4900 South Pennsylvania Avenue, Suite 100
Cudahy, Wisconsin 53110
**P** (414) 423-0255
**F** (414) 423-0566
Terracon.com

January 3, 2025

Leslie Dixon
327 E. Reservoir Condominium Association, Inc.
325-327 East Reservoir Avenue
Milwaukee, Wisconsin 53233

**Subject:** **Site Investigation Sampling Results**
BRRTS #02-41-594249

Dear Ms. Dixon:

In accordance with Wisconsin Department of Natural Resources (WNDR) regulation NR 716.14, Terracon Consultants, Inc. (Terracon) is providing the results of environmental samples collected from your property located at 325-327 East Reservoir Avenue, Milwaukee, Wisconsin. The samples were collected between December 2 and 12, 2024. The sampling activities are part of a site investigation being performed on behalf of 327 E. Reservoir Condominium Association, Inc. in general accordance with Terracon's *Site Investigation Work Plan* dated June 28, 2024. Based on historical site investigations, the contaminants of concern for the investigation are metals, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and per- and polyfluoroalkyl substances (PFAS).

**Sampling Results**

Terracon collected air samples in the basements of both units of the condominium building (samples "325-B" and "327-B") and outside (sample "OA") over a 10-day period. Subsequently, Terracon collected three sub-slab vapor samples designated SS-1 through SS-3 and a sump headspace vapor sample designated SUMP-1 from the basement of the condominium building. The sump basin was professionally sealed on November 8, 2024. The air and vapor sample locations are depicted on Figure 1.

As listed in Table 1 (attached), several VOCs were detected above their respective analytical limits of detection (LODs) in the indoor air samples. The concentrations of VOCs were less than the residential vapor action levels (VALs) with the exception of benzene in sample 325-B, which was just above the VAL of 3.6 micrograms per cubic meter ($\mu g/m^3$). Notably, benzene was also detected in the outdoor air sample at an estimated concentration of 1.70 $\mu g/m^3$.

Several VOCs were also detected above their respective analytical LODs in the vapor samples as listed in Table 2. The VOC concentrations detected in samples SS-1 through SS-3 and SUMP-1 were well below the residential vapor risk screening levels (VRSLs), indicating a low risk of vapor intrusion.

## Conclusions

We attempted to remove obvious potential sources of contaminants from the attached garage prior to the December sampling event. That effort likely resulted in the lower concentrations of petroleum-related compounds (i.e., benzene, ethylbenzene, toluene, and xylenes) in air samples compared to June 2024 sample results. However, the benzene concentration in sample 325-B remained slightly above the VAL.

The source of benzene does not appear to be vapor intrusion because the benzene concentrations in air samples are higher than the benzene concentrations in sub-slab vapor and in the headspace of the sealed sump. The most likely source of petroleum-related compounds in indoor air is gasoline vapors and/or vehicle exhaust from the garage, which is directly accessed from the basement of each unit. Terracon notes that vehicle(s) and power equipment utilized the garage during the sampling period.

Terracon is preparing a site investigation report and remedial action plan for the site, which will include a conceptual site model and recommendations.

We appreciate your assistance with this matter. If you have any questions or concerns, please contact us at (414) 423-0255 or by email at rtslonac@terracon.com.

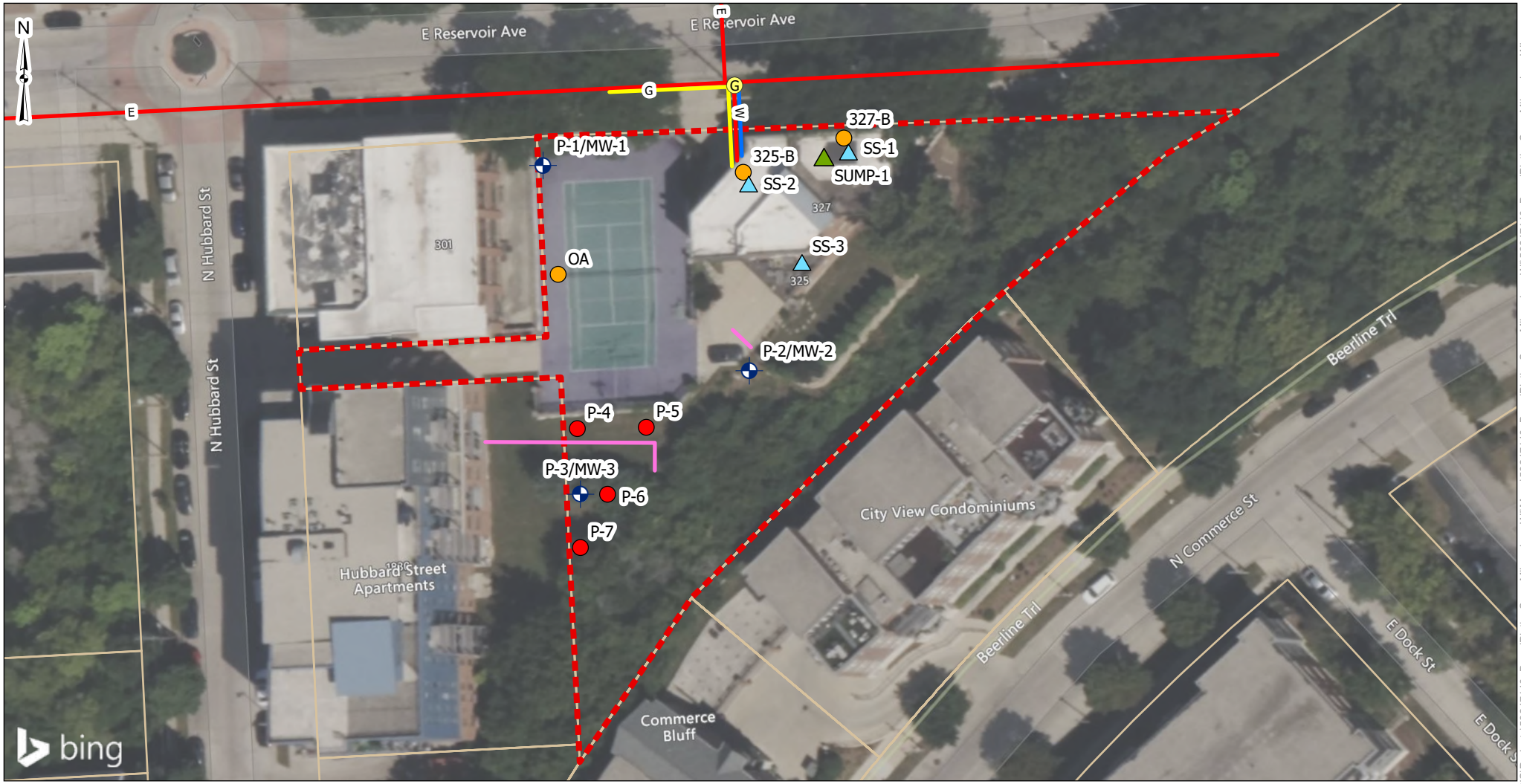
Sincerely,
**Terracon Consultants, Inc.**

