ng/L | 80 | 81.0 | 83.4 | 101 | 104 | 70-130 | 3 | 30 | 2q |
| NEtFOSAA | ng/L | 80 | 81.2 | 80.0 | 101 | 100 | 70-130 | 1 | 30 | |
| NEtFOSE | ng/L | 80 | 82.0 | 80.7 | 102 | 101 | 70-130 | 2 | 30 | N2 |
| NMeFOSA | ng/L | 80 | 84.8 | 78.0 | 106 | 97 | 70-130 | 8 | 30 | 2q |
| NMeFOSAA | ng/L | 80 | 86.5 | 77.6 | 108 | 97 | 70-130 | 11 | 30 | |
| NMeFOSE | ng/L | 80 | 82.8 | 79.0 | 103 | 99 | 70-130 | 5 | 30 | N2 |
| Perfluorobutanesulfonic acid | ng/L | 70.8 | 71.2 | 67.7 | 100 | 96 | 70-130 | 5 | 30 | |
| Perfluorodecanoic acid | ng/L | 80 | 82.5 | 79.7 | 103 | 100 | 70-130 | 3 | 30 | |
| Perfluorododecanoic acid | ng/L | 80 | 81.5 | 80.4 | 102 | 101 | 70-130 | 1 | 30 | |
| Perfluoroheptanoic acid | ng/L | 80 | 82.9 | 77.1 | 104 | 96 | 70-130 | 7 | 30 | |
| Perfluorohexanesulfonic acid | ng/L | 73.2 | 74.2 | 70.2 | 101 | 96 | 70-130 | 5 | 30 | |
| Perfluorohexanoic acid | ng/L | 80 | 79.8 | 77.8 | 100 | 97 | 70-130 | 3 | 30 | |
| Perfluorononanoic acid | ng/L | 80 | 82.5 | 79.3 | 103 | 99 | 70-130 | 4 | 30 | |
| Perfluorooctanesulfonic acid | ng/L | 74.4 | 74.4 | 71.6 | 100 | 96 | 70-130 | 4 | 30 | |
| Perfluorooctanoic acid | ng/L | 80 | 81.5 | 79.2 | 102 | 99 | 70-130 | 3 | 30 | |
| Perfluorotetradecanoic acid | ng/L | 80 | 79.6 | 78.5 | 99 | 98 | 70-130 | 1 | 30 | |
| Perfluorotridecanoic acid | ng/L | 80 | 78.9 | 76.6 | 99 | 96 | 70-130 | 3 | 30 | |
| Perfluoroundecanoic acid | ng/L | 80 | 81.6 | 77.4 | 102 | 97 | 70-130 | 5 | 30 | |
| PFBA | ng/L | 80 | 81.3 | 79.4 | 102 | 99 | 70-130 | 2 | 30 | |
| PFDoS | ng/L | 77.6 | 71.6 | 65.8 | 92 | 85 | 70-130 | 8 | 30 | |
| PFDS | ng/L | 77.2 | 74.2 | 71.0 | 96 | 92 | 70-130 | 4 | 30 | |
| PFHpS | ng/L | 76.4 | 77.0 | 73.1 | 101 | 96 | 70-130 | 5 | 30 | |
| PFNS | ng/L | 76.8 | 75.4 | 75.2 | 98 | 98 | 70-130 | 0 | 30 | |
| PFOSA | ng/L | 80 | 85.5 | 83.3 | 107 | 104 | 70-130 | 3 | 30 | |
| PFPeA | ng/L | 80 | 80.4 | 79.9 | 101 | 100 | 70-130 | 1 | 30 | |
| PFPeS | ng/L | 75.2 | 74.9 | 73.1 | 100 | 97 | 70-130 | 2 | 30 | |

LABORATORY CONTROL SAMPLE: 1463011

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 11Cl-PF3OUdS | ng/L | 7.5 | 6.2 | 83 | 70-130 | |
| 4:2 FTS | ng/L | 7.5 | 7.5 | 100 | 70-130 | |
| 6:2 FTS | ng/L | 7.6 | 8.0 | 105 | 70-130 | |
| 8:2 FTS | ng/L | 7.7 | 8.2 | 107 | 70-130 | |
| 9Cl-PF3ONS | ng/L | 7.5 | 7.0 | 93 | 70-130 | |
| ADONA | ng/L | 7.5 | 7.4 | 98 | 70-130 | |
| HFPO-DA | ng/L | 16 | 15.9J | 99 | 70-130 | |
| NEtFOSA | ng/L | 8 | 8.0J | 100 | 70-130 | |
| NEtFOSAA | ng/L | 8 | 8.2 | 102 | 70-130 | |
| NEtFOSE | ng/L | 8 | 8.3 | 104 | 70-130 | N2 |

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## REPORT OF LABORATORY ANALYSIS

**Pace Analytical Services, LLC**
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

## QUALITY CONTROL DATA

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

LABORATORY CONTROL SAMPLE: 1463011

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| NMeFOSA | ng/L | 8 | 7.9J | 99 | 70-130 | |
| NMeFOSAA | ng/L | 8 | 8.1 | 101 | 70-130 | |
| NMeFOSE | ng/L | 8 | 8.2 | 102 | 70-130 | N2 |
| Perfluorobutanesulfonic acid | ng/L | 7 | 6.9 | 98 | 70-130 | |
| Perfluorodecanoic acid | ng/L | 8 | 7.7 | 97 | 70-130 | |
| Perfluorododecanoic acid | ng/L | 8 | 7.7 | 96 | 70-130 | |
| Perfluoroheptanoic acid | ng/L | 8 | 7.7 | 96 | 70-130 | |
| Perfluorohexanesulfonic acid | ng/L | 7.4 | 7.2 | 97 | 70-130 | |
| Perfluorohexanoic acid | ng/L | 8 | 7.9 | 99 | 70-130 | |
| Perfluorononanoic acid | ng/L | 8 | 7.9 | 99 | 70-130 | |
| Perfluorooctanesulfonic acid | ng/L | 7.4 | 7.5 | 101 | 70-130 | |
| Perfluorooctanoic acid | ng/L | 8 | 8.0 | 100 | 70-130 | |
| Perfluorotetradecanoic acid | ng/L | 8 | 7.6 | 96 | 70-130 | |
| Perfluorotridecanoic acid | ng/L | 8 | 7.9 | 99 | 70-130 | |
| Perfluoroundecanoic acid | ng/L | 8 | 7.6 | 95 | 70-130 | |
| PFBA | ng/L | 8 | 7.9 | 99 | 70-130 | |
| PFDoS | ng/L | 7.8 | 6.8 | 87 | 70-130 | |
| PFDS | ng/L | 7.7 | 6.1 | 79 | 70-130 | |
| PFHpS | ng/L | 7.7 | 7.1 | 93 | 70-130 | |
| PFNS | ng/L | 7.7 | 7.5 | 98 | 70-130 | |
| PFOSA | ng/L | 8 | 8.3 | 104 | 70-130 | |
| PFPeA | ng/L | 8 | 7.7 | 97 | 70-130 | |
| PFPeS | ng/L | 7.5 | 7.4 | 98 | 70-130 | |

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## REPORT OF LABORATORY ANALYSIS

**Pace Analytical Services, LLC**
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

## QUALITY CONTROL DATA

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

QC Batch: 307012
QC Batch Method: EPA 537 Mod
Analysis Method: EPA 537 Mod
Analysis Description: PFAS in Water-EPA 537 Mod
Laboratory: Pace Analytical Services - Baton Rouge
Associated Lab Samples: 40269875003, 40269875006

METHOD BLANK: 1469418 Matrix: Water
Associated Lab Samples: 40269875003, 40269875006

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 11Cl-PF3OUdS | ng/L | <0.90 | 4.0 | 11/17/23 16:24 | |
| 4:2 FTS | ng/L | <1.2 | 4.0 | 11/17/23 16:24 | |
| 6:2 FTS | ng/L | <1.5 | 4.0 | 11/17/23 16:24 | |
| 8:2 FTS | ng/L | <1.1 | 4.0 | 11/17/23 16:24 | |
| 9Cl-PF3ONS | ng/L | <0.90 | 4.0 | 11/17/23 16:24 | |
| ADONA | ng/L | <0.86 | 4.0 | 11/17/23 16:24 | |
| HFPO-DA | ng/L | <6.7 | 20.0 | 11/17/23 16:24 | |
| NEtFOSA | ng/L | <1.4 | 8.0 | 11/17/23 16:24 | |
| NEtFOSAA | ng/L | <1.6 | 8.0 | 11/17/23 16:24 | |
| NEtFOSE | ng/L | <1.0 | 8.0 | 11/17/23 16:24 | N2 |
| NMeFOSA | ng/L | <1.7 | 8.0 | 11/17/23 16:24 | |
| NMeFOSAA | ng/L | <0.90 | 8.0 | 11/17/23 16:24 | |
| NMeFOSE | ng/L | <1.3 | 8.0 | 11/17/23 16:24 | N2 |
| Perfluorobutanesulfonic acid | ng/L | <0.62 | 4.0 | 11/17/23 16:24 | |
| Perfluorodecanoic acid | ng/L | <1.4 | 4.0 | 11/17/23 16:24 | |
| Perfluorododecanoic acid | ng/L | <1.3 | 4.0 | 11/17/23 16:24 | |
| Perfluoroheptanoic acid | ng/L | <1.2 | 4.0 | 11/17/23 16:24 | |
| Perfluorohexanesulfonic acid | ng/L | <1.2 | 4.0 | 11/17/23 16:24 | |
| Perfluorohexanoic acid | ng/L | <0.94 | 4.0 | 11/17/23 16:24 | |
| Perfluorononanoic acid | ng/L | <0.98 | 4.0 | 11/17/23 16:24 | |
| Perfluorooctanesulfonic acid | ng/L | 1.5J | 4.0 | 11/17/23 16:24 | |
| Perfluorooctanoic acid | ng/L | <0.84 | 4.0 | 11/17/23 16:24 | |
| Perfluorotetradecanoic acid | ng/L | <1.1 | 4.0 | 11/17/23 16:24 | |
| Perfluorotridecanoic acid | ng/L | <1.2 | 4.0 | 11/17/23 16:24 | |
| Perfluoroundecanoic acid | ng/L | <1.2 | 4.0 | 11/17/23 16:24 | |
| PFBA | ng/L | <1.5 | 4.0 | 11/17/23 16:24 | |
| PFDoS | ng/L | <1.3 | 4.0 | 11/17/23 16:24 | |
| PFDS | ng/L | <1.2 | 4.0 | 11/17/23 16:24 | |
| PFHpS | ng/L | <1.2 | 4.0 | 11/17/23 16:24 | |
| PFNS | ng/L | <1.7 | 4.0 | 11/17/23 16:24 | |
| PFOSA | ng/L | <0.74 | 4.0 | 11/17/23 16:24 | |
| PFPeA | ng/L | <0.88 | 4.0 | 11/17/23 16:24 | |
| PFPeS | ng/L | <1.0 | 4.0 | 11/17/23 16:24 | |

LABORATORY CONTROL SAMPLE & LCSD: 1469419 1469420

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| 11Cl-PF3OUdS | ng/L | 75.6 | 75.7 | 75.7 | 100 | 100 | 70-130 | 0 | 30 | |
| 4:2 FTS | ng/L | 74.8 | 79.3 | 80.1 | 106 | 107 | 70-130 | 1 | 30 | |

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## REPORT OF LABORATORY ANALYSIS

**Pace Analytical Services, LLC**
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

## QUALITY CONTROL DATA

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

LABORATORY CONTROL SAMPLE & LCSD: 1469419 1469420

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| 6:2 FTS | ng/L | 76 | 83.2 | 82.2 | 110 | 108 | 70-130 | 1 | 30 | |
| 8:2 FTS | ng/L | 76.8 | 87.2 | 85.1 | 113 | 111 | 70-130 | 2 | 30 | |
| 9Cl-PF3ONS | ng/L | 74.8 | 77.4 | 78.1 | 103 | 104 | 70-130 | 1 | 30 | |
| ADONA | ng/L | 75.6 | 77.1 | 78.0 | 102 | 103 | 70-130 | 1 | 30 | |
| HFPO-DA | ng/L | 160 | 168 | 179 | 105 | 112 | 70-130 | 6 | 30 | |
| NEtFOSA | ng/L | 80 | 83.3 | 83.1 | 104 | 104 | 70-130 | 0 | 30 | 2q |
| NEtFOSAA | ng/L | 80 | 82.2 | 83.2 | 103 | 104 | 70-130 | 1 | 30 | |
| NEtFOSE | ng/L | 80 | 85.5 | 86.3 | 107 | 108 | 70-130 | 1 | 30 | 2q,N2 |
| NMeFOSA | ng/L | 80 | 90.1 | 88.6 | 113 | 111 | 70-130 | 2 | 30 | 2q |
| NMeFOSAA | ng/L | 80 | 86.0 | 88.1 | 108 | 110 | 70-130 | 2 | 30 | |
| NMeFOSE | ng/L | 80 | 82.4 | 83.7 | 103 | 105 | 70-130 | 2 | 30 | 2q,N2 |
| Perfluorobutanesulfonic acid | ng/L | 70.8 | 73.8 | 77.5 | 104 | 109 | 70-130 | 5 | 30 | |
| Perfluorodecanoic acid | ng/L | 80 | 84.8 | 85.8 | 106 | 107 | 70-130 | 1 | 30 | |
| Perfluorododecanoic acid | ng/L | 80 | 86.0 | 84.7 | 108 | 106 | 70-130 | 1 | 30 | |
| Perfluoroheptanoic acid | ng/L | 80 | 83.1 | 85.2 | 104 | 106 | 70-130 | 2 | 30 | |
| Perfluorohexanesulfonic acid | ng/L | 73.2 | 76.7 | 78.0 | 105 | 107 | 70-130 | 2 | 30 | |
| Perfluorohexanoic acid | ng/L | 80 | 83.6 | 84.4 | 105 | 105 | 70-130 | 1 | 30 | |
| Perfluorononanoic acid | ng/L | 80 | 84.4 | 85.6 | 105 | 107 | 70-130 | 1 | 30 | |
| Perfluorooctanesulfonic acid | ng/L | 74.4 | 78.7 | 78.8 | 106 | 106 | 70-130 | 0 | 30 | |
| Perfluorooctanoic acid | ng/L | 80 | 83.9 | 86.0 | 105 | 108 | 70-130 | 3 | 30 | |
| Perfluorotetradecanoic acid | ng/L | 80 | 84.8 | 85.8 | 106 | 107 | 70-130 | 1 | 30 | |
| Perfluorotridecanoic acid | ng/L | 80 | 86.1 | 86.3 | 108 | 108 | 70-130 | 0 | 30 | |
| Perfluoroundecanoic acid | ng/L | 80 | 84.6 | 85.3 | 106 | 107 | 70-130 | 1 | 30 | |
| PFBA | ng/L | 80 | 83.8 | 85.5 | 105 | 107 | 70-130 | 2 | 30 | |
| PFDoS | ng/L | 77.6 | 79.6 | 78.1 | 103 | 101 | 70-130 | 2 | 30 | |
| PFDS | ng/L | 77.2 | 77.8 | 76.6 | 101 | 99 | 70-130 | 2 | 30 | |
| PFHpS | ng/L | 76.4 | 79.7 | 82.9 | 104 | 109 | 70-130 | 4 | 30 | |
| PFNS | ng/L | 76.8 | 78.7 | 80.0 | 102 | 104 | 70-130 | 2 | 30 | |
| PFOSA | ng/L | 80 | 84.1 | 84.3 | 105 | 105 | 70-130 | 0 | 30 | |
| PFPeA | ng/L | 80 | 84.2 | 85.0 | 105 | 106 | 70-130 | 1 | 30 | |
| PFPeS | ng/L | 75.2 | 79.4 | 81.8 | 106 | 109 | 70-130 | 3 | 30 | |

LABORATORY CONTROL SAMPLE: 1471754

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 11Cl-PF3OUdS | ng/L | 7.5 | 5.9 | 79 | | |
| 4:2 FTS | ng/L | 7.5 | 6.3 | 83 | | |
| 6:2 FTS | ng/L | 7.6 | 28.6 | 376 | | |
| 8:2 FTS | ng/L | 7.7 | 14.6 | 190 | | |
| 9Cl-PF3ONS | ng/L | 7.5 | 6.0 | 79 | | |
| ADONA | ng/L | 7.5 | 6.1 | 81 | | |
| HFPO-DA | ng/L | 16 | 13.8J | 86 | | |
| NEtFOSA | ng/L | 8 | 7.4J | 93 | | |
| NEtFOSAA | ng/L | 8 | 6.6J | 83 | | |
| NEtFOSE | ng/L | 8 | 7.2J | 90 | | 2q,N2 |

**Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.**

## REPORT OF LABORATORY ANALYSIS

**Pace Analytical Services, LLC**
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

## QUALITY CONTROL DATA

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

LABORATORY CONTROL SAMPLE: 1471754

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| NMeFOSA | ng/L | 8 | 8.4 | 105 | | 2q |
| NMeFOSAA | ng/L | 8 | 7.4J | 93 | | |
| NMeFOSE | ng/L | 8 | 7.2J | 90 | | 2q,N2 |
| Perfluorobutanesulfonic acid | ng/L | 7 | 6.0 | 86 | | |
| Perfluorodecanoic acid | ng/L | 8 | 7.0 | 88 | | |
| Perfluorododecanoic acid | ng/L | 8 | 7.0 | 88 | | |
| Perfluoroheptanoic acid | ng/L | 8 | 6.8 | 85 | | |
| Perfluorohexanesulfonic acid | ng/L | 7.4 | 6.7 | 91 | | |
| Perfluorohexanoic acid | ng/L | 8 | 8.0 | 99 | | |
| Perfluorononanoic acid | ng/L | 8 | 6.6 | 83 | | |
| Perfluorooctanesulfonic acid | ng/L | 7.4 | 8.1 | 109 | | |
| Perfluorooctanoic acid | ng/L | 8 | 7.5 | 94 | | |
| Perfluorotetradecanoic acid | ng/L | 8 | 6.9 | 86 | | |
| Perfluorotridecanoic acid | ng/L | 8 | 7.0 | 87 | | |
| Perfluoroundecanoic acid | ng/L | 8 | 6.7 | 83 | | |
| PFBA | ng/L | 8 | 6.8 | 86 | | |
| PFDoS | ng/L | 7.8 | 6.0 | 77 | | |
| PFDS | ng/L | 7.7 | 6.0 | 78 | | |
| PFHpS | ng/L | 7.7 | 6.5 | 84 | | |
| PFNS | ng/L | 7.7 | 6.4 | 83 | | |
| PFOSA | ng/L | 8 | 6.9 | 87 | | |
| PFPeA | ng/L | 8 | 6.7 | 84 | | |
| PFPeS | ng/L | 7.5 | 6.3 | 83 | | |

**Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.**

## REPORT OF LABORATORY ANALYSIS

**Pace Analytical Services, LLC**
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

# QUALIFIERS

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

## DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - The reported result is an estimated value.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

DL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Analyte was not detected and is reported as less than the LOD or as defined by the customer.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

## ANALYTE QUALIFIERS

| | |
|---|---|
| 1q | The extracted internal standard is above criteria. |
| 2q | The extracted internal standard is below criteria. |
| 3q | The extracted internal standard is below criteria. The sample was re-analyzed with similar results. |
| B | Analyte was detected in the associated method blank. |
| L1 | Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high. |
| N2 | The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request. |

**Pace Analytical Services, LLC**
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 200032 JAGEMANN PLATING
Pace Project No.: 40269875

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **40269875001** | **200032-MW-5** | EPA 537 Mod | 305494 | EPA 537 Mod | 306087 |
| **40269875002** | **200032-MW-4** | EPA 537 Mod | 305494 | EPA 537 Mod | 306087 |
| **40269875003** | **200032-MW-6** | EPA 537 Mod | 305494 | EPA 537 Mod | 306087 |
| **40269875003** | **200032-MW-6** | EPA 537 Mod | 307012 | EPA 537 Mod | 308559 |
| **40269875004** | **200032-MW-7** | EPA 537 Mod | 305494 | EPA 537 Mod | 306087 |
| **40269875005** | **200032-FB** | EPA 537 Mod | 305494 | EPA 537 Mod | 306087 |
| **40269875006** | **200032-MW-17** | EPA 537 Mod | 307012 | EPA 537 Mod | 308559 |
| **40269875007** | **200032-MW-19** | EPA 537 Mod | 305494 | EPA 537 Mod | 306087 |
| **40269875008** | **200032-TW-27** | EPA 537 Mod | 305603 | EPA 537 Mod | 305762 |
| **40269875009** | **200032-TW-28** | EPA 537 Mod | 305494 | EPA 537 Mod | 306087 |
| **40269875010** | **200032-DUP-1** | EPA 537 Mod | 305603 | EPA 537 Mod | 305762 |

# CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: 40269875

**ALL SHADED AREAS are for LAB USE ONLY**

| | |
|---|---|
| Company: Enviro Forensics, LLC | Billing Information: |
| Address: | |
| Report To: W. Fassbender | Email To: WFassbender@enviroforensics.com |
| Copy To: | Site Collection Info/Address: Jagemann Plating |
| Customer Project Name/Number: Jagemann Plating - 200032 | State: WI County/City: Time Zone Collected: [ ] PT [ ] MT [X] CT [ ] ET |
| Phone: 262-490-6472 Email: | Site/Facility ID #: Compliance Monitoring? [ ] Yes [ ] No |
| Collected By (print): Wayne Fassbender | Purchase Order #: Quote #: DW PWS ID #: DW Location Code: |
| Collected By (signature): Wayne Fassbender | Turnaround Date Required: Normal Immediately Packed on Ice: [X] Yes [ ] No |
| Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____ | Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply) Field Filtered (if applicable): [ ] Yes [ ] No Analysis: _____ |

** Preservative Types. (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Container Preservative Type **

Lab Project Manager:

Analyses: PFAS - WI MTK 33

Lab Profile/Line:

Lab Sample Receipt Checklist:

| | | | |
|---|---|---|---|
| Custody Seals Present/Intact | Y | N | NA |
| Custody Signatures Present | Y | N | NA |
| Collector Signature Present | Y | N | NA |
| Bottles Intact | Y | N | NA |
| Correct Bottles | Y | N | NA |
| Sufficient Volume | Y | N | NA |
| Samples Received on Ice | Y | N | NA |
| VOA - Headspace Acceptable | Y | N | NA |
| USDA Regulated Soils | Y | N | NA |
| Samples in Holding Time | Y | N | NA |
| Residual Chlorine Present | Y | N | NA |
| Cl Strips: _____ | | | |
| Sample pH Acceptable | Y | N | NA |
| pH Strips: _____ | | | |
| Sulfide Present | Y | N | NA |
| Lead Acetate Strips: _____ | | | |

LAB USE ONLY:
Lab Sample # / Comments:

10/20/2023

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

| Customer Sample ID | Matrix * | Comp / Grab | Collected (or Composite Start) Date | Collected (or Composite Start) Time | Composite End Date | Composite End Time | Res Cl | # of Ctns | Lab Sample # / Comments |
|---|---|---|---|---|---|---|---|---|---|
| 200032-MW-5 | GW | Grab | 10/17/23 | 08:30 | | | | 2 | 001 |
| 200032-MW-4 | " | " | " | 08:55 | | | | 2 | 002 |
| 200032-MW-6 | " | " | " | 09:30 | | | | 2 | 003 |
| 200032-MW-7 | " | " | " | 09:45 | | | | 2 | 004 |
| 200032-FB | Other | | " | 09:47 | | | | 2 | 005 |
| 200032-MW-17 | GW | Grab | " | 10:10 | | | | 2 | 006 |
| 200032-MW-19 | " | " | " | 10:30 | | | | 2 | 007 |
| 200032-TW-27 | " | " | 10/18/23 | 12:48 | | | | 2 | 008 |
| 200032-TW-28 | " | " | ~~10/18/23~~ | ~~13:25~~ | | | | 2 | 009 |
| 200032-DUP-1 | " | " | 10/18/23 | 11:35 | | | | 2 | 010 |

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used: NA see SCW

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2881413

Samples received via: FEDEX UPS Client Courier Pace Courier

10/20/2023

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: _____ oC
Cooler 1 Therm Corr. Factor: _____ oC
Cooler 1 Corrected Temp: _____ oC
Comments:

| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) | Date/Time: |
|---|---|---|---|
| Enviroforensics | 10/19/23 14:30 | Kyle Lasley GSLogistics | 10/19 230 PM |
| CS Logistics | Date/Time: 10/20/2023 08:00 | Received by/Company: (Signature) Pace Matt VanSambeek | Date/Time: 10/20/2023 08:00 |
| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) | Date/Time: |

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

10/20/2023

Trip Blank Received: Y N NA
HCl MeOH TSP Other

Non Conformance(s): YES / NO

# Sample Preservation Receipt Form

Client Name: Enviro Forensics, LLC  Project # 40216975

All containers needing preservation have been checked and noted below ☐Yes ☐No ☐N/A  Initial when completed MTS  Date/Time.

Lab Lot# of pH paper.  Lab Std #ID of preservation (if pH adjusted)

| Pace Lab # | Glass: AG1U | BG1U | AG1H | AG4S | AG5U | AG2S | BG3U | Plastic: BP1U | BP3U | BP3B | BP3N | BP3S | BP2Z | Vials: VG9C | DG9T | VG9U | VG9H | VG9M | VG9D | Jars: JGFU | JG9U | WGFU | WPFU | General: SP5T | ZPLC | GN 1 | GN 2 | VOA Vials (>6mm) * | H2SO4 pH ≤2 | NaOH+Zn Act pH ≥9 | NaOH pH ≥12 | HNO3 pH ≤2 | pH after adjusted | Volume (mL) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 / 5 |
| 002 | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 / 5 |
| 003 | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 / 5 |
| 004 | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 / 5 |
| 005 | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 / 5 |
| 006 | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 / 5 |
| 007 | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 / 5 |
| 008 | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 / 5 |
| 009 | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 / 5 |
| 010 | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 / 5 |
| 011 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 / 5 |
| 012 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 / 5 |
| 013 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 / 5 |
| 014 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 / 5 |
| 015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 / 5 |
| 016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 / 5 |
| 017 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 / 5 |
| 018 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 / 5 |
| 019 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 / 5 |
| 020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2.5 / 5 |

MTS

10/20/2025

Exceptions to preservation check VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____  Headspace in VOA Vials (>6mm) : ☐Yes ☐No ☐N/A  ***If yes look in headspace column**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| AG1U | 1 liter amber glass | BP1U | 1 liter plastic unpres | VG9C | 40 mL clear ascorbic w/ HCl | JGFU | 4 oz amber jar unpres |
| BG1U | 1 liter clear glass | BP3U | 250 mL plastic unpres | DG9T | 40 mL amber Na Thio | JG9U | 9 oz amber jar unpres |
| AG1H | 1 liter amber glass HCL | BP3B | 250 mL plastic NaOH | VG9U | 40 mL clear vial unpres | WGFU | 4 oz clear jar unpres |
| AG4S | 125 mL amber glass H2SO4 | BP3N | 250 mL plastic HNO3 | VG9H | 40 mL clear vial HCL | WPFU | 4 oz plastic jar unpres |
| AG5U | 100 mL amber glass unpres | BP3S | 250 mL plastic H2SO4 | VG9M | 40 mL clear vial MeOH | SP5T | 120 mL plastic Na Thiosulfate |
| AG2S | 500 mL amber glass H2SO4 | BP2Z | 500 mL plastic NaOH + Zn | VG9D | 40 mL clear vial DI | ZPLC | ziploc bag |
| BG3U | 250 mL clear glass unpres | | | | | GN 1 | |
| | | | | | | GN 2 | |

Page 1 of 2

# Sample Condition Upon Receipt Form (SCUR)

Project #:

WO#: 40269875

40269875

**Client Name:** Enviro Forensics, LLC

**Courier:** ☑ CS Logistics ☐ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco
☐ Client ☐ Pace Other: _____

**Tracking #:** _____

**Custody Seal on Cooler/Box Present:** ☐ yes ☑ no Seals intact: ☐ yes ☐ no

**Custody Seal on Samples Present:** ☐ yes ☑ no Seals intact: ☐ yes ☐ no

**Packing Material:** ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____

**Thermometer Used** SR - 131 **Type of Ice:** (Wet) Blue Dry None ☐ Meltwater Only

**Cooler Temperature** Uncorr: 1.0 /Corr: 0.5

**Temp Blank Present:** ☑ yes ☐ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Person examining contents:
Date: 10/20/2023 Initials: MM

Labeled By Initials: yn

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

| | | |
|---|---|---|
| Chain of Custody Present: | ☑Yes ☐No ☐N/A | 1. |
| Chain of Custody Filled Out: | ☑Yes ☐No ☐N/A | 2. |
| Chain of Custody Relinquished: | ☑Yes ☐No ☐N/A | 3. |
| Sampler Name & Signature on COC: | ☑Yes ☐No ☐N/A | 4. |
| Samples Arrived within Hold Time: | ☑Yes ☐No | 5. |
| - DI VOA Samples frozen upon receipt | ☐Yes ☐No | Date/Time: |
| **Short Hold Time Analysis (<72hr):** | ☐Yes ☑No | 6. |
| **Rush Turn Around Time Requested:** | ☐Yes ☑No | 7. |
| Sufficient Volume: For Analysis: ☑Yes ☐No MS/MSD: ☐Yes ☑No ☐N/A | | 8. |
| Correct Containers Used: | ☑Yes ☐No | 9. |
| Correct Type: (Pace Green Bay) Pace IR, Non-Pace | | |
| Containers Intact: | ☑Yes ☐No | 10. |
| Filtered volume received for Dissolved tests | ☐Yes ☐No ☑N/A | 11. |
| Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: W | ☐Yes ☑No ☐N/A | 12. Multiple alterations on COC however with the arrows I believe the time to be used for Sample point 009 is 11:35 on the COC but 11:25 on the sample label mm 10/20/23 |
| Trip Blank Present: | ☐Yes ☐No ☑N/A | 13. |
| Trip Blank Custody Seals Present | ☐Yes ☐No ☑N/A | |
| Pace Trip Blank Lot # (if purchased): _____ | | |

**Client Notification/ Resolution:** If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

**PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logi**

Page 2 of 2

**EnvisionAir**
1441 Sadlier Circle West Drive
Indianapolis, IN 46239
Ph: 317-351-0885
Fax: 317-351-0882
www.envision-air.com

Ms. Nicolette Morris
Enviroforensics
825 N. Capitol Ave.
Indianapolis, IN 46204

October 28, 2023

EnvisionAir Project Number: 2023-515
Client Project Name: Jagemann Plating 200032

Dear Ms. Morris,

Please find the attached analytical report for the samples received October 20, 2023. All test methods performed were fully compliant with local, state, and federal EPA methods unless otherwise noted. The project was analyzed as requested on the enclosed chain of custody record. Please review the comments section for additional information about your results or Quality Control data.

Feel free to contact me if you have any questions or comments regarding your analytical report or service.

Thank you for your business. EnvisionAir looks forward to working with you on your next project.

Yours Sincerely,

David Norris
Project Manager
EnvisionAir, LLC

**EnvisionAir**
1441 Sadlier Circle West Drive
Indianapolis, IN 46239
Ph: 317-351-0885
Fax: 317-351-0882
www.envision-air.com

**Client Name:** ENVIROFORENSICS

**Project ID:** JAGEMANN PLATING 200032

**Client Project Manager:** NICOLETTE MORRIS

**EnvisionAir Project Number:** 2023-515

## Sample Summary

*Canister Pressure / Vacuum*

| Laboratory Sample Number: | Sample Description: | Matrix: | START Date Collected: | START Time Collected: | End Date Collected: | End Time Collected: | Date Received: | Time Received | Initial Field (in. Hg) | Final Field (in. Hg) | Lab Received (in. Hg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23-2630 | 200032-SSV-14 | A | 10/19/23 | 9:48 | 10/19/23 | 9:54 | 10/20/23 | 8:29 | -30 | -5 | -5 |
| 23-2631 | 200032-SSV-15 | A | 10/19/23 | 9:16 | 10/19/23 | 9:21 | 10/20/23 | 8:29 | -30 | -5 | -5 |

**EnvisionAir**
1441 Sadlier Circle West Drive
Indianapolis, IN 46239
Ph: 317-351-0885
Fax: 317-351-0882
www.envision-air.com

**Client Name:** ENVIROFORENSICS

**Project ID:** JAGEMANN PLATING 200032

**Client Project Manager:** NICOLETTE MORRIS

**EnvisionAir Project Number:** 2023-515

**Analytical Method:** TO-15
**Analytical Batch:** 102323AIR

**Client Sample ID:** 200032-SSV-14
**EnvisionAir Sample Number:** 23-2630
**Sample Matrix:** AIR

**Sample Collection START Date/Time:** 10/19/23 9:48
**Sample Collection END Date/Time:** 10/19/23 9:54
**Sample Received Date/Time:** 10/20/23 8:29

| Compounds | Sample Results ug/m³ | Reporting Limit ug/m³ | Flag |
|---|---|---|---|
| 4-Ethyltoluene | < 4920 | 4920 | |
| 4-Methyl-2-pentanone (MIBK) | < 20500 | 20500 | |
| 1,1,1-Trichloroethane | < 5460 | 5460 | |
| 1,1,2,2-Tetrachloroethane | < 3.36 | 3.36 | 1 |
| 1,1,2-Trichloroethane | < 2.10 | 2.10 | 1 |
| 1,1-Dichloroethane | < 40.5 | 40.5 | |
| 1,1-Dichloroethene | < 1980 | 1980 | |
| 1,2,4-Trichlorobenzene | < 7.42 | 7.42 | |
| 1,2,4-Trimethylbenzene | < 49.2 | 49.2 | |
| 1,2-dibromoethane (EDB) | < 0.32 | 0.32 | 1 |
| 1,2-Dichlorobenzene | < 601 | 601 | |
| 1,2-Dichloroethane | < 4.05 | 4.05 | |
| 1,2-Dichloropropane | < 4.62 | 4.62 | |
| 1,3,5-Trimethylbenzene | < 49.2 | 49.2 | |
| 1,3-Butadiene | < 2.21 | 2.21 | |
| 1,3-Dichlorobenzene | < 601 | 601 | |
| 1,4-Dichlorobenzene | < 6.01 | 6.01 | |
| 1,4-Dioxane | < 18.0 | 18.0 | |
| 2-Butanone (MEK) | < 29500 | 29500 | |
| 2-Hexanone | < 205 | 205 | |
| Acetone | < 23800 | 23800 | |
| Benzene | < 16.0 | 16.0 | |
| Benzyl Chloride | < 4.14 | 4.14 | 1 |
| Bromodichloromethane | < 5.36 | 5.36 | 1 |
| Bromoform | < 103 | 103 | |
| Bromomethane | < 38.8 | 38.8 | |
| Carbon Disulfide | < 3110 | 3110 | |
| Carbon Tetrachloride | < 6.29 | 6.29 | |
| Chlorobenzene | < 230 | 230 | |
| Chloroethane | < 132 | 132 | |

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www.envision-air.com

| Compounds | Sample Results ug/m³ | Reporting Limit ug/m³ | Flag |
|---|---|---|---|
| Chloroform | < 8.30 | 8.30 | |
| Chloromethane | < 206 | 206 | |
| cis-1,2-Dichloroethene | < 198 | 198 | |
| cis-1,3-Dichloropropene | < 45.4 | 45.4 | |
| Cyclohexane | < 55100 | 55100 | |
| Dibromochloromethane | < 8.52 | 8.52 | |
| Dichlorodifluoromethane | **619** | 495 | |
| Ethyl Acetate | < 541 | 541 | |
| Ethylbenzene | < 86.8 | 86.8 | |
| Hexachloro-1,3-butadiene | < 10.7 | 10.7 | |
| Isooctane | < 4670 | 4670 | |
| m,p-Xylene | < 434 | 434 | |
| Methylene Chloride | < 417 | 417 | |
| Methyl-tert-butyl ether | < 361 | 361 | |
| N-Heptane | < 4100 | 4100 | |
| N-Hexane | < 1760 | 1760 | |
| Naphthalene | < 5.24 | 5.24 | |
| o-Xylene | < 434 | 434 | |
| Propylene | < 1720 | 1720 | |
| Styrene | < 4260 | 4260 | |
| Tetrachloroethene | < 31.9 | 31.9 | |
| Tetrahydrofuran | < 2950 | 2950 | |
| Toluene | < 37700 | 37700 | |
| trans-1,2-Dichloroethene | < 396 | 396 | |
| trans-1,3-Dichloropropene | < 45.4 | 45.4 | |
| Trichloroethene | **294** | 10.7 | |
| Trichlorofluoromethane | < 5620 | 5620 | |
| Vinyl Acetate | < 1760 | 1760 | |
| Vinyl Bromide | < 4.37 | 4.37 | |
| Vinyl Chloride | < 12.8 | 12.8 | |
| 4-bromofluorobenzene (surrogate) | 93% | | |
| Analysis Date/Time: | 10-23-23/19:21 | | |
| Analyst Initials | tjg | | |

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Indianapolis, IN 46239
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Fax: 317-351-0882
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**Client Name:** ENVIROFORENSICS

**Project ID:** JAGEMANN PLATING 200032

**Client Project Manager:** NICOLETTE MORRIS

**EnvisionAir Project Number:** 2023-515

**Analytical Method:** TO-15
**Analytical Batch:** 102323AIR

**Client Sample ID:** 200032-SSV-15
**EnvisionAir Sample Number:** 23-2631
**Sample Matrix:** AIR

**Sample Collection START Date/Time:** 10/19/23 9:16
**Sample Collection END Date/Time:** 10/19/23 9:21
**Sample Received Date/Time:** 10/20/23 8:29

| Compounds | Sample Results ug/m³ | Reporting Limit ug/m³ | Flag |
|---|---|---|---|
| 4-Ethyltoluene | < 4920 | 4920 | |
| 4-Methyl-2-pentanone (MIBK) | < 20500 | 20500 | |
| 1,1,1-Trichloroethane | < 5460 | 5460 | |
| 1,1,2,2-Tetrachloroethane | < 3.36 | 3.36 | 1 |
| 1,1,2-Trichloroethane | < 2.10 | 2.10 | 1 |
| 1,1-Dichloroethane | < 40.5 | 40.5 | |
| 1,1-Dichloroethene | < 1980 | 1980 | |
| 1,2,4-Trichlorobenzene | < 7.42 | 7.42 | |
| 1,2,4-Trimethylbenzene | < 49.2 | 49.2 | |
| 1,2-dibromoethane (EDB) | < 0.32 | 0.32 | 1 |
| 1,2-Dichlorobenzene | < 601 | 601 | |
| 1,2-Dichloroethane | < 4.05 | 4.05 | |
| 1,2-Dichloropropane | < 4.62 | 4.62 | |
| 1,3,5-Trimethylbenzene | < 49.2 | 49.2 | |
| 1,3-Butadiene | < 2.21 | 2.21 | |
| 1,3-Dichlorobenzene | < 601 | 601 | |
| 1,4-Dichlorobenzene | < 6.01 | 6.01 | |
| 1,4-Dioxane | < 18.0 | 18.0 | |
| 2-Butanone (MEK) | < 29500 | 29500 | |
| 2-Hexanone | < 205 | 205 | |
| Acetone | < 23800 | 23800 | |
| Benzene | < 16.0 | 16.0 | |
| Benzyl Chloride | < 4.14 | 4.14 | 1 |
| Bromodichloromethane | < 5.36 | 5.36 | 1 |
| Bromoform | < 103 | 103 | |
| Bromomethane | < 38.8 | 38.8 | |
| Carbon Disulfide | < 3110 | 3110 | |
| Carbon Tetrachloride | < 6.29 | 6.29 | |
| Chlorobenzene | < 230 | 230 | |
| Chloroethane | < 132 | 132 | |

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| Compounds | Sample Results ug/m³ | Reporting Limit ug/m³ | Flag |
|---|---|---|---|
| Chloroform | < 8.30 | 8.30 | |
| Chloromethane | < 206 | 206 | |
| cis-1,2-Dichloroethene | < 198 | 198 | |
| cis-1,3-Dichloropropene | < 45.4 | 45.4 | |
| Cyclohexane | < 55100 | 55100 | |
| Dibromochloromethane | < 8.52 | 8.52 | |
| Dichlorodifluoromethane | < 495 | 495 | |
| Ethyl Acetate | < 541 | 541 | |
| Ethylbenzene | < 86.8 | 86.8 | |
| Hexachloro-1,3-butadiene | < 10.7 | 10.7 | |
| Isooctane | < 4670 | 4670 | |
| m,p-Xylene | < 434 | 434 | |
| Methylene Chloride | < 417 | 417 | |
| Methyl-tert-butyl ether | < 361 | 361 | |
| N-Heptane | < 4100 | 4100 | |
| N-Hexane | < 1760 | 1760 | |
| Naphthalene | < 5.24 | 5.24 | |
| o-Xylene | < 434 | 434 | |
| Propylene | < 1720 | 1720 | |
| Styrene | < 4260 | 4260 | |
| Tetrachloroethene | < 31.9 | 31.9 | |
| Tetrahydrofuran | < 2950 | 2950 | |
| Toluene | < 37700 | 37700 | |
| trans-1,2-Dichloroethene | < 396 | 396 | |
| trans-1,3-Dichloropropene | < 45.4 | 45.4 | |
| Trichloroethene | < 10.7 | 10.7 | |
| Trichlorofluoromethane | < 5620 | 5620 | |
| Vinyl Acetate | < 1760 | 1760 | |
| Vinyl Bromide | < 4.37 | 4.37 | |
| Vinyl Chloride | < 12.8 | 12.8 | |
| 4-bromofluorobenzene (surrogate) | 104% | | |
| Analysis Date/Time: | 10-23-23/19:58 | | |
| Analyst Initials | tjg | | |

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*Analytical Report*

## TO-15 Quality Control Data

**EnvisionAir Batch Number:** 102323AIR

| Method Blank (MB): | MB Results (ppbv) | Reporting Limit (ppbv) | Flags |
|---|---|---|---|
| 4-Ethyltoluene | < 100 | 100 | |
| 4-Methyl-2-pentanone (MIBK) | < 500 | 500 | |
| 1,1,1-Trichloroethane | < 100 | 100 | |
| 1,1,2,2-Tetrachloroethane | < 0.049 | 0.049 | 1 |
| 1,1,2-Trichloroethane | < 0.038 | 0.038 | 1 |
| 1,1-Dichloroethane | < 1 | 1 | |
| 1,1-Dichloroethene | < 50 | 50 | |
| 1,2,4-Trichlorobenzene | < 0.1 | 0.1 | |
| 1,2,4-Trimethylbenzene | < 1 | 1 | |
| 1,2-dibromoethane (EDB) | < 0.0041 | 0.0041 | 1 |
| 1,2-Dichlorobenzene | < 10 | 10 | |
| 1,2-Dichloroethane | < 0.1 | 0.1 | |
| 1,2-Dichloropropane | < 0.1 | 0.1 | |
| 1,3,5-Trimethylbenzene | < 1 | 1 | |
| 1,3-Butadiene | < 0.1 | 0.1 | |
| 1,3-Dichlorobenzene | < 10 | 10 | |
| 1,4-Dichlorobenzene | < 0.1 | 0.1 | |
| 1,4-Dioxane | < 0.5 | 0.5 | |
| 2-Butanone (MEK) | < 1000 | 1000 | |
| 2-Hexanone | < 5 | 5 | |
| Acetone | < 1000 | 1000 | |
| Benzene | < 0.5 | 0.5 | |
| Benzyl Chloride | < 0.08 | 0.08 | 1 |
| Bromodichloromethane | < 0.08 | 0.08 | 1 |
| Bromoform | < 1 | 1 | |
| Bromomethane | < 1 | 1 | |
| Carbon Disulfide | < 100 | 100 | |
| Carbon Tetrachloride | < 0.1 | 0.1 | |
| Chlorobenzene | < 5 | 5 | |
| Chloroethane | < 5 | 5 | |
| Chloroform | < 0.17 | 0.17 | |
| Chloromethane | < 10 | 10 | |
| cis-1,2-Dichloroethene | < 5 | 5 | |
| cis-1,3-Dichloropropene | < 1 | 1 | |
| Cyclohexane | < 1600 | 1600 | |
| Dibromochloromethane | < 0.1 | 0.1 | |
| Dichlorodifluoromethane | < 10 | 10 | |
| Ethyl Acetate | < 15 | 15 | |
| Ethylbenzene | < 2 | 2 | |
| Hexachloro-1,3-butadiene | < 0.1 | 0.1 | |
| Isooctane | < 100 | 100 | |
| m,p-Xylene | < 10 | 10 | |
| Methylene Chloride | < 12 | 12 | |
| Methyl-tert-butyl ether | < 10 | 10 | |
| N-Heptane | < 100 | 100 | |
| N-Hexane | < 50 | 50 | |
| Naphthalene | < 0.1 | 0.1 | |
| o-Xylene | < 10 | 10 | |
| Propylene | < 100 | 100 | |
| Styrene | < 100 | 100 | |
| Tetrachloroethene | < 0.47 | 0.47 | |
| Tetrahydrofuran | < 100 | 100 | |

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*Analytical Report*

| Method Blank (MB): | MB Results (ppbv) | Reporting Limit (ppbv) | Flags |
|---|---|---|---|
| Toluene | < 1000 | 1000 | |
| trans-1,2-Dichloroethene | < 10 | 10 | |
| trans-1,3-Dichloropropene | < 1 | 1 | |
| Trichloroethene | < 0.2 | 0.2 | |
| Trichlorofluoromethane | < 100 | 100 | |
| Vinyl Acetate | < 50 | 50 | |
| Vinyl Bromide | < 0.1 | 0.1 | |
| Vinyl Chloride | < 0.5 | 0.5 | |
| 4-bromofluorobenzene (surrogate) | 96% | | |
| Analysis Date/Time: | 10-23-23/18:05 | | |
| Analyst Initials | tjg | | |

| LCS/LCSD | LCS Results (ppbv) | LCSD Results (ppbv) | LCS/D Conc(ppbv) | LCS Rec. | LCSD Rec. | RPD | Flag |
|---|---|---|---|---|---|---|---|
| Propylene | 9.82 | 9.66 | 10 | 98% | 97% | 1.6% | |
| Dichlorodifluoromethane | 10.4 | 10 | 10 | 104% | 100% | 3.9% | |
| Chloromethane | 10.9 | 10.5 | 10 | 109% | 105% | 3.7% | |
| Vinyl Chloride | 10.7 | 10.2 | 10 | 107% | 102% | 4.8% | |
| 1,3-Butadiene | 9.82 | 9.15 | 10 | 98% | 92% | 7.1% | |
| Bromomethane | 9.61 | 9.2 | 10 | 96% | 92% | 4.4% | |
| Chloroethane | 10.6 | 9.34 | 10 | 106% | 93% | 12.6% | |
| Vinyl Bromide | 10.2 | 9.32 | 10 | 102% | 93% | 9.0% | |
| Trichlorofluoromethane | 9.21 | 9.35 | 10 | 92% | 94% | 1.5% | |
| Acetone | 9.58 | 9.18 | 10 | 96% | 92% | 4.3% | |
| 1,1-Dichloroethene | 10 | 10.4 | 10 | 100% | 104% | 3.9% | |
| Methylene Chloride | 10.6 | 9.2 | 10 | 106% | 92% | 14.1% | |
| Carbon Disulfide | 9.92 | 9.66 | 10 | 99% | 97% | 2.7% | |
| trans-1,2-Dichloroethene | 9.59 | 9.64 | 10 | 96% | 96% | 0.5% | |
| Methyl-tert-butyl ether | 10.4 | 10.2 | 10 | 104% | 102% | 1.9% | |
| 1,1-Dichloroethane | 9.75 | 9.22 | 10 | 98% | 92% | 5.6% | |
| Vinyl Acetate | 10.2 | 10.2 | 10 | 102% | 102% | 0.0% | |
| N-Hexane | 9.31 | 9.24 | 10 | 93% | 92% | 0.8% | |
| 2-Butanone (MEK) | 10.1 | 10.4 | 10 | 101% | 104% | 2.9% | |
| cis-1,2-Dichloroethene | 9.99 | 10.1 | 10 | 100% | 101% | 1.1% | |
| Ethyl Acetate | 9.59 | 9.78 | 10 | 96% | 98% | 2.0% | |
| Chloroform | 9.69 | 10.2 | 10 | 97% | 102% | 5.1% | |
| Tetrahydrofuran | 11.1 | 10.1 | 10 | 111% | 101% | 9.4% | |
| 1,2-Dichloroethane | 10.6 | 10.1 | 10 | 106% | 101% | 4.8% | |
| 1,1,1-Trichloroethane | 10.2 | 9.58 | 10 | 102% | 96% | 6.3% | |
| Carbon Tetrachloride | 9.78 | 9.37 | 10 | 98% | 94% | 4.3% | |
| Benzene | 10.3 | 9.82 | 10 | 103% | 98% | 4.8% | |
| Cyclohexane | 10.7 | 9.17 | 10 | 107% | 92% | 15.4% | |
| 1,2-Dichloropropane | 10.6 | 9.61 | 10 | 106% | 96% | 9.8% | |
| Trichloroethene | 9.82 | 9.83 | 10 | 98% | 98% | 0.1% | |
| Bromodichloromethane | 10.7 | 10.3 | 10 | 107% | 103% | 3.8% | |
| 1,4-Dioxane | 9.5 | 9.42 | 10 | 95% | 94% | 0.8% | |
| Isooctane | 9.48 | 9.35 | 10 | 95% | 94% | 1.4% | |
| N-Heptane | 9.79 | 9.46 | 10 | 98% | 95% | 3.4% | |
| cis-1,3-Dichloropropene | 10.1 | 9.62 | 10 | 101% | 96% | 4.9% | |
| 4-Methyl-2-pentanone (MIBK) | 9.85 | 9.83 | 10 | 99% | 98% | 0.2% | |
| trans-1,3-Dichloropropene | 10.9 | 10.4 | 10 | 109% | 104% | 4.7% | |
| 1,1,2-Trichloroethane | 9.52 | 8.98 | 10 | 95% | 90% | 5.8% | |
| Toluene | 9.52 | 8.68 | 10 | 95% | 87% | 9.2% | |
| 2-Hexanone | 10.3 | 10.2 | 10 | 103% | 102% | 1.0% | |
| Dibromochloromethane | 10.2 | 9.93 | 10 | 102% | 99% | 2.7% | |
| 1,2-dibromoethane (EDB) | 10.7 | 10.2 | 10 | 107% | 102% | 4.8% | |
| Tetrachloroethene | 10.5 | 10.5 | 10 | 105% | 105% | 0.0% | |
| Chlorobenzene | 9.67 | 9.34 | 10 | 97% | 93% | 3.5% | |
| Ethylbenzene | 10.3 | 10.2 | 10 | 103% | 102% | 1.0% | |
| m,p-Xylene | 21.4 | 21.4 | 20 | 107% | 107% | 0.0% | |
| Bromoform | 10.6 | 10.8 | 10 | 106% | 108% | 1.9% | |

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*Analytical Report*

| LCS/LCSD | LCS Results (ppbv) | LCSD Results (ppbv) | LCS/D Conc(ppbv) | LCS Rec. | LCSD Rec. | RPD | Flag |
|---|---|---|---|---|---|---|---|
| Styrene | 9.98 | 10 | 10 | 100% | 100% | 0.2% | |
| 1,1,2,2-Tetrachloroethane | 10 | 10.6 | 10 | 100% | 106% | 5.8% | |
| o-Xylene | 10.5 | 9.85 | 10 | 105% | 99% | 6.4% | |
| 4-Ethyltoluene | 10.6 | 10.6 | 10 | 106% | 106% | 0.0% | |
| 1,3,5-Trimethylbenzene | 10.3 | 10.2 | 10 | 103% | 102% | 1.0% | |
| 1,2,4-Trimethylbenzene | 10.2 | 10.2 | 10 | 102% | 102% | 0.0% | |
| 1,3-Dichlorobenzene | 9.7 | 9.77 | 10 | 97% | 98% | 0.7% | |
| Benzyl Chloride | 10.5 | 10.3 | 10 | 105% | 103% | 1.9% | |
| 1,4-Dichlorobenzene | 9.46 | 9.52 | 10 | 95% | 95% | 0.6% | |
| 1,2-Dichlorobenzene | 10.4 | 10.6 | 10 | 104% | 106% | 1.9% | |
| 1,2,4-Trichlorobenzene | 10.6 | 10.6 | 10 | 106% | 106% | 0.0% | |
| Naphthalene | 9.02 | 10.5 | 10 | 90% | 105% | 15.2% | |
| Hexachloro-1,3-butadiene | 9.16 | 10.1 | 10 | 92% | 101% | 9.8% | |
| 4-bromofluorobenzene (surrogate) | 101% | 101% | | | | | |
| Analysis Date/Time: | 10-23-23/15:32 | 10-23-23/16:50 | | | | | |
| Analyst Initials | tjg | tjg | | | | | |

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| Flag Number | Comments |
|---|---|
| 1 | Reporting limit is supported by MDL. TJG |

EnvisionAir Proj#: 2023515 Page 1 of 1

# CHAIN OF CUSTODY RECORD

EnvisionAir | 1441 Sadlier Circle West Drive | Indianapolis, IN 46239 | Phone: (317) 351-0885 | Fax: (317) 351-0882

| | |
|---|---|
| Client: NFO | P.O. Number: 2023-0305 |
| Report Address: 825 N. Capitol Ave | Project Name or Number: Jagemann Plating 200032 |
| Report To: W. Fassbender / N. Morris | Sampled by: M. Runyon |
| Phone: 317-972-7870 | QA/QC Required: (circle if applicable) Level III Level IV |
| Invoice Address: Same | Reporting Units needed: (circle) ug/m³ mg/m³ PPBV PPMV |
| Desired TAT: (Please Circle One) 1 day 2 days 3 days Std (5 bus. days) | Media type: 1LC = 1 Liter Canister; 6LC = 6 Liter Canister; TB = Tedlar Bag; TD = Thermal Desorption Tube |

**REQUESTED PARAMETERS**

TO-15 Full List

TO-15 Short List (Specify in notes)

ENVISIONAIR

**Sampling Type:**
Soil-Gas: ☐
Sub-Slab: ☐
Indoor-Air: ☐

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*Canister Pressure / Vacuum*

| Air Sample ID | Media Type (see code above) | Coll. Date (Grab/Comp Start) | Coll. Time (Grab/Comp Start) | Coll. Date (Comp. End) | Coll. Time (Comp. End) | | | | | Canister Serial # | Flow Controller Serial # | Initial Field (in. Hg) | Final Field (in. Hg) | Lab Received (in. Hg) | EnvisionAir Sample Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 200032-SSV-14 | 1LC | 10/19/23 | 9:48 | 10/19/23 | 9:54 | X | | | | 83738 | 0118 | -30 | -5 | -5 | 23-2630 |
| 200032-SSV-15 | 1LC | 10/19/23 | 9:16 | 10/19/23 | 9:21 | X | | | | 84050 | 0060 | -30 | -5 | -5 | 23-2631 |
| | | | | | | | | | | | | | | | |
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Comments: Times are in CT

| Relinquished by: | Date | Time | Received by: | Date | Time |
|---|---|---|---|---|---|
| | 10/20/23 | 8:29 | | 10/20/23 | 8:29 |

Beacon Environmental
2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA
1.410.838.8780

# CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 231010R04

Laboratory Work Order: 0007281

**Project Description:**
Jagemann Plating
Manitowoc, WI

Prepared for:
Wayne Fassbender
**EnviroForensics**
N16W23390 Stone Ridge Dr, Suite G
Waukesha, WI 53188

Ryan W. Schneider
Senior Project Manager

November 14, 2023

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017, except samples were analyzed within a 24-hour tune window. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

Steven C. Thornley
Laboratory Director

Peter B. Kelly
Quality Manager

# Table of Contents

# Table of Contents (continued)

BEACON ENVIRONMENTAL

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# CERTIFICATE OF ANALYSIS

| | | |
|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## Sample Summary

| Lab Sample ID | Client Sample ID | Received | Analysis | Matrix |
|---|---|---|---|---|
| 0007281-01 | Trip 1 | 11/03/2023 | EPA 8260C | Air |
| Sampler Type: | Beacon Passive Sampler | | | |
| 0007281-02 | 200032-SG-1 | 11/03/2023 | EPA 8260C | Soil Gas |
| Sampler Type: | Beacon Passive Sampler | | | |
| 0007281-03 | 200032-SG-1-DUP | 11/03/2023 | EPA 8260C | Soil Gas |
| Sampler Type: | Beacon Passive Sampler | | | |
| 0007281-04 | 200032-SG-2 | 11/03/2023 | EPA 8260C | Soil Gas |
| Sampler Type: | Beacon Passive Sampler | | | |
| 0007281-05 | 200032-SG-3 | 11/03/2023 | EPA 8260C | Soil Gas |
| Sampler Type: | Beacon Passive Sampler | | | |
| 0007281-06 | 200032-SG-4 | 11/03/2023 | EPA 8260C | Soil Gas |
| Sampler Type: | Beacon Passive Sampler | | | |
| 0007281-07 | 200032-SG-5 | 11/03/2023 | EPA 8260C | Soil Gas |
| Sampler Type: | Beacon Passive Sampler | | | |

### Project Completeness

**Samples Received:** 7
**Samples Analyzed:** 7

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| | | |
|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# *Case Narrative*

**U.S. EPA Method 8260C**

All samples were analyzed using thermal desorption-gas chromatography/mass spectrometry (TD-GC/MS) instrumentation following U.S. EPA Method 8260C, with laboratory results provided in nanograms (ng) and micrograms per cubic meter ($\mu g/m^3$). Laboratory QA/QC procedures included internal standards, surrogates, and blanks based on EPA Method 8260C. Analyses and reporting were under BEACON's Quality Assurance Project Plan.

**Passive Soil-Gas Survey Notes**

If sample locations are covered with or near the edge of an impervious surface (*e.g.*, asphalt or concrete), the concentrations of compounds in soil gas are higher than if the surfacing was not present. Therefore, the sample location conditions should be considered when comparing results between locations.

Survey findings are exclusive to this project and when the spatial relationships are compared with results of other BEACON Surveys it is necessary to incorporate information from both investigations (*e.g.*, depth to sources, soil types, porosity, soil moisture, presence of impervious surfacing, sample collection times).

**Reporting Limits**

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. All reported results are within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. Beacon determined uptake rates for a suite of compounds with the Beacon sampler for sampling in air. Beacon calculated the uptake rates for the remaining compounds using Graham's Law of Diffusion. The reported data includes LOQ limits.

**Project Details**

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017, except samples were analyzed within a 24-hour tune window.

End of Case Narrative

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| | | |
|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# *Analytical Results*

BEACON ENVIRONMENTAL

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# CERTIFICATE OF ANALYSIS

| | | |
|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## *Summary of Compound Detections- Mass*

Lab Sample ID: 0007281-07

**200032-SG-5**
Soil Gas

Method: EPA 8260C

| Analyte | CAS# | Result (ng) | Q | RT | LOQ (ng) | File ID |
|---|---|---|---|---|---|---|
| **2-Methylnaphthalene** | 91-57-6 | **36** | | 9.697 | 25 | S23110646.D |

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| | | |
|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## *Summary of Compound Detections- Concentration*

Lab Sample ID: 0007281-07

**200032-SG-5**
Soil Gas

Method: EPA 8260C

| Analyte | CAS# | Result (µg/m³) | Q | RT | LOQ (µg/m³) | File ID |
|---|---|---|---|---|---|---|
| **2-Methylnaphthalene** | 91-57-6 | **2.39** | | 9.697 | 1.65 | S23110646.D |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## *Data Summary Table- Mass*

| Compound | Frequency | LOQ (ng) | Max Value (ng) |
|---|---|---|---|
| 2-Methylnaphthalene | 1 | 25 | 36 |

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| | | |
|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## *Data Summary Table- Concentration*

| Compound | Frequency | LOQ (µg/m³) | Max Value (µg/m³) |
|---|---|---|---|
| 2-Methylnaphthalene | 1 | 1.65 | 2.39 |

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| | | |
|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# *Detailed Analytical Results*

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| | | |
|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# *Detailed Analytical Results- Mass*

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# CERTIFICATE OF ANALYSIS

| | | |
|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

Lab Sample ID: 0007281-01

## Trip 1

Air

Method: EPA 8260C

| Analyte | CAS# | Result (ng) | Q | LOQ (ng) | RRT Eval | Analyzed | File ID |
|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 75-01-4 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,1-Dichloroethene | 75-35-4 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Methylene Chloride | 75-09-2 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 76-13-1 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| trans-1,2-Dichloroethene | 156-60-5 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Methyl-t-butyl ether | 1634-04-4 | <25 | | 25 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,1-Dichloroethane | 75-34-3 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| cis-1,2-Dichloroethene | 156-59-2 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Chloroform | 67-66-3 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,2-Dichloroethane | 107-06-2 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,1,1-Trichloroethane | 71-55-6 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Carbon Tetrachloride | 56-23-5 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Benzene | 71-43-2 | <25 | | 25 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Trichloroethene | 79-01-6 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,4-Dioxane | 123-91-1 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,1,2-Trichloroethane | 79-00-5 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Toluene | 108-88-3 | <25 | | 25 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,2-Dibromoethane (EDB) | 106-93-4 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Tetrachloroethene | 127-18-4 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Chlorobenzene | 108-90-7 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Ethylbenzene | 100-41-4 | <25 | | 25 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| p & m-Xylene | 179601-23-1 | <25 | | 25 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| o-Xylene | 95-47-6 | <25 | | 25 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,2,3-Trichloropropane | 96-18-4 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Isopropylbenzene | 98-82-8 | <25 | | 25 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,3,5-Trimethylbenzene | 108-67-8 | <25 | | 25 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,2,4-Trimethylbenzene | 95-63-6 | <25 | | 25 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,3-Dichlorobenzene | 541-73-1 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,4-Dichlorobenzene | 106-46-7 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,2-Dichlorobenzene | 95-50-1 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,2,4-Trichlorobenzene | 120-82-1 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Naphthalene | 91-20-3 | <25 | | 25 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,2,3-Trichlorobenzene | 87-61-6 | <10 | | 10 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 2-Methylnaphthalene | 91-57-6 | <25 | | 25 | 0.00 | 11/07/2023 05:50 | S23110640.D |

| *Analyte* | *CAS#* | *% Recovery* | *Recovery Limits* | *Q* | *RRT Eval* | *Analyzed* | *File ID* |
|---|---|---|---|---|---|---|---|
| *Surrogate: 1,2-DCA-d4* | 17060-07-0 | *121%* | *70-130* | | *0.00* | *11/07/2023 05:50* | *S23110640.D* |
| *Surrogate: Toluene-d8* | 2037-26-5 | *93.7%* | *70-130* | | *0.00* | *11/07/2023 05:50* | *S23110640.D* |
| *Surrogate: Bromofluorobenzene* | 460-00-4 | *85.7%* | *70-130* | | *0.00* | *11/07/2023 05:50* | *S23110640.D* |

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# CERTIFICATE OF ANALYSIS

| | | |
|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

Lab Sample ID: 0007281-02

## 200032-SG-1

Soil Gas

Method: EPA 8260C

| Analyte | CAS# | Result (ng) | Q | LOQ (ng) | RRT Eval | Analyzed | File ID |
|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 75-01-4 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,1-Dichloroethene | 75-35-4 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Methylene Chloride | 75-09-2 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 76-13-1 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| trans-1,2-Dichloroethene | 156-60-5 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Methyl-t-butyl ether | 1634-04-4 | <25 | | 25 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,1-Dichloroethane | 75-34-3 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| cis-1,2-Dichloroethene | 156-59-2 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Chloroform | 67-66-3 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,2-Dichloroethane | 107-06-2 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,1,1-Trichloroethane | 71-55-6 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Carbon Tetrachloride | 56-23-5 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Benzene | 71-43-2 | <25 | | 25 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Trichloroethene | 79-01-6 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,4-Dioxane | 123-91-1 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,1,2-Trichloroethane | 79-00-5 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Toluene | 108-88-3 | <25 | | 25 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,2-Dibromoethane (EDB) | 106-93-4 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Tetrachloroethene | 127-18-4 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Chlorobenzene | 108-90-7 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Ethylbenzene | 100-41-4 | <25 | | 25 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| p & m-Xylene | 179601-23-1 | <25 | | 25 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| o-Xylene | 95-47-6 | <25 | | 25 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,2,3-Trichloropropane | 96-18-4 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Isopropylbenzene | 98-82-8 | <25 | | 25 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,3,5-Trimethylbenzene | 108-67-8 | <25 | | 25 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,2,4-Trimethylbenzene | 95-63-6 | <25 | | 25 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,3-Dichlorobenzene | 541-73-1 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,4-Dichlorobenzene | 106-46-7 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,2-Dichlorobenzene | 95-50-1 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,2,4-Trichlorobenzene | 120-82-1 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Naphthalene | 91-20-3 | <25 | | 25 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,2,3-Trichlorobenzene | 87-61-6 | <10 | | 10 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 2-Methylnaphthalene | 91-57-6 | <25 | | 25 | 0.00 | 11/07/2023 06:19 | S23110641.D |

| *Analyte* | *CAS#* | *% Recovery* | *Recovery Limits* | *Q* | *RRT Eval* | *Analyzed* | *File ID* |
|---|---|---|---|---|---|---|---|
| *Surrogate: 1,2-DCA-d4* | 17060-07-0 | *108%* | *70-130* | | *0.00* | *11/07/2023 06:19* | *S23110641.D* |
| *Surrogate: Toluene-d8* | 2037-26-5 | *92.0%* | *70-130* | | *0.00* | *11/07/2023 06:19* | *S23110641.D* |
| *Surrogate: Bromofluorobenzene* | 460-00-4 | *93.2%* | *70-130* | | *0.00* | *11/07/2023 06:19* | *S23110641.D* |

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| | | |
|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

Lab Sample ID: 0007281-03

## 200032-SG-1-DUP

Soil Gas

Method: EPA 8260C

| Analyte | CAS# | Result (ng) | Q | LOQ (ng) | RRT Eval | Analyzed | File ID |
|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 75-01-4 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,1-Dichloroethene | 75-35-4 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Methylene Chloride | 75-09-2 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 76-13-1 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| trans-1,2-Dichloroethene | 156-60-5 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Methyl-t-butyl ether | 1634-04-4 | <25 | | 25 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,1-Dichloroethane | 75-34-3 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| cis-1,2-Dichloroethene | 156-59-2 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Chloroform | 67-66-3 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,2-Dichloroethane | 107-06-2 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,1,1-Trichloroethane | 71-55-6 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Carbon Tetrachloride | 56-23-5 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Benzene | 71-43-2 | <25 | | 25 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Trichloroethene | 79-01-6 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,4-Dioxane | 123-91-1 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,1,2-Trichloroethane | 79-00-5 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Toluene | 108-88-3 | <25 | | 25 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,2-Dibromoethane (EDB) | 106-93-4 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Tetrachloroethene | 127-18-4 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Chlorobenzene | 108-90-7 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Ethylbenzene | 100-41-4 | <25 | | 25 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| p & m-Xylene | 179601-23-1 | <25 | | 25 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| o-Xylene | 95-47-6 | <25 | | 25 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,2,3-Trichloropropane | 96-18-4 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Isopropylbenzene | 98-82-8 | <25 | | 25 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,3,5-Trimethylbenzene | 108-67-8 | <25 | | 25 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,2,4-Trimethylbenzene | 95-63-6 | <25 | | 25 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,3-Dichlorobenzene | 541-73-1 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,4-Dichlorobenzene | 106-46-7 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,2-Dichlorobenzene | 95-50-1 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,2,4-Trichlorobenzene | 120-82-1 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Naphthalene | 91-20-3 | <25 | | 25 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,2,3-Trichlorobenzene | 87-61-6 | <10 | | 10 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 2-Methylnaphthalene | 91-57-6 | <25 | | 25 | 0.00 | 11/07/2023 06:48 | S23110642.D |

| *Analyte* | *CAS#* | *% Recovery* | *Recovery Limits* | *Q* | *RRT Eval* | *Analyzed* | *File ID* |
|---|---|---|---|---|---|---|---|
| *Surrogate: 1,2-DCA-d4* | 17060-07-0 | *110%* | *70-130* | | *0.00* | *11/07/2023 06:48* | *S23110642.D* |
| *Surrogate: Toluene-d8* | 2037-26-5 | *91.7%* | *70-130* | | *0.00* | *11/07/2023 06:48* | *S23110642.D* |
| *Surrogate: Bromofluorobenzene* | 460-00-4 | *95.5%* | *70-130* | | *0.00* | *11/07/2023 06:48* | *S23110642.D* |

BEACON ENVIRONMENTAL

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# CERTIFICATE OF ANALYSIS

| | | |
|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

Lab Sample ID: 0007281-04

## 200032-SG-2

Soil Gas

Method: EPA 8260C

| Analyte | CAS# | Result (ng) | Q | LOQ (ng) | RRT Eval | Analyzed | File ID |
|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 75-01-4 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,1-Dichloroethene | 75-35-4 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Methylene Chloride | 75-09-2 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 76-13-1 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| trans-1,2-Dichloroethene | 156-60-5 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Methyl-t-butyl ether | 1634-04-4 | <25 | | 25 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,1-Dichloroethane | 75-34-3 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| cis-1,2-Dichloroethene | 156-59-2 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Chloroform | 67-66-3 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,2-Dichloroethane | 107-06-2 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,1,1-Trichloroethane | 71-55-6 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Carbon Tetrachloride | 56-23-5 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Benzene | 71-43-2 | <25 | | 25 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Trichloroethene | 79-01-6 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,4-Dioxane | 123-91-1 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,1,2-Trichloroethane | 79-00-5 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Toluene | 108-88-3 | <25 | | 25 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,2-Dibromoethane (EDB) | 106-93-4 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Tetrachloroethene | 127-18-4 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Chlorobenzene | 108-90-7 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Ethylbenzene | 100-41-4 | <25 | | 25 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| p & m-Xylene | 179601-23-1 | <25 | | 25 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| o-Xylene | 95-47-6 | <25 | | 25 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,2,3-Trichloropropane | 96-18-4 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Isopropylbenzene | 98-82-8 | <25 | | 25 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,3,5-Trimethylbenzene | 108-67-8 | <25 | | 25 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,2,4-Trimethylbenzene | 95-63-6 | <25 | | 25 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,3-Dichlorobenzene | 541-73-1 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,4-Dichlorobenzene | 106-46-7 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,2-Dichlorobenzene | 95-50-1 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,2,4-Trichlorobenzene | 120-82-1 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Naphthalene | 91-20-3 | <25 | | 25 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,2,3-Trichlorobenzene | 87-61-6 | <10 | | 10 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 2-Methylnaphthalene | 91-57-6 | <25 | | 25 | 0.00 | 11/07/2023 07:17 | S23110643.D |

| *Analyte* | *CAS#* | *% Recovery* | *Recovery Limits* | *Q* | *RRT Eval* | *Analyzed* | *File ID* |
|---|---|---|---|---|---|---|---|
| *Surrogate: 1,2-DCA-d4* | 17060-07-0 | *103%* | *70-130* | | *0.00* | *11/07/2023 07:17* | *S23110643.D* |
| *Surrogate: Toluene-d8* | 2037-26-5 | *93.8%* | *70-130* | | *0.00* | *11/07/2023 07:17* | *S23110643.D* |
| *Surrogate: Bromofluorobenzene* | 460-00-4 | *99.0%* | *70-130* | | *0.00* | *11/07/2023 07:17* | *S23110643.D* |