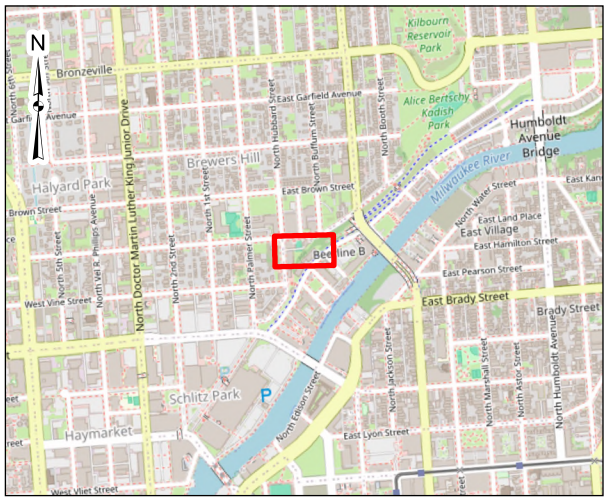
Rachel Slonac
Field Geologist

Brian J. Kappen, P.G.
Senior Geologist

Copy: Linda Michalets, Wisconsin Department of Natural Resources
Sain Loya

Attachments: Figure 1 – Sample Location Map
Table 1 – Indoor and Outdoor Air Analytical Test Results Summary
Table 2 – Sub-Slab Vapor Analytical Test Results Summary
Laboratory Analytical Reports




**LEGEND**

- APPROXIMATE SITE BOUNDARY
- MILWAUKEE COUNTY TAX PARCELS
- SOIL BORING/ MONITORING WELL
- VAPOR MONITORING POINT
- AIR SAMPLE LOCATION
- SOIL BORINGS
- SUMP HEADSPACE SAMPLE LOCATION
- GAS
- WATER
- OVERHEAD/ UNDERGROUND ELECTRIC
- UNKOWN UTILITY
- GAS SHUT-OFF

Feet
0 25 50 100

DATA SOURCES:
ESRI - BING HYBRID BASEMAPS

MILWAUKEE COUNTY

| | |
|---|---|
| Project No.: | 58247140 |
| Date: | Dec 2024 |
| Drawn By: | JLM |
| Reviewed By: | BJK |