BEACON ENVIRONMENTAL

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# CERTIFICATE OF ANALYSIS

| | | |
|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

Lab Sample ID: 0007281-05

## 200032-SG-3

Soil Gas

Method: EPA 8260C

| Analyte | CAS# | Result (ng) | Q | LOQ (ng) | RRT Eval | Analyzed | File ID |
|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 75-01-4 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,1-Dichloroethene | 75-35-4 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Methylene Chloride | 75-09-2 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 76-13-1 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| trans-1,2-Dichloroethene | 156-60-5 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Methyl-t-butyl ether | 1634-04-4 | <25 | | 25 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,1-Dichloroethane | 75-34-3 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| cis-1,2-Dichloroethene | 156-59-2 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Chloroform | 67-66-3 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,2-Dichloroethane | 107-06-2 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,1,1-Trichloroethane | 71-55-6 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Carbon Tetrachloride | 56-23-5 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Benzene | 71-43-2 | <25 | | 25 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Trichloroethene | 79-01-6 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,4-Dioxane | 123-91-1 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,1,2-Trichloroethane | 79-00-5 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Toluene | 108-88-3 | <25 | | 25 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,2-Dibromoethane (EDB) | 106-93-4 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Tetrachloroethene | 127-18-4 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Chlorobenzene | 108-90-7 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Ethylbenzene | 100-41-4 | <25 | | 25 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| p & m-Xylene | 179601-23-1 | <25 | | 25 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| o-Xylene | 95-47-6 | <25 | | 25 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,2,3-Trichloropropane | 96-18-4 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Isopropylbenzene | 98-82-8 | <25 | | 25 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,3,5-Trimethylbenzene | 108-67-8 | <25 | | 25 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,2,4-Trimethylbenzene | 95-63-6 | <25 | | 25 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,3-Dichlorobenzene | 541-73-1 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,4-Dichlorobenzene | 106-46-7 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,2-Dichlorobenzene | 95-50-1 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,2,4-Trichlorobenzene | 120-82-1 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Naphthalene | 91-20-3 | <25 | | 25 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,2,3-Trichlorobenzene | 87-61-6 | <10 | | 10 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 2-Methylnaphthalene | 91-57-6 | <25 | | 25 | 0.00 | 11/07/2023 07:46 | S23110644.D |

| *Analyte* | *CAS#* | *% Recovery* | *Recovery Limits* | *Q* | *RRT Eval* | *Analyzed* | *File ID* |
|---|---|---|---|---|---|---|---|
| *Surrogate: 1,2-DCA-d4* | 17060-07-0 | *106%* | *70-130* | | *0.00* | *11/07/2023 07:46* | *S23110644.D* |
| *Surrogate: Toluene-d8* | 2037-26-5 | *94.1%* | *70-130* | | *0.00* | *11/07/2023 07:46* | *S23110644.D* |
| *Surrogate: Bromofluorobenzene* | 460-00-4 | *97.7%* | *70-130* | | *0.00* | *11/07/2023 07:46* | *S23110644.D* |

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| | | |
|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

Lab Sample ID: 0007281-06

## 200032-SG-4

Soil Gas

Method: EPA 8260C

| Analyte | CAS# | Result (ng) | Q | LOQ (ng) | RRT Eval | Analyzed | File ID |
|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 75-01-4 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,1-Dichloroethene | 75-35-4 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Methylene Chloride | 75-09-2 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 76-13-1 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| trans-1,2-Dichloroethene | 156-60-5 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Methyl-t-butyl ether | 1634-04-4 | <25 | | 25 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,1-Dichloroethane | 75-34-3 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| cis-1,2-Dichloroethene | 156-59-2 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Chloroform | 67-66-3 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,2-Dichloroethane | 107-06-2 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,1,1-Trichloroethane | 71-55-6 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Carbon Tetrachloride | 56-23-5 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Benzene | 71-43-2 | <25 | | 25 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Trichloroethene | 79-01-6 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,4-Dioxane | 123-91-1 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,1,2-Trichloroethane | 79-00-5 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Toluene | 108-88-3 | <25 | | 25 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,2-Dibromoethane (EDB) | 106-93-4 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Tetrachloroethene | 127-18-4 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Chlorobenzene | 108-90-7 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Ethylbenzene | 100-41-4 | <25 | | 25 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| p & m-Xylene | 179601-23-1 | <25 | | 25 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| o-Xylene | 95-47-6 | <25 | | 25 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,2,3-Trichloropropane | 96-18-4 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Isopropylbenzene | 98-82-8 | <25 | | 25 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,3,5-Trimethylbenzene | 108-67-8 | <25 | | 25 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,2,4-Trimethylbenzene | 95-63-6 | <25 | | 25 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,3-Dichlorobenzene | 541-73-1 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,4-Dichlorobenzene | 106-46-7 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,2-Dichlorobenzene | 95-50-1 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,2,4-Trichlorobenzene | 120-82-1 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Naphthalene | 91-20-3 | <25 | | 25 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,2,3-Trichlorobenzene | 87-61-6 | <10 | | 10 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 2-Methylnaphthalene | 91-57-6 | <25 | | 25 | 0.00 | 11/07/2023 08:16 | S23110645.D |

| *Analyte* | *CAS#* | *% Recovery* | *Recovery Limits* | *Q* | *RRT Eval* | *Analyzed* | *File ID* |
|---|---|---|---|---|---|---|---|
| *Surrogate: 1,2-DCA-d4* | 17060-07-0 | *107%* | *70-130* | | *0.00* | *11/07/2023 08:16* | *S23110645.D* |
| *Surrogate: Toluene-d8* | 2037-26-5 | *92.8%* | *70-130* | | *0.00* | *11/07/2023 08:16* | *S23110645.D* |
| *Surrogate: Bromofluorobenzene* | 460-00-4 | *90.1%* | *70-130* | | *0.00* | *11/07/2023 08:16* | *S23110645.D* |

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# CERTIFICATE OF ANALYSIS

| | | |
|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

Lab Sample ID: 0007281-07

## 200032-SG-5

Soil Gas

Method: EPA 8260C

| Analyte | CAS# | Result (ng) | Q | LOQ (ng) | RRT Eval | Analyzed | File ID |
|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 75-01-4 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,1-Dichloroethene | 75-35-4 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Methylene Chloride | 75-09-2 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 76-13-1 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| trans-1,2-Dichloroethene | 156-60-5 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Methyl-t-butyl ether | 1634-04-4 | <25 | | 25 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,1-Dichloroethane | 75-34-3 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| cis-1,2-Dichloroethene | 156-59-2 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Chloroform | 67-66-3 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,2-Dichloroethane | 107-06-2 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,1,1-Trichloroethane | 71-55-6 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Carbon Tetrachloride | 56-23-5 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Benzene | 71-43-2 | <25 | | 25 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Trichloroethene | 79-01-6 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,4-Dioxane | 123-91-1 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,1,2-Trichloroethane | 79-00-5 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Toluene | 108-88-3 | <25 | | 25 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,2-Dibromoethane (EDB) | 106-93-4 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Tetrachloroethene | 127-18-4 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Chlorobenzene | 108-90-7 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Ethylbenzene | 100-41-4 | <25 | | 25 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| p & m-Xylene | 179601-23-1 | <25 | | 25 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| o-Xylene | 95-47-6 | <25 | | 25 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,2,3-Trichloropropane | 96-18-4 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Isopropylbenzene | 98-82-8 | <25 | | 25 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,3,5-Trimethylbenzene | 108-67-8 | <25 | | 25 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,2,4-Trimethylbenzene | 95-63-6 | <25 | | 25 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,3-Dichlorobenzene | 541-73-1 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,4-Dichlorobenzene | 106-46-7 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,2-Dichlorobenzene | 95-50-1 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,2,4-Trichlorobenzene | 120-82-1 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Naphthalene | 91-20-3 | <25 | | 25 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,2,3-Trichlorobenzene | 87-61-6 | <10 | | 10 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| **2-Methylnaphthalene** | 91-57-6 | **36** | | 25 | 0.01 | 11/07/2023 08:45 | S23110646.D |

| *Analyte* | *CAS#* | *% Recovery* | *Recovery Limits* | *Q* | *RRT Eval* | *Analyzed* | *File ID* |
|---|---|---|---|---|---|---|---|
| *Surrogate: 1,2-DCA-d4* | 17060-07-0 | *114%* | *70-130* | | *0.00* | *11/07/2023 08:45* | *S23110646.D* |
| *Surrogate: Toluene-d8* | 2037-26-5 | *91.4%* | *70-130* | | *0.00* | *11/07/2023 08:45* | *S23110646.D* |
| *Surrogate: Bromofluorobenzene* | 460-00-4 | *97.2%* | *70-130* | | *0.00* | *11/07/2023 08:45* | *S23110646.D* |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# *Detailed Analytical Results- Concentration*

BEACON ENVIRONMENTAL

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# CERTIFICATE OF ANALYSIS

| | | |
|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

Lab Sample ID: 0007281-01

## Trip 1

Air

Method: EPA 8260C

| Analyte | CAS# | Result (µg/m³) | Q | LOQ (µg/m³) | RRT Eval | Analyzed | File ID |
|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 75-01-4 | <0.62 | | 0.62 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,1-Dichloroethene | 75-35-4 | <1.52 | | 1.52 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Methylene Chloride | 75-09-2 | <1.43 | | 1.43 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 76-13-1 | <0.56 | | 0.56 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| trans-1,2-Dichloroethene | 156-60-5 | <1.14 | | 1.14 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Methyl-t-butyl ether | 1634-04-4 | <2.50 | | 2.50 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,1-Dichloroethane | 75-34-3 | <0.59 | | 0.59 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| cis-1,2-Dichloroethene | 156-59-2 | <0.94 | | 0.94 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Chloroform | 67-66-3 | <1.43 | | 1.43 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,2-Dichloroethane | 107-06-2 | <0.89 | | 0.89 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,1,1-Trichloroethane | 71-55-6 | <0.48 | | 0.48 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Carbon Tetrachloride | 56-23-5 | <1.16 | | 1.16 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Benzene | 71-43-2 | <2.36 | | 2.36 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Trichloroethene | 79-01-6 | <1.52 | | 1.52 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,4-Dioxane | 123-91-1 | <1.22 | | 1.22 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,1,2-Trichloroethane | 79-00-5 | <1.52 | | 1.52 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Toluene | 108-88-3 | <3.13 | | 3.13 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,2-Dibromoethane (EDB) | 106-93-4 | <1.28 | | 1.28 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Tetrachloroethene | 127-18-4 | <1.22 | | 1.22 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | <1.22 | | 1.22 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Chlorobenzene | 108-90-7 | <0.59 | | 0.59 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Ethylbenzene | 100-41-4 | <1.47 | | 1.47 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| p & m-Xylene | 179601-23-1 | <1.42 | | 1.42 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| o-Xylene | 95-47-6 | <1.42 | | 1.42 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,2,3-Trichloropropane | 96-18-4 | <0.67 | | 0.67 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Isopropylbenzene | 98-82-8 | <1.51 | | 1.51 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,3,5-Trimethylbenzene | 108-67-8 | <1.51 | | 1.51 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,2,4-Trimethylbenzene | 95-63-6 | <1.51 | | 1.51 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,3-Dichlorobenzene | 541-73-1 | <0.67 | | 0.67 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,4-Dichlorobenzene | 106-46-7 | <0.67 | | 0.67 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,2-Dichlorobenzene | 95-50-1 | <0.67 | | 0.67 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,2,4-Trichlorobenzene | 120-82-1 | <1.28 | | 1.28 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| Naphthalene | 91-20-3 | <1.56 | | 1.56 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 1,2,3-Trichlorobenzene | 87-61-6 | <1.28 | | 1.28 | 0.00 | 11/07/2023 05:50 | S23110640.D |
| 2-Methylnaphthalene | 91-57-6 | <1.65 | | 1.65 | 0.00 | 11/07/2023 05:50 | S23110640.D |

| *Analyte* | *CAS#* | *% Recovery* | *Recovery Limits* | *Q* | *RRT Eval* | *Analyzed* | *File ID* |
|---|---|---|---|---|---|---|---|
| *Surrogate: 1,2-DCA-d4* | 17060-07-0 | *121%* | *70-130* | | *0.00* | *11/07/2023 05:50* | *S23110640.D* |
| *Surrogate: Toluene-d8* | 2037-26-5 | *93.7%* | *70-130* | | *0.00* | *11/07/2023 05:50* | *S23110640.D* |
| *Surrogate: Bromofluorobenzene* | 460-00-4 | *85.7%* | *70-130* | | *0.00* | *11/07/2023 05:50* | *S23110640.D* |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

Lab Sample ID: 0007281-02

## 200032-SG-1

Soil Gas

Method: EPA 8260C

| Analyte | CAS# | Result (µg/m³) | Q | LOQ (µg/m³) | RRT Eval | Analyzed | File ID |
|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 75-01-4 | <0.62 | | 0.62 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,1-Dichloroethene | 75-35-4 | <1.52 | | 1.52 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Methylene Chloride | 75-09-2 | <1.43 | | 1.43 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 76-13-1 | <0.56 | | 0.56 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| trans-1,2-Dichloroethene | 156-60-5 | <1.14 | | 1.14 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Methyl-t-butyl ether | 1634-04-4 | <2.50 | | 2.50 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,1-Dichloroethane | 75-34-3 | <0.59 | | 0.59 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| cis-1,2-Dichloroethene | 156-59-2 | <0.94 | | 0.94 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Chloroform | 67-66-3 | <1.43 | | 1.43 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,2-Dichloroethane | 107-06-2 | <0.89 | | 0.89 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,1,1-Trichloroethane | 71-55-6 | <0.48 | | 0.48 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Carbon Tetrachloride | 56-23-5 | <1.16 | | 1.16 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Benzene | 71-43-2 | <2.36 | | 2.36 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Trichloroethene | 79-01-6 | <1.52 | | 1.52 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,4-Dioxane | 123-91-1 | <1.22 | | 1.22 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,1,2-Trichloroethane | 79-00-5 | <1.52 | | 1.52 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Toluene | 108-88-3 | <3.13 | | 3.13 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,2-Dibromoethane (EDB) | 106-93-4 | <1.28 | | 1.28 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Tetrachloroethene | 127-18-4 | <1.22 | | 1.22 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | <1.22 | | 1.22 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Chlorobenzene | 108-90-7 | <0.59 | | 0.59 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Ethylbenzene | 100-41-4 | <1.47 | | 1.47 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| p & m-Xylene | 179601-23-1 | <1.42 | | 1.42 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| o-Xylene | 95-47-6 | <1.42 | | 1.42 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,2,3-Trichloropropane | 96-18-4 | <0.67 | | 0.67 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Isopropylbenzene | 98-82-8 | <1.51 | | 1.51 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,3,5-Trimethylbenzene | 108-67-8 | <1.51 | | 1.51 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,2,4-Trimethylbenzene | 95-63-6 | <1.51 | | 1.51 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,3-Dichlorobenzene | 541-73-1 | <0.67 | | 0.67 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,4-Dichlorobenzene | 106-46-7 | <0.67 | | 0.67 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,2-Dichlorobenzene | 95-50-1 | <0.67 | | 0.67 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,2,4-Trichlorobenzene | 120-82-1 | <1.28 | | 1.28 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| Naphthalene | 91-20-3 | <1.56 | | 1.56 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 1,2,3-Trichlorobenzene | 87-61-6 | <1.28 | | 1.28 | 0.00 | 11/07/2023 06:19 | S23110641.D |
| 2-Methylnaphthalene | 91-57-6 | <1.65 | | 1.65 | 0.00 | 11/07/2023 06:19 | S23110641.D |

| *Analyte* | *CAS#* | *% Recovery* | *Recovery Limits* | *Q* | *RRT Eval* | *Analyzed* | *File ID* |
|---|---|---|---|---|---|---|---|
| *Surrogate: 1,2-DCA-d4* | 17060-07-0 | *108%* | *70-130* | | *0.00* | *11/07/2023 06:19* | *S23110641.D* |
| *Surrogate: Toluene-d8* | 2037-26-5 | *92.0%* | *70-130* | | *0.00* | *11/07/2023 06:19* | *S23110641.D* |
| *Surrogate: Bromofluorobenzene* | 460-00-4 | *93.2%* | *70-130* | | *0.00* | *11/07/2023 06:19* | *S23110641.D* |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

Lab Sample ID: 0007281-03

## 200032-SG-1-DUP

Soil Gas

Method: EPA 8260C

| Analyte | CAS# | Result (µg/m³) | Q | LOQ (µg/m³) | RRT Eval | Analyzed | File ID |
|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 75-01-4 | <0.62 | | 0.62 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,1-Dichloroethene | 75-35-4 | <1.52 | | 1.52 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Methylene Chloride | 75-09-2 | <1.43 | | 1.43 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 76-13-1 | <0.56 | | 0.56 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| trans-1,2-Dichloroethene | 156-60-5 | <1.14 | | 1.14 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Methyl-t-butyl ether | 1634-04-4 | <2.50 | | 2.50 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,1-Dichloroethane | 75-34-3 | <0.59 | | 0.59 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| cis-1,2-Dichloroethene | 156-59-2 | <0.94 | | 0.94 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Chloroform | 67-66-3 | <1.43 | | 1.43 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,2-Dichloroethane | 107-06-2 | <0.89 | | 0.89 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,1,1-Trichloroethane | 71-55-6 | <0.48 | | 0.48 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Carbon Tetrachloride | 56-23-5 | <1.16 | | 1.16 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Benzene | 71-43-2 | <2.36 | | 2.36 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Trichloroethene | 79-01-6 | <1.52 | | 1.52 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,4-Dioxane | 123-91-1 | <1.22 | | 1.22 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,1,2-Trichloroethane | 79-00-5 | <1.52 | | 1.52 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Toluene | 108-88-3 | <3.13 | | 3.13 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,2-Dibromoethane (EDB) | 106-93-4 | <1.28 | | 1.28 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Tetrachloroethene | 127-18-4 | <1.22 | | 1.22 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | <1.22 | | 1.22 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Chlorobenzene | 108-90-7 | <0.59 | | 0.59 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Ethylbenzene | 100-41-4 | <1.47 | | 1.47 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| p & m-Xylene | 179601-23-1 | <1.42 | | 1.42 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| o-Xylene | 95-47-6 | <1.42 | | 1.42 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,2,3-Trichloropropane | 96-18-4 | <0.67 | | 0.67 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Isopropylbenzene | 98-82-8 | <1.51 | | 1.51 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,3,5-Trimethylbenzene | 108-67-8 | <1.51 | | 1.51 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,2,4-Trimethylbenzene | 95-63-6 | <1.51 | | 1.51 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,3-Dichlorobenzene | 541-73-1 | <0.67 | | 0.67 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,4-Dichlorobenzene | 106-46-7 | <0.67 | | 0.67 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,2-Dichlorobenzene | 95-50-1 | <0.67 | | 0.67 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,2,4-Trichlorobenzene | 120-82-1 | <1.28 | | 1.28 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| Naphthalene | 91-20-3 | <1.56 | | 1.56 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 1,2,3-Trichlorobenzene | 87-61-6 | <1.28 | | 1.28 | 0.00 | 11/07/2023 06:48 | S23110642.D |
| 2-Methylnaphthalene | 91-57-6 | <1.65 | | 1.65 | 0.00 | 11/07/2023 06:48 | S23110642.D |

| *Analyte* | *CAS#* | *% Recovery* | *Recovery Limits* | *Q* | *RRT Eval* | *Analyzed* | *File ID* |
|---|---|---|---|---|---|---|---|
| *Surrogate: 1,2-DCA-d4* | 17060-07-0 | *110%* | *70-130* | | *0.00* | *11/07/2023 06:48* | *S23110642.D* |
| *Surrogate: Toluene-d8* | 2037-26-5 | *91.7%* | *70-130* | | *0.00* | *11/07/2023 06:48* | *S23110642.D* |
| *Surrogate: Bromofluorobenzene* | 460-00-4 | *95.5%* | *70-130* | | *0.00* | *11/07/2023 06:48* | *S23110642.D* |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

Lab Sample ID: 0007281-04

## 200032-SG-2

Soil Gas

Method: EPA 8260C

| Analyte | CAS# | Result (µg/m³) | Q | LOQ (µg/m³) | RRT Eval | Analyzed | File ID |
|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 75-01-4 | <0.62 | | 0.62 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,1-Dichloroethene | 75-35-4 | <1.52 | | 1.52 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Methylene Chloride | 75-09-2 | <1.43 | | 1.43 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 76-13-1 | <0.56 | | 0.56 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| trans-1,2-Dichloroethene | 156-60-5 | <1.14 | | 1.14 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Methyl-t-butyl ether | 1634-04-4 | <2.50 | | 2.50 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,1-Dichloroethane | 75-34-3 | <0.59 | | 0.59 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| cis-1,2-Dichloroethene | 156-59-2 | <0.94 | | 0.94 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Chloroform | 67-66-3 | <1.43 | | 1.43 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,2-Dichloroethane | 107-06-2 | <0.89 | | 0.89 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,1,1-Trichloroethane | 71-55-6 | <0.48 | | 0.48 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Carbon Tetrachloride | 56-23-5 | <1.16 | | 1.16 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Benzene | 71-43-2 | <2.36 | | 2.36 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Trichloroethene | 79-01-6 | <1.52 | | 1.52 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,4-Dioxane | 123-91-1 | <1.22 | | 1.22 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,1,2-Trichloroethane | 79-00-5 | <1.52 | | 1.52 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Toluene | 108-88-3 | <3.13 | | 3.13 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,2-Dibromoethane (EDB) | 106-93-4 | <1.28 | | 1.28 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Tetrachloroethene | 127-18-4 | <1.22 | | 1.22 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | <1.22 | | 1.22 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Chlorobenzene | 108-90-7 | <0.59 | | 0.59 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Ethylbenzene | 100-41-4 | <1.47 | | 1.47 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| p & m-Xylene | 179601-23-1 | <1.42 | | 1.42 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| o-Xylene | 95-47-6 | <1.42 | | 1.42 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,2,3-Trichloropropane | 96-18-4 | <0.67 | | 0.67 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Isopropylbenzene | 98-82-8 | <1.51 | | 1.51 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,3,5-Trimethylbenzene | 108-67-8 | <1.51 | | 1.51 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,2,4-Trimethylbenzene | 95-63-6 | <1.51 | | 1.51 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,3-Dichlorobenzene | 541-73-1 | <0.67 | | 0.67 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,4-Dichlorobenzene | 106-46-7 | <0.67 | | 0.67 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,2-Dichlorobenzene | 95-50-1 | <0.67 | | 0.67 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,2,4-Trichlorobenzene | 120-82-1 | <1.28 | | 1.28 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| Naphthalene | 91-20-3 | <1.56 | | 1.56 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 1,2,3-Trichlorobenzene | 87-61-6 | <1.28 | | 1.28 | 0.00 | 11/07/2023 07:17 | S23110643.D |
| 2-Methylnaphthalene | 91-57-6 | <1.65 | | 1.65 | 0.00 | 11/07/2023 07:17 | S23110643.D |

| *Analyte* | *CAS#* | *% Recovery* | *Recovery Limits* | *Q* | *RRT Eval* | *Analyzed* | *File ID* |
|---|---|---|---|---|---|---|---|
| *Surrogate: 1,2-DCA-d4* | 17060-07-0 | *103%* | *70-130* | | *0.00* | *11/07/2023 07:17* | *S23110643.D* |
| *Surrogate: Toluene-d8* | 2037-26-5 | *93.8%* | *70-130* | | *0.00* | *11/07/2023 07:17* | *S23110643.D* |
| *Surrogate: Bromofluorobenzene* | 460-00-4 | *99.0%* | *70-130* | | *0.00* | *11/07/2023 07:17* | *S23110643.D* |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

Lab Sample ID: 0007281-05

## 200032-SG-3

Soil Gas

Method: EPA 8260C

| Analyte | CAS# | Result (µg/m³) | Q | LOQ (µg/m³) | RRT Eval | Analyzed | File ID |
|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 75-01-4 | <0.62 | | 0.62 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,1-Dichloroethene | 75-35-4 | <1.52 | | 1.52 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Methylene Chloride | 75-09-2 | <1.43 | | 1.43 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 76-13-1 | <0.56 | | 0.56 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| trans-1,2-Dichloroethene | 156-60-5 | <1.14 | | 1.14 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Methyl-t-butyl ether | 1634-04-4 | <2.50 | | 2.50 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,1-Dichloroethane | 75-34-3 | <0.59 | | 0.59 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| cis-1,2-Dichloroethene | 156-59-2 | <0.94 | | 0.94 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Chloroform | 67-66-3 | <1.43 | | 1.43 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,2-Dichloroethane | 107-06-2 | <0.89 | | 0.89 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,1,1-Trichloroethane | 71-55-6 | <0.48 | | 0.48 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Carbon Tetrachloride | 56-23-5 | <1.16 | | 1.16 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Benzene | 71-43-2 | <2.36 | | 2.36 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Trichloroethene | 79-01-6 | <1.52 | | 1.52 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,4-Dioxane | 123-91-1 | <1.22 | | 1.22 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,1,2-Trichloroethane | 79-00-5 | <1.52 | | 1.52 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Toluene | 108-88-3 | <3.13 | | 3.13 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,2-Dibromoethane (EDB) | 106-93-4 | <1.28 | | 1.28 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Tetrachloroethene | 127-18-4 | <1.22 | | 1.22 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | <1.22 | | 1.22 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Chlorobenzene | 108-90-7 | <0.59 | | 0.59 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Ethylbenzene | 100-41-4 | <1.47 | | 1.47 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| p & m-Xylene | 179601-23-1 | <1.42 | | 1.42 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| o-Xylene | 95-47-6 | <1.42 | | 1.42 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,2,3-Trichloropropane | 96-18-4 | <0.67 | | 0.67 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Isopropylbenzene | 98-82-8 | <1.51 | | 1.51 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,3,5-Trimethylbenzene | 108-67-8 | <1.51 | | 1.51 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,2,4-Trimethylbenzene | 95-63-6 | <1.51 | | 1.51 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,3-Dichlorobenzene | 541-73-1 | <0.67 | | 0.67 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,4-Dichlorobenzene | 106-46-7 | <0.67 | | 0.67 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,2-Dichlorobenzene | 95-50-1 | <0.67 | | 0.67 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,2,4-Trichlorobenzene | 120-82-1 | <1.28 | | 1.28 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| Naphthalene | 91-20-3 | <1.56 | | 1.56 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 1,2,3-Trichlorobenzene | 87-61-6 | <1.28 | | 1.28 | 0.00 | 11/07/2023 07:46 | S23110644.D |
| 2-Methylnaphthalene | 91-57-6 | <1.65 | | 1.65 | 0.00 | 11/07/2023 07:46 | S23110644.D |

| *Analyte* | *CAS#* | *% Recovery* | *Recovery Limits* | *Q* | *RRT Eval* | *Analyzed* | *File ID* |
|---|---|---|---|---|---|---|---|
| *Surrogate: 1,2-DCA-d4* | 17060-07-0 | *106%* | *70-130* | | *0.00* | *11/07/2023 07:46* | *S23110644.D* |
| *Surrogate: Toluene-d8* | 2037-26-5 | *94.1%* | *70-130* | | *0.00* | *11/07/2023 07:46* | *S23110644.D* |
| *Surrogate: Bromofluorobenzene* | 460-00-4 | *97.7%* | *70-130* | | *0.00* | *11/07/2023 07:46* | *S23110644.D* |

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| | | |
|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

Lab Sample ID: 0007281-06

## 200032-SG-4

Soil Gas

Method: EPA 8260C

| Analyte | CAS# | Result (µg/m³) | Q | LOQ (µg/m³) | RRT Eval | Analyzed | File ID |
|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 75-01-4 | <0.62 | | 0.62 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,1-Dichloroethene | 75-35-4 | <1.52 | | 1.52 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Methylene Chloride | 75-09-2 | <1.43 | | 1.43 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 76-13-1 | <0.56 | | 0.56 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| trans-1,2-Dichloroethene | 156-60-5 | <1.14 | | 1.14 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Methyl-t-butyl ether | 1634-04-4 | <2.50 | | 2.50 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,1-Dichloroethane | 75-34-3 | <0.59 | | 0.59 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| cis-1,2-Dichloroethene | 156-59-2 | <0.94 | | 0.94 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Chloroform | 67-66-3 | <1.43 | | 1.43 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,2-Dichloroethane | 107-06-2 | <0.89 | | 0.89 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,1,1-Trichloroethane | 71-55-6 | <0.48 | | 0.48 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Carbon Tetrachloride | 56-23-5 | <1.16 | | 1.16 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Benzene | 71-43-2 | <2.36 | | 2.36 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Trichloroethene | 79-01-6 | <1.52 | | 1.52 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,4-Dioxane | 123-91-1 | <1.22 | | 1.22 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,1,2-Trichloroethane | 79-00-5 | <1.52 | | 1.52 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Toluene | 108-88-3 | <3.13 | | 3.13 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,2-Dibromoethane (EDB) | 106-93-4 | <1.28 | | 1.28 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Tetrachloroethene | 127-18-4 | <1.22 | | 1.22 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | <1.22 | | 1.22 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Chlorobenzene | 108-90-7 | <0.59 | | 0.59 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Ethylbenzene | 100-41-4 | <1.47 | | 1.47 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| p & m-Xylene | 179601-23-1 | <1.42 | | 1.42 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| o-Xylene | 95-47-6 | <1.42 | | 1.42 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,2,3-Trichloropropane | 96-18-4 | <0.67 | | 0.67 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Isopropylbenzene | 98-82-8 | <1.51 | | 1.51 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,3,5-Trimethylbenzene | 108-67-8 | <1.51 | | 1.51 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,2,4-Trimethylbenzene | 95-63-6 | <1.51 | | 1.51 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,3-Dichlorobenzene | 541-73-1 | <0.67 | | 0.67 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,4-Dichlorobenzene | 106-46-7 | <0.67 | | 0.67 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,2-Dichlorobenzene | 95-50-1 | <0.67 | | 0.67 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,2,4-Trichlorobenzene | 120-82-1 | <1.28 | | 1.28 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| Naphthalene | 91-20-3 | <1.56 | | 1.56 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 1,2,3-Trichlorobenzene | 87-61-6 | <1.28 | | 1.28 | 0.00 | 11/07/2023 08:16 | S23110645.D |
| 2-Methylnaphthalene | 91-57-6 | <1.65 | | 1.65 | 0.00 | 11/07/2023 08:16 | S23110645.D |

| *Analyte* | *CAS#* | *% Recovery* | *Recovery Limits* | *Q* | *RRT Eval* | *Analyzed* | *File ID* |
|---|---|---|---|---|---|---|---|
| *Surrogate: 1,2-DCA-d4* | 17060-07-0 | *107%* | *70-130* | | *0.00* | *11/07/2023 08:16* | *S23110645.D* |
| *Surrogate: Toluene-d8* | 2037-26-5 | *92.8%* | *70-130* | | *0.00* | *11/07/2023 08:16* | *S23110645.D* |
| *Surrogate: Bromofluorobenzene* | 460-00-4 | *90.1%* | *70-130* | | *0.00* | *11/07/2023 08:16* | *S23110645.D* |

BEACON ENVIRONMENTAL

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# CERTIFICATE OF ANALYSIS

| | | |
|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

Lab Sample ID: 0007281-07

## 200032-SG-5

Soil Gas

Method: EPA 8260C

| Analyte | CAS# | Result (µg/m³) | Q | LOQ (µg/m³) | RRT Eval | Analyzed | File ID |
|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 75-01-4 | <0.62 | | 0.62 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,1-Dichloroethene | 75-35-4 | <1.52 | | 1.52 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Methylene Chloride | 75-09-2 | <1.43 | | 1.43 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 76-13-1 | <0.56 | | 0.56 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| trans-1,2-Dichloroethene | 156-60-5 | <1.14 | | 1.14 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Methyl-t-butyl ether | 1634-04-4 | <2.50 | | 2.50 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,1-Dichloroethane | 75-34-3 | <0.59 | | 0.59 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| cis-1,2-Dichloroethene | 156-59-2 | <0.94 | | 0.94 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Chloroform | 67-66-3 | <1.43 | | 1.43 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,2-Dichloroethane | 107-06-2 | <0.89 | | 0.89 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,1,1-Trichloroethane | 71-55-6 | <0.48 | | 0.48 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Carbon Tetrachloride | 56-23-5 | <1.16 | | 1.16 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Benzene | 71-43-2 | <2.36 | | 2.36 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Trichloroethene | 79-01-6 | <1.52 | | 1.52 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,4-Dioxane | 123-91-1 | <1.22 | | 1.22 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,1,2-Trichloroethane | 79-00-5 | <1.52 | | 1.52 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Toluene | 108-88-3 | <3.13 | | 3.13 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,2-Dibromoethane (EDB) | 106-93-4 | <1.28 | | 1.28 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Tetrachloroethene | 127-18-4 | <1.22 | | 1.22 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | <1.22 | | 1.22 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Chlorobenzene | 108-90-7 | <0.59 | | 0.59 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Ethylbenzene | 100-41-4 | <1.47 | | 1.47 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| p & m-Xylene | 179601-23-1 | <1.42 | | 1.42 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| o-Xylene | 95-47-6 | <1.42 | | 1.42 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,2,3-Trichloropropane | 96-18-4 | <0.67 | | 0.67 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Isopropylbenzene | 98-82-8 | <1.51 | | 1.51 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,3,5-Trimethylbenzene | 108-67-8 | <1.51 | | 1.51 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,2,4-Trimethylbenzene | 95-63-6 | <1.51 | | 1.51 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,3-Dichlorobenzene | 541-73-1 | <0.67 | | 0.67 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,4-Dichlorobenzene | 106-46-7 | <0.67 | | 0.67 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,2-Dichlorobenzene | 95-50-1 | <0.67 | | 0.67 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,2,4-Trichlorobenzene | 120-82-1 | <1.28 | | 1.28 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| Naphthalene | 91-20-3 | <1.56 | | 1.56 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| 1,2,3-Trichlorobenzene | 87-61-6 | <1.28 | | 1.28 | 0.00 | 11/07/2023 08:45 | S23110646.D |
| **2-Methylnaphthalene** | 91-57-6 | **2.39** | | 1.65 | 0.01 | 11/07/2023 08:45 | S23110646.D |

| *Analyte* | *CAS#* | *% Recovery* | *Recovery Limits* | *Q* | *RRT Eval* | *Analyzed* | *File ID* |
|---|---|---|---|---|---|---|---|
| *Surrogate: 1,2-DCA-d4* | 17060-07-0 | *114%* | *70-130* | | *0.00* | *11/07/2023 08:45* | *S23110646.D* |
| *Surrogate: Toluene-d8* | 2037-26-5 | *91.4%* | *70-130* | | *0.00* | *11/07/2023 08:45* | *S23110646.D* |
| *Surrogate: Bromofluorobenzene* | 460-00-4 | *97.2%* | *70-130* | | *0.00* | *11/07/2023 08:45* | *S23110646.D* |

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| | | |
|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# *QC Information/Summary*

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| | | |
|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## *Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary*

**Sequence: B23H003 - Instrument: S System - File ID: S23073120.D**

***B23H003-ICB1 (Lab Blank/Initial Calibration Blank)***

| Analyte | Result | LOQ | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | <5 | 10 | ng | | | | | | | U |
| 1,1-Dichloroethene | <5 | 10 | ng | | | | | | | U |
| Methylene Chloride | <5 | 10 | ng | | | | | | | U |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | <5 | 10 | ng | | | | | | | U |
| trans-1,2-Dichloroethene | <5 | 10 | ng | | | | | | | U |
| Methyl-t-butyl ether | <10 | 25 | ng | | | | | | | U |
| 1,1-Dichloroethane | <5 | 10 | ng | | | | | | | U |
| cis-1,2-Dichloroethene | <5 | 10 | ng | | | | | | | U |
| Chloroform | <5 | 10 | ng | | | | | | | U |
| 1,2-Dichloroethane | <5 | 10 | ng | | | | | | | U |
| 1,1,1-Trichloroethane | <5 | 10 | ng | | | | | | | U |
| Carbon Tetrachloride | <5 | 10 | ng | | | | | | | U |
| Benzene | <10 | 25 | ng | | | | | | | U |
| Trichloroethene | <5 | 10 | ng | | | | | | | U |
| 1,4-Dioxane | <5 | 10 | ng | | | | | | | U |
| 1,1,2-Trichloroethane | <5 | 10 | ng | | | | | | | U |
| Toluene | <10 | 25 | ng | | | | | | | U |
| 1,2-Dibromoethane (EDB) | <5 | 10 | ng | | | | | | | U |
| Tetrachloroethene | <5 | 10 | ng | | | | | | | U |
| 1,1,1,2-Tetrachloroethane | <5 | 10 | ng | | | | | | | U |
| Chlorobenzene | <5 | 10 | ng | | | | | | | U |
| Ethylbenzene | <10 | 25 | ng | | | | | | | U |
| p & m-Xylene | <10 | 25 | ng | | | | | | | U |
| o-Xylene | <10 | 25 | ng | | | | | | | U |
| 1,2,3-Trichloropropane | <5 | 10 | ng | | | | | | | U |
| Isopropylbenzene | <10 | 25 | ng | | | | | | | U |
| 1,3,5-Trimethylbenzene | <10 | 25 | ng | | | | | | | U |
| 1,2,4-Trimethylbenzene | <10 | 25 | ng | | | | | | | U |
| 1,3-Dichlorobenzene | <5 | 10 | ng | | | | | | | U |
| 1,4-Dichlorobenzene | <5 | 10 | ng | | | | | | | U |
| 1,2-Dichlorobenzene | <5 | 10 | ng | | | | | | | U |
| 1,2,4-Trichlorobenzene | <5 | 10 | ng | | | | | | | U |
| Naphthalene | <10 | 25 | ng | | | | | | | U |
| 1,2,3-Trichlorobenzene | <5 | 10 | ng | | | | | | | U |
| 2-Methylnaphthalene | <10 | 25 | ng | | | | | | | U |
| *Surrogate: 1,2-DCA-d4* | *102* | | *ng* | 100 | | *102* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *105* | | *ng* | 100 | | *105* | *70-130* | | | |
| *Surrogate: Bromofluorobenzene* | *83.7* | | *ng* | 100 | | *83.7* | *70-130* | | | |

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| | | |
|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## *Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary*

**Sequence: B23H003 - Instrument: S System - File ID: S23073132.D**

***B23H003-ICV1 (LCSD/Second Source Verification/CALV)***

| Analyte | Result | LOQ | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 57.3 | 10 | ng | 50.0 | | 115 | 70-130 | | | |
| 1,1-Dichloroethene | 48.1 | 10 | ng | 50.0 | | 96.2 | 70-130 | | | |
| Methylene Chloride | 50.1 | 10 | ng | 50.0 | | 100 | 70-130 | | | |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 52.3 | 10 | ng | 50.0 | | 105 | 70-130 | | | |
| trans-1,2-Dichloroethene | 50.4 | 10 | ng | 50.0 | | 101 | 70-130 | | | |
| Methyl-t-butyl ether | 47.0 | 25 | ng | 50.0 | | 94.1 | 70-130 | | | |
| 1,1-Dichloroethane | 50.2 | 10 | ng | 50.0 | | 100 | 70-130 | | | |
| cis-1,2-Dichloroethene | 48.7 | 10 | ng | 50.0 | | 97.4 | 70-130 | | | |
| Chloroform | 52.4 | 10 | ng | 50.0 | | 105 | 70-130 | | | |
| 1,2-Dichloroethane | 50.5 | 10 | ng | 50.0 | | 101 | 70-130 | | | |
| 1,1,1-Trichloroethane | 51.2 | 10 | ng | 50.0 | | 102 | 70-130 | | | |
| Carbon Tetrachloride | 53.3 | 10 | ng | 50.0 | | 107 | 70-130 | | | |
| Benzene | 49.0 | 25 | ng | 50.0 | | 98.1 | 70-130 | | | |
| Trichloroethene | 50.6 | 10 | ng | 50.0 | | 101 | 70-130 | | | |
| 1,4-Dioxane | 47.6 | 10 | ng | 50.0 | | 95.2 | 70-130 | | | |
| 1,1,2-Trichloroethane | 50.1 | 10 | ng | 50.0 | | 100 | 70-130 | | | |
| Toluene | 47.8 | 25 | ng | 50.0 | | 95.6 | 70-130 | | | |
| 1,2-Dibromoethane (EDB) | 50.8 | 10 | ng | 50.0 | | 102 | 70-130 | | | |
| Tetrachloroethene | 51.6 | 10 | ng | 50.0 | | 103 | 70-130 | | | |
| 1,1,1,2-Tetrachloroethane | 51.4 | 10 | ng | 50.0 | | 103 | 70-130 | | | |
| Chlorobenzene | 48.7 | 10 | ng | 50.0 | | 97.4 | 70-130 | | | |
| Ethylbenzene | 46.2 | 25 | ng | 50.0 | | 92.3 | 70-130 | | | |
| p & m-Xylene | 46.8 | 25 | ng | 50.0 | | 93.5 | 70-130 | | | |
| o-Xylene | 46.9 | 25 | ng | 50.0 | | 93.7 | 70-130 | | | |
| 1,2,3-Trichloropropane | 50.3 | 10 | ng | 50.0 | | 101 | 70-130 | | | |
| Isopropylbenzene | 46.2 | 25 | ng | 50.0 | | 92.4 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 47.8 | 25 | ng | 50.0 | | 95.6 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 48.4 | 25 | ng | 50.0 | | 96.7 | 70-130 | | | |
| 1,3-Dichlorobenzene | 50.0 | 10 | ng | 50.0 | | 99.9 | 70-130 | | | |
| 1,4-Dichlorobenzene | 47.5 | 10 | ng | 50.0 | | 94.9 | 70-130 | | | |
| 1,2-Dichlorobenzene | 50.1 | 10 | ng | 50.0 | | 100 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 47.1 | 10 | ng | 50.0 | | 94.2 | 70-130 | | | |
| Naphthalene | 45.9 | 25 | ng | 50.0 | | 91.9 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 50.1 | 10 | ng | 50.0 | | 100 | 70-130 | | | |
| 2-Methylnaphthalene | 44.9 | 25 | ng | 50.0 | | 89.7 | 70-130 | | | |
| *Surrogate: 1,2-DCA-d4* | *52.9* | | *ng* | 50.0 | | *106* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *50.1* | | *ng* | 50.0 | | *100* | *70-130* | | | |
| *Surrogate: Bromofluorobenzene* | *45.0* | | *ng* | 50.0 | | *89.9* | *70-130* | | | |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## *Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary*

**Sequence: B23K017 - Batch: 23K0014 - Instrument: S System - File ID: S23110602.D**

***23K0014-BS1 (LCS, Calibration Source Verification)***

| Analyte | Result | LOQ | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 54.4 | 10 | ng | 50.0 | | 109 | 80-120 | | | |
| 1,1-Dichloroethene | 52.8 | 10 | ng | 50.0 | | 106 | 80-120 | | | |
| Methylene Chloride | 50.3 | 10 | ng | 50.0 | | 101 | 80-120 | | | |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 49.7 | 10 | ng | 50.0 | | 99.4 | 80-120 | | | |
| trans-1,2-Dichloroethene | 54.8 | 10 | ng | 50.0 | | 110 | 80-120 | | | |
| Methyl-t-butyl ether | 45.6 | 25 | ng | 50.0 | | 91.2 | 80-120 | | | |
| 1,1-Dichloroethane | 53.1 | 10 | ng | 50.0 | | 106 | 80-120 | | | |
| cis-1,2-Dichloroethene | 51.8 | 10 | ng | 50.0 | | 104 | 80-120 | | | |
| Chloroform | 54.6 | 10 | ng | 50.0 | | 109 | 80-120 | | | |
| 1,2-Dichloroethane | 59.2 | 10 | ng | 50.0 | | 118 | 80-120 | | | |
| 1,1,1-Trichloroethane | 53.9 | 10 | ng | 50.0 | | 108 | 80-120 | | | |
| Carbon Tetrachloride | 50.0 | 10 | ng | 50.0 | | 99.9 | 80-120 | | | |
| Benzene | 49.5 | 25 | ng | 50.0 | | 98.9 | 80-120 | | | |
| Trichloroethene | 47.4 | 10 | ng | 50.0 | | 94.8 | 80-120 | | | |
| 1,4-Dioxane | 46.1 | 10 | ng | 50.0 | | 92.2 | 80-120 | | | |
| 1,1,2-Trichloroethane | 51.5 | 10 | ng | 50.0 | | 103 | 80-120 | | | |
| Toluene | 45.9 | 25 | ng | 50.0 | | 91.8 | 80-120 | | | |
| 1,2-Dibromoethane (EDB) | 51.5 | 10 | ng | 50.0 | | 103 | 80-120 | | | |
| Tetrachloroethene | 48.7 | 10 | ng | 50.0 | | 97.4 | 80-120 | | | |
| 1,1,1,2-Tetrachloroethane | 55.6 | 10 | ng | 50.0 | | 111 | 80-120 | | | |
| Chlorobenzene | 48.1 | 10 | ng | 50.0 | | 96.3 | 80-120 | | | |
| Ethylbenzene | 44.2 | 25 | ng | 50.0 | | 88.4 | 80-120 | | | |
| p & m-Xylene | 44.8 | 25 | ng | 50.0 | | 89.5 | 80-120 | | | |
| o-Xylene | 44.9 | 25 | ng | 50.0 | | 89.8 | 80-120 | | | |
| 1,2,3-Trichloropropane | 52.0 | 10 | ng | 50.0 | | 104 | 80-120 | | | |
| Isopropylbenzene | 46.9 | 25 | ng | 50.0 | | 93.7 | 80-120 | | | |
| 1,3,5-Trimethylbenzene | 53.6 | 25 | ng | 50.0 | | 107 | 80-120 | | | |
| 1,2,4-Trimethylbenzene | 56.1 | 25 | ng | 50.0 | | 112 | 80-120 | | | |
| 1,3-Dichlorobenzene | 58.8 | 10 | ng | 50.0 | | 118 | 80-120 | | | |
| 1,4-Dichlorobenzene | 56.2 | 10 | ng | 50.0 | | 112 | 80-120 | | | |
| 1,2-Dichlorobenzene | 57.8 | 10 | ng | 50.0 | | 116 | 80-120 | | | |
| 1,2,4-Trichlorobenzene | 51.9 | 10 | ng | 50.0 | | 104 | 80-120 | | | |
| Naphthalene | 46.6 | 25 | ng | 50.0 | | 93.3 | 80-120 | | | |
| 1,2,3-Trichlorobenzene | 53.9 | 10 | ng | 50.0 | | 108 | 80-120 | | | |
| 2-Methylnaphthalene | 40.7 | 25 | ng | 50.0 | | 81.5 | 80-120 | | | |
| *Surrogate: 1,2-DCA-d4* | *61.9* | | *ng* | 50.0 | | *124* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *48.7* | | *ng* | 50.0 | | *97.3* | *70-130* | | | |
| *Surrogate: Bromofluorobenzene* | *46.1* | | *ng* | 50.0 | | *92.2* | *70-130* | | | |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## *Soil-Gas Analysis by EPA 8260 - Data in Concentration - Quality Control Summary*

**Sequence: B23K017 - Batch: 23K0014 - Instrument: S System - File ID: S23110603.D**

***23K0014-BLK1 (Lab Blank)***

| Analyte | Result | LOQ | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | <0.618 | 0.618 | µg/m³ | | | | | | | U |
| 1,1-Dichloroethene | <1.52 | 1.52 | µg/m³ | | | | | | | U |
| Methylene Chloride | <1.43 | 1.43 | µg/m³ | | | | | | | U |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | <0.562 | 0.562 | µg/m³ | | | | | | | U |
| trans-1,2-Dichloroethene | <1.14 | 1.14 | µg/m³ | | | | | | | U |
| Methyl-t-butyl ether | <2.50 | 2.50 | µg/m³ | | | | | | | U |
| 1,1-Dichloroethane | <0.589 | 0.589 | µg/m³ | | | | | | | U |
| cis-1,2-Dichloroethene | <0.944 | 0.944 | µg/m³ | | | | | | | U |
| Chloroform | <1.43 | 1.43 | µg/m³ | | | | | | | U |
| 1,2-Dichloroethane | <0.893 | 0.893 | µg/m³ | | | | | | | U |
| 1,1,1-Trichloroethane | <0.476 | 0.476 | µg/m³ | | | | | | | U |
| Carbon Tetrachloride | <1.16 | 1.16 | µg/m³ | | | | | | | U |
| Benzene | <2.36 | 2.36 | µg/m³ | | | | | | | U |
| Trichloroethene | <1.52 | 1.52 | µg/m³ | | | | | | | U |
| 1,4-Dioxane | <1.22 | 1.22 | µg/m³ | | | | | | | U |
| 1,1,2-Trichloroethane | <1.52 | 1.52 | µg/m³ | | | | | | | U |
| Toluene | <3.13 | 3.13 | µg/m³ | | | | | | | U |
| 1,2-Dibromoethane (EDB) | <1.28 | 1.28 | µg/m³ | | | | | | | U |
| Tetrachloroethene | <1.22 | 1.22 | µg/m³ | | | | | | | U |
| 1,1,1,2-Tetrachloroethane | <1.22 | 1.22 | µg/m³ | | | | | | | U |
| Chlorobenzene | <0.589 | 0.589 | µg/m³ | | | | | | | U |
| Ethylbenzene | <1.47 | 1.47 | µg/m³ | | | | | | | U |
| p & m-Xylene | <1.42 | 1.42 | µg/m³ | | | | | | | U |
| o-Xylene | <1.42 | 1.42 | µg/m³ | | | | | | | U |
| 1,2,3-Trichloropropane | <0.667 | 0.667 | µg/m³ | | | | | | | U |
| Isopropylbenzene | <1.51 | 1.51 | µg/m³ | | | | | | | U |
| 1,3,5-Trimethylbenzene | <1.51 | 1.51 | µg/m³ | | | | | | | U |
| 1,2,4-Trimethylbenzene | <1.51 | 1.51 | µg/m³ | | | | | | | U |
| 1,3-Dichlorobenzene | <0.667 | 0.667 | µg/m³ | | | | | | | U |
| 1,4-Dichlorobenzene | <0.667 | 0.667 | µg/m³ | | | | | | | U |
| 1,2-Dichlorobenzene | <0.667 | 0.667 | µg/m³ | | | | | | | U |
| 1,2,4-Trichlorobenzene | <1.28 | 1.28 | µg/m³ | | | | | | | U |
| Naphthalene | <1.56 | 1.56 | µg/m³ | | | | | | | U |
| 1,2,3-Trichlorobenzene | <1.28 | 1.28 | µg/m³ | | | | | | | U |
| 2-Methylnaphthalene | <1.65 | 1.65 | µg/m³ | | | | | | | U |
| *Surrogate: 1,2-DCA-d4* | *123* | | *ng* | 100 | | *123* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *98.7* | | *ng* | 100 | | *98.7* | *70-130* | | | |
| *Surrogate: Bromofluorobenzene* | *81.8* | | *ng* | 100 | | *81.8* | *70-130* | | | |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## *Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary*

**Sequence: B23K017 - Batch: 23K0014 - Instrument: S System - File ID: S23110603.D**

***23K0014-BLK1 (Lab Blank)***

| Analyte | Result | LOQ | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | <5 | 10 | ng | | | | | | | U |
| 1,1-Dichloroethene | <5 | 10 | ng | | | | | | | U |
| Methylene Chloride | <5 | 10 | ng | | | | | | | U |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | <5 | 10 | ng | | | | | | | U |
| trans-1,2-Dichloroethene | <5 | 10 | ng | | | | | | | U |
| Methyl-t-butyl ether | <10 | 25 | ng | | | | | | | U |
| 1,1-Dichloroethane | <5 | 10 | ng | | | | | | | U |
| cis-1,2-Dichloroethene | <5 | 10 | ng | | | | | | | U |
| Chloroform | <5 | 10 | ng | | | | | | | U |
| 1,2-Dichloroethane | <5 | 10 | ng | | | | | | | U |
| 1,1,1-Trichloroethane | <5 | 10 | ng | | | | | | | U |
| Carbon Tetrachloride | <5 | 10 | ng | | | | | | | U |
| Benzene | <10 | 25 | ng | | | | | | | U |
| Trichloroethene | <5 | 10 | ng | | | | | | | U |
| 1,4-Dioxane | <5 | 10 | ng | | | | | | | U |
| 1,1,2-Trichloroethane | <5 | 10 | ng | | | | | | | U |
| Toluene | <10 | 25 | ng | | | | | | | U |
| 1,2-Dibromoethane (EDB) | <5 | 10 | ng | | | | | | | U |
| Tetrachloroethene | <5 | 10 | ng | | | | | | | U |
| 1,1,1,2-Tetrachloroethane | <5 | 10 | ng | | | | | | | U |
| Chlorobenzene | <5 | 10 | ng | | | | | | | U |
| Ethylbenzene | <10 | 25 | ng | | | | | | | U |
| p & m-Xylene | <10 | 25 | ng | | | | | | | U |
| o-Xylene | <10 | 25 | ng | | | | | | | U |
| 1,2,3-Trichloropropane | <5 | 10 | ng | | | | | | | U |
| Isopropylbenzene | <10 | 25 | ng | | | | | | | U |
| 1,3,5-Trimethylbenzene | <10 | 25 | ng | | | | | | | U |
| 1,2,4-Trimethylbenzene | <10 | 25 | ng | | | | | | | U |
| 1,3-Dichlorobenzene | <5 | 10 | ng | | | | | | | U |
| 1,4-Dichlorobenzene | <5 | 10 | ng | | | | | | | U |
| 1,2-Dichlorobenzene | <5 | 10 | ng | | | | | | | U |
| 1,2,4-Trichlorobenzene | <5 | 10 | ng | | | | | | | U |
| Naphthalene | <10 | 25 | ng | | | | | | | U |
| 1,2,3-Trichlorobenzene | <5 | 10 | ng | | | | | | | U |
| 2-Methylnaphthalene | <10 | 25 | ng | | | | | | | U |
| *Surrogate: 1,2-DCA-d4* | *123* | | *ng* | 100 | | *123* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *98.7* | | *ng* | 100 | | *98.7* | *70-130* | | | |
| *Surrogate: Bromofluorobenzene* | *81.8* | | *ng* | 100 | | *81.8* | *70-130* | | | |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## *Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary*

**Sequence: B23K017 - Instrument: S System - File ID: S23110604.D**

***B23K017-ICV1 (LCSD/Second Source Verification/CALV)***

| Analyte | Result | LOQ | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 59.1 | 10 | ng | 50.0 | | 118 | 70-130 | | | |
| 1,1-Dichloroethene | 55.7 | 10 | ng | 50.0 | | 111 | 70-130 | | | |
| Methylene Chloride | 52.5 | 10 | ng | 50.0 | | 105 | 70-130 | | | |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 52.8 | 10 | ng | 50.0 | | 106 | 70-130 | | | |
| trans-1,2-Dichloroethene | 56.7 | 10 | ng | 50.0 | | 113 | 70-130 | | | |
| Methyl-t-butyl ether | 44.4 | 25 | ng | 50.0 | | 88.7 | 70-130 | | | |
| 1,1-Dichloroethane | 53.0 | 10 | ng | 50.0 | | 106 | 70-130 | | | |
| cis-1,2-Dichloroethene | 52.3 | 10 | ng | 50.0 | | 105 | 70-130 | | | |
| Chloroform | 58.5 | 10 | ng | 50.0 | | 117 | 70-130 | | | |
| 1,2-Dichloroethane | 59.7 | 10 | ng | 50.0 | | 119 | 70-130 | | | |
| 1,1,1-Trichloroethane | 56.8 | 10 | ng | 50.0 | | 114 | 70-130 | | | |
| Carbon Tetrachloride | 52.3 | 10 | ng | 50.0 | | 105 | 70-130 | | | |
| Benzene | 49.9 | 25 | ng | 50.0 | | 99.8 | 70-130 | | | |
| Trichloroethene | 49.2 | 10 | ng | 50.0 | | 98.3 | 70-130 | | | |
| 1,4-Dioxane | 44.9 | 10 | ng | 50.0 | | 89.7 | 70-130 | | | |
| 1,1,2-Trichloroethane | 52.6 | 10 | ng | 50.0 | | 105 | 70-130 | | | |
| Toluene | 46.6 | 25 | ng | 50.0 | | 93.2 | 70-130 | | | |
| 1,2-Dibromoethane (EDB) | 52.7 | 10 | ng | 50.0 | | 105 | 70-130 | | | |
| Tetrachloroethene | 50.2 | 10 | ng | 50.0 | | 100 | 70-130 | | | |
| 1,1,1,2-Tetrachloroethane | 58.3 | 10 | ng | 50.0 | | 117 | 70-130 | | | |
| Chlorobenzene | 49.7 | 10 | ng | 50.0 | | 99.5 | 70-130 | | | |
| Ethylbenzene | 44.8 | 25 | ng | 50.0 | | 89.6 | 70-130 | | | |
| p & m-Xylene | 45.2 | 25 | ng | 50.0 | | 90.4 | 70-130 | | | |
| o-Xylene | 45.7 | 25 | ng | 50.0 | | 91.4 | 70-130 | | | |
| 1,2,3-Trichloropropane | 52.6 | 10 | ng | 50.0 | | 105 | 70-130 | | | |
| Isopropylbenzene | 46.8 | 25 | ng | 50.0 | | 93.5 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 52.4 | 25 | ng | 50.0 | | 105 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 53.5 | 25 | ng | 50.0 | | 107 | 70-130 | | | |
| 1,3-Dichlorobenzene | 58.8 | 10 | ng | 50.0 | | 118 | 70-130 | | | |
| 1,4-Dichlorobenzene | 56.3 | 10 | ng | 50.0 | | 113 | 70-130 | | | |
| 1,2-Dichlorobenzene | 56.4 | 10 | ng | 50.0 | | 113 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 51.3 | 10 | ng | 50.0 | | 103 | 70-130 | | | |
| Naphthalene | 45.5 | 25 | ng | 50.0 | | 90.9 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 53.2 | 10 | ng | 50.0 | | 106 | 70-130 | | | |
| 2-Methylnaphthalene | 38.6 | 25 | ng | 50.0 | | 77.2 | 70-130 | | | |
| *Surrogate: 1,2-DCA-d4* | *60.5* | | *ng* | 50.0 | | *121* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *47.7* | | *ng* | 50.0 | | *95.5* | *70-130* | | | |
| *Surrogate: Bromofluorobenzene* | *44.9* | | *ng* | 50.0 | | *89.8* | *70-130* | | | |

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# CERTIFICATE OF ANALYSIS

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## *EPA 8260C - LCS/LCSD RPD Quality Control Summary*

***LCS: 23K0014-BS1 File ID: S23110602.D*** Analyzed: 11/6/23 15:18

***LCSD: B23K017-ICV1 File ID: S23110604.D*** Analyzed: 11/6/23 14:28

| Analyte | CAS# | LCS Result (ng) | %REC | Q | Spike Level (ng) | LCSD Result (ng) | %REC | %REC Limits | RPD | RPD Limit | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 75-01-4 | 54.41 | 108.82 | | 50 | 59.05 | 118.00 | 80-120 | 8.18 | 30 | |
| 1,1-Dichloroethene | 75-35-4 | 52.81 | 105.62 | | 50 | 55.65 | 111.00 | 80-120 | 5.24 | 30 | |
| Methylene Chloride | 75-09-2 | 50.30 | 100.6 | | 50 | 52.5 | 105.00 | 80-120 | 4.28 | 30 | |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 76-13-1 | 49.70 | 99.4 | | 50 | 52.81 | 106.00 | 80-120 | 6.07 | 30 | |
| trans-1,2-Dichloroethene | 156-60-5 | 54.78 | 109.56 | | 50 | 56.72 | 113.00 | 80-120 | 3.48 | 30 | |
| Methyl-t-butyl ether | 1634-04-4 | 45.61 | 91.22 | | 50 | 44.35 | 88.70 | 80-120 | 2.80 | 30 | |
| 1,1-Dichloroethane | 75-34-3 | 53.05 | 106.1 | | 50 | 52.99 | 106.00 | 80-120 | 0.11 | 30 | |
| cis-1,2-Dichloroethene | 156-59-2 | 51.75 | 103.5 | | 50 | 52.27 | 105.00 | 80-120 | 1.00 | 30 | |
| Chloroform | 67-66-3 | 54.58 | 109.16 | | 50 | 58.48 | 117.00 | 80-120 | 6.90 | 30 | |
| 1,2-Dichloroethane | 107-06-2 | 59.20 | 118.4 | | 50 | 59.71 | 119.00 | 80-120 | 0.86 | 30 | |
| 1,1,1-Trichloroethane | 71-55-6 | 53.87 | 107.74 | | 50 | 56.83 | 114.00 | 80-120 | 5.35 | 30 | |
| Carbon Tetrachloride | 56-23-5 | 49.97 | 99.94 | | 50 | 52.34 | 105.00 | 80-120 | 4.63 | 30 | |
| Benzene | 71-43-2 | 49.47 | 98.94 | | 50 | 49.91 | 99.80 | 80-120 | 0.89 | 30 | |
| Trichloroethene | 79-01-6 | 47.40 | 94.8 | | 50 | 49.16 | 98.30 | 80-120 | 3.65 | 30 | |
| 1,4-Dioxane | 123-91-1 | 46.08 | 92.16 | | 50 | 44.85 | 89.70 | 80-120 | 2.71 | 30 | |
| 1,1,2-Trichloroethane | 79-00-5 | 51.52 | 103.04 | | 50 | 52.59 | 105.00 | 80-120 | 2.06 | 30 | |
| Toluene | 108-88-3 | 45.90 | 91.8 | | 50 | 46.58 | 93.20 | 80-120 | 1.47 | 30 | |
| 1,2-Dibromoethane (EDB) | 106-93-4 | 51.53 | 103.06 | | 50 | 52.69 | 105.00 | 80-120 | 2.23 | 30 | |
| Tetrachloroethene | 127-18-4 | 48.72 | 97.44 | | 50 | 50.17 | 100.00 | 80-120 | 2.93 | 30 | |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | 55.58 | 111.16 | | 50 | 58.27 | 117.00 | 80-120 | 4.73 | 30 | |
| Chlorobenzene | 108-90-7 | 48.13 | 96.26 | | 50 | 49.74 | 99.50 | 80-120 | 3.29 | 30 | |
| Ethylbenzene | 100-41-4 | 44.19 | 88.38 | | 50 | 44.8 | 89.60 | 80-120 | 1.37 | 30 | |
| p & m-Xylene | 179601-23-1 | 44.77 | 89.54 | | 50 | 45.18 | 90.40 | 80-120 | 0.91 | 30 | |
| o-Xylene | 95-47-6 | 44.89 | 89.78 | | 50 | 45.69 | 91.40 | 80-120 | 1.77 | 30 | |
| 1,2,3-Trichloropropane | 96-18-4 | 52.03 | 104.06 | | 50 | 52.61 | 105.00 | 80-120 | 1.11 | 30 | |
| Isopropylbenzene | 98-82-8 | 46.87 | 93.74 | | 50 | 46.75 | 93.50 | 80-120 | 0.26 | 30 | |
| 1,3,5-Trimethylbenzene | 108-67-8 | 53.58 | 107.16 | | 50 | 52.37 | 105.00 | 80-120 | 2.28 | 30 | |
| 1,2,4-Trimethylbenzene | 95-63-6 | 56.08 | 112.16 | | 50 | 53.49 | 107.00 | 80-120 | 4.73 | 30 | |
| 1,3-Dichlorobenzene | 541-73-1 | 58.82 | 117.64 | | 50 | 58.75 | 118.00 | 80-120 | 0.12 | 30 | |
| 1,4-Dichlorobenzene | 106-46-7 | 56.19 | 112.38 | | 50 | 56.27 | 113.00 | 80-120 | 0.14 | 30 | |
| 1,2-Dichlorobenzene | 95-50-1 | 57.83 | 115.66 | | 50 | 56.35 | 113.00 | 80-120 | 2.59 | 30 | |
| 1,2,4-Trichlorobenzene | 120-82-1 | 51.85 | 103.7 | | 50 | 51.34 | 103.00 | 80-120 | 0.99 | 30 | |
| Naphthalene | 91-20-3 | 46.64 | 93.28 | | 50 | 45.47 | 90.90 | 80-120 | 2.54 | 30 | |
| 1,2,3-Trichlorobenzene | 87-61-6 | 53.85 | 107.7 | | 50 | 53.19 | 106.00 | 80-120 | 1.23 | 30 | |
| 2-Methylnaphthalene | 91-57-6 | 40.73 | 81.46 | | 50 | 38.62 | 77.20 | 80-120 | 5.32 | 30 | |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# *Sample Duplicate RPD Summary*

## *Soil-Gas Sample Analysis by EPA Method 8260C*

***Duplicate Sample: 200032-SG-1-DUP (0007281-03)*** ***Sample: 200032-SG-1 (0007281-02)*** ***Average RPD:*** 0.0%

| Analyte | CAS# | Duplicate Result (ng) | LOQ (ng) | Sample Result (ng) | LOQ (ng) | RPD (%) |
|---|---|---|---|---|---|---|
| Vinyl Chloride | 75-01-4 | <10 | 10 | <10 | 10 | 0.0 |
| 1,1-Dichloroethene | 75-35-4 | <10 | 10 | <10 | 10 | 0.0 |
| Methylene Chloride | 75-09-2 | <10 | 10 | <10 | 10 | 0.0 |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 76-13-1 | <10 | 10 | <10 | 10 | 0.0 |
| trans-1,2-Dichloroethene | 156-60-5 | <10 | 10 | <10 | 10 | 0.0 |
| Methyl-t-butyl ether | 1634-04-4 | <25 | 25 | <25 | 25 | 0.0 |
| 1,1-Dichloroethane | 75-34-3 | <10 | 10 | <10 | 10 | 0.0 |
| cis-1,2-Dichloroethene | 156-59-2 | <10 | 10 | <10 | 10 | 0.0 |
| Chloroform | 67-66-3 | <10 | 10 | <10 | 10 | 0.0 |
| 1,2-Dichloroethane | 107-06-2 | <10 | 10 | <10 | 10 | 0.0 |
| 1,1,1-Trichloroethane | 71-55-6 | <10 | 10 | <10 | 10 | 0.0 |
| Carbon Tetrachloride | 56-23-5 | <10 | 10 | <10 | 10 | 0.0 |
| Benzene | 71-43-2 | <25 | 25 | <25 | 25 | 0.0 |
| Trichloroethene | 79-01-6 | <10 | 10 | <10 | 10 | 0.0 |
| 1,4-Dioxane | 123-91-1 | <10 | 10 | <10 | 10 | 0.0 |
| 1,1,2-Trichloroethane | 79-00-5 | <10 | 10 | <10 | 10 | 0.0 |
| Toluene | 108-88-3 | <25 | 25 | <25 | 25 | 0.0 |
| 1,2-Dibromoethane (EDB) | 106-93-4 | <10 | 10 | <10 | 10 | 0.0 |
| Tetrachloroethene | 127-18-4 | <10 | 10 | <10 | 10 | 0.0 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | <10 | 10 | <10 | 10 | 0.0 |
| Chlorobenzene | 108-90-7 | <10 | 10 | <10 | 10 | 0.0 |
| Ethylbenzene | 100-41-4 | <25 | 25 | <25 | 25 | 0.0 |
| p & m-Xylene | 179601-23-1 | <25 | 25 | <25 | 25 | 0.0 |
| o-Xylene | 95-47-6 | <25 | 25 | <25 | 25 | 0.0 |
| 1,2,3-Trichloropropane | 96-18-4 | <10 | 10 | <10 | 10 | 0.0 |
| Isopropylbenzene | 98-82-8 | <25 | 25 | <25 | 25 | 0.0 |
| 1,3,5-Trimethylbenzene | 108-67-8 | <25 | 25 | <25 | 25 | 0.0 |
| 1,2,4-Trimethylbenzene | 95-63-6 | <25 | 25 | <25 | 25 | 0.0 |
| 1,3-Dichlorobenzene | 541-73-1 | <10 | 10 | <10 | 10 | 0.0 |
| 1,4-Dichlorobenzene | 106-46-7 | <10 | 10 | <10 | 10 | 0.0 |
| 1,2-Dichlorobenzene | 95-50-1 | <10 | 10 | <10 | 10 | 0.0 |
| 1,2,4-Trichlorobenzene | 120-82-1 | <10 | 10 | <10 | 10 | 0.0 |
| Naphthalene | 91-20-3 | <25 | 25 | <25 | 25 | 0.0 |
| 1,2,3-Trichlorobenzene | 87-61-6 | <10 | 10 | <10 | 10 | 0.0 |
| 2-Methylnaphthalene | 91-57-6 | <25 | 25 | <25 | 25 | 0.0 |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## *Sample Duplicate RPD Summary - Concentration*