terracon
4900 S Pennsylvania Ave,
Cudahy, WI
PH. 414-423-0255 terracon.com


**SITE DIAGRAM**

BARREL PLATING SERVICES FMR
325-327 EAST RESERVOIR AVE
MILWAUKEE, MILWAUKEE CO., WI

**FIGURE**

1

# Table 1

## Indoor and Outdoor Air Analytical Test Results Summary

## Detected Compounds Only

Barrel Plating Services Fmr

325-327 East Reservoir Avenue

Milwaukee, Wisconsin

Terracon Project No. 58247140

| Sample ID | Sample Location | Sampling Method | Matrix | Applicable Criteria | Sample Date | Tetrachloroethene | Trichloroethene[2] | Benzene | Ethylbenzene | Isopropylbenzne | Methylene Chloride | Naphthalene | 2-Methylnaphthalene | Toluene | 1,3,5-Trimethylbenzene | 1,2,4-Trimethylbenzene | o-Xylene | m&p-Xylene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Large Commercial VAL [1]** | | | | | | **180** | **8.8** | **16** | **49** | **1,800** | **2,600** | **3.6** | **NE** | **22,000** | **260** | **260** | **440** | |
| Small Commercial VAL [1] | | | | | | 180 | 8.8 | 16 | 49 | 1,800 | 2,600 | 3.6 | NE | 22,000 | 260 | 260 | 440 | |
| *Residential VAL [1]* | | | | | | *42* | *2.1* | *3.6* | *11* | *420* | *630* | *0.83* | *NE* | *5,200* | *63* | *63* | *100* | |
| 327-B | 327 E. Reservoir Ave Wine Cellar | Passive Sorbent Sampler | Indoor Air | Residential | 6/21-6/28/2024 | 1.98 J | <1.49 | *6.56* | 2.34 J | <1.19 | 5.38 | 0.724 J | <0.647 | 22.4 | <1.19 | <1.19 | 2.95 | 7.97 |
| | | | | | 12/2-12/12/2024 | <0.841 | <1.04 | 2.84 J | <0.811 | <0.831 | 1.52 J | <0.431 | <0.454 | 5.36 | <0.831 | 1.76 J | 1.07 J | 3.01 |
| 325-B | 325 E. Reservoir Ave Basement | Passive Sorbent Sampler | Indoor Air | Residential | 6/21-6/28/2024 | 3.67 | <1.49 | *16.6* | 6.22 | 2.75 J | 14.2 | *0.991 J* | 0.879 J | 56.4 | 1.66 J | 6.54 | 7.53 | 21.8 |
| | | | | | 12/2-12/12/2024 | <0.845 | <1.05 | *4.40* | 1.75 J | <0.835 | <0.990 | 0.448 J | <0.456 | 14.0 | <0.835 | 3.38 | 2.42 | 7.20 |
| OA | Tennis Court | Passive Sorbent Sampler | Outdoor Air | Residential | 6/21-6/28/2024 | <1.20 | <1.49 | <1.86 | <1.16 | <1.19 | <1.41 | <0.615 | <0.647 | <2.46 | <1.19 | <1.19 | <1.12 | <1.12 |
| | | | | | 12/2-12/12/2024 | <0.867 | <1.08 | 1.70 | <0.837 | <0.857 | <1.02 | <0.445 | <0.468 | <1.78 | <0.857 | <0.857 | <0.808 | <0.808 |

**Notes:**

Results expressed in units of micrograms per cubic meter (µg/m³)

" < " Indicates not detected at or above the reported detection limit (RDL)

J = Estimated concentration between the laboratory limit of detection and limit of quantitation

NE = No established standards

VAL = Vapor Action Level

[1] VAL calculated from generic U.S EPA Screening Level Tables and modified per WDNR Publication RR-800 as the lesser of 1:100,000 lifetime cancer risk or noncancer hazard index of 1

[2] Although trichloroethene was not detected above the laboratory method detection limit, results are included in this table for information purposes.

| | |
|---|---|
| **XX.XX** | Brown and bolded values exceed the applicable small commercial VAL |
| XX.XX | Pink and underlined values exceed the applicable large commercial/industrial building VAL |
| *XX.XX* | Blue and italicized values exceed the applicable residential VAL |

# Table 2
## Sub-Slab Vapor Analytical Test Results Summary
## Detected Compounds Only

Barrel Plating Services Fmr
325-327 East Reservoir Avenue
Milwaukee, Wisconsin
Terracon Project No. 58247140