### *Soil-Gas Analysis by EPA 8260 - Data in Concentration*

***Duplicate Sample: 200032-SG-1-DUP (0007281-03)*** ***Sample: 200032-SG-1 (0007281-02)*** ***Average RPD:*** 0.0%

| Analyte | CAS# | Duplicate Result (µg/m³) | LOQ (µg/m³) | Sample Result (µg/m³) | LOQ (µg/m³) | RPD (%) |
|---|---|---|---|---|---|---|
| Vinyl Chloride | 75-01-4 | <0.62 | 0.62 | <0.62 | 0.62 | 0.0 |
| 1,1-Dichloroethene | 75-35-4 | <1.52 | 1.52 | <1.52 | 1.52 | 0.0 |
| Methylene Chloride | 75-09-2 | <1.43 | 1.43 | <1.43 | 1.43 | 0.0 |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 76-13-1 | <0.56 | 0.56 | <0.56 | 0.56 | 0.0 |
| trans-1,2-Dichloroethene | 156-60-5 | <1.14 | 1.14 | <1.14 | 1.14 | 0.0 |
| Methyl-t-butyl ether | 1634-04-4 | <2.50 | 2.50 | <2.50 | 2.50 | 0.0 |
| 1,1-Dichloroethane | 75-34-3 | <0.59 | 0.59 | <0.59 | 0.59 | 0.0 |
| cis-1,2-Dichloroethene | 156-59-2 | <0.94 | 0.94 | <0.94 | 0.94 | 0.0 |
| Chloroform | 67-66-3 | <1.43 | 1.43 | <1.43 | 1.43 | 0.0 |
| 1,2-Dichloroethane | 107-06-2 | <0.89 | 0.89 | <0.89 | 0.89 | 0.0 |
| 1,1,1-Trichloroethane | 71-55-6 | <0.48 | 0.48 | <0.48 | 0.48 | 0.0 |
| Carbon Tetrachloride | 56-23-5 | <1.16 | 1.16 | <1.16 | 1.16 | 0.0 |
| Benzene | 71-43-2 | <2.36 | 2.36 | <2.36 | 2.36 | 0.0 |
| Trichloroethene | 79-01-6 | <1.52 | 1.52 | <1.52 | 1.52 | 0.0 |
| 1,4-Dioxane | 123-91-1 | <1.22 | 1.22 | <1.22 | 1.22 | 0.0 |
| 1,1,2-Trichloroethane | 79-00-5 | <1.52 | 1.52 | <1.52 | 1.52 | 0.0 |
| Toluene | 108-88-3 | <3.13 | 3.13 | <3.13 | 3.13 | 0.0 |
| 1,2-Dibromoethane (EDB) | 106-93-4 | <1.28 | 1.28 | <1.28 | 1.28 | 0.0 |
| Tetrachloroethene | 127-18-4 | <1.22 | 1.22 | <1.22 | 1.22 | 0.0 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | <1.22 | 1.22 | <1.22 | 1.22 | 0.0 |
| Chlorobenzene | 108-90-7 | <0.59 | 0.59 | <0.59 | 0.59 | 0.0 |
| Ethylbenzene | 100-41-4 | <1.47 | 1.47 | <1.47 | 1.47 | 0.0 |
| p & m-Xylene | 179601-23-1 | <1.42 | 1.42 | <1.42 | 1.42 | 0.0 |
| o-Xylene | 95-47-6 | <1.42 | 1.42 | <1.42 | 1.42 | 0.0 |
| 1,2,3-Trichloropropane | 96-18-4 | <0.67 | 0.67 | <0.67 | 0.67 | 0.0 |
| Isopropylbenzene | 98-82-8 | <1.51 | 1.51 | <1.51 | 1.51 | 0.0 |
| 1,3,5-Trimethylbenzene | 108-67-8 | <1.51 | 1.51 | <1.51 | 1.51 | 0.0 |
| 1,2,4-Trimethylbenzene | 95-63-6 | <1.51 | 1.51 | <1.51 | 1.51 | 0.0 |
| 1,3-Dichlorobenzene | 541-73-1 | <0.67 | 0.67 | <0.67 | 0.67 | 0.0 |
| 1,4-Dichlorobenzene | 106-46-7 | <0.67 | 0.67 | <0.67 | 0.67 | 0.0 |
| 1,2-Dichlorobenzene | 95-50-1 | <0.67 | 0.67 | <0.67 | 0.67 | 0.0 |
| 1,2,4-Trichlorobenzene | 120-82-1 | <1.28 | 1.28 | <1.28 | 1.28 | 0.0 |
| Naphthalene | 91-20-3 | <1.56 | 1.56 | <1.56 | 1.56 | 0.0 |
| 1,2,3-Trichlorobenzene | 87-61-6 | <1.28 | 1.28 | <1.28 | 1.28 | 0.0 |
| 2-Methylnaphthalene | 91-57-6 | <1.65 | 1.65 | <1.65 | 1.65 | 0.0 |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# *QC/CLP Tables*

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## Form 1

## Volatile Analysis Data Package Sequence Summary

**Method:** EPA 8260C

**Sequence:** B23K017 **Instrument:** S System

| Lab Sample ID | Client Sample ID | DF | File ID | QC Description |
|---|---|---|---|---|
| B23K017-TUN1 | MS Tune | 1.00 | S23110601.D | MS Tune |
| 23K0014-BS1 | LCS | 1.00 | S23110602.D | LCS, Calibration Source Verification |
| 23K0014-BLK1 | Blank | 1.00 | S23110603.D | Method Blank |
| B23K017-ICV1 | Initial Cal Check | 1.00 | S23110604.D | LCSD, Second Source Verification/ICV |
| 0007281-01 | Trip 1 | 1.00 | S23110640.D | |
| 0007281-02 | 200032-SG-1 | 1.00 | S23110641.D | |
| 0007281-03 | 200032-SG-1-DUP | 1.00 | S23110642.D | |
| 0007281-04 | 200032-SG-2 | 1.00 | S23110643.D | |
| 0007281-05 | 200032-SG-3 | 1.00 | S23110644.D | |
| 0007281-06 | 200032-SG-4 | 1.00 | S23110645.D | |
| 0007281-07 | 200032-SG-5 | 1.00 | S23110646.D | |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## Table 2 - Form II A VOA
## Volatile Deuterated Monitoring Compound Recovery Summary

**Method:** EPA 8260C
**Sequence:** B23K017

**Instrument:** S System
**QC Limits:** 70.00 - 130.00%

+ values are outside method/contract required QC limits

| Lab Number | Client Sample Name | File ID | 1,2-DCA-d4 | | Toluene-d8 | | Bromofluorobenzene | |
|---|---|---|---|---|---|---|---|---|
| | | | *Calibration RT:* | 3.20 | Calibration RT: | 4.51 | Calibration RT: | 6.59 |
| | | | *Recovery* | *RT* | *Recovery* | *RT* | *Recovery* | *RT* |
| 23K0014-BS1 | LCS, Primary Calibration Source | S23110602.D | 123.9 | 3.20 | 97.3 | 4.52 | 92.2 | 6.59 |
| 23K0014-BLK1 | Method Blank | S23110603.D | 123.5 | 3.20 | 98.7 | 4.52 | 81.8 | 6.59 |
| B23K017-ICV1 | LCSD, Second Source | S23110604.D | 121.1 | 3.20 | 95.5 | 4.52 | 89.8 | 6.59 |
| 0007281-01 | Trip 1 | S23110640.D | 120.9 | 3.20 | 93.7 | 4.52 | 85.7 | 6.59 |
| 0007281-02 | 200032-SG-1 | S23110641.D | 107.7 | 3.21 | 92.0 | 4.52 | 93.2 | 6.59 |
| 0007281-03 | 200032-SG-1-DUP | S23110642.D | 110.4 | 3.21 | 91.7 | 4.52 | 95.5 | 6.59 |
| 0007281-04 | 200032-SG-2 | S23110643.D | 103.1 | 3.21 | 93.8 | 4.52 | 99.0 | 6.59 |
| 0007281-05 | 200032-SG-3 | S23110644.D | 105.9 | 3.21 | 94.1 | 4.52 | 97.7 | 6.59 |
| 0007281-06 | 200032-SG-4 | S23110645.D | 106.8 | 3.21 | 92.8 | 4.52 | 90.1 | 6.59 |
| 0007281-07 | 200032-SG-5 | S23110646.D | 114.2 | 3.21 | 91.4 | 4.52 | 97.2 | 6.59 |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## Table 3 - Form III B VOA

## Volatile Laboratory Control Sample Recoveries

**Lab Sample No.:** 23K0014-BS1 **QC Description:** LCS

**Instrument:** S System **Sequence:** B23K017

**Method:** EPA 8260C **File ID:** S23110602.D

+ values are outside method/contract required QC limits

| Compound | Spike Added (ng) | Spike Result (ng) | % Recovery | Q | QC Limits | Notes |
|---|---|---|---|---|---|---|
| Vinyl Chloride | 50.0 | 54.4 | 108.8 | | 80 - 120 | |
| 1,1-Dichloroethene | 50.0 | 52.8 | 105.6 | | 80 - 120 | |
| Methylene Chloride | 50.0 | 50.3 | 100.6 | | 80 - 120 | |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 50.0 | 49.7 | 99.4 | | 80 - 120 | |
| trans-1,2-Dichloroethene | 50.0 | 54.8 | 109.6 | | 80 - 120 | |
| Methyl-t-butyl ether | 50.0 | 45.6 | 91.2 | | 80 - 120 | |
| 1,1-Dichloroethane | 50.0 | 53.1 | 106.1 | | 80 - 120 | |
| cis-1,2-Dichloroethene | 50.0 | 51.8 | 103.5 | | 80 - 120 | |
| Chloroform | 50.0 | 54.6 | 109.2 | | 80 - 120 | |
| 1,2-Dichloroethane | 50.0 | 59.2 | 118.4 | | 80 - 120 | |
| 1,1,1-Trichloroethane | 50.0 | 53.9 | 107.7 | | 80 - 120 | |
| Carbon Tetrachloride | 50.0 | 50.0 | 99.9 | | 80 - 120 | |
| Benzene | 50.0 | 49.5 | 98.9 | | 80 - 120 | |
| Trichloroethene | 50.0 | 47.4 | 94.8 | | 80 - 120 | |
| 1,4-Dioxane | 50.0 | 46.1 | 92.2 | | 80 - 120 | |
| 1,1,2-Trichloroethane | 50.0 | 51.5 | 103.0 | | 80 - 120 | |
| Toluene | 50.0 | 45.9 | 91.8 | | 80 - 120 | |
| 1,2-Dibromoethane (EDB) | 50.0 | 51.5 | 103.1 | | 80 - 120 | |
| Tetrachloroethene | 50.0 | 48.7 | 97.4 | | 80 - 120 | |
| 1,1,1,2-Tetrachloroethane | 50.0 | 55.6 | 111.2 | | 80 - 120 | |
| Chlorobenzene | 50.0 | 48.1 | 96.3 | | 80 - 120 | |
| Ethylbenzene | 50.0 | 44.2 | 88.4 | | 80 - 120 | |
| p & m-Xylene | 50.0 | 44.8 | 89.5 | | 80 - 120 | |
| o-Xylene | 50.0 | 44.9 | 89.8 | | 80 - 120 | |
| 1,2,3-Trichloropropane | 50.0 | 52.0 | 104.1 | | 80 - 120 | |
| Isopropylbenzene | 50.0 | 46.9 | 93.7 | | 80 - 120 | |
| 1,3,5-Trimethylbenzene | 50.0 | 53.6 | 107.2 | | 80 - 120 | |
| 1,2,4-Trimethylbenzene | 50.0 | 56.1 | 112.2 | | 80 - 120 | |
| 1,3-Dichlorobenzene | 50.0 | 58.8 | 117.6 | | 80 - 120 | |
| 1,4-Dichlorobenzene | 50.0 | 56.2 | 112.4 | | 80 - 120 | |
| 1,2-Dichlorobenzene | 50.0 | 57.8 | 115.7 | | 80 - 120 | |
| 1,2,4-Trichlorobenzene | 50.0 | 51.9 | 103.7 | | 80 - 120 | |
| Naphthalene | 50.0 | 46.6 | 93.3 | | 80 - 120 | |
| 1,2,3-Trichlorobenzene | 50.0 | 53.9 | 107.7 | | 80 - 120 | |
| 2-Methylnaphthalene | 50.0 | 40.7 | 81.5 | | 80 - 120 | |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## Table 3 - Form III B VOA
## Volatile LCS/LCSD Recovery/RPD

**Lab Sample No.:** B23K017-ICV1
**QC Description:** LCSD, Second Source Standard
**Method:** EPA 8260C
**Sequence:** B23K017
**Batch:** B23K017
**Instrument:** S System
**LCSD FileID:** S23110604.D
**LCS FileID:** S23110602.D

+ values are outside method/contract required QC limits

| Compound | Spike Added (ng) | LCS Result (ng) | LCSD Result (ng) | LCSD Recovery (%) | LCSD RPD (%) | RPD Limit (%) | LCSD Recovery Limits (%) |
|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 50 | 54.41 | 59.05 | 118.00 | 8.18 | 30 | 80 - 120 |
| 1,1-Dichloroethene | 50 | 52.81 | 55.65 | 111.00 | 5.24 | 30 | 80 - 120 |
| Methylene Chloride | 50 | 50.30 | 52.5 | 105.00 | 4.28 | 30 | 80 - 120 |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 50 | 49.70 | 52.81 | 106.00 | 6.07 | 30 | 80 - 120 |
| trans-1,2-Dichloroethene | 50 | 54.78 | 56.72 | 113.00 | 3.48 | 30 | 80 - 120 |
| Methyl-t-butyl ether | 50 | 45.61 | 44.35 | 88.70 | 2.80 | 30 | 80 - 120 |
| 1,1-Dichloroethane | 50 | 53.05 | 52.99 | 106.00 | 0.11 | 30 | 80 - 120 |
| cis-1,2-Dichloroethene | 50 | 51.75 | 52.27 | 105.00 | 1.00 | 30 | 80 - 120 |
| Chloroform | 50 | 54.58 | 58.48 | 117.00 | 6.90 | 30 | 80 - 120 |
| 1,2-Dichloroethane | 50 | 59.20 | 59.71 | 119.00 | 0.86 | 30 | 80 - 120 |
| 1,1,1-Trichloroethane | 50 | 53.87 | 56.83 | 114.00 | 5.35 | 30 | 80 - 120 |
| Carbon Tetrachloride | 50 | 49.97 | 52.34 | 105.00 | 4.63 | 30 | 80 - 120 |
| Benzene | 50 | 49.47 | 49.91 | 99.80 | 0.89 | 30 | 80 - 120 |
| Trichloroethene | 50 | 47.40 | 49.16 | 98.30 | 3.65 | 30 | 80 - 120 |
| 1,4-Dioxane | 50 | 46.08 | 44.85 | 89.70 | 2.71 | 30 | 80 - 120 |
| 1,1,2-Trichloroethane | 50 | 51.52 | 52.59 | 105.00 | 2.06 | 30 | 80 - 120 |
| Toluene | 50 | 45.90 | 46.58 | 93.20 | 1.47 | 30 | 80 - 120 |
| 1,2-Dibromoethane (EDB) | 50 | 51.53 | 52.69 | 105.00 | 2.23 | 30 | 80 - 120 |
| Tetrachloroethene | 50 | 48.72 | 50.17 | 100.00 | 2.93 | 30 | 80 - 120 |
| 1,1,1,2-Tetrachloroethane | 50 | 55.58 | 58.27 | 117.00 | 4.73 | 30 | 80 - 120 |
| Chlorobenzene | 50 | 48.13 | 49.74 | 99.50 | 3.29 | 30 | 80 - 120 |
| Ethylbenzene | 50 | 44.19 | 44.8 | 89.60 | 1.37 | 30 | 80 - 120 |
| p & m-Xylene | 50 | 44.77 | 45.18 | 90.40 | 0.91 | 30 | 80 - 120 |
| o-Xylene | 50 | 44.89 | 45.69 | 91.40 | 1.77 | 30 | 80 - 120 |
| 1,2,3-Trichloropropane | 50 | 52.03 | 52.61 | 105.00 | 1.11 | 30 | 80 - 120 |
| Isopropylbenzene | 50 | 46.87 | 46.75 | 93.50 | 0.26 | 30 | 80 - 120 |
| 1,3,5-Trimethylbenzene | 50 | 53.58 | 52.37 | 105.00 | 2.28 | 30 | 80 - 120 |
| 1,2,4-Trimethylbenzene | 50 | 56.08 | 53.49 | 107.00 | 4.73 | 30 | 80 - 120 |
| 1,3-Dichlorobenzene | 50 | 58.82 | 58.75 | 118.00 | 0.12 | 30 | 80 - 120 |
| 1,4-Dichlorobenzene | 50 | 56.19 | 56.27 | 113.00 | 0.14 | 30 | 80 - 120 |
| 1,2-Dichlorobenzene | 50 | 57.83 | 56.35 | 113.00 | 2.59 | 30 | 80 - 120 |
| 1,2,4-Trichlorobenzene | 50 | 51.85 | 51.34 | 103.00 | 0.99 | 30 | 80 - 120 |
| Naphthalene | 50 | 46.64 | 45.47 | 90.90 | 2.54 | 30 | 80 - 120 |
| 1,2,3-Trichlorobenzene | 50 | 53.85 | 53.19 | 106.00 | 1.23 | 30 | 80 - 120 |
| 2-Methylnaphthalene | 50 | 40.73 | 38.62 | 77.20 | 5.32 | 30 | 80 - 120 |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## Table 3 - Form III C VOA

## Volatile Laboratory Sample Duplicate Data Sheet

+ values are outside method/contract required QC limits

| | Field Duplicate | Initial Sample | | | |
|---|---|---|---|---|---|
| **Lab Number:** | 0007281-03 | 0007281-02 | | | |
| **Sample Name:** | 200032-SG-1-DUP | 200032-SG-1 | | | |
| **Compound** | **Result (ng)** | **Result (ng)** | **RPD** | **RPD Limit** | **Q** |
| Vinyl Chloride | <10 | <10 | | 50 | |
| 1,1-Dichloroethene | <10 | <10 | | 50 | |
| Methylene Chloride | <10 | <10 | | 50 | |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | <10 | <10 | | 50 | |
| trans-1,2-Dichloroethene | <10 | <10 | | 50 | |
| Methyl-t-butyl ether | <25 | <25 | | 50 | |
| 1,1-Dichloroethane | <10 | <10 | | 50 | |
| cis-1,2-Dichloroethene | <10 | <10 | | 50 | |
| Chloroform | <10 | <10 | | 50 | |
| 1,2-Dichloroethane | <10 | <10 | | 50 | |
| 1,1,1-Trichloroethane | <10 | <10 | | 50 | |
| Carbon Tetrachloride | <10 | <10 | | 50 | |
| Benzene | <25 | <25 | | 67 | |
| Trichloroethene | <10 | <10 | | 87 | |
| 1,4-Dioxane | <10 | <10 | | 50 | |
| 1,1,2-Trichloroethane | <10 | <10 | | 50 | |
| Toluene | <25 | <25 | | 57 | |
| 1,2-Dibromoethane (EDB) | <10 | <10 | | 50 | |
| Tetrachloroethene | <10 | <10 | | 86 | |
| 1,1,1,2-Tetrachloroethane | <10 | <10 | | 50 | |
| Chlorobenzene | <10 | <10 | | 50 | |
| Ethylbenzene | <25 | <25 | | 48 | |
| p & m-Xylene | <25 | <25 | | 55 | |
| o-Xylene | <25 | <25 | | 55 | |
| 1,2,3-Trichloropropane | <10 | <10 | | 50 | |
| Isopropylbenzene | <25 | <25 | | 50 | |
| 1,3,5-Trimethylbenzene | <25 | <25 | | 50 | |
| 1,2,4-Trimethylbenzene | <25 | <25 | | 50 | |
| 1,3-Dichlorobenzene | <10 | <10 | | 50 | |
| 1,4-Dichlorobenzene | <10 | <10 | | 50 | |
| 1,2-Dichlorobenzene | <10 | <10 | | 50 | |
| 1,2,4-Trichlorobenzene | <10 | <10 | | 50 | |
| Naphthalene | <25 | <25 | | 50 | |
| 1,2,3-Trichlorobenzene | <10 | <10 | | 50 | |
| 2-Methylnaphthalene | <25 | <25 | | 50 | |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## Table 3 - Form III C VOA

## Volatile Laboratory Sample Duplicate Data Sheet

+ values are outside method/contract required QC limits

| | Field Duplicate | Initial Sample | | | |
|---|---|---|---|---|---|
| **Lab Number:** | 0007281-03 | 0007281-02 | | | |
| **Sample Name:** | 200032-SG-1-DUP | 200032-SG-1 | | | |
| **Compound** | **Result (µg/m³)** | **Result (µg/m³)** | **RPD** | **RPD Limit** | **Q** |
| Vinyl Chloride | <0.62 | <0.62 | | 50 | |
| 1,1-Dichloroethene | <1.52 | <1.52 | | 50 | |
| Methylene Chloride | <1.43 | <1.43 | | 50 | |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | <0.56 | <0.56 | | 50 | |
| trans-1,2-Dichloroethene | <1.14 | <1.14 | | 50 | |
| Methyl-t-butyl ether | <2.50 | <2.50 | | 50 | |
| 1,1-Dichloroethane | <0.59 | <0.59 | | 50 | |
| cis-1,2-Dichloroethene | <0.94 | <0.94 | | 50 | |
| Chloroform | <1.43 | <1.43 | | 50 | |
| 1,2-Dichloroethane | <0.89 | <0.89 | | 50 | |
| 1,1,1-Trichloroethane | <0.48 | <0.48 | | 50 | |
| Carbon Tetrachloride | <1.16 | <1.16 | | 50 | |
| Benzene | <2.36 | <2.36 | | 67 | |
| Trichloroethene | <1.52 | <1.52 | | 87 | |
| 1,4-Dioxane | <1.22 | <1.22 | | 50 | |
| 1,1,2-Trichloroethane | <1.52 | <1.52 | | 50 | |
| Toluene | <3.13 | <3.13 | | 57 | |
| 1,2-Dibromoethane (EDB) | <1.28 | <1.28 | | 50 | |
| Tetrachloroethene | <1.22 | <1.22 | | 86 | |
| 1,1,1,2-Tetrachloroethane | <1.22 | <1.22 | | 50 | |
| Chlorobenzene | <0.59 | <0.59 | | 50 | |
| Ethylbenzene | <1.47 | <1.47 | | 48 | |
| p & m-Xylene | <1.42 | <1.42 | | 55 | |
| o-Xylene | <1.42 | <1.42 | | 55 | |
| 1,2,3-Trichloropropane | <0.67 | <0.67 | | 50 | |
| Isopropylbenzene | <1.51 | <1.51 | | 50 | |
| 1,3,5-Trimethylbenzene | <1.51 | <1.51 | | 50 | |
| 1,2,4-Trimethylbenzene | <1.51 | <1.51 | | 50 | |
| 1,3-Dichlorobenzene | <0.67 | <0.67 | | 50 | |
| 1,4-Dichlorobenzene | <0.67 | <0.67 | | 50 | |
| 1,2-Dichlorobenzene | <0.67 | <0.67 | | 50 | |
| 1,2,4-Trichlorobenzene | <1.28 | <1.28 | | 50 | |
| Naphthalene | <1.56 | <1.56 | | 50 | |
| 1,2,3-Trichlorobenzene | <1.28 | <1.28 | | 50 | |
| 2-Methylnaphthalene | <1.65 | <1.65 | | 50 | |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## Table 4 - Form IV VOA

## Volatile Method Blank Summary

**Sequence:** B23H003 **Batch:** B23H003 **Matrix:** Soil Gas **Analysis:** EPA 8260C

**EPA Sample No.:** B23H003-ICB1 **Instrument:** S System **Date Analyzed**: 07/31/2023

| Sample Name | Lab Sample Number | Lab File ID | Time Analyzed |
|---|---|---|---|
| MS Tune | B23H003-TUN1 | S23073101.D | 21:44:00 |
| Cal Standard | B23H003-CAL1 | S23073103.D | 22:32:00 |
| Cal Standard | B23H003-CAL2 | S23073104.D | 22:56:00 |
| Cal Standard | B23H003-CAL3 | S23073105.D | 23:20:00 |
| Cal Standard | B23H003-CAL4 | S23073106.D | 23:44:00 |
| Cal Standard | B23H003-CAL5 | S23073107.D | 0:08:00 |
| Cal Standard | B23H003-CAL6 | S23073108.D | 0:31:00 |
| Cal Standard | B23H003-CAL7 | S23073109.D | 0:55:00 |
| Cal Standard | B23H003-CAL8 | S23073110.D | 1:19:00 |
| Cal Standard | B23H003-CAL9 | S23073111.D | 1:44:00 |
| Cal Standard | B23H003-CALA | S23073112.D | 2:08:00 |
| Cal Standard | B23H003-CALB | S23073113.D | 2:31:00 |
| Cal Standard | B23H003-CALC | S23073114.D | 2:55:00 |
| Lab Blank/Initial Calibration Blank | B23H003-ICB1 | S23073120.D | 5:18:00 |
| LCSD/Second Source Verification/CALV | B23H003-ICV1 | S23073132.D | 12:04:00 |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## Table 4 - Form IV VOA

## Volatile Method Blank Summary

**Sequence:** B23K017 **Batch:** B23K017 **Matrix:** Soil Gas **Analysis:** EPA 8260C

**EPA Sample No.:** 23K0014-BLK1 **Instrument:** S System **Date Analyzed**: 11/06/2023

| Sample Name | Lab Sample Number | Lab File ID | Time Analyzed |
|---|---|---|---|
| MS Tune | B23K017-TUN1 | S23110601.D | 14:03:00 |
| LCS, Calibration Source Verification | 23K0014-BS1 | S23110602.D | 14:28:00 |
| Lab Blank | 23K0014-BLK1 | S23110603.D | 14:53:00 |
| LCSD/Second Source Verification/CALV | B23K017-ICV1 | S23110604.D | 15:18:00 |
| Trip 1 | 0007281-01 | S23110640.D | 5:50:00 |
| 200032-SG-1 | 0007281-02 | S23110641.D | 6:19:00 |
| 200032-SG-1-DUP | 0007281-03 | S23110642.D | 6:48:00 |
| 200032-SG-2 | 0007281-04 | S23110643.D | 7:17:00 |
| 200032-SG-3 | 0007281-05 | S23110644.D | 7:46:00 |
| 200032-SG-4 | 0007281-06 | S23110645.D | 8:16:00 |
| 200032-SG-5 | 0007281-07 | S23110646.D | 8:45:00 |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## Table 5 - Form V VOA
## Volatile Organic Instrument Performance Check (BFB)
## EPA 8260C

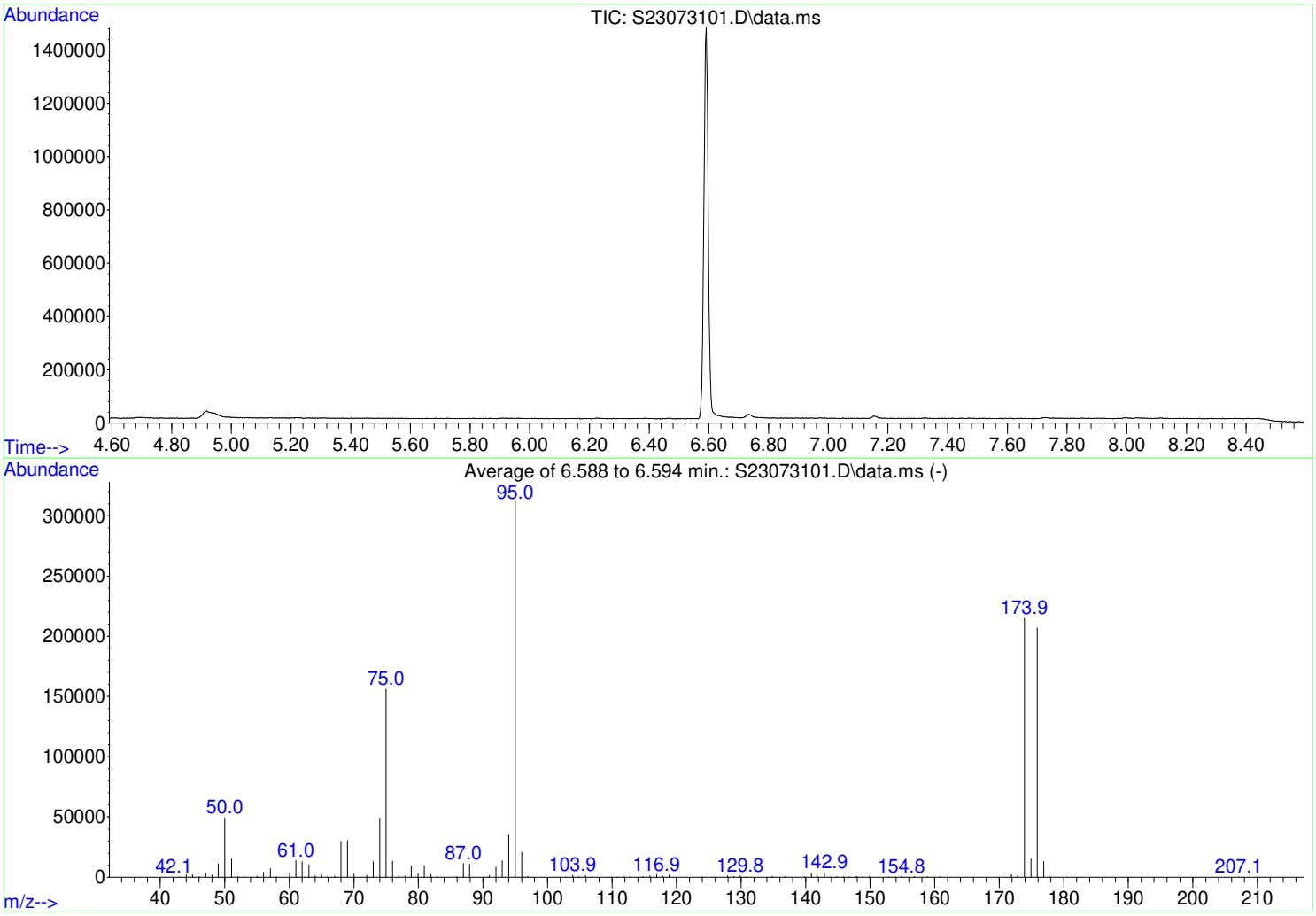
| | | | |
|---|---|---|---|
| Laboratory: | Beacon Environmental | SDG: | |
| Client: | EnviroForensics_Waukesha | Project Site: | Manitowoc, WI |
| Lab File ID: | S23073101.D | Injection Date: | 07/31/23 |
| Instrument ID: | S System | Injection Time: | 21:44 |
| Sequence: | B23H003 | Lab Sample ID: | B23H003-TUN1 |

| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | Pass/Fail |
|---|---|---|---|
| 50 | 8 - 120% of 95 | 15.8 | PASS |
| 75 | 30 - 60% of 95 | 49.9 | PASS |
| 95 | Base peak, 100% relative abundance | 100.0 | PASS |
| 96 | 5 - 9% of 95 | 6.6 | PASS |
| 173 | Less than 2% of 174 | 0.6 | PASS |
| 174 | 50 - 120% of 95 | 68.8 | PASS |
| 175 | 4 - 9% of 174 | 7.1 | PASS |
| 176 | 93 - 101% of 174 | 96.3 | PASS |
| 177 | 5 - 9% of 176 | 6.3 | PASS |

Data Path : Z:\GCMS\data\23\07\S230731 Q CAL\STD\
Data File : S23073101.D
Acq On : 31 Jul 2023 09:44 pm
Operator : KAI
Sample : SEQ-TUN1
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: KNEW.P

Method : Z:\msdchem\S_system\S_5977_230731_STD LIST_8260C.M
Title : SOURCE AREA VOA ANALYSIS
Last Update : Tue Aug 01 13:31:16 2023




AutoFind: Scans 2072, 2073, 2074; Background Corrected with Scan 2063

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 15.8 | 49225 | PASS |
| 75 | 95 | 30 | 60 | 49.9 | 155883 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 312533 | PASS |
| 96 | 95 | 5 | 9 | 6.6 | 20757 | PASS |
| 173 | 174 | 0.00 | 2 | 0.6 | 1293 | PASS |
| 174 | 95 | 50 | 200 | 68.8 | 214997 | PASS |
| 175 | 174 | 5 | 9 | 7.1 | 15227 | PASS |
| 176 | 174 | 95 | 102 | 96.3 | 206997 | PASS |
| 177 | 176 | 5 | 9 | 6.3 | 13003 | PASS |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## Table 5 - Form V VOA
## Volatile Organic Instrument Performance Check (BFB)
## EPA 8260C

| | | | |
|---|---|---|---|
| Laboratory: | Beacon Environmental | SDG: | |
| Client: | EnviroForensics_Waukesha | Project Site: | Manitowoc, WI |
| Lab File ID: | S23110601.D | Injection Date: | 11/06/23 |
| Instrument ID: | S System | Injection Time: | 14:03 |
| Sequence: | B23K017 | Lab Sample ID: | B23K017-TUN1 |

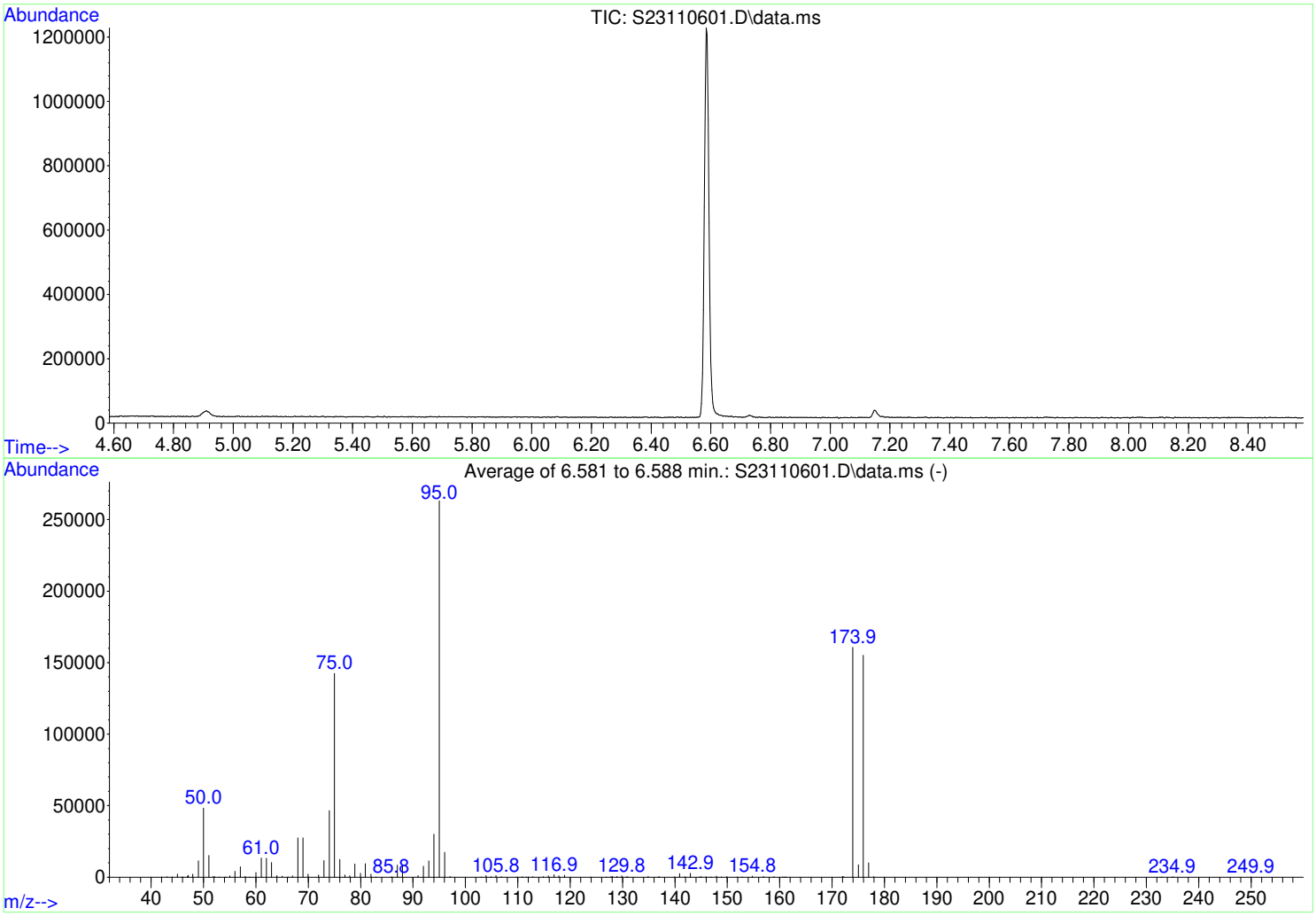
| m/z | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE | Pass/Fail |
|---|---|---|---|
| 50 | 8 - 120% of 95 | 18.4 | PASS |
| 75 | 30 - 60% of 95 | 54.1 | PASS |
| 95 | Base peak, 100% relative abundance | 100.0 | PASS |
| 96 | 5 - 9% of 95 | 6.6 | PASS |
| 173 | Less than 2% of 174 | 0.0 | PASS |
| 174 | 50 - 120% of 95 | 61.0 | PASS |
| 175 | 4 - 9% of 174 | 5.3 | PASS |
| 176 | 93 - 101% of 174 | 96.6 | PASS |
| 177 | 5 - 9% of 176 | 6.5 | PASS |

BFB

Data Path : Z:\GCMS\data\23\11\S231106\
Data File : S23110601.D
Acq On : 06 Nov 2023 02:03 pm
Operator : KAI
Sample : B23K017-TUN1
Misc : BFB
ALS Vial : 1 Sample Multiplier: 1

Integration File: KNEW.P

Method : Z:\msdchem\S_system\S_5977_230731_STD LIST_8260C.M
Title : SOURCE AREA VOA ANALYSIS
Last Update : Tue Oct 31 12:01:36 2023




AutoFind: Scans 2070, 2071, 2072; Background Corrected with Scan 2061

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 18.4 | 48315 | PASS |
| 75 | 95 | 30 | 60 | 54.1 | 142464 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 263189 | PASS |
| 96 | 95 | 5 | 9 | 6.6 | 17339 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 200 | 61.0 | 160576 | PASS |
| 175 | 174 | 5 | 9 | 5.3 | 8586 | PASS |
| 176 | 174 | 95 | 102 | 96.6 | 155067 | PASS |
| 177 | 176 | 5 | 9 | 6.5 | 10097 | PASS |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## Table 5 - Form IV VOA
## Volatile Organic Instrument Performance Check (BFB) Sequence Summary

**Sequence:** B23H003 **Batch:** B23H003 **Matrix:** Soil Gas

**EPA Sample No.:** B23H003-TUN1 **Instrument:** S System **Date Analyzed**: 07/31/2023

+ values are outside method/contract required QC limits

| | Lab Sample Number | Lab File ID | Time Analyzed | Tune to Analysis (hr) | Q |
|---|---|---|---|---|---|
| B23H003-TUN1 | B23H003-TUN1 | S23073101.D | 21:44:00 | 0.00 | |
| B23H003-CAL1 | B23H003-CAL1 | S23073103.D | 22:32:00 | 0.80 | |
| B23H003-CAL2 | B23H003-CAL2 | S23073104.D | 22:56:00 | 1.20 | |
| B23H003-CAL3 | B23H003-CAL3 | S23073105.D | 23:20:00 | 1.60 | |
| B23H003-CAL4 | B23H003-CAL4 | S23073106.D | 23:44:00 | 2.00 | |
| B23H003-CAL5 | B23H003-CAL5 | S23073107.D | 0:08:00 | 2.40 | |
| B23H003-CAL6 | B23H003-CAL6 | S23073108.D | 0:31:00 | 2.78 | |
| B23H003-CAL7 | B23H003-CAL7 | S23073109.D | 0:55:00 | 3.18 | |
| B23H003-CAL8 | B23H003-CAL8 | S23073110.D | 1:19:00 | 3.58 | |
| B23H003-CAL9 | B23H003-CAL9 | S23073111.D | 1:44:00 | 4.00 | |
| B23H003-CALA | B23H003-CALA | S23073112.D | 2:08:00 | 4.40 | |
| B23H003-CALB | B23H003-CALB | S23073113.D | 2:31:00 | 4.78 | |
| B23H003-CALC | B23H003-CALC | S23073114.D | 2:55:00 | 5.18 | |
| Lab Blank | B23H003-ICB1 | S23073120.D | 5:18:00 | 7.57 | |
| LCSD, Calibration Verification, Second Source | B23H003-ICV1 | S23073132.D | 12:04:00 | 14.33 | |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## Table 5 - Form IV VOA
## Volatile Organic Instrument Performance Check (BFB) Sequence Summary

**Sequence:** B23K017 **Batch:** B23K017 **Matrix:** Air

**EPA Sample No.:** B23K017-TUN1 **Instrument:** S System **Date Analyzed**: 11/06/2023

+ values are outside method/contract required QC limits

| | Lab Sample Number | Lab File ID | Time Analyzed | Tune to Analysis (hr) | Q |
|---|---|---|---|---|---|
| B23K017-TUN1 | B23K017-TUN1 | S23110601.D | 14:03:00 | 0.00 | |
| LCS, Primary Calibration Source | 23K0014-BS1 | S23110602.D | 14:28:00 | 0.42 | |
| Method Blank | 23K0014-BLK1 | S23110603.D | 14:53:00 | 0.83 | |
| LCSD, Calibration Verification, Second Source | B23K017-ICV1 | S23110604.D | 15:18:00 | 1.25 | |
| 0007281-01 | 0007281-01 | S23110640.D | 5:50:00 | 15.78 | |
| 0007281-02 | 0007281-02 | S23110641.D | 6:19:00 | 16.27 | |
| 0007281-03 | 0007281-03 | S23110642.D | 6:48:00 | 16.75 | |
| 0007281-04 | 0007281-04 | S23110643.D | 7:17:00 | 17.23 | |
| 0007281-05 | 0007281-05 | S23110644.D | 7:46:00 | 17.72 | |
| 0007281-06 | 0007281-06 | S23110645.D | 8:16:00 | 18.22 | |
| 0007281-07 | 0007281-07 | S23110646.D | 8:45:00 | 18.70 | |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## Table 6 - Form VI A VOA
## Volatile Organics Initial Calibration Data

**Calibration:** BH30002 **Calibration Start:** 07/31/2023 22:32

**Instrument:** S System **Calibration End:** 08/01/2023 02:55

| | **Lab File ID:** | | S23073103.D | S23073104.D | S23073105.D | S23073106.D | S23073107.D | S23073108.D | S23073109.D |
|---|---|---|---|---|---|---|---|---|---|
| | Compound Associated QC | | ***Response Factors/Responses*** | | | | | | |
| | ISTD | SUR | **2.5 ng** | **5 ng** | **10 ng** | **25 ng** | **50 ng** | **100 ng** | **200 ng** |
| Vinyl Chloride | FBZ | DCA12D4 | 0.27 | 0.27 | 0.25 | 0.19 | 0.26 | 0.23 | 0.23 |
| 1,1-Dichloroethene | FBZ | DCA12D4 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 |
| Methylene Chloride | FBZ | DCA12D4 | 0.27 | 0.31 | 0.28 | 0.28 | 0.28 | 0.27 | 0.27 |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | FBZ | DCA12D4 | 0.26 | 0.27 | 0.27 | 0.28 | 0.28 | 0.26 | 0.27 |
| trans-1,2-Dichloroethene | FBZ | DCA12D4 | 0.25 | 0.29 | 0.26 | 0.27 | 0.27 | 0.26 | 0.27 |
| Methyl-t-butyl ether | FBZ | DCA12D4 | 0.93 | 0.72 | 0.78 | 0.79 | 0.80 | 0.79 | 0.81 |
| 1,1-Dichloroethane | FBZ | DCA12D4 | 0.53 | 0.57 | 0.54 | 0.53 | 0.53 | 0.51 | 0.51 |
| cis-1,2-Dichloroethene | FBZ | DCA12D4 | 0.29 | 0.30 | 0.29 | 0.30 | 0.29 | 0.29 | 0.30 |
| Chloroform | FBZ | DCA12D4 | 0.38 | 0.39 | 0.37 | 0.36 | 0.36 | 0.35 | 0.35 |
| 1,2-DCA-d4 | FBZ | DCA12D4 | 0.39 | 0.39 | 0.40 | 0.39 | 0.39 | 0.37 | 0.37 |
| 1,2-Dichloroethane | FBZ | DCA12D4 | 0.49 | 0.51 | 0.46 | 0.47 | 0.46 | 0.45 | 0.45 |
| 1,1,1-Trichloroethane | FBZ | DCA12D4 | 0.54 | 0.53 | 0.51 | 0.51 | 0.49 | 0.49 | 0.48 |
| Carbon Tetrachloride | FBZ | DCA12D4 | 0.46 | 0.42 | 0.42 | 0.44 | 0.43 | 0.43 | 0.43 |
| Benzene | FBZ | DCA12D4 | 0.30 | 0.29 | 0.27 | 0.27 | 0.25 | 0.26 | 0.26 |
| Trichloroethene | FBZ | DCA12D4 | 0.31 | 0.34 | 0.29 | 0.30 | 0.30 | 0.29 | 0.29 |
| 1,4-Dioxane | FBZ | DCA12D4 | 0.17 | 0.18 | 0.19 | 0.19 | 0.20 | 0.20 | 0.21 |
| 1,1,2-Trichloroethane | FBZ | DCA12D4 | 0.17 | 0.19 | 0.18 | 0.18 | 0.17 | 0.17 | 0.18 |
| Toluene-d8 | CLBZD5 | BZMED8 | 1.29 | 1.30 | 1.26 | 1.26 | 1.33 | 1.35 | 1.38 |
| Toluene | CLBZD5 | BZMED8 | 1.03 | 0.97 | 0.87 | 0.88 | 0.91 | 0.93 | 0.97 |
| 1,2-Dibromoethane (EDB) | CLBZD5 | BZMED8 | 0.42 | 0.41 | 0.43 | 0.42 | 0.43 | 0.43 | 0.44 |
| Tetrachloroethene | CLBZD5 | BZMED8 | 0.38 | 0.43 | 0.37 | 0.36 | 0.37 | 0.36 | 0.35 |
| 1,1,1,2-Tetrachloroethane | CLBZD5 | BZMED8 | 0.42 | 0.43 | 0.40 | 0.41 | 0.40 | 0.41 | 0.41 |
| Chlorobenzene | CLBZD5 | BZMED8 | 1.02 | 1.06 | 1.02 | 1.02 | 1.02 | 1.04 | 1.06 |
| Ethylbenzene | CLBZD5 | BZMED8 | 0.45 | 0.47 | 0.45 | 0.47 | 0.47 | 0.51 | 0.56 |
| p & m-Xylene | CLBZD5 | BZMED8 | 0.53 | 0.53 | 0.53 | 0.56 | 0.59 | 0.64 | 0.70 |
| o-Xylene | CLBZD5 | BZMED8 | 0.52 | 0.52 | 0.50 | 0.53 | 0.56 | 0.61 | 0.66 |
| 1,2,3-Trichloropropane | CLBZD5 | BZMED8 | 0.74 | 0.73 | 0.70 | 0.71 | 0.69 | 0.71 | 0.71 |
| Isopropylbenzene | CLBZD5 | BZMED8 | 1.34 | 1.37 | 1.40 | 1.45 | 1.53 | 1.68 | 1.82 |
| Bromofluorobenzene | CLBZD5 | BR4FBZ | 0.49 | 0.35 | 0.31 | 0.33 | 0.34 | 0.35 | 0.38 |
| 1,3,5-Trimethylbenzene | DCBZ14D4 | BR4FBZ | 1.02 | 1.15 | 1.15 | 1.14 | 1.21 | 1.27 | 1.32 |
| 1,2,4-Trimethylbenzene | DCBZ14D4 | BR4FBZ | 0.95 | 0.96 | 1.06 | 1.09 | 1.12 | 1.21 | 1.26 |
| 1,3-Dichlorobenzene | DCBZ14D4 | BR4FBZ | 1.47 | 1.56 | 1.63 | 1.62 | 1.59 | 1.56 | 1.55 |
| 1,4-Dichlorobenzene | DCBZ14D4 | BR4FBZ | 1.72 | 1.74 | 1.62 | 1.63 | 1.58 | 1.59 | 1.63 |
| 1,2-Dichlorobenzene | DCBZ14D4 | BR4FBZ | 1.53 | 1.67 | 1.68 | 1.58 | 1.53 | 1.52 | 1.51 |
| 1,2,4-Trichlorobenzene | DCBZ14D4 | BR4FBZ | 0.94 | 1.02 | 1.09 | 1.13 | 1.09 | 1.15 | 1.13 |
| Naphthalene | DCBZ14D4 | BR4FBZ | 2.73 | 2.66 | 2.74 | 3.05 | 2.97 | 3.58 | 3.99 |
| 1,2,3-Trichlorobenzene | DCBZ14D4 | BR4FBZ | 0.92 | 1.06 | 1.17 | 1.16 | 1.14 | 1.19 | 1.17 |
| 2-Methylnaphthalene | DCBZ14D4 | BR4FBZ | 1389 | 3292 | 7218 | 22146 | 41588 | 131734 | 351185 |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## Table 6 - Form VI A VOA
## Volatile Organics Initial Calibration Data

**Calibration:** BH30002 **Calibration Start:** 07/31/2023 22:32

**Instrument:** S System **Calibration End:** 08/01/2023 02:55

+ values are outside method/contract required QC limits

| **Lab File ID:** | S23073110.D | S23073111.D | S23073112.D | S23073113.D | S23073114.D | | Acceptance Limits | |
|---|---|---|---|---|---|---|---|---|
| | ***Response Factors/Responses*** | | | | | | ≤ 20 | ≥ 0.99 |
| | **500 ng** | **1000 ng** | **2000 ng** | **5000 ng** | **10000 ng** | **AVG RF** | **RSD** | **$R^2$** |
| Vinyl Chloride | 0.17 | 0.24 | ---- | ---- | ---- | 0.236 | 14.66 | |
| 1,1-Dichloroethene | 0.17 | 0.16 | 0.15 | 0.16 | 0.16 | 0.149 | 6.64 | |
| Methylene Chloride | ---- | ---- | ---- | ---- | ---- | 0.282 | 4.99 | |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 0.29 | 0.27 | ---- | ---- | ---- | 0.273 | 3.75 | |
| trans-1,2-Dichloroethene | 0.30 | 0.27 | 0.28 | 0.30 | 0.25 | 0.272 | 5.85 | |
| Methyl-t-butyl ether | 0.94 | 0.85 | ---- | ---- | ---- | 0.824 | 8.71 | |
| 1,1-Dichloroethane | 0.55 | 0.50 | ---- | ---- | ---- | 0.530 | 4.18 | |
| cis-1,2-Dichloroethene | 0.33 | 0.30 | 0.31 | 0.32 | 0.27 | 0.299 | 5.17 | |
| Chloroform | 0.38 | 0.34 | 0.36 | 0.35 | 0.30 | 0.357 | 6.38 | |
| 1,2-DCA-d4 | 0.42 | 0.37 | 0.39 | 0.37 | 0.30 | 0.379 | 8.06 | |
| 1,2-Dichloroethane | 0.49 | 0.45 | ---- | ---- | ---- | 0.471 | 4.91 | |
| 1,1,1-Trichloroethane | 0.53 | 0.48 | ---- | ---- | ---- | 0.507 | 4.56 | |
| Carbon Tetrachloride | 0.46 | 0.42 | ---- | ---- | ---- | 0.435 | 3.59 | |
| Benzene | 0.29 | 0.27 | 0.29 | 0.25 | 0.19 | 0.265 | 11.25 | |
| Trichloroethene | 0.32 | 0.30 | 0.31 | 0.32 | 0.27 | 0.302 | 6.16 | |
| 1,4-Dioxane | 0.25 | 0.23 | ---- | ---- | ---- | 0.204 | 11.91 | |
| 1,1,2-Trichloroethane | 0.20 | 0.18 | ---- | ---- | ---- | 0.179 | 4.48 | |
| Toluene-d8 | 1.57 | 1.44 | 1.46 | 1.27 | 1.00 | 1.326 | 10.50 | |
| Toluene | 1.10 | 0.98 | 0.92 | 0.87 | 0.70 | 0.927 | 10.78 | |
| 1,2-Dibromoethane (EDB) | 0.47 | 0.42 | ---- | ---- | ---- | 0.431 | 3.95 | |
| Tetrachloroethene | 0.35 | 0.31 | 0.34 | 0.34 | 0.30 | 0.354 | 9.40 | |
| 1,1,1,2-Tetrachloroethane | 0.45 | 0.41 | ---- | ---- | ---- | 0.414 | 3.76 | |
| Chlorobenzene | 1.20 | 1.08 | ---- | ---- | ---- | 1.057 | 5.36 | |
| Ethylbenzene | 0.65 | 0.59 | 0.57 | 0.53 | 0.43 | 0.512 | 13.49 | |
| p & m-Xylene | 0.80 | 0.72 | 0.68 | 0.65 | 0.53 | 0.622 | 14.76 | |
| o-Xylene | 0.77 | 0.67 | 0.67 | 0.61 | 0.49 | 0.593 | 14.39 | |
| 1,2,3-Trichloropropane | 0.76 | 0.66 | ---- | ---- | ---- | 0.711 | 4.14 | |
| Isopropylbenzene | 2.15 | 1.88 | ---- | ---- | ---- | 1.624 | 17.19 | |
| Bromofluorobenzene | 0.45 | 0.42 | 0.44 | 0.44 | 0.36 | 0.389 | 14.74 | |
| 1,3,5-Trimethylbenzene | 1.57 | 1.32 | ---- | ---- | ---- | 1.237 | 12.71 | |
| 1,2,4-Trimethylbenzene | 1.43 | 1.21 | ---- | ---- | ---- | 1.144 | 13.45 | |
| 1,3-Dichlorobenzene | 1.78 | 1.55 | ---- | ---- | ---- | 1.591 | 5.35 | |
| 1,4-Dichlorobenzene | 1.82 | 1.60 | ---- | ---- | ---- | 1.658 | 4.91 | |
| 1,2-Dichlorobenzene | 1.71 | 1.47 | ---- | ---- | ---- | 1.577 | 5.61 | |
| 1,2,4-Trichlorobenzene | 1.30 | 1.21 | ---- | ---- | ---- | 1.118 | 9.26 | |
| Naphthalene | 4.20 | 3.47 | ---- | ---- | ---- | 3.265 | 17.53 | |
| 1,2,3-Trichlorobenzene | 1.37 | 1.04 | ---- | ---- | ---- | 1.136 | 11.02 | |
| 2-Methylnaphthalene | 955379 | 1875857 | ----- | ----- | ----- | | | 0.991515 |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## Table 7 - Form VII A VOA
## Volatile Organics Continuing Calibration Data: Calibration Mid-Point

**Sample No.:** **B23H003-CAL5** **Calibration:** BH30002 **Calibration Start Date:** 07/31/2023 22:32

**Sequence:** B23H003 **Instrument:** S System **Lab File ID:** S23073107.D **Calibration End Date:** 08/01/2023 01:44

**Method:** EPA 8260C + values are outside method/contract required QC limits

| Compound | Mean RRF | RRF | Minimum RF | %D | %D Limit |
|---|---|---|---|---|---|
| Vinyl Chloride | 0.24 | 0.26 | 0.1 | 10.3 | 20 |
| 1,1-Dichloroethene | 0.15 | 0.14 | 0.1 | -5.1 | 20 |
| Methylene Chloride | 0.28 | 0.28 | 0.1 | 1.0 | 20 |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 0.27 | 0.28 | 0.1 | 3.0 | 20 |
| trans-1,2-Dichloroethene | 0.27 | 0.27 | 0.1 | -2.2 | 20 |
| Methyl-t-butyl ether | 0.82 | 0.80 | 0.1 | -2.8 | 20 |
| 1,1-Dichloroethane | 0.53 | 0.53 | 0.2 | -0.4 | 20 |
| cis-1,2-Dichloroethene | 0.30 | 0.29 | 0.1 | -2.2 | 20 |
| Chloroform | 0.36 | 0.36 | 0.2 | 1.1 | 20 |
| 1,2-DCA-d4 | 0.38 | 0.39 | 0.1 | 2.4 | 20 |
| 1,2-Dichloroethane | 0.47 | 0.46 | 0.1 | -2.6 | 20 |
| 1,1,1-Trichloroethane | 0.51 | 0.49 | 0.1 | -2.7 | 20 |
| Carbon Tetrachloride | 0.44 | 0.43 | 0.1 | -0.9 | 20 |
| Benzene | 0.27 | 0.25 | 0.5 | -6.0 | 20 |
| Trichloroethene | 0.30 | 0.30 | 0.2 | -1.9 | 20 |
| 1,4-Dioxane | 0.20 | 0.20 | 0.1 | -3.0 | 20 |
| 1,1,2-Trichloroethane | 0.18 | 0.17 | 0.1 | -4.3 | 20 |
| Toluene-d8 | 1.33 | 1.33 | 0.4 | 0.4 | 20 |
| Toluene | 0.93 | 0.91 | 0.4 | -2.0 | 20 |
| 1,2-Dibromoethane (EDB) | 0.43 | 0.43 | 0.1 | -0.1 | 20 |
| Tetrachloroethene | 0.35 | 0.37 | 0.2 | 3.4 | 20 |
| 1,1,1,2-Tetrachloroethane | 0.41 | 0.40 | 0.1 | -3.9 | 20 |
| Chlorobenzene | 1.06 | 1.02 | 0.5 | -3.2 | 20 |
| Ethylbenzene | 0.51 | 0.47 | 0.1 | -7.3 | 20 |
| p & m-Xylene | 0.62 | 0.59 | 0.1 | -4.6 | 20 |
| o-Xylene | 0.59 | 0.56 | 0.3 | -5.0 | 20 |
| 1,2,3-Trichloropropane | 0.71 | 0.69 | 0.1 | -3.3 | 20 |
| Isopropylbenzene | 1.62 | 1.53 | 0.1 | -5.9 | 20 |
| Bromofluorobenzene | 0.39 | 0.34 | 0.1 | -12.8 | 20 |
| 1,3,5-Trimethylbenzene | 1.24 | 1.21 | 0.1 | -2.4 | 20 |
| 1,2,4-Trimethylbenzene | 1.14 | 1.12 | 0.1 | -2.3 | 20 |
| 1,3-Dichlorobenzene | 1.59 | 1.59 | 0.6 | 0.2 | 20 |
| 1,4-Dichlorobenzene | 1.66 | 1.58 | 0.5 | -4.9 | 20 |
| 1,2-Dichlorobenzene | 1.58 | 1.53 | 0.4 | -3.2 | 20 |
| 1,2,4-Trichlorobenzene | 1.12 | 1.09 | 0.2 | -2.3 | 20 |
| Naphthalene | 3.27 | 2.97 | 0.1 | -9.1 | 20 |
| 1,2,3-Trichlorobenzene | 1.14 | 1.14 | 0.1 | 0.8 | 20 |
| 2-Methylnaphthalene | 1.80 | 1.45 | 0.1 | -19.2 | 20 |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## Table 7 - Form VII A VOA

## Volatile Organics Continuing Calibration Data

**Sample No.: B23H003-ICV1** **Sample Name:** LCSD/Second Source Verification/CALV

**Analysis:** EPA 8260C **Calibration:** BH30002 **Calibration Start Date:** 07/31/2023 22:32

**Sequence:** B23H003 **Instrument:** S System **Lab File ID:** S23073132.D **Calibration End Date:** 08/01/2023 02:55

+ values are outside method/contract required QC limits

| Compound | Mean RRF | RRF | Min_RF | %D | %D Limit |
|---|---|---|---|---|---|
| Vinyl Chloride | 0.24 | 0.27 | 0.1 | 14.5 | 30 |
| 1,1-Dichloroethene | 0.15 | 0.14 | 0.1 | -5.7 | 30 |
| Methylene Chloride | 0.28 | 0.28 | 0.1 | 0.1 | 30 |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 0.27 | 0.29 | 0.1 | 4.6 | 30 |
| trans-1,2-Dichloroethene | 0.27 | 0.27 | 0.1 | 0.8 | 30 |
| Methyl-t-butyl ether | 0.82 | 0.78 | 0.1 | -5.4 | 30 |
| 1,1-Dichloroethane | 0.53 | 0.53 | 0.2 | 0.3 | 30 |
| cis-1,2-Dichloroethene | 0.30 | 0.29 | 0.1 | -2.6 | 30 |
| Chloroform | 0.36 | 0.37 | 0.2 | 4.8 | 30 |
| 1,2-DCA-d4 | 0.38 | 0.40 | 0.1 | 6.3 | 30 |
| 1,2-Dichloroethane | 0.47 | 0.48 | 0.1 | 0.9 | 30 |
| 1,1,1-Trichloroethane | 0.51 | 0.52 | 0.1 | 2.3 | 30 |
| Carbon Tetrachloride | 0.44 | 0.46 | 0.1 | 6.5 | 30 |
| Benzene | 0.27 | 0.26 | 0.5 | -2.0 | 30 |
| Trichloroethene | 0.30 | 0.31 | 0.2 | 1.2 | 30 |
| 1,4-Dioxane | 0.20 | 0.19 | 0.1 | -4.9 | 30 |
| 1,1,2-Trichloroethane | 0.18 | 0.18 | 0.1 | 0.2 | 30 |
| Toluene-d8 | 1.33 | 1.33 | 0.4 | 0.1 | 30 |
| Toluene | 0.93 | 0.89 | 0.4 | -3.8 | 30 |
| 1,2-Dibromoethane (EDB) | 0.43 | 0.44 | 0.1 | 1.4 | 30 |
| Tetrachloroethene | 0.35 | 0.37 | 0.2 | 3.0 | 30 |
| 1,1,1,2-Tetrachloroethane | 0.41 | 0.42 | 0.1 | 2.6 | 30 |
| Chlorobenzene | 1.06 | 1.03 | 0.5 | -2.8 | 30 |
| Ethylbenzene | 0.51 | 0.47 | 0.1 | -7.8 | 30 |
| p & m-Xylene | 0.62 | 0.58 | 0.1 | -6.6 | 30 |
| o-Xylene | 0.59 | 0.56 | 0.3 | -6.4 | 30 |
| 1,2,3-Trichloropropane | 0.71 | 0.72 | 0.1 | 0.6 | 30 |
| Isopropylbenzene | 1.62 | 1.50 | 0.1 | -7.7 | 30 |
| Bromofluorobenzene | 0.39 | 0.35 | 0.1 | -10.2 | 30 |
| 1,3,5-Trimethylbenzene | 1.24 | 1.18 | 0.1 | -4.5 | 30 |
| 1,2,4-Trimethylbenzene | 1.14 | 1.11 | 0.1 | -3.4 | 30 |
| 1,3-Dichlorobenzene | 1.59 | 1.59 | 0.6 | -0.1 | 30 |
| 1,4-Dichlorobenzene | 1.66 | 1.57 | 0.5 | -5.1 | 30 |
| 1,2-Dichlorobenzene | 1.58 | 1.58 | 0.4 | 0.3 | 30 |
| 1,2,4-Trichlorobenzene | 1.12 | 1.06 | 0.2 | -5.5 | 30 |
| Naphthalene | 3.27 | 3.02 | 0.1 | -7.5 | 30 |
| 1,2,3-Trichlorobenzene | 1.14 | 1.14 | 0.1 | 0.4 | 30 |
| 2-Methylnaphthalene | 1.80 | 1.61 | 0.1 | -10.3 | 30 |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## Table 7 - Form VII A VOA

## Volatile Organics Continuing Calibration Data

**Sample No.:** 23K0014-BS1 **Sample Name:** LCS, Calibration Source Verification

**Analysis:** EPA 8260C **Calibration:** BH30002 **Calibration Start Date:** 07/31/2023 22:32

**Sequence:** B23K017 **Instrument:** S System **Lab File ID:** S23110602.D **Calibration End Date:** 08/01/2023 02:55

+ values are outside method/contract required QC limits

| Compound | Mean RRF | RRF | Min_RF | %D | %D Limit |
|---|---|---|---|---|---|
| Vinyl Chloride | 0.24 | 0.26 | 0.1 | 8.6 | 20 |
| 1,1-Dichloroethene | 0.15 | 0.16 | 0.1 | 5.9 | 20 |
| Methylene Chloride | 0.28 | 0.28 | 0.1 | 0.8 | 20 |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 0.27 | 0.27 | 0.1 | -0.3 | 20 |
| trans-1,2-Dichloroethene | 0.27 | 0.30 | 0.1 | 9.7 | 20 |
| Methyl-t-butyl ether | 0.82 | 0.75 | 0.1 | -8.7 | 20 |
| 1,1-Dichloroethane | 0.53 | 0.56 | 0.2 | 5.9 | 20 |
| cis-1,2-Dichloroethene | 0.30 | 0.31 | 0.1 | 3.6 | 20 |
| Chloroform | 0.36 | 0.39 | 0.2 | 9.1 | 20 |
| 1,2-DCA-d4 | 0.38 | 0.47 | 0.1 | 23.6 + | 20 |
| 1,2-Dichloroethane | 0.47 | 0.56 | 0.1 | 18.5 | 20 |
| 1,1,1-Trichloroethane | 0.51 | 0.55 | 0.1 | 7.6 | 20 |
| Carbon Tetrachloride | 0.44 | 0.44 | 0.1 | 0.2 | 20 |
| Benzene | 0.27 | 0.26 | 0.5 | -1.3 | 20 |
| Trichloroethene | 0.30 | 0.29 | 0.2 | -5.4 | 20 |
| 1,4-Dioxane | 0.20 | 0.19 | 0.1 | -7.8 | 20 |
| 1,1,2-Trichloroethane | 0.18 | 0.18 | 0.1 | 2.5 | 20 |
| Toluene-d8 | 1.33 | 1.29 | 0.4 | -2.6 | 20 |
| Toluene | 0.93 | 0.85 | 0.4 | -8.1 | 20 |
| 1,2-Dibromoethane (EDB) | 0.43 | 0.44 | 0.1 | 3.0 | 20 |
| Tetrachloroethene | 0.35 | 0.35 | 0.2 | -2.4 | 20 |
| 1,1,1,2-Tetrachloroethane | 0.41 | 0.46 | 0.1 | 11.0 | 20 |
| Chlorobenzene | 1.06 | 1.02 | 0.5 | -3.7 | 20 |
| Ethylbenzene | 0.51 | 0.45 | 0.1 | -11.7 | 20 |
| p & m-Xylene | 0.62 | 0.56 | 0.1 | -10.3 | 20 |
| o-Xylene | 0.59 | 0.53 | 0.3 | -10.3 | 20 |
| 1,2,3-Trichloropropane | 0.71 | 0.74 | 0.1 | 4.0 | 20 |
| Isopropylbenzene | 1.62 | 1.52 | 0.1 | -6.3 | 20 |
| Bromofluorobenzene | 0.39 | 0.36 | 0.1 | -8.0 | 20 |
| 1,3,5-Trimethylbenzene | 1.24 | 1.33 | 0.1 | 7.2 | 20 |
| 1,2,4-Trimethylbenzene | 1.14 | 1.28 | 0.1 | 12.3 | 20 |
| 1,3-Dichlorobenzene | 1.59 | 1.87 | 0.6 | 17.7 | 20 |
| 1,4-Dichlorobenzene | 1.66 | 1.86 | 0.5 | 12.4 | 20 |
| 1,2-Dichlorobenzene | 1.58 | 1.82 | 0.4 | 15.6 | 20 |
| 1,2,4-Trichlorobenzene | 1.12 | 1.16 | 0.2 | 3.8 | 20 |
| Naphthalene | 3.27 | 3.05 | 0.1 | -6.7 | 20 |
| 1,2,3-Trichlorobenzene | 1.14 | 1.22 | 0.1 | 7.6 | 20 |
| 2-Methylnaphthalene | 1.80 | 1.46 | 0.1 | -18.5 | 20 |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## Table 7 - Form VII A VOA