| Sample ID | Sample Location | Applicable Criteria | Sample Date | Tetrachloroethene | Trichloroethene | Acetone | Benzene | Carbon Disulfide | Chloroform | Chloromethane | Cyclohexane | trans-1,2- Dichloroethene | Ethanol | Ethylbenzene | 4-Ethyltoluene | Dichlorodifluoromethane | Heptane | n-Hexane | Isopropylbenzene | Methylene Chloride | Methyl Butyl Ketone | 2-Butanone (MEK) | 4-Methyl-2-pentanone (MIBK) | Naphthalene | 2-Propanol | Propene | Styrene | Tetrahydrofuran | Toluene | 1,1,1-Trichloroethane | Trichlorofluoromethane | 1,2,4-Trimethylbenzene | 1,3,5-Trimethylbenzene | 2,2,4-Trimethylpentane | Xylenes, Total | m&p-Xylene | o-Xylene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Large Commercial/Industrial VRSL [1]** | | | | **18,000** | **880** | **14,000,000** | **1,600** | **2,600,000** | **530** | **39,000** | **2,600,000** | **18,000** | **NE** | **4,900** | **NE** | **44,000** | **180,000** | **31,000** | **180,000** | **260,000** | **1,300** | **220,000** | **260,000** | **360** | **88,000** | **1,300,000** | **44,000** | **880,000** | **2,200,000** | **2,200,000** | **NE** | **26,000** | **26,000** | **NE** | **44,000** | **44,000** | |
| Small Commercial VRSL [2] | | | | 5,800 | 290 | 4,500,000 | 530 | 880,000 | 180 | 13,000 | 880,000 | 5,800 | NE | 1,600 | NE | 15,000 | 60,000 | 100,000 | 58,000 | 87,000 | 440 | 730,000 | 87,000 | 120 | 29,000 | 440,000 | 150,000 | 290,000 | 730,000 | 730,000 | NE | 8,700 | 8,700 | NE | 15,000 | 1,500 | |
| *Residential VRSL [2]* | | | | *1,400* | *70* | 1,100,000 | *120* | *210,000* | *40* | *3,100* | *210,000* | *1,400* | NE | *370* | *NE* | *3,300* | 14,000 | *24,000* | *14,000* | *21,000* | 100 | *170,000* | *21,000* | *28* | 7,000 | *100,000* | *35,000* | *70,000* | *170,000* | *170,000* | *NE* | *2,100* | *2,100* | NE | *3,500* | *3,300* | |
| SS-1 | 327 E. Reservoir Ave Wine Cellar | Residential | 7/12/2024 | 2.88 | 1.16 J | 23.3 | 0.719 J | 0.349 J | 2.29 | <0.213 | <0.259 | <0.267 | 40.5 | 1.01 J | <0.384 | 2.05 J | 0.519 J | 1.14 J | <0.382 | 4.44 | <0.544 | 3.10 | 1.56 | <1.83 | 6.86 | 1.21 | 0.442 J | 1.19 | 1.92 | <0.400 | 1.33 J | 0.756 J | <0.382 | 0.986 J | 4.25 | 3.08 | 1.16 J |
| | | | 12/12/2024 | 5.84 | 2.85 | <1.24 | <0.351 | <0.498 | 0.526 J | <0.227 | <0.585 | <0.291 | <4.47 | <0.337 | <0.435 | <0.399 | <0.466 | <0.504 | <0.355 | <0.587 | <0.544 | <0.342 | <0.434 | <3.23 | <1.67 | <0.368 | <0.341 | <0.484 | <0.490 | <0.391 | <0.433 | <0.455 | <0.419 | <0.420 | <0.384 | <0.754 | <0.385 |
| SS-2 | 325 E. Reservoir Ave Basement | Residential | 7/12/2024 | 6.53 | 1.63 | 31.8 | 0.540 J | <0.317 | 2.46 | 34.7 | 0.314 J | <0.267 | 42.4 | 2.56 | <0.384 | 1.90 J | 0.822 J | 0.874 J | <0.382 | 0.993 J | 1.06 J | 4.57 | 7.45 | <1.83 | 10.4 | 1.08 | <0.335 | 1.47 | 2.90 | <0.400 | 1.55 | 1.19 J | <0.382 | 0.682 J | 9.34 | 6.98 | 2.36 |
| | | | 12/12/2024 | 3.40 | 1.88 | 6.15 | <0.351 | <0.498 | <0.506 | <0.227 | <0.585 | <0.971 | 7.32 J | <0.337 | <0.435 | 2.31 | <0.466 | <0.504 | <0.355 | <0.587 | <0.544 | <0.342 | <0.434 | <3.23 | <1.67 | <0.368 | <0.341 | <0.484 | <0.490 | <0.391 | 1.18 J | <0.455 | <0.419 | <0.420 | <0.385 | <0.754 | <0.385 |
| SS-3 | Shared Garage Space | Residential | 7/12/2024 | 12.0 | 22.1 | 14.4 | 1.49 | 4.42 | 2.30 | <0.213 | 0.620 J | 24.3 | 20.0 | 4.47 | 0.545 J | 1.95 J | 1.23 J | 1.18 J | 0.456 J | <0.340 | 0.699 J | 2.18 | 7.94 | 2.44 J | 7.82 | <0.160 | <0.335 | <0.216 | 6.06 | 0.419 J | 2.17 | 3.08 | 1.21 J | 0.631 J | 17.0 | 12.3 | 4.68 |
| | | | 12/12/2024 | 11.8 | 5.79 | 2.61 J | <0.351 | <0.498 | 0.599 J | <0.227 | <0.585 | 0.364 J | <4.47 | <0.337 | <0.435 | 2.15 | <0.466 | <0.504 | <0.355 | <0.587 | <0.544 | <0.342 | <0.434 | <3.23 | <1.67 | <0.368 | <0.341 | <0.484 | 0.671 J | 0.410 J | <0.433 | <0.455 | <0.419 | <0.420 | <0.385 | <0.754 | <0.385 |
| SUMP-1 | 327 E. Reservoir Sump | Residential | 12/12/2024 | 4.71 | 1.79 | 7.06 | 0.473 J | <0.498 | 1.28 J | <0.227 | <0.585 | <0.291 | 19.2 | <0.337 | <0.435 | 2.29 | <0.466 | 1.15 J | 0.405 J | <0.587 | <0.544 | 1.18 | <0.434 | <3.23 | 1.96 J | 5.89 | <0.341 | <0.484 | 2.52 | <0.391 | 1.31 J | <0.455 | <0.419 | <0.420 | <0.385 | <0.754 | <0.385 |

**Notes:**

Results expressed in units of micrograms per cubic meter (µg/m³)

Sampling method: 6-Liter Suma Canister, 30-minute grab sample

J = Estimated concentration between the laboratory limit of detection and limit of quantitation

NE = No established standards

VRSL = Vapor Risk Screening Level

[1] VRSL is the indoor air vapor action level (VAL) adjusted for sub-slab vapor to indoor air by applying an attenuation factor of 0.01

[2] VRSL is the indoor air VAL adjusted by applying an attenuation factor of 0.03

**XX.XX** Brown and bolded values exceed the applicable large commercial/industrial VRSL

XX.XX Pink and underlined values exceed the applicable small commercial VRSL

*XX.XX* Blue and italicized values exceed the applicable residential VRSL

Beacon Environmental
526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

# CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 241122R03

Laboratory Work Order: 0008201

**Project Description:**

Barrel Plating Services fmr 58247140
Milwaukee, WI

Client PO No.: P00198962

Prepared for:
Rachel Slonac
**Terracon**
4900 South Pennsylvania Ave, Ste 100
Cudahy, WI 53110

Ryan W. Schneider
Senior Project Manager

December 24, 2024

All data meet requirements as specified in the Beacon Environmental Quality System Manual and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. 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

BEACON ENVIRONMENTAL

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# CERTIFICATE OF ANALYSIS

| | | |
|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

## Sample Summary

| Lab Sample ID | Client Sample ID | Received | Analysis | Matrix |
|---|---|---|---|---|
| 0008201-01 | OA | 12/16/2024 | TO-17 (Passive) | Ambient Air |
| Sampler Type: | Beacon Passive Sampler | | | |
| 0008201-02 | 325-B | 12/16/2024 | TO-17 (Passive) | Indoor Air |
| Sampler Type: | Beacon Passive Sampler | | | |
| 0008201-03 | 327-B | 12/16/2024 | TO-17 (Passive) | Indoor Air |
| Sampler Type: | Beacon Passive Sampler | | | |

### Project Completeness

**Samples Received:** 3
**Samples Analyzed:** 3

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| | | |
|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

# *Case Narrative*

Beacon Environmental provided thermally conditioned Beacon Samplers for sampling, with analyses following U.S. EPA Method TO-17, with analytical results reported in µg/m3. Beacon calculated concentration results using the exposure period, target analyte mass, and the following procedures detailed in ISO 16017-2, *Indoor, ambient and workplace air-Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography-Part 2: Diffusive sampling.*

Beacon reports results and reporting limits to three significant digits.

**Reporting Limits (RLs) for EPA Method TO-17**
The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Beacon performed dilution analysis when results exceeded the upper calibration limit, bringing all reported results within the calibration range. The project method quantitation limit (MQL) is the limit of detection (LOD) as noted in the data tables.

**Calibration Verification**
All continuing calibration verification (CCV) values are within ±30% of the true values as defined by the initial calibration and met the requirements specified in BEACON's Quality Manual.

**Internal Standards and Surrogates**
Internal standards and surrogates are spiked on all blanks (ICB, BLK), field samples and laboratory control samples (ICV/CALV, BS, ICV and CCV). Acceptance criteria for internal standards are 60 to 140 percent and surrogate recoveries are 70 to 130 percent; all internal standards and surrogates are within the acceptance criteria unless noted in the **Case Narrative**.

**Blank Contamination**
No targeted compounds above the limit of detection (LOD) for each compound were observed in the Laboratory Method Blanks unless noted in the **Case Narrative**.

**Laboratory Control Samples**
Acceptance criteria for surrogate and analytes recoveries are 70 to 130 percent; all recoveries are within the acceptance criteria unless noted in the **Case Narrative**.

**Discussion**
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.

End of Case Narrative

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| | | |
|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

# *Analytical Results*

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| | | |
|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

## *Summary of Compound Detections- Concentration*

Lab Sample ID: 0008201-01 — **OA** — Ambient Air — Method: TO-17 (Passive)

| Analyte | CAS# | Result (µg/m³) | Q | RT | LOQ (µg/m³) | LOD (µg/m³) | File ID |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 1.70 | J | 4.173 | 3.36 | 1.34 | S24122023.D |

Lab Sample ID: 0008201-02 — **325-B** — Indoor Air — Method: TO-17 (Passive)

| Analyte | CAS# | Result (µg/m³) | Q | RT | LOQ (µg/m³) | LOD (µg/m³) | File ID |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 4.40 | | 4.173 | 3.27 | 1.31 | S24122024.D |
| Toluene | 108-88-3 | 14.0 | | 5.564 | 4.33 | 1.73 | S24122024.D |
| Ethylbenzene | 100-41-4 | 1.75 | J | 6.694 | 2.04 | 0.815 | S24122024.D |
| p & m-Xylene | 179601-23-1 | 7.20 | | 6.786 | 1.97 | 0.787 | S24122024.D |
| o-Xylene | 95-47-6 | 2.42 | | 7.057 | 1.97 | 0.787 | S24122024.D |
| 1,2,4-Trimethylbenzene | 95-63-6 | 3.38 | | 7.98 | 2.09 | 0.835 | S24122024.D |
| Naphthalene | 91-20-3 | 0.448 | J | 9.642 | 0.866 | 0.433 | S24122024.D |

Lab Sample ID: 0008201-03 — **327-B** — Indoor Air — Method: TO-17 (Passive)

| Analyte | CAS# | Result (µg/m³) | Q | RT | LOQ (µg/m³) | LOD (µg/m³) | File ID |
|---|---|---|---|---|---|---|---|
| Methylene Chloride | 75-09-2 | 1.52 | J | 3.036 | 1.97 | 0.985 | S24122025.D |
| Benzene | 71-43-2 | 2.84 | J | 4.173 | 3.25 | 1.30 | S24122025.D |
| Toluene | 108-88-3 | 5.36 | | 5.564 | 4.31 | 1.72 | S24122025.D |
| p & m-Xylene | 179601-23-1 | 3.01 | | 6.783 | 1.96 | 0.784 | S24122025.D |
| o-Xylene | 95-47-6 | 1.07 | J | 7.057 | 1.96 | 0.784 | S24122025.D |
| 1,2,4-Trimethylbenzene | 95-63-6 | 1.76 | J | 7.98 | 2.08 | 0.831 | S24122025.D |

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| | | |
|---|---|---|
| **Terracon**<br>4900 South Pennsylvania Ave, Ste 100<br>Cudahy, WI 53110 | **Site Name:** Barrel Plating Services fmr 58247140<br>**Site Location:** Milwaukee, WI<br>**Project Manager:** Rachel Slonac | **Beacon Proposal:** 241122R03<br>**Lab Work Order:** 0008201<br>**Reported:** 12/24/2024 |