## Volatile Organics Continuing Calibration Data

**Sample No.: B23K017-ICV1** **Sample Name:** LCSD/Second Source Verification/CALV

**Analysis:** EPA 8260C **Calibration:** BH30002 **Calibration Start Date:** 07/31/2023 22:32

**Sequence:** B23K017 **Instrument:** S System **Lab File ID:** S23110604.D **Calibration End Date:** 08/01/2023 02:55

+ values are outside method/contract required QC limits

| Compound | Mean RRF | RRF | Min_RF | %D | %D Limit |
|---|---|---|---|---|---|
| Vinyl Chloride | 0.24 | 0.28 | 0.1 | 18.1 | 30 |
| 1,1-Dichloroethene | 0.15 | 0.17 | 0.1 | 11.3 | 30 |
| Methylene Chloride | 0.28 | 0.30 | 0.1 | 5.0 | 30 |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 0.27 | 0.29 | 0.1 | 5.6 | 30 |
| trans-1,2-Dichloroethene | 0.27 | 0.31 | 0.1 | 13.4 | 30 |
| Methyl-t-butyl ether | 0.82 | 0.73 | 0.1 | -11.3 | 30 |
| 1,1-Dichloroethane | 0.53 | 0.56 | 0.2 | 6.0 | 30 |
| cis-1,2-Dichloroethene | 0.30 | 0.31 | 0.1 | 4.5 | 30 |
| Chloroform | 0.36 | 0.42 | 0.2 | 17.0 | 30 |
| 1,2-DCA-d4 | 0.38 | 0.46 | 0.1 | 21.1 | 30 |
| 1,2-Dichloroethane | 0.47 | 0.56 | 0.1 | 19.4 | 30 |
| 1,1,1-Trichloroethane | 0.51 | 0.58 | 0.1 | 13.7 | 30 |
| Carbon Tetrachloride | 0.44 | 0.46 | 0.1 | 4.7 | 30 |
| Benzene | 0.27 | 0.26 | 0.5 | -0.2 | 30 |
| Trichloroethene | 0.30 | 0.30 | 0.2 | -1.7 | 30 |
| 1,4-Dioxane | 0.20 | 0.18 | 0.1 | -10.3 | 30 |
| 1,1,2-Trichloroethane | 0.18 | 0.19 | 0.1 | 5.2 | 30 |
| Toluene-d8 | 1.33 | 1.27 | 0.4 | -4.5 | 30 |
| Toluene | 0.93 | 0.86 | 0.4 | -6.8 | 30 |
| 1,2-Dibromoethane (EDB) | 0.43 | 0.45 | 0.1 | 5.4 | 30 |
| Tetrachloroethene | 0.35 | 0.36 | 0.2 | 0.3 | 30 |
| 1,1,1,2-Tetrachloroethane | 0.41 | 0.48 | 0.1 | 16.5 | 30 |
| Chlorobenzene | 1.06 | 1.05 | 0.5 | -0.5 | 30 |
| Ethylbenzene | 0.51 | 0.46 | 0.1 | -10.4 | 30 |
| p & m-Xylene | 0.62 | 0.56 | 0.1 | -9.6 | 30 |
| o-Xylene | 0.59 | 0.54 | 0.3 | -8.6 | 30 |
| 1,2,3-Trichloropropane | 0.71 | 0.75 | 0.1 | 5.2 | 30 |
| Isopropylbenzene | 1.62 | 1.52 | 0.1 | -6.5 | 30 |
| Bromofluorobenzene | 0.39 | 0.35 | 0.1 | -10.2 | 30 |
| 1,3,5-Trimethylbenzene | 1.24 | 1.30 | 0.1 | 4.7 | 30 |
| 1,2,4-Trimethylbenzene | 1.14 | 1.22 | 0.1 | 7.0 | 30 |
| 1,3-Dichlorobenzene | 1.59 | 1.87 | 0.6 | 17.5 | 30 |
| 1,4-Dichlorobenzene | 1.66 | 1.87 | 0.5 | 12.5 | 30 |
| 1,2-Dichlorobenzene | 1.58 | 1.78 | 0.4 | 12.7 | 30 |
| 1,2,4-Trichlorobenzene | 1.12 | 1.15 | 0.2 | 2.7 | 30 |
| Naphthalene | 3.27 | 2.97 | 0.1 | -9.1 | 30 |
| 1,2,3-Trichlorobenzene | 1.14 | 1.21 | 0.1 | 6.4 | 30 |
| 2-Methylnaphthalene | 1.80 | 1.39 | 0.1 | -22.8 | 30 |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## Table 8 - Form VIII A VOA

## Volatile Internal Standard Area and Retention Time Summary

**Sequence:** B23H003 **Instrument:** S System **Calibration:** BH30002

**Matrix:** Air **Calibration Date:** 08/01/2023

+ values are outside method/contract required QC limits

| *Initial Calibration Reference Values* | | | | | | |
|---|---|---|---|---|---|---|
| **Reference Value (RV) File ID:** S23073107.D | **Fluorobenzene** | | **Chlorobenzene-d5** | | **1,4-Dichlorobenzene-d4** | |
| | **Response** | **RT** | **Response** | **RT** | **Response** | **RT** |
| **Reference Value** | 178154 | 3.39 | 117281 | 5.70 | 57265 | 7.40 |
| **Upper Limit** | 356308 | 3.51 | 234562 | 5.82 | 114530 | 7.52 |
| **Lower Limit** | 89077 | 3.27 | 58641 | 5.58 | 28633 | 7.28 |

| | | | **Fluorobenzene** | | **Chlorobenzene-d5** | | **1,4-Dichlorobenzene-d4** | |
|---|---|---|---|---|---|---|---|---|
| | **RV** | **FileID** | **Response** | **RT** | **Response** | **RT** | **Response** | **RT** |
| B23H003-CAL1 | | S23073103.D | 179255 | 3.39 | 122522 | 5.70 | 49544 | 7.40 |
| B23H003-CAL2 | | S23073104.D | 177311 | 3.39 | 120494 | 5.70 | 51700 | 7.40 |
| B23H003-CAL3 | | S23073105.D | 177647 | 3.39 | 120779 | 5.70 | 50731 | 7.40 |
| B23H003-CAL4 | | S23073106.D | 184282 | 3.39 | 126998 | 5.70 | 59712 | 7.40 |
| B23H003-CAL5 | RV | S23073107.D | 178154 | 3.39 | 117281 | 5.70 | 57265 | 7.40 |
| B23H003-CAL6 | | S23073108.D | 188042 | 3.39 | 126313 | 5.70 | 66696 | 7.40 |
| B23H003-CAL7 | | S23073109.D | 198579 | 3.39 | 134578 | 5.70 | 75032 | 7.40 |
| B23H003-CAL8 | | S23073110.D | 174119 | 3.39 | 124915 | 5.70 | 68786 | 7.40 |
| B23H003-CAL9 | | S23073111.D | 200501 | 3.39 | 145090 | 5.70 | 80538 | 7.40 |
| B23H003-CALA | | S23073112.D | 169938 | 3.39 | 125404 | 5.70 | 59122 | 7.40 |
| B23H003-CALB | | S23073113.D | 182375 | 3.39 | 133152 | 5.70 | 67315 | 7.40 |
| B23H003-CALC | | S23073114.D | 184678 | 3.39 | 124796 | 5.70 | 64052 | 7.40 |
| B23H003-ICB1 | | S23073120.D | 183715 | 3.39 | 125593 | 5.70 | 50761 | 7.40 |
| B23H003-ICV1 | | S23073132.D | 171442 | 3.39 | 114714 | 5.70 | 58258 | 7.40 |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## Table 8 - Form VIII A VOA

## Volatile Internal Standard Area and Retention Time Summary

**Sequence:** B23K017 **Instrument:** S System **Calibration:** BH30002

**Matrix:** Air **Calibration Date:** 08/01/2023

+ values are outside method/contract required QC limits

| *Initial Calibration Reference Values* | | | | | | |
|---|---|---|---|---|---|---|
| **Reference Value (RV) File ID:** S23073107.D | **Fluorobenzene** | | **Chlorobenzene-d5** | | **1,4-Dichlorobenzene-d4** | |
| | **Response** | **RT** | **Response** | **RT** | **Response** | **RT** |
| **Reference Value** | 178154 | 3.39 | 117281 | 5.70 | 57265 | 7.40 |
| **Upper Limit** | 356308 | 3.51 | 234562 | 5.82 | 114530 | 7.52 |
| **Lower Limit** | 89077 | 3.27 | 58641 | 5.58 | 28633 | 7.28 |

| | | **Fluorobenzene** | | **Chlorobenzene-d5** | | **1,4-Dichlorobenzene-d4** | |
|---|---|---|---|---|---|---|---|
| **RV** | **FileID** | **Response** | **RT** | **Response** | **RT** | **Response** | **RT** |
| 23K0014-BS1 | S23110602.D | 162644 | 3.40 | 111243 | 5.70 | 47278 | 7.40 |
| 23K0014-BLK1 | S23110603.D | 139762 | 3.40 | 98898 | 5.70 | 37414 | 7.40 |
| B23K017-ICV1 | S23110604.D | 150837 | 3.40 | 104648 | 5.70 | 46327 | 7.40 |
| 0007281-01 | S23110640.D | 109116 | 3.40 | 85647 | 5.70 | 34473 | 7.40 |
| 0007281-02 | S23110641.D | 180597 | 3.40 | 150533 | 5.70 | 68500 | 7.40 |
| 0007281-03 | S23110642.D | 194389 | 3.40 | 164049 | 5.70 | 77431 | 7.40 |
| 0007281-04 | S23110643.D | 195240 | 3.40 | 158030 | 5.70 | 83598 | 7.40 |
| 0007281-05 | S23110644.D | 198915 | 3.40 | 162220 | 5.70 | 85915 | 7.40 |
| 0007281-06 | S23110645.D | 174322 | 3.40 | 143538 | 5.70 | 62877 | 7.40 |
| 0007281-07 | S23110646.D | 187126 | 3.40 | 166923 | 5.70 | 86962 | 7.40 |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# *Additional QC Information*

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# Sample Result Calculation Summary (Concentration)

## EPA 8260C

| Analyte | t<br>Sampling Time<br>minutes | DF<br>Dilution Factor | U<br>Uptake Rate | M<br>Initial Result<br>ng | C<br>Calculated Result<br>µg/m³ | File ID |
|---|---|---|---|---|---|---|
| **Lab ID:** 0007281-01 **Sample Name:** Trip 1 | | | | | | |
| Vinyl Chloride | 19,990 | 1.00 | 0.810 | U | U | S23110640.D |
| 1,1-Dichloroethene | 19,990 | 1.00 | 0.330 | U | U | S23110640.D |
| Methylene Chloride | 19,990 | 1.00 | 0.350 g | U | U | S23110640.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 19,990 | 1.00 | 0.890 g | U | U | S23110640.D |
| trans-1,2-Dichloroethene | 19,990 | 1.00 | 0.440 | U | U | S23110640.D |
| Methyl-t-butyl ether | 19,990 | 1.00 | 0.500 g | U | U | S23110640.D |
| 1,1-Dichloroethane | 19,990 | 1.00 | 0.850 | U | U | S23110640.D |
| cis-1,2-Dichloroethene | 19,990 | 1.00 | 0.530 | U | U | S23110640.D |
| Chloroform | 19,990 | 1.00 | 0.350 g | U | U | S23110640.D |
| 1,2-Dichloroethane | 19,990 | 1.00 | 0.560 | U | U | S23110640.D |
| 1,1,1-Trichloroethane | 19,990 | 1.00 | 1.050 | U | U | S23110640.D |
| Carbon Tetrachloride | 19,990 | 1.00 | 0.430 g | U | U | S23110640.D |
| Benzene | 19,990 | 1.00 | 0.530 | U | U | S23110640.D |
| Trichloroethene | 19,990 | 1.00 | 0.330 | U | U | S23110640.D |
| 1,4-Dioxane | 19,990 | 1.00 | 0.410 g | U | U | S23110640.D |
| 1,1,2-Trichloroethane | 19,990 | 1.00 | 0.330 g | U | U | S23110640.D |
| Toluene | 19,990 | 1.00 | 0.400 | U | U | S23110640.D |
| 1,2-Dibromoethane (EDB) | 19,990 | 1.00 | 0.390 g | U | U | S23110640.D |
| Tetrachloroethene | 19,990 | 1.00 | 0.410 | U | U | S23110640.D |
| 1,1,1,2-Tetrachloroethane | 19,990 | 1.00 | 0.410 g | U | U | S23110640.D |
| Chlorobenzene | 19,990 | 1.00 | 0.850 g | U | U | S23110640.D |
| Ethylbenzene | 19,990 | 1.00 | 0.850 | U | U | S23110640.D |
| p & m-Xylene | 19,990 | 1.00 | 0.880 | U | U | S23110640.D |
| o-Xylene | 19,990 | 1.00 | 0.880 | U | U | S23110640.D |
| 1,2,3-Trichloropropane | 19,990 | 1.00 | 0.750 g | U | U | S23110640.D |
| Isopropylbenzene | 19,990 | 1.00 | 0.830 g | U | U | S23110640.D |
| 1,3,5-Trimethylbenzene | 19,990 | 1.00 | 0.830 g | U | U | S23110640.D |
| 1,2,4-Trimethylbenzene | 19,990 | 1.00 | 0.830 g | U | U | S23110640.D |
| 1,3-Dichlorobenzene | 19,990 | 1.00 | 0.750 g | U | U | S23110640.D |
| 1,4-Dichlorobenzene | 19,990 | 1.00 | 0.750 g | U | U | S23110640.D |
| 1,2-Dichlorobenzene | 19,990 | 1.00 | 0.750 g | U | U | S23110640.D |
| 1,2,4-Trichlorobenzene | 19,990 | 1.00 | 0.390 g | U | U | S23110640.D |
| Naphthalene | 19,990 | 1.00 | 0.800 g | U | U | S23110640.D |
| 1,2,3-Trichlorobenzene | 19,990 | 1.00 | 0.390 g | U | U | S23110640.D |
| 2-Methylnaphthalene | 19,990 | 1.00 | 0.760 g | U | U | S23110640.D |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# Sample Result Calculation Summary (Concentration)

## EPA 8260C

| Analyte | t<br>Sampling Time<br>minutes | DF<br>Dilution<br>Factor | U<br>Uptake<br>Rate | M<br>Initial Result<br>ng | C<br>Calculated Result<br>µg/m³ | File ID |
|---|---|---|---|---|---|---|
| **Lab ID:** 0007281-02 **Sample Name:** 200032-SG-1 | | | | | | |
| Vinyl Chloride | 19,985 | 1.00 | 0.810 | U | U | S23110641.D |
| 1,1-Dichloroethene | 19,985 | 1.00 | 0.330 | U | U | S23110641.D |
| Methylene Chloride | 19,985 | 1.00 | 0.350 g | U | U | S23110641.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 19,985 | 1.00 | 0.890 g | U | U | S23110641.D |
| trans-1,2-Dichloroethene | 19,985 | 1.00 | 0.440 | U | U | S23110641.D |
| Methyl-t-butyl ether | 19,985 | 1.00 | 0.500 g | U | U | S23110641.D |
| 1,1-Dichloroethane | 19,985 | 1.00 | 0.850 | U | U | S23110641.D |
| cis-1,2-Dichloroethene | 19,985 | 1.00 | 0.530 | U | U | S23110641.D |
| Chloroform | 19,985 | 1.00 | 0.350 g | U | U | S23110641.D |
| 1,2-Dichloroethane | 19,985 | 1.00 | 0.560 | U | U | S23110641.D |
| 1,1,1-Trichloroethane | 19,985 | 1.00 | 1.050 | U | U | S23110641.D |
| Carbon Tetrachloride | 19,985 | 1.00 | 0.430 g | U | U | S23110641.D |
| Benzene | 19,985 | 1.00 | 0.530 | U | U | S23110641.D |
| Trichloroethene | 19,985 | 1.00 | 0.330 | U | U | S23110641.D |
| 1,4-Dioxane | 19,985 | 1.00 | 0.410 g | U | U | S23110641.D |
| 1,1,2-Trichloroethane | 19,985 | 1.00 | 0.330 g | U | U | S23110641.D |
| Toluene | 19,985 | 1.00 | 0.400 | U | U | S23110641.D |
| 1,2-Dibromoethane (EDB) | 19,985 | 1.00 | 0.390 g | U | U | S23110641.D |
| Tetrachloroethene | 19,985 | 1.00 | 0.410 | U | U | S23110641.D |
| 1,1,1,2-Tetrachloroethane | 19,985 | 1.00 | 0.410 g | U | U | S23110641.D |
| Chlorobenzene | 19,985 | 1.00 | 0.850 g | U | U | S23110641.D |
| Ethylbenzene | 19,985 | 1.00 | 0.850 | U | U | S23110641.D |
| p & m-Xylene | 19,985 | 1.00 | 0.880 | U | U | S23110641.D |
| o-Xylene | 19,985 | 1.00 | 0.880 | U | U | S23110641.D |
| 1,2,3-Trichloropropane | 19,985 | 1.00 | 0.750 g | U | U | S23110641.D |
| Isopropylbenzene | 19,985 | 1.00 | 0.830 g | U | U | S23110641.D |
| 1,3,5-Trimethylbenzene | 19,985 | 1.00 | 0.830 g | U | U | S23110641.D |
| 1,2,4-Trimethylbenzene | 19,985 | 1.00 | 0.830 g | U | U | S23110641.D |
| 1,3-Dichlorobenzene | 19,985 | 1.00 | 0.750 g | U | U | S23110641.D |
| 1,4-Dichlorobenzene | 19,985 | 1.00 | 0.750 g | U | U | S23110641.D |
| 1,2-Dichlorobenzene | 19,985 | 1.00 | 0.750 g | U | U | S23110641.D |
| 1,2,4-Trichlorobenzene | 19,985 | 1.00 | 0.390 g | U | U | S23110641.D |
| Naphthalene | 19,985 | 1.00 | 0.800 g | U | U | S23110641.D |
| 1,2,3-Trichlorobenzene | 19,985 | 1.00 | 0.390 g | U | U | S23110641.D |
| 2-Methylnaphthalene | 19,985 | 1.00 | 0.760 g | U | U | S23110641.D |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# Sample Result Calculation Summary (Concentration)

## EPA 8260C

| Analyte | t<br>Sampling Time<br>minutes | DF<br>Dilution<br>Factor | U<br>Uptake<br>Rate | M<br>Initial Result<br>ng | C<br>Calculated Result<br>µg/m³ | File ID |
|---|---|---|---|---|---|---|
| **Lab ID:** 0007281-03 **Sample Name:** 200032-SG-1-DUP | | | | | | |
| Vinyl Chloride | 19,985 | 1.00 | 0.810 | U | U | S23110642.D |
| 1,1-Dichloroethene | 19,985 | 1.00 | 0.330 | U | U | S23110642.D |
| Methylene Chloride | 19,985 | 1.00 | 0.350 g | U | U | S23110642.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 19,985 | 1.00 | 0.890 g | U | U | S23110642.D |
| trans-1,2-Dichloroethene | 19,985 | 1.00 | 0.440 | U | U | S23110642.D |
| Methyl-t-butyl ether | 19,985 | 1.00 | 0.500 g | U | U | S23110642.D |
| 1,1-Dichloroethane | 19,985 | 1.00 | 0.850 | U | U | S23110642.D |
| cis-1,2-Dichloroethene | 19,985 | 1.00 | 0.530 | U | U | S23110642.D |
| Chloroform | 19,985 | 1.00 | 0.350 g | U | U | S23110642.D |
| 1,2-Dichloroethane | 19,985 | 1.00 | 0.560 | U | U | S23110642.D |
| 1,1,1-Trichloroethane | 19,985 | 1.00 | 1.050 | U | U | S23110642.D |
| Carbon Tetrachloride | 19,985 | 1.00 | 0.430 g | U | U | S23110642.D |
| Benzene | 19,985 | 1.00 | 0.530 | U | U | S23110642.D |
| Trichloroethene | 19,985 | 1.00 | 0.330 | U | U | S23110642.D |
| 1,4-Dioxane | 19,985 | 1.00 | 0.410 g | U | U | S23110642.D |
| 1,1,2-Trichloroethane | 19,985 | 1.00 | 0.330 g | U | U | S23110642.D |
| Toluene | 19,985 | 1.00 | 0.400 | U | U | S23110642.D |
| 1,2-Dibromoethane (EDB) | 19,985 | 1.00 | 0.390 g | U | U | S23110642.D |
| Tetrachloroethene | 19,985 | 1.00 | 0.410 | U | U | S23110642.D |
| 1,1,1,2-Tetrachloroethane | 19,985 | 1.00 | 0.410 g | U | U | S23110642.D |
| Chlorobenzene | 19,985 | 1.00 | 0.850 g | U | U | S23110642.D |
| Ethylbenzene | 19,985 | 1.00 | 0.850 | U | U | S23110642.D |
| p & m-Xylene | 19,985 | 1.00 | 0.880 | U | U | S23110642.D |
| o-Xylene | 19,985 | 1.00 | 0.880 | U | U | S23110642.D |
| 1,2,3-Trichloropropane | 19,985 | 1.00 | 0.750 g | U | U | S23110642.D |
| Isopropylbenzene | 19,985 | 1.00 | 0.830 g | U | U | S23110642.D |
| 1,3,5-Trimethylbenzene | 19,985 | 1.00 | 0.830 g | U | U | S23110642.D |
| 1,2,4-Trimethylbenzene | 19,985 | 1.00 | 0.830 g | U | U | S23110642.D |
| 1,3-Dichlorobenzene | 19,985 | 1.00 | 0.750 g | U | U | S23110642.D |
| 1,4-Dichlorobenzene | 19,985 | 1.00 | 0.750 g | U | U | S23110642.D |
| 1,2-Dichlorobenzene | 19,985 | 1.00 | 0.750 g | U | U | S23110642.D |
| 1,2,4-Trichlorobenzene | 19,985 | 1.00 | 0.390 g | U | U | S23110642.D |
| Naphthalene | 19,985 | 1.00 | 0.800 g | U | U | S23110642.D |
| 1,2,3-Trichlorobenzene | 19,985 | 1.00 | 0.390 g | U | U | S23110642.D |
| 2-Methylnaphthalene | 19,985 | 1.00 | 0.760 g | U | U | S23110642.D |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# Sample Result Calculation Summary (Concentration)

## EPA 8260C

| Analyte | t<br>Sampling Time<br>minutes | DF<br>Dilution<br>Factor | U<br>Uptake<br>Rate | M<br>Initial Result<br>ng | C<br>Calculated Result<br>µg/m³ | File ID |
|---|---|---|---|---|---|---|
| **Lab ID:** 0007281-04 **Sample Name:** 200032-SG-2 | | | | | | |
| Vinyl Chloride | 19,990 | 1.00 | 0.810 | U | U | S23110643.D |
| 1,1-Dichloroethene | 19,990 | 1.00 | 0.330 | U | U | S23110643.D |
| Methylene Chloride | 19,990 | 1.00 | 0.350 g | U | U | S23110643.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 19,990 | 1.00 | 0.890 g | U | U | S23110643.D |
| trans-1,2-Dichloroethene | 19,990 | 1.00 | 0.440 | U | U | S23110643.D |
| Methyl-t-butyl ether | 19,990 | 1.00 | 0.500 g | U | U | S23110643.D |
| 1,1-Dichloroethane | 19,990 | 1.00 | 0.850 | U | U | S23110643.D |
| cis-1,2-Dichloroethene | 19,990 | 1.00 | 0.530 | U | U | S23110643.D |
| Chloroform | 19,990 | 1.00 | 0.350 g | U | U | S23110643.D |
| 1,2-Dichloroethane | 19,990 | 1.00 | 0.560 | U | U | S23110643.D |
| 1,1,1-Trichloroethane | 19,990 | 1.00 | 1.050 | U | U | S23110643.D |
| Carbon Tetrachloride | 19,990 | 1.00 | 0.430 g | U | U | S23110643.D |
| Benzene | 19,990 | 1.00 | 0.530 | U | U | S23110643.D |
| Trichloroethene | 19,990 | 1.00 | 0.330 | U | U | S23110643.D |
| 1,4-Dioxane | 19,990 | 1.00 | 0.410 g | U | U | S23110643.D |
| 1,1,2-Trichloroethane | 19,990 | 1.00 | 0.330 g | U | U | S23110643.D |
| Toluene | 19,990 | 1.00 | 0.400 | U | U | S23110643.D |
| 1,2-Dibromoethane (EDB) | 19,990 | 1.00 | 0.390 g | U | U | S23110643.D |
| Tetrachloroethene | 19,990 | 1.00 | 0.410 | U | U | S23110643.D |
| 1,1,1,2-Tetrachloroethane | 19,990 | 1.00 | 0.410 g | U | U | S23110643.D |
| Chlorobenzene | 19,990 | 1.00 | 0.850 g | U | U | S23110643.D |
| Ethylbenzene | 19,990 | 1.00 | 0.850 | U | U | S23110643.D |
| p & m-Xylene | 19,990 | 1.00 | 0.880 | U | U | S23110643.D |
| o-Xylene | 19,990 | 1.00 | 0.880 | U | U | S23110643.D |
| 1,2,3-Trichloropropane | 19,990 | 1.00 | 0.750 g | U | U | S23110643.D |
| Isopropylbenzene | 19,990 | 1.00 | 0.830 g | U | U | S23110643.D |
| 1,3,5-Trimethylbenzene | 19,990 | 1.00 | 0.830 g | U | U | S23110643.D |
| 1,2,4-Trimethylbenzene | 19,990 | 1.00 | 0.830 g | U | U | S23110643.D |
| 1,3-Dichlorobenzene | 19,990 | 1.00 | 0.750 g | U | U | S23110643.D |
| 1,4-Dichlorobenzene | 19,990 | 1.00 | 0.750 g | U | U | S23110643.D |
| 1,2-Dichlorobenzene | 19,990 | 1.00 | 0.750 g | U | U | S23110643.D |
| 1,2,4-Trichlorobenzene | 19,990 | 1.00 | 0.390 g | U | U | S23110643.D |
| Naphthalene | 19,990 | 1.00 | 0.800 g | U | U | S23110643.D |
| 1,2,3-Trichlorobenzene | 19,990 | 1.00 | 0.390 g | U | U | S23110643.D |
| 2-Methylnaphthalene | 19,990 | 1.00 | 0.760 g | U | U | S23110643.D |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# Sample Result Calculation Summary (Concentration)

## EPA 8260C

| Analyte | t<br>Sampling Time<br>minutes | DF<br>Dilution<br>Factor | U<br>Uptake<br>Rate | M<br>Initial Result<br>ng | C<br>Calculated Result<br>µg/m³ | File ID |
|---|---|---|---|---|---|---|
| **Lab ID:** 0007281-05 **Sample Name:** 200032-SG-3 | | | | | | |
| Vinyl Chloride | 19,977 | 1.00 | 0.810 | U | U | S23110644.D |
| 1,1-Dichloroethene | 19,977 | 1.00 | 0.330 | U | U | S23110644.D |
| Methylene Chloride | 19,977 | 1.00 | 0.350 g | U | U | S23110644.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 19,977 | 1.00 | 0.890 g | U | U | S23110644.D |
| trans-1,2-Dichloroethene | 19,977 | 1.00 | 0.440 | U | U | S23110644.D |
| Methyl-t-butyl ether | 19,977 | 1.00 | 0.500 g | U | U | S23110644.D |
| 1,1-Dichloroethane | 19,977 | 1.00 | 0.850 | U | U | S23110644.D |
| cis-1,2-Dichloroethene | 19,977 | 1.00 | 0.530 | U | U | S23110644.D |
| Chloroform | 19,977 | 1.00 | 0.350 g | U | U | S23110644.D |
| 1,2-Dichloroethane | 19,977 | 1.00 | 0.560 | U | U | S23110644.D |
| 1,1,1-Trichloroethane | 19,977 | 1.00 | 1.050 | U | U | S23110644.D |
| Carbon Tetrachloride | 19,977 | 1.00 | 0.430 g | U | U | S23110644.D |
| Benzene | 19,977 | 1.00 | 0.530 | U | U | S23110644.D |
| Trichloroethene | 19,977 | 1.00 | 0.330 | U | U | S23110644.D |
| 1,4-Dioxane | 19,977 | 1.00 | 0.410 g | U | U | S23110644.D |
| 1,1,2-Trichloroethane | 19,977 | 1.00 | 0.330 g | U | U | S23110644.D |
| Toluene | 19,977 | 1.00 | 0.400 | U | U | S23110644.D |
| 1,2-Dibromoethane (EDB) | 19,977 | 1.00 | 0.390 g | U | U | S23110644.D |
| Tetrachloroethene | 19,977 | 1.00 | 0.410 | U | U | S23110644.D |
| 1,1,1,2-Tetrachloroethane | 19,977 | 1.00 | 0.410 g | U | U | S23110644.D |
| Chlorobenzene | 19,977 | 1.00 | 0.850 g | U | U | S23110644.D |
| Ethylbenzene | 19,977 | 1.00 | 0.850 | U | U | S23110644.D |
| p & m-Xylene | 19,977 | 1.00 | 0.880 | U | U | S23110644.D |
| o-Xylene | 19,977 | 1.00 | 0.880 | U | U | S23110644.D |
| 1,2,3-Trichloropropane | 19,977 | 1.00 | 0.750 g | U | U | S23110644.D |
| Isopropylbenzene | 19,977 | 1.00 | 0.830 g | U | U | S23110644.D |
| 1,3,5-Trimethylbenzene | 19,977 | 1.00 | 0.830 g | U | U | S23110644.D |
| 1,2,4-Trimethylbenzene | 19,977 | 1.00 | 0.830 g | U | U | S23110644.D |
| 1,3-Dichlorobenzene | 19,977 | 1.00 | 0.750 g | U | U | S23110644.D |
| 1,4-Dichlorobenzene | 19,977 | 1.00 | 0.750 g | U | U | S23110644.D |
| 1,2-Dichlorobenzene | 19,977 | 1.00 | 0.750 g | U | U | S23110644.D |
| 1,2,4-Trichlorobenzene | 19,977 | 1.00 | 0.390 g | U | U | S23110644.D |
| Naphthalene | 19,977 | 1.00 | 0.800 g | U | U | S23110644.D |
| 1,2,3-Trichlorobenzene | 19,977 | 1.00 | 0.390 g | U | U | S23110644.D |
| 2-Methylnaphthalene | 19,977 | 1.00 | 0.760 g | U | U | S23110644.D |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# Sample Result Calculation Summary (Concentration)

## EPA 8260C

| Analyte | t<br>Sampling Time<br>minutes | DF<br>Dilution<br>Factor | U<br>Uptake<br>Rate | M<br>Initial Result<br>ng | C<br>Calculated Result<br>µg/m³ | File ID |
|---|---|---|---|---|---|---|
| **Lab ID:** 0007281-06 **Sample Name:** 200032-SG-4 | | | | | | |
| Vinyl Chloride | 19,975 | 1.00 | 0.810 | U | U | S23110645.D |
| 1,1-Dichloroethene | 19,975 | 1.00 | 0.330 | U | U | S23110645.D |
| Methylene Chloride | 19,975 | 1.00 | 0.350 g | U | U | S23110645.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 19,975 | 1.00 | 0.890 g | U | U | S23110645.D |
| trans-1,2-Dichloroethene | 19,975 | 1.00 | 0.440 | U | U | S23110645.D |
| Methyl-t-butyl ether | 19,975 | 1.00 | 0.500 g | U | U | S23110645.D |
| 1,1-Dichloroethane | 19,975 | 1.00 | 0.850 | U | U | S23110645.D |
| cis-1,2-Dichloroethene | 19,975 | 1.00 | 0.530 | U | U | S23110645.D |
| Chloroform | 19,975 | 1.00 | 0.350 g | U | U | S23110645.D |
| 1,2-Dichloroethane | 19,975 | 1.00 | 0.560 | U | U | S23110645.D |
| 1,1,1-Trichloroethane | 19,975 | 1.00 | 1.050 | U | U | S23110645.D |
| Carbon Tetrachloride | 19,975 | 1.00 | 0.430 g | U | U | S23110645.D |
| Benzene | 19,975 | 1.00 | 0.530 | U | U | S23110645.D |
| Trichloroethene | 19,975 | 1.00 | 0.330 | U | U | S23110645.D |
| 1,4-Dioxane | 19,975 | 1.00 | 0.410 g | U | U | S23110645.D |
| 1,1,2-Trichloroethane | 19,975 | 1.00 | 0.330 g | U | U | S23110645.D |
| Toluene | 19,975 | 1.00 | 0.400 | U | U | S23110645.D |
| 1,2-Dibromoethane (EDB) | 19,975 | 1.00 | 0.390 g | U | U | S23110645.D |
| Tetrachloroethene | 19,975 | 1.00 | 0.410 | U | U | S23110645.D |
| 1,1,1,2-Tetrachloroethane | 19,975 | 1.00 | 0.410 g | U | U | S23110645.D |
| Chlorobenzene | 19,975 | 1.00 | 0.850 g | U | U | S23110645.D |
| Ethylbenzene | 19,975 | 1.00 | 0.850 | U | U | S23110645.D |
| p & m-Xylene | 19,975 | 1.00 | 0.880 | U | U | S23110645.D |
| o-Xylene | 19,975 | 1.00 | 0.880 | U | U | S23110645.D |
| 1,2,3-Trichloropropane | 19,975 | 1.00 | 0.750 g | U | U | S23110645.D |
| Isopropylbenzene | 19,975 | 1.00 | 0.830 g | U | U | S23110645.D |
| 1,3,5-Trimethylbenzene | 19,975 | 1.00 | 0.830 g | U | U | S23110645.D |
| 1,2,4-Trimethylbenzene | 19,975 | 1.00 | 0.830 g | U | U | S23110645.D |
| 1,3-Dichlorobenzene | 19,975 | 1.00 | 0.750 g | U | U | S23110645.D |
| 1,4-Dichlorobenzene | 19,975 | 1.00 | 0.750 g | U | U | S23110645.D |
| 1,2-Dichlorobenzene | 19,975 | 1.00 | 0.750 g | U | U | S23110645.D |
| 1,2,4-Trichlorobenzene | 19,975 | 1.00 | 0.390 g | U | U | S23110645.D |
| Naphthalene | 19,975 | 1.00 | 0.800 g | U | U | S23110645.D |
| 1,2,3-Trichlorobenzene | 19,975 | 1.00 | 0.390 g | U | U | S23110645.D |
| 2-Methylnaphthalene | 19,975 | 1.00 | 0.760 g | U | U | S23110645.D |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# Sample Result Calculation Summary (Concentration)

## EPA 8260C

| Analyte | t<br>Sampling Time<br>minutes | DF<br>Dilution<br>Factor | U<br>Uptake<br>Rate | M<br>Initial Result<br>ng | C<br>Calculated Result<br>µg/m³ | File ID |
|---|---|---|---|---|---|---|
| **Lab ID:** 0007281-07 **Sample Name:** 200032-SG-5 | | | | | | |
| Vinyl Chloride | 19,970 | 1.00 | 0.810 | U | U | S23110646.D |
| 1,1-Dichloroethene | 19,970 | 1.00 | 0.330 | U | U | S23110646.D |
| Methylene Chloride | 19,970 | 1.00 | 0.350 g | U | U | S23110646.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 19,970 | 1.00 | 0.890 g | U | U | S23110646.D |
| trans-1,2-Dichloroethene | 19,970 | 1.00 | 0.440 | U | U | S23110646.D |
| Methyl-t-butyl ether | 19,970 | 1.00 | 0.500 g | U | U | S23110646.D |
| 1,1-Dichloroethane | 19,970 | 1.00 | 0.850 | U | U | S23110646.D |
| cis-1,2-Dichloroethene | 19,970 | 1.00 | 0.530 | U | U | S23110646.D |
| Chloroform | 19,970 | 1.00 | 0.350 g | U | U | S23110646.D |
| 1,2-Dichloroethane | 19,970 | 1.00 | 0.560 | U | U | S23110646.D |
| 1,1,1-Trichloroethane | 19,970 | 1.00 | 1.050 | U | U | S23110646.D |
| Carbon Tetrachloride | 19,970 | 1.00 | 0.430 g | U | U | S23110646.D |
| Benzene | 19,970 | 1.00 | 0.530 | U | U | S23110646.D |
| Trichloroethene | 19,970 | 1.00 | 0.330 | U | U | S23110646.D |
| 1,4-Dioxane | 19,970 | 1.00 | 0.410 g | U | U | S23110646.D |
| 1,1,2-Trichloroethane | 19,970 | 1.00 | 0.330 g | U | U | S23110646.D |
| Toluene | 19,970 | 1.00 | 0.400 | U | U | S23110646.D |
| 1,2-Dibromoethane (EDB) | 19,970 | 1.00 | 0.390 g | U | U | S23110646.D |
| Tetrachloroethene | 19,970 | 1.00 | 0.410 | U | U | S23110646.D |
| 1,1,1,2-Tetrachloroethane | 19,970 | 1.00 | 0.410 g | U | U | S23110646.D |
| Chlorobenzene | 19,970 | 1.00 | 0.850 g | U | U | S23110646.D |
| Ethylbenzene | 19,970 | 1.00 | 0.850 | U | U | S23110646.D |
| p & m-Xylene | 19,970 | 1.00 | 0.880 | U | U | S23110646.D |
| o-Xylene | 19,970 | 1.00 | 0.880 | U | U | S23110646.D |
| 1,2,3-Trichloropropane | 19,970 | 1.00 | 0.750 g | U | U | S23110646.D |
| Isopropylbenzene | 19,970 | 1.00 | 0.830 g | U | U | S23110646.D |
| 1,3,5-Trimethylbenzene | 19,970 | 1.00 | 0.830 g | U | U | S23110646.D |
| 1,2,4-Trimethylbenzene | 19,970 | 1.00 | 0.830 g | U | U | S23110646.D |
| 1,3-Dichlorobenzene | 19,970 | 1.00 | 0.750 g | U | U | S23110646.D |
| 1,4-Dichlorobenzene | 19,970 | 1.00 | 0.750 g | U | U | S23110646.D |
| 1,2-Dichlorobenzene | 19,970 | 1.00 | 0.750 g | U | U | S23110646.D |
| 1,2,4-Trichlorobenzene | 19,970 | 1.00 | 0.390 g | U | U | S23110646.D |
| Naphthalene | 19,970 | 1.00 | 0.800 g | U | U | S23110646.D |
| 1,2,3-Trichlorobenzene | 19,970 | 1.00 | 0.390 g | U | U | S23110646.D |
| 2-Methylnaphthalene | 19,970 | 1.00 | 0.760 g | 36.22 | 2.39 | S23110646.D |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

Calculations:

$$C = \frac{1000 \times M \times DF}{U \times t}$$

where: C = concentration ($\mu g/m^3$)
M = mass (ng)
DF = dilution factor
t = sampling time (minutes)
U = compound specific uptake rate

[g] = Uptake rate determined using Graham's Law of Diffusion.