## *Data Summary Table- Concentration*

| Compound | Frequency | LOD (µg/m³) | Max Value (µg/m³) |
|---|---|---|---|
| Methylene Chloride | 1 | 0.985 | 1.52 |
| Benzene | 3 | 1.30 | 4.40 |
| Toluene | 2 | 1.72 | 14.0 |
| Ethylbenzene | 1 | 0.815 | 1.75 |
| p & m-Xylene | 2 | 0.784 | 7.20 |
| o-Xylene | 2 | 0.784 | 2.42 |
| 1,2,4-Trimethylbenzene | 2 | 0.831 | 3.38 |
| Naphthalene | 1 | 0.433 | 0.448 |

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| | | |
|---|---|---|
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| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

# *Detailed Analytical Results*

526 Underwood Lane
Bel Air, MD 21014 USA
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# CERTIFICATE OF ANALYSIS

| | | |
|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

Lab Sample ID: 0008201-01

## OA

Ambient Air

Method: TO-17 (Passive)

| Analyte | CAS# | Result (µg/m³) | Q | LOD (µg/m³) | LOQ (µg/m³) | Analyzed | File ID |
|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 75-01-4 | <0.439 | U | 0.439 | 0.878 | 12/21/2024 03:28 | S24122023.D |
| 1,1-Dichloroethene | 75-35-4 | <1.08 | U | 1.08 | 2.16 | 12/21/2024 03:28 | S24122023.D |
| Methylene Chloride | 75-09-2 | <1.02 | U | 1.02 | 2.03 | 12/21/2024 03:28 | S24122023.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 76-13-1 | <0.400 | U | 0.400 | 0.799 | 12/21/2024 03:28 | S24122023.D |
| trans-1,2-Dichloroethene | 156-60-5 | <0.808 | U | 0.808 | 1.62 | 12/21/2024 03:28 | S24122023.D |
| Methyl-t-butyl ether | 1634-04-4 | <1.42 | U | 1.42 | 3.56 | 12/21/2024 03:28 | S24122023.D |
| 1,1-Dichloroethane | 75-34-3 | <0.418 | U | 0.418 | 0.837 | 12/21/2024 03:28 | S24122023.D |
| cis-1,2-Dichloroethene | 156-59-2 | <0.671 | U | 0.671 | 1.34 | 12/21/2024 03:28 | S24122023.D |
| Chloroform | 67-66-3 | <1.02 | U | 1.02 | 2.03 | 12/21/2024 03:28 | S24122023.D |
| 1,2-Dichloroethane | 107-06-2 | <0.635 | U | 0.635 | 1.27 | 12/21/2024 03:28 | S24122023.D |
| 1,1,1-Trichloroethane | 71-55-6 | <0.339 | U | 0.339 | 0.677 | 12/21/2024 03:28 | S24122023.D |
| Carbon Tetrachloride | 56-23-5 | <0.827 | U | 0.827 | 1.65 | 12/21/2024 03:28 | S24122023.D |
| **Benzene** | 71-43-2 | **1.70** | J | 1.34 | 3.36 | 12/21/2024 03:28 | S24122023.D |
| Trichloroethene | 79-01-6 | <1.08 | U | 1.08 | 2.16 | 12/21/2024 03:28 | S24122023.D |
| 1,4-Dioxane | 123-91-1 | <0.867 | U | 0.867 | 1.73 | 12/21/2024 03:28 | S24122023.D |
| 1,1,2-Trichloroethane | 79-00-5 | <1.08 | U | 1.08 | 2.16 | 12/21/2024 03:28 | S24122023.D |
| Toluene | 108-88-3 | <1.78 | U | 1.78 | 4.45 | 12/21/2024 03:28 | S24122023.D |
| 1,2-Dibromoethane (EDB) | 106-93-4 | <0.912 | U | 0.912 | 1.82 | 12/21/2024 03:28 | S24122023.D |
| Tetrachloroethene | 127-18-4 | <0.867 | U | 0.867 | 1.73 | 12/21/2024 03:28 | S24122023.D |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | <0.867 | U | 0.867 | 1.73 | 12/21/2024 03:28 | S24122023.D |
| Chlorobenzene | 108-90-7 | <0.418 | U | 0.418 | 0.837 | 12/21/2024 03:28 | S24122023.D |
| Ethylbenzene | 100-41-4 | <0.837 | U | 0.837 | 2.09 | 12/21/2024 03:28 | S24122023.D |
| p & m-Xylene | 179601-23-1 | <0.808 | U | 0.808 | 2.02 | 12/21/2024 03:28 | S24122023.D |
| o-Xylene | 95-47-6 | <0.808 | U | 0.808 | 2.02 | 12/21/2024 03:28 | S24122023.D |
| 1,2,3-Trichloropropane | 96-18-4 | <0.474 | U | 0.474 | 0.948 | 12/21/2024 03:28 | S24122023.D |
| Isopropylbenzene | 98-82-8 | <0.857 | U | 0.857 | 2.14 | 12/21/2024 03:28 | S24122023.D |
| 1,3,5-Trimethylbenzene | 108-67-8 | <0.857 | U | 0.857 | 2.14 | 12/21/2024 03:28 | S24122023.D |
| 1,2,4-Trimethylbenzene | 95-63-6 | <0.857 | U | 0.857 | 2.14 | 12/21/2024 03:28 | S24122023.D |
| 1,3-Dichlorobenzene | 541-73-1 | <0.474 | U | 0.474 | 0.948 | 12/21/2024 03:28 | S24122023.D |
| 1,4-Dichlorobenzene | 106-46-7 | <0.474 | U | 0.474 | 0.948 | 12/21/2024 03:28 | S24122023.D |
| 1,2-Dichlorobenzene | 95-50-1 | <0.474 | U | 0.474 | 0.948 | 12/21/2024 03:28 | S24122023.D |
| 1,2,4-Trichlorobenzene | 120-82-1 | <0.912 | U | 0.912 | 1.82 | 12/21/2024 03:28 | S24122023.D |
| Naphthalene | 91-20-3 | <0.445 | U | 0.445 | 0.889 | 12/21/2024 03:28 | S24122023.D |
| 1,2,3-Trichlorobenzene | 87-61-6 | <0.912 | U | 0.912 | 1.82 | 12/21/2024 03:28 | S24122023.D |
| 2-Methylnaphthalene | 91-57-6 | <0.468 | U | 0.468 | 0.936 | 12/21/2024 03:28 | S24122023.D |

| *Analyte* | *CAS#* | *% Recovery* | *Recovery Limits* | *Q* | *Analyzed* | *File ID* |
|---|---|---|---|---|---|---|
| *Surrogate: 1,2-DCA-d4* | 17060-07-0 | *91.0%* | *70-130* | | *12/21/2024 03:28* | *S24122023.D* |
| *Surrogate: Toluene-d8* | 2037-26-5 | *95.2%* | *70-130* | | *12/21/2024 03:28* | *S24122023.D* |
| *Surrogate: Bromofluorobenzene* | 460-00-4 | *99.1%* | *70-130* | | *12/21/2024 03:28* | *S24122023.D* |

BEACON ENVIRONMENTAL

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

# CERTIFICATE OF ANALYSIS

| | | |
|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

Lab Sample ID: 0008201-02

## 325-B

Indoor Air

Method: TO-17 (Passive)

| Analyte | CAS# | Result (µg/m³) | Q | LOD (µg/m³) | LOQ (µg/m³) | Analyzed | File ID |
|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 75-01-4 | <0.428 | U | 0.428 | 0.855 | 12/21/2024 04:02 | S24122024.D |
| 1,1-Dichloroethene | 75-35-4 | <1.05 | U | 1.05 | 2.10 | 12/21/2024 04:02 | S24122024.D |
| Methylene Chloride | 75-09-2 | <0.990 | U | 0.990 | 1.98 | 12/21/2024 04:02 | S24122024.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 76-13-1 | <0.389 | U | 0.389 | 0.778 | 12/21/2024 04:02 | S24122024.D |
| trans-1,2-Dichloroethene | 156-60-5 | <0.787 | U | 0.787 | 1.57 | 12/21/2024 04:02 | S24122024.D |
| Methyl-t-butyl ether | 1634-04-4 | <1.39 | U | 1.39 | 3.46 | 12/21/2024 04:02 | S24122024.D |
| 1,1-Dichloroethane | 75-34-3 | <0.408 | U | 0.408 | 0.815 | 12/21/2024 04:02 | S24122024.D |
| cis-1,2-Dichloroethene | 156-59-2 | <0.654 | U | 0.654 | 1.31 | 12/21/2024 04:02 | S24122024.D |
| Chloroform | 67-66-3 | <0.990 | U | 0.990 | 1.98 | 12/21/2024 04:02 | S24122024.D |
| 1,2-Dichloroethane | 107-06-2 | <0.619 | U | 0.619 | 1.24 | 12/21/2024 04:02 | S24122024.D |
| 1,1,1-Trichloroethane | 71-55-6 | <0.330 | U | 0.330 | 0.660 | 12/21/2024 04:02 | S24122024.D |
| Carbon Tetrachloride | 56-23-5 | <0.806 | U | 0.806 | 1.61 | 12/21/2024 04:02 | S24122024.D |
| **Benzene** | 71-43-2 | **4.40** | | 1.31 | 3.27 | 12/21/2024 04:02 | S24122024.D |
| Trichloroethene | 79-01-6 | <1.05 | U | 1.05 | 2.10 | 12/21/2024 04:02 | S24122024.D |
| 1,4-Dioxane | 123-91-1 | <0.845 | U | 0.845 | 1.69 | 12/21/2024 04:02 | S24122024.D |
| 1,1,2-Trichloroethane | 79-00-5 | <1.05 | U | 1.05 | 2.10 | 12/21/2024 04:02 | S24122024.D |
| **Toluene** | 108-88-3 | **14.0** | | 1.73 | 4.33 | 12/21/2024 04:02 | S24122024.D |
| 1,2-Dibromoethane (EDB) | 106-93-4 | <0.888 | U | 0.888 | 1.78 | 12/21/2024 04:02 | S24122024.D |
| Tetrachloroethene | 127-18-4 | <0.845 | U | 0.845 | 1.69 | 12/21/2024 04:02 | S24122024.D |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | <0.845 | U | 0.845 | 1.69 | 12/21/2024 04:02 | S24122024.D |
| Chlorobenzene | 108-90-7 | <0.408 | U | 0.408 | 0.815 | 12/21/2024 04:02 | S24122024.D |
| **Ethylbenzene** | 100-41-4 | **1.75** | J | 0.815 | 2.04 | 12/21/2024 04:02 | S24122024.D |
| **p & m-Xylene** | 179601-23-1 | **7.20** | | 0.787 | 1.97 | 12/21/2024 04:02 | S24122024.D |
| **o-Xylene** | 95-47-6 | **2.42** | | 0.787 | 1.97 | 12/21/2024 04:02 | S24122024.D |
| 1,2,3-Trichloropropane | 96-18-4 | <0.462 | U | 0.462 | 0.924 | 12/21/2024 04:02 | S24122024.D |
| Isopropylbenzene | 98-82-8 | <0.835 | U | 0.835 | 2.09 | 12/21/2024 04:02 | S24122024.D |
| 1,3,5-Trimethylbenzene | 108-67-8 | <0.835 | U | 0.835 | 2.09 | 12/21/2024 04:02 | S24122024.D |
| **1,2,4-Trimethylbenzene** | 95-63-6 | **3.38** | | 0.835 | 2.09 | 12/21/2024 04:02 | S24122024.D |
| 1,3-Dichlorobenzene | 541-73-1 | <0.462 | U | 0.462 | 0.924 | 12/21/2024 04:02 | S24122024.D |
| 1,4-Dichlorobenzene | 106-46-7 | <0.462 | U | 0.462 | 0.924 | 12/21/2024 04:02 | S24122024.D |
| 1,2-Dichlorobenzene | 95-50-1 | <0.462 | U | 0.462 | 0.924 | 12/21/2024 04:02 | S24122024.D |
| 1,2,4-Trichlorobenzene | 120-82-1 | <0.888 | U | 0.888 | 1.78 | 12/21/2024 04:02 | S24122024.D |
| **Naphthalene** | 91-20-3 | **0.448** | J | 0.433 | 0.866 | 12/21/2024 04:02 | S24122024.D |
| 1,2,3-Trichlorobenzene | 87-61-6 | <0.888 | U | 0.888 | 1.78 | 12/21/2024 04:02 | S24122024.D |
| 2-Methylnaphthalene | 91-57-6 | <0.456 | U | 0.456 | 0.912 | 12/21/2024 04:02 | S24122024.D |

| *Analyte* | *CAS#* | *% Recovery* | *Recovery Limits* | *Q* | *Analyzed* | *File ID* |
|---|---|---|---|---|---|---|
| *Surrogate: 1,2-DCA-d4* | 17060-07-0 | *99.1%* | *70-130* | | *12/21/2024 04:02* | *S24122024.D* |
| *Surrogate: Toluene-d8* | 2037-26-5 | *96.2%* | *70-130* | | *12/21/2024 04:02* | *S24122024.D* |
| *Surrogate: Bromofluorobenzene* | 460-00-4 | *99.8%* | *70-130* | | *12/21/2024 04:02* | *S24122024.D* |

BEACON ENVIRONMENTAL

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

# CERTIFICATE OF ANALYSIS

| | | |
|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

Lab Sample ID: 0008201-03

## 327-B

Indoor Air

Method: TO-17 (Passive)

| Analyte | CAS# | Result (µg/m³) | Q | LOD (µg/m³) | LOQ (µg/m³) | Analyzed | File ID |
|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 75-01-4 | <0.426 | U | 0.426 | 0.851 | 12/21/2024 04:37 | S24122025.D |
| 1,1-Dichloroethene | 75-35-4 | <1.04 | U | 1.04 | 2.09 | 12/21/2024 04:37 | S24122025.D |
| **Methylene Chloride** | 75-09-2 | **1.52** | J | 0.985 | 1.97 | 12/21/2024 04:37 | S24122025.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 76-13-1 | <0.387 | U | 0.387 | 0.775 | 12/21/2024 04:37 | S24122025.D |
| trans-1,2-Dichloroethene | 156-60-5 | <0.784 | U | 0.784 | 1.57 | 12/21/2024 04:37 | S24122025.D |
| Methyl-t-butyl ether | 1634-04-4 | <1.38 | U | 1.38 | 3.45 | 12/21/2024 04:37 | S24122025.D |
| 1,1-Dichloroethane | 75-34-3 | <0.406 | U | 0.406 | 0.811 | 12/21/2024 04:37 | S24122025.D |
| cis-1,2-Dichloroethene | 156-59-2 | <0.651 | U | 0.651 | 1.30 | 12/21/2024 04:37 | S24122025.D |
| Chloroform | 67-66-3 | <0.985 | U | 0.985 | 1.97 | 12/21/2024 04:37 | S24122025.D |
| 1,2-Dichloroethane | 107-06-2 | <0.616 | U | 0.616 | 1.23 | 12/21/2024 04:37 | S24122025.D |
| 1,1,1-Trichloroethane | 71-55-6 | <0.328 | U | 0.328 | 0.657 | 12/21/2024 04:37 | S24122025.D |
| Carbon Tetrachloride | 56-23-5 | <0.802 | U | 0.802 | 1.60 | 12/21/2024 04:37 | S24122025.D |
| **Benzene** | 71-43-2 | **2.84** | J | 1.30 | 3.25 | 12/21/2024 04:37 | S24122025.D |
| Trichloroethene | 79-01-6 | <1.04 | U | 1.04 | 2.09 | 12/21/2024 04:37 | S24122025.D |
| 1,4-Dioxane | 123-91-1 | <0.841 | U | 0.841 | 1.68 | 12/21/2024 04:37 | S24122025.D |
| 1,1,2-Trichloroethane | 79-00-5 | <1.04 | U | 1.04 | 2.09 | 12/21/2024 04:37 | S24122025.D |
| **Toluene** | 108-88-3 | **5.36** | | 1.72 | 4.31 | 12/21/2024 04:37 | S24122025.D |
| 1,2-Dibromoethane (EDB) | 106-93-4 | <0.884 | U | 0.884 | 1.77 | 12/21/2024 04:37 | S24122025.D |
| Tetrachloroethene | 127-18-4 | <0.841 | U | 0.841 | 1.68 | 12/21/2024 04:37 | S