*Reference: Federal Register/Vol. 79, No. 125/June 30, 2014*

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# Method Detection and Reporting Limit Calculations (Concentration)

## EPA 8260C

**Lab ID:** 0007281-01 **Sample Name:** Trip 1

| Analyte | t Sampling Time minutes | DF Dilution Factor | U Uptake Rate | M Initial LOQ ng | C Calculated LOQ µg/m³ |
|---|---|---|---|---|---|
| Vinyl Chloride | 19,990 | 1.00 | 0.810 | 10.0 | 0.62 |
| 1,1-Dichloroethene | 19,990 | 1.00 | 0.330 | 10.0 | 1.52 |
| Methylene Chloride | 19,990 | 1.00 | 0.350 g | 10.0 | 1.43 |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 19,990 | 1.00 | 0.890 g | 10.0 | 0.56 |
| trans-1,2-Dichloroethene | 19,990 | 1.00 | 0.440 | 10.0 | 1.14 |
| Methyl-t-butyl ether | 19,990 | 1.00 | 0.500 g | 25.0 | 2.50 |
| 1,1-Dichloroethane | 19,990 | 1.00 | 0.850 | 10.0 | 0.59 |
| cis-1,2-Dichloroethene | 19,990 | 1.00 | 0.530 | 10.0 | 0.94 |
| Chloroform | 19,990 | 1.00 | 0.350 g | 10.0 | 1.43 |
| 1,2-Dichloroethane | 19,990 | 1.00 | 0.560 | 10.0 | 0.89 |
| 1,1,1-Trichloroethane | 19,990 | 1.00 | 1.050 | 10.0 | 0.48 |
| Carbon Tetrachloride | 19,990 | 1.00 | 0.430 g | 10.0 | 1.16 |
| Benzene | 19,990 | 1.00 | 0.530 | 25.0 | 2.36 |
| Trichloroethene | 19,990 | 1.00 | 0.330 | 10.0 | 1.52 |
| 1,4-Dioxane | 19,990 | 1.00 | 0.410 g | 10.0 | 1.22 |
| 1,1,2-Trichloroethane | 19,990 | 1.00 | 0.330 g | 10.0 | 1.52 |
| Toluene | 19,990 | 1.00 | 0.400 | 25.0 | 3.13 |
| 1,2-Dibromoethane (EDB) | 19,990 | 1.00 | 0.390 g | 10.0 | 1.28 |
| Tetrachloroethene | 19,990 | 1.00 | 0.410 | 10.0 | 1.22 |
| 1,1,1,2-Tetrachloroethane | 19,990 | 1.00 | 0.410 g | 10.0 | 1.22 |
| Chlorobenzene | 19,990 | 1.00 | 0.850 g | 10.0 | 0.59 |
| Ethylbenzene | 19,990 | 1.00 | 0.850 | 25.0 | 1.47 |
| p & m-Xylene | 19,990 | 1.00 | 0.880 | 25.0 | 1.42 |
| o-Xylene | 19,990 | 1.00 | 0.880 | 25.0 | 1.42 |
| 1,2,3-Trichloropropane | 19,990 | 1.00 | 0.750 g | 10.0 | 0.67 |
| Isopropylbenzene | 19,990 | 1.00 | 0.830 g | 25.0 | 1.51 |
| 1,3,5-Trimethylbenzene | 19,990 | 1.00 | 0.830 g | 25.0 | 1.51 |
| 1,2,4-Trimethylbenzene | 19,990 | 1.00 | 0.830 g | 25.0 | 1.51 |
| 1,3-Dichlorobenzene | 19,990 | 1.00 | 0.750 g | 10.0 | 0.67 |
| 1,4-Dichlorobenzene | 19,990 | 1.00 | 0.750 g | 10.0 | 0.67 |
| 1,2-Dichlorobenzene | 19,990 | 1.00 | 0.750 g | 10.0 | 0.67 |
| 1,2,4-Trichlorobenzene | 19,990 | 1.00 | 0.390 g | 10.0 | 1.28 |
| Naphthalene | 19,990 | 1.00 | 0.800 g | 25.0 | 1.56 |
| 1,2,3-Trichlorobenzene | 19,990 | 1.00 | 0.390 g | 10.0 | 1.28 |
| 2-Methylnaphthalene | 19,990 | 1.00 | 0.760 g | 25.0 | 1.65 |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# Method Detection and Reporting Limit Calculations (Concentration)

## EPA 8260C

**Lab ID:** 0007281-02 **Sample Name:** 200032-SG-1

| Analyte | t Sampling Time minutes | DF Dilution Factor | U Uptake Rate | M Initial LOQ ng | C Calculated LOQ µg/m³ |
|---|---|---|---|---|---|
| Vinyl Chloride | 19,985 | 1.00 | 0.810 | 10.0 | 0.62 |
| 1,1-Dichloroethene | 19,985 | 1.00 | 0.330 | 10.0 | 1.52 |
| Methylene Chloride | 19,985 | 1.00 | 0.350 g | 10.0 | 1.43 |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 19,985 | 1.00 | 0.890 g | 10.0 | 0.56 |
| trans-1,2-Dichloroethene | 19,985 | 1.00 | 0.440 | 10.0 | 1.14 |
| Methyl-t-butyl ether | 19,985 | 1.00 | 0.500 g | 25.0 | 2.50 |
| 1,1-Dichloroethane | 19,985 | 1.00 | 0.850 | 10.0 | 0.59 |
| cis-1,2-Dichloroethene | 19,985 | 1.00 | 0.530 | 10.0 | 0.94 |
| Chloroform | 19,985 | 1.00 | 0.350 g | 10.0 | 1.43 |
| 1,2-Dichloroethane | 19,985 | 1.00 | 0.560 | 10.0 | 0.89 |
| 1,1,1-Trichloroethane | 19,985 | 1.00 | 1.050 | 10.0 | 0.48 |
| Carbon Tetrachloride | 19,985 | 1.00 | 0.430 g | 10.0 | 1.16 |
| Benzene | 19,985 | 1.00 | 0.530 | 25.0 | 2.36 |
| Trichloroethene | 19,985 | 1.00 | 0.330 | 10.0 | 1.52 |
| 1,4-Dioxane | 19,985 | 1.00 | 0.410 g | 10.0 | 1.22 |
| 1,1,2-Trichloroethane | 19,985 | 1.00 | 0.330 g | 10.0 | 1.52 |
| Toluene | 19,985 | 1.00 | 0.400 | 25.0 | 3.13 |
| 1,2-Dibromoethane (EDB) | 19,985 | 1.00 | 0.390 g | 10.0 | 1.28 |
| Tetrachloroethene | 19,985 | 1.00 | 0.410 | 10.0 | 1.22 |
| 1,1,1,2-Tetrachloroethane | 19,985 | 1.00 | 0.410 g | 10.0 | 1.22 |
| Chlorobenzene | 19,985 | 1.00 | 0.850 g | 10.0 | 0.59 |
| Ethylbenzene | 19,985 | 1.00 | 0.850 | 25.0 | 1.47 |
| p & m-Xylene | 19,985 | 1.00 | 0.880 | 25.0 | 1.42 |
| o-Xylene | 19,985 | 1.00 | 0.880 | 25.0 | 1.42 |
| 1,2,3-Trichloropropane | 19,985 | 1.00 | 0.750 g | 10.0 | 0.67 |
| Isopropylbenzene | 19,985 | 1.00 | 0.830 g | 25.0 | 1.51 |
| 1,3,5-Trimethylbenzene | 19,985 | 1.00 | 0.830 g | 25.0 | 1.51 |
| 1,2,4-Trimethylbenzene | 19,985 | 1.00 | 0.830 g | 25.0 | 1.51 |
| 1,3-Dichlorobenzene | 19,985 | 1.00 | 0.750 g | 10.0 | 0.67 |
| 1,4-Dichlorobenzene | 19,985 | 1.00 | 0.750 g | 10.0 | 0.67 |
| 1,2-Dichlorobenzene | 19,985 | 1.00 | 0.750 g | 10.0 | 0.67 |
| 1,2,4-Trichlorobenzene | 19,985 | 1.00 | 0.390 g | 10.0 | 1.28 |
| Naphthalene | 19,985 | 1.00 | 0.800 g | 25.0 | 1.56 |
| 1,2,3-Trichlorobenzene | 19,985 | 1.00 | 0.390 g | 10.0 | 1.28 |
| 2-Methylnaphthalene | 19,985 | 1.00 | 0.760 g | 25.0 | 1.65 |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# Method Detection and Reporting Limit Calculations (Concentration)

## EPA 8260C

**Lab ID:** 0007281-03 **Sample Name:** 200032-SG-1-DUP

| Analyte | t Sampling Time minutes | DF Dilution Factor | U Uptake Rate | M Initial LOQ ng | C Calculated LOQ µg/m³ |
|---|---|---|---|---|---|
| Vinyl Chloride | 19,985 | 1.00 | 0.810 | 10.0 | 0.62 |
| 1,1-Dichloroethene | 19,985 | 1.00 | 0.330 | 10.0 | 1.52 |
| Methylene Chloride | 19,985 | 1.00 | 0.350 g | 10.0 | 1.43 |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 19,985 | 1.00 | 0.890 g | 10.0 | 0.56 |
| trans-1,2-Dichloroethene | 19,985 | 1.00 | 0.440 | 10.0 | 1.14 |
| Methyl-t-butyl ether | 19,985 | 1.00 | 0.500 g | 25.0 | 2.50 |
| 1,1-Dichloroethane | 19,985 | 1.00 | 0.850 | 10.0 | 0.59 |
| cis-1,2-Dichloroethene | 19,985 | 1.00 | 0.530 | 10.0 | 0.94 |
| Chloroform | 19,985 | 1.00 | 0.350 g | 10.0 | 1.43 |
| 1,2-Dichloroethane | 19,985 | 1.00 | 0.560 | 10.0 | 0.89 |
| 1,1,1-Trichloroethane | 19,985 | 1.00 | 1.050 | 10.0 | 0.48 |
| Carbon Tetrachloride | 19,985 | 1.00 | 0.430 g | 10.0 | 1.16 |
| Benzene | 19,985 | 1.00 | 0.530 | 25.0 | 2.36 |
| Trichloroethene | 19,985 | 1.00 | 0.330 | 10.0 | 1.52 |
| 1,4-Dioxane | 19,985 | 1.00 | 0.410 g | 10.0 | 1.22 |
| 1,1,2-Trichloroethane | 19,985 | 1.00 | 0.330 g | 10.0 | 1.52 |
| Toluene | 19,985 | 1.00 | 0.400 | 25.0 | 3.13 |
| 1,2-Dibromoethane (EDB) | 19,985 | 1.00 | 0.390 g | 10.0 | 1.28 |
| Tetrachloroethene | 19,985 | 1.00 | 0.410 | 10.0 | 1.22 |
| 1,1,1,2-Tetrachloroethane | 19,985 | 1.00 | 0.410 g | 10.0 | 1.22 |
| Chlorobenzene | 19,985 | 1.00 | 0.850 g | 10.0 | 0.59 |
| Ethylbenzene | 19,985 | 1.00 | 0.850 | 25.0 | 1.47 |
| p & m-Xylene | 19,985 | 1.00 | 0.880 | 25.0 | 1.42 |
| o-Xylene | 19,985 | 1.00 | 0.880 | 25.0 | 1.42 |
| 1,2,3-Trichloropropane | 19,985 | 1.00 | 0.750 g | 10.0 | 0.67 |
| Isopropylbenzene | 19,985 | 1.00 | 0.830 g | 25.0 | 1.51 |
| 1,3,5-Trimethylbenzene | 19,985 | 1.00 | 0.830 g | 25.0 | 1.51 |
| 1,2,4-Trimethylbenzene | 19,985 | 1.00 | 0.830 g | 25.0 | 1.51 |
| 1,3-Dichlorobenzene | 19,985 | 1.00 | 0.750 g | 10.0 | 0.67 |
| 1,4-Dichlorobenzene | 19,985 | 1.00 | 0.750 g | 10.0 | 0.67 |
| 1,2-Dichlorobenzene | 19,985 | 1.00 | 0.750 g | 10.0 | 0.67 |
| 1,2,4-Trichlorobenzene | 19,985 | 1.00 | 0.390 g | 10.0 | 1.28 |
| Naphthalene | 19,985 | 1.00 | 0.800 g | 25.0 | 1.56 |
| 1,2,3-Trichlorobenzene | 19,985 | 1.00 | 0.390 g | 10.0 | 1.28 |
| 2-Methylnaphthalene | 19,985 | 1.00 | 0.760 g | 25.0 | 1.65 |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# Method Detection and Reporting Limit Calculations (Concentration)

## EPA 8260C

**Lab ID:** 0007281-04 **Sample Name:** 200032-SG-2

| Analyte | t Sampling Time minutes | DF Dilution Factor | U Uptake Rate | M Initial LOQ ng | C Calculated LOQ µg/m³ |
|---|---|---|---|---|---|
| Vinyl Chloride | 19,990 | 1.00 | 0.810 | 10.0 | 0.62 |
| 1,1-Dichloroethene | 19,990 | 1.00 | 0.330 | 10.0 | 1.52 |
| Methylene Chloride | 19,990 | 1.00 | 0.350 g | 10.0 | 1.43 |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 19,990 | 1.00 | 0.890 g | 10.0 | 0.56 |
| trans-1,2-Dichloroethene | 19,990 | 1.00 | 0.440 | 10.0 | 1.14 |
| Methyl-t-butyl ether | 19,990 | 1.00 | 0.500 g | 25.0 | 2.50 |
| 1,1-Dichloroethane | 19,990 | 1.00 | 0.850 | 10.0 | 0.59 |
| cis-1,2-Dichloroethene | 19,990 | 1.00 | 0.530 | 10.0 | 0.94 |
| Chloroform | 19,990 | 1.00 | 0.350 g | 10.0 | 1.43 |
| 1,2-Dichloroethane | 19,990 | 1.00 | 0.560 | 10.0 | 0.89 |
| 1,1,1-Trichloroethane | 19,990 | 1.00 | 1.050 | 10.0 | 0.48 |
| Carbon Tetrachloride | 19,990 | 1.00 | 0.430 g | 10.0 | 1.16 |
| Benzene | 19,990 | 1.00 | 0.530 | 25.0 | 2.36 |
| Trichloroethene | 19,990 | 1.00 | 0.330 | 10.0 | 1.52 |
| 1,4-Dioxane | 19,990 | 1.00 | 0.410 g | 10.0 | 1.22 |
| 1,1,2-Trichloroethane | 19,990 | 1.00 | 0.330 g | 10.0 | 1.52 |
| Toluene | 19,990 | 1.00 | 0.400 | 25.0 | 3.13 |
| 1,2-Dibromoethane (EDB) | 19,990 | 1.00 | 0.390 g | 10.0 | 1.28 |
| Tetrachloroethene | 19,990 | 1.00 | 0.410 | 10.0 | 1.22 |
| 1,1,1,2-Tetrachloroethane | 19,990 | 1.00 | 0.410 g | 10.0 | 1.22 |
| Chlorobenzene | 19,990 | 1.00 | 0.850 g | 10.0 | 0.59 |
| Ethylbenzene | 19,990 | 1.00 | 0.850 | 25.0 | 1.47 |
| p & m-Xylene | 19,990 | 1.00 | 0.880 | 25.0 | 1.42 |
| o-Xylene | 19,990 | 1.00 | 0.880 | 25.0 | 1.42 |
| 1,2,3-Trichloropropane | 19,990 | 1.00 | 0.750 g | 10.0 | 0.67 |
| Isopropylbenzene | 19,990 | 1.00 | 0.830 g | 25.0 | 1.51 |
| 1,3,5-Trimethylbenzene | 19,990 | 1.00 | 0.830 g | 25.0 | 1.51 |
| 1,2,4-Trimethylbenzene | 19,990 | 1.00 | 0.830 g | 25.0 | 1.51 |
| 1,3-Dichlorobenzene | 19,990 | 1.00 | 0.750 g | 10.0 | 0.67 |
| 1,4-Dichlorobenzene | 19,990 | 1.00 | 0.750 g | 10.0 | 0.67 |
| 1,2-Dichlorobenzene | 19,990 | 1.00 | 0.750 g | 10.0 | 0.67 |
| 1,2,4-Trichlorobenzene | 19,990 | 1.00 | 0.390 g | 10.0 | 1.28 |
| Naphthalene | 19,990 | 1.00 | 0.800 g | 25.0 | 1.56 |
| 1,2,3-Trichlorobenzene | 19,990 | 1.00 | 0.390 g | 10.0 | 1.28 |
| 2-Methylnaphthalene | 19,990 | 1.00 | 0.760 g | 25.0 | 1.65 |

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|---|---|---|
| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# Method Detection and Reporting Limit Calculations (Concentration)

## EPA 8260C

**Lab ID:** 0007281-05 **Sample Name:** 200032-SG-3

| Analyte | t Sampling Time minutes | DF Dilution Factor | U Uptake Rate | M Initial LOQ ng | C Calculated LOQ µg/m³ |
|---|---|---|---|---|---|
| Vinyl Chloride | 19,977 | 1.00 | 0.810 | 10.0 | 0.62 |
| 1,1-Dichloroethene | 19,977 | 1.00 | 0.330 | 10.0 | 1.52 |
| Methylene Chloride | 19,977 | 1.00 | 0.350 g | 10.0 | 1.43 |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 19,977 | 1.00 | 0.890 g | 10.0 | 0.56 |
| trans-1,2-Dichloroethene | 19,977 | 1.00 | 0.440 | 10.0 | 1.14 |
| Methyl-t-butyl ether | 19,977 | 1.00 | 0.500 g | 25.0 | 2.50 |
| 1,1-Dichloroethane | 19,977 | 1.00 | 0.850 | 10.0 | 0.59 |
| cis-1,2-Dichloroethene | 19,977 | 1.00 | 0.530 | 10.0 | 0.94 |
| Chloroform | 19,977 | 1.00 | 0.350 g | 10.0 | 1.43 |
| 1,2-Dichloroethane | 19,977 | 1.00 | 0.560 | 10.0 | 0.89 |
| 1,1,1-Trichloroethane | 19,977 | 1.00 | 1.050 | 10.0 | 0.48 |
| Carbon Tetrachloride | 19,977 | 1.00 | 0.430 g | 10.0 | 1.16 |
| Benzene | 19,977 | 1.00 | 0.530 | 25.0 | 2.36 |
| Trichloroethene | 19,977 | 1.00 | 0.330 | 10.0 | 1.52 |
| 1,4-Dioxane | 19,977 | 1.00 | 0.410 g | 10.0 | 1.22 |
| 1,1,2-Trichloroethane | 19,977 | 1.00 | 0.330 g | 10.0 | 1.52 |
| Toluene | 19,977 | 1.00 | 0.400 | 25.0 | 3.13 |
| 1,2-Dibromoethane (EDB) | 19,977 | 1.00 | 0.390 g | 10.0 | 1.28 |
| Tetrachloroethene | 19,977 | 1.00 | 0.410 | 10.0 | 1.22 |
| 1,1,1,2-Tetrachloroethane | 19,977 | 1.00 | 0.410 g | 10.0 | 1.22 |
| Chlorobenzene | 19,977 | 1.00 | 0.850 g | 10.0 | 0.59 |
| Ethylbenzene | 19,977 | 1.00 | 0.850 | 25.0 | 1.47 |
| p & m-Xylene | 19,977 | 1.00 | 0.880 | 25.0 | 1.42 |
| o-Xylene | 19,977 | 1.00 | 0.880 | 25.0 | 1.42 |
| 1,2,3-Trichloropropane | 19,977 | 1.00 | 0.750 g | 10.0 | 0.67 |
| Isopropylbenzene | 19,977 | 1.00 | 0.830 g | 25.0 | 1.51 |
| 1,3,5-Trimethylbenzene | 19,977 | 1.00 | 0.830 g | 25.0 | 1.51 |
| 1,2,4-Trimethylbenzene | 19,977 | 1.00 | 0.830 g | 25.0 | 1.51 |
| 1,3-Dichlorobenzene | 19,977 | 1.00 | 0.750 g | 10.0 | 0.67 |
| 1,4-Dichlorobenzene | 19,977 | 1.00 | 0.750 g | 10.0 | 0.67 |
| 1,2-Dichlorobenzene | 19,977 | 1.00 | 0.750 g | 10.0 | 0.67 |
| 1,2,4-Trichlorobenzene | 19,977 | 1.00 | 0.390 g | 10.0 | 1.28 |
| Naphthalene | 19,977 | 1.00 | 0.800 g | 25.0 | 1.56 |
| 1,2,3-Trichlorobenzene | 19,977 | 1.00 | 0.390 g | 10.0 | 1.28 |
| 2-Methylnaphthalene | 19,977 | 1.00 | 0.760 g | 25.0 | 1.65 |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# Method Detection and Reporting Limit Calculations (Concentration)

## EPA 8260C

**Lab ID:** 0007281-06 **Sample Name:** 200032-SG-4

| Analyte | t Sampling Time minutes | DF Dilution Factor | U Uptake Rate | M Initial LOQ ng | C Calculated LOQ µg/m³ |
|---|---|---|---|---|---|
| Vinyl Chloride | 19,975 | 1.00 | 0.810 | 10.0 | 0.62 |
| 1,1-Dichloroethene | 19,975 | 1.00 | 0.330 | 10.0 | 1.52 |
| Methylene Chloride | 19,975 | 1.00 | 0.350 g | 10.0 | 1.43 |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 19,975 | 1.00 | 0.890 g | 10.0 | 0.56 |
| trans-1,2-Dichloroethene | 19,975 | 1.00 | 0.440 | 10.0 | 1.14 |
| Methyl-t-butyl ether | 19,975 | 1.00 | 0.500 g | 25.0 | 2.50 |
| 1,1-Dichloroethane | 19,975 | 1.00 | 0.850 | 10.0 | 0.59 |
| cis-1,2-Dichloroethene | 19,975 | 1.00 | 0.530 | 10.0 | 0.94 |
| Chloroform | 19,975 | 1.00 | 0.350 g | 10.0 | 1.43 |
| 1,2-Dichloroethane | 19,975 | 1.00 | 0.560 | 10.0 | 0.89 |
| 1,1,1-Trichloroethane | 19,975 | 1.00 | 1.050 | 10.0 | 0.48 |
| Carbon Tetrachloride | 19,975 | 1.00 | 0.430 g | 10.0 | 1.16 |
| Benzene | 19,975 | 1.00 | 0.530 | 25.0 | 2.36 |
| Trichloroethene | 19,975 | 1.00 | 0.330 | 10.0 | 1.52 |
| 1,4-Dioxane | 19,975 | 1.00 | 0.410 g | 10.0 | 1.22 |
| 1,1,2-Trichloroethane | 19,975 | 1.00 | 0.330 g | 10.0 | 1.52 |
| Toluene | 19,975 | 1.00 | 0.400 | 25.0 | 3.13 |
| 1,2-Dibromoethane (EDB) | 19,975 | 1.00 | 0.390 g | 10.0 | 1.28 |
| Tetrachloroethene | 19,975 | 1.00 | 0.410 | 10.0 | 1.22 |
| 1,1,1,2-Tetrachloroethane | 19,975 | 1.00 | 0.410 g | 10.0 | 1.22 |
| Chlorobenzene | 19,975 | 1.00 | 0.850 g | 10.0 | 0.59 |
| Ethylbenzene | 19,975 | 1.00 | 0.850 | 25.0 | 1.47 |
| p & m-Xylene | 19,975 | 1.00 | 0.880 | 25.0 | 1.42 |
| o-Xylene | 19,975 | 1.00 | 0.880 | 25.0 | 1.42 |
| 1,2,3-Trichloropropane | 19,975 | 1.00 | 0.750 g | 10.0 | 0.67 |
| Isopropylbenzene | 19,975 | 1.00 | 0.830 g | 25.0 | 1.51 |
| 1,3,5-Trimethylbenzene | 19,975 | 1.00 | 0.830 g | 25.0 | 1.51 |
| 1,2,4-Trimethylbenzene | 19,975 | 1.00 | 0.830 g | 25.0 | 1.51 |
| 1,3-Dichlorobenzene | 19,975 | 1.00 | 0.750 g | 10.0 | 0.67 |
| 1,4-Dichlorobenzene | 19,975 | 1.00 | 0.750 g | 10.0 | 0.67 |
| 1,2-Dichlorobenzene | 19,975 | 1.00 | 0.750 g | 10.0 | 0.67 |
| 1,2,4-Trichlorobenzene | 19,975 | 1.00 | 0.390 g | 10.0 | 1.28 |
| Naphthalene | 19,975 | 1.00 | 0.800 g | 25.0 | 1.56 |
| 1,2,3-Trichlorobenzene | 19,975 | 1.00 | 0.390 g | 10.0 | 1.28 |
| 2-Methylnaphthalene | 19,975 | 1.00 | 0.760 g | 25.0 | 1.65 |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

# Method Detection and Reporting Limit Calculations (Concentration)

## EPA 8260C

**Lab ID:** 0007281-07 **Sample Name:** 200032-SG-5

| Analyte | t Sampling Time minutes | DF Dilution Factor | U Uptake Rate | M Initial LOQ ng | C Calculated LOQ µg/m³ |
|---|---|---|---|---|---|
| Vinyl Chloride | 19,970 | 1.00 | 0.810 | 10.0 | 0.62 |
| 1,1-Dichloroethene | 19,970 | 1.00 | 0.330 | 10.0 | 1.52 |
| Methylene Chloride | 19,970 | 1.00 | 0.350 g | 10.0 | 1.43 |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 19,970 | 1.00 | 0.890 g | 10.0 | 0.56 |
| trans-1,2-Dichloroethene | 19,970 | 1.00 | 0.440 | 10.0 | 1.14 |
| Methyl-t-butyl ether | 19,970 | 1.00 | 0.500 g | 25.0 | 2.50 |
| 1,1-Dichloroethane | 19,970 | 1.00 | 0.850 | 10.0 | 0.59 |
| cis-1,2-Dichloroethene | 19,970 | 1.00 | 0.530 | 10.0 | 0.94 |
| Chloroform | 19,970 | 1.00 | 0.350 g | 10.0 | 1.43 |
| 1,2-Dichloroethane | 19,970 | 1.00 | 0.560 | 10.0 | 0.89 |
| 1,1,1-Trichloroethane | 19,970 | 1.00 | 1.050 | 10.0 | 0.48 |
| Carbon Tetrachloride | 19,970 | 1.00 | 0.430 g | 10.0 | 1.16 |
| Benzene | 19,970 | 1.00 | 0.530 | 25.0 | 2.36 |
| Trichloroethene | 19,970 | 1.00 | 0.330 | 10.0 | 1.52 |
| 1,4-Dioxane | 19,970 | 1.00 | 0.410 g | 10.0 | 1.22 |
| 1,1,2-Trichloroethane | 19,970 | 1.00 | 0.330 g | 10.0 | 1.52 |
| Toluene | 19,970 | 1.00 | 0.400 | 25.0 | 3.13 |
| 1,2-Dibromoethane (EDB) | 19,970 | 1.00 | 0.390 g | 10.0 | 1.28 |
| Tetrachloroethene | 19,970 | 1.00 | 0.410 | 10.0 | 1.22 |
| 1,1,1,2-Tetrachloroethane | 19,970 | 1.00 | 0.410 g | 10.0 | 1.22 |
| Chlorobenzene | 19,970 | 1.00 | 0.850 g | 10.0 | 0.59 |
| Ethylbenzene | 19,970 | 1.00 | 0.850 | 25.0 | 1.47 |
| p & m-Xylene | 19,970 | 1.00 | 0.880 | 25.0 | 1.42 |
| o-Xylene | 19,970 | 1.00 | 0.880 | 25.0 | 1.42 |
| 1,2,3-Trichloropropane | 19,970 | 1.00 | 0.750 g | 10.0 | 0.67 |
| Isopropylbenzene | 19,970 | 1.00 | 0.830 g | 25.0 | 1.51 |
| 1,3,5-Trimethylbenzene | 19,970 | 1.00 | 0.830 g | 25.0 | 1.51 |
| 1,2,4-Trimethylbenzene | 19,970 | 1.00 | 0.830 g | 25.0 | 1.51 |
| 1,3-Dichlorobenzene | 19,970 | 1.00 | 0.750 g | 10.0 | 0.67 |
| 1,4-Dichlorobenzene | 19,970 | 1.00 | 0.750 g | 10.0 | 0.67 |
| 1,2-Dichlorobenzene | 19,970 | 1.00 | 0.750 g | 10.0 | 0.67 |
| 1,2,4-Trichlorobenzene | 19,970 | 1.00 | 0.390 g | 10.0 | 1.28 |
| Naphthalene | 19,970 | 1.00 | 0.800 g | 25.0 | 1.56 |
| 1,2,3-Trichlorobenzene | 19,970 | 1.00 | 0.390 g | 10.0 | 1.28 |
| 2-Methylnaphthalene | 19,970 | 1.00 | 0.760 g | 25.0 | 1.65 |

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| **EnviroForensics** | **Site Name:** Jagemann Plating | **Beacon Proposal:** 231010R04 |
| N16W23390 Stone Ridge Dr, Suite G | **Site Location:** Manitowoc, WI | **Lab Work Order:** 0007281 |
| Waukesha, WI 53188 | **Project Manager:** Wayne Fassbender | **Reported:** 11/14/2023 |

## *Laboratory Certification List*

| Certification ID | Certification No. | Description | Expires | Project Required |
|---|---|---|---|---|
| Alaska CS-LAP | 19-002 | Alaska Department of Environmental Conservation | 12/30/2024 | |
| DoD-ELAP | 72690/L22-563 | United States Department of Defense Environmental Laboratory Accreditation | 11/30/2024 | |
| ISO/IEC 17025:2017 | 72690/L22-563 | General Requirements for the Competence of Testing and Calibration Laboratories | 11/30/2024 | |
| NEFAP | 72690/L22-564 | TNI National Environmental Field Activities Program (NEFAP) | 11/30/2024 | |
| NY-NELAC | 12097 | New York Department of Health | 04/01/2024 | |
| Utah-NELAC | MD010912022-12 | Utah Department of Health | 12/31/2023 | |

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## Qualifiers/Notes and Definitions

***General Definitions:***

| | |
|---|---|
| DF | Dilution Factor |
| DL | Detection Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| NA | Not Applicable |
| Q | Qualifier |
| RPD | Relative Percent Difference |
| RT | Retention Times in Minutes |
| RRT | Evaluation of Relative Retention Times in RRT Units (qualified if outside ±0.06 control limits) |
| 3σ | Uncertainty |
| ∉ | Compound not on scope of accreditation |
| + | values are outside method/contract required QC limits |
| ∅ | Compound not on scope of accreditation and analyzed with a one-point calibration |

| | |
|---|---|
| BR4FBZ | Bromofluorobenzene |
| BZMED8 | Toluene-d8 |
| CLBZD5 | Chlorobenzene-d5 |
| DCA12D4 | 1,2-DCA-d4 |
| DCBZ14D4 | 1,4-Dichlorobenzene-d4 |
| FBZ | Fluorobenzene |

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# *Sample Management Records*

BEACON ENVIRONMENTAL
2203A Commerce Rd, Suite 1
Forest Hill, MD 21050, USA
Need help? Call 1-410-838-8780
or email help@beacon-usa.com

# PASSIVE SOIL GAS SAMPLES | CHAIN-OF-CUSTODY

## Project Information

Site Name: Jagemann Plating

Site Location: 1324 S. 26th Street, Manitowoc, WI

## Client Information

Company Name: EnviroForensics, LLC

Office Location: Oconomowoc, WI

Submitted by: W. Fassbender

Email: wfassbender@enviroforensics.com

Project Manager: Wayne Fassbender

Client PO:

Turn around time (check one): [X] Normal [ ] Rush (specify) ____ days

| Field Sample ID | Start Date | Start Time | Stop Date | Stop Time | Sampling Hole Depth [ ] cm [X] inches | Surface Type (Soil, Asphalt, Concrete, Gravel) | Optional Information (Location Description, Sample Condition, PID / FID Readings, etc) |
|---|---|---|---|---|---|---|---|
| 200032-SG-2 | 10/18/23 | 13:20 | | | 36 | Asphalt | |
| 200032-SG-1 | 10/18/23 | 13:40 | 11/1/23 | 10:45 | 11 | 11 | |
| 200032-SG-3 | 10/18/23 | 14:00 | 11/1/23 | 10:57 | 11 | Concrete | |
| 200032-SG-4 | 10/18/23 | 14:25 | 11/1/23 | 11:20 | 11 | Asphalt | |
| 200032-SG-5 | 10/18/23 | 14:40 | 11/1/23 | 11:30 | 11 | Asphalt | |
| Duplicate of SG-1 | | | | | | | |
| Trip 1 | — | — | — | — | — | — | Nar 11/3/23 |
| | | | | | | | |
| | | | | | | | |
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Special Instructions: Ryan a Duplicate of SG-1

| | | | |
|---|---|---|---|
| Relinquished by (signature): | Date / Time: 11/1/23 @15:30 | Received by (signature): Nicole Rief | Date / Time: 11/3/23 12:55 |
| Relinquished by (signature): | Date / Time: | Received by (signature): | Date / Time: |
| For Lab Use Only | Beacon Job No: 7281 | Beacon Proposal: 231010R04 | Analytical Method: |
| Courier Name: FedEx | Shipment Condition: Good | Custody Seal Intact: [X] Yes [ ] No [ ] n/a | Custody Seal No: 5722489 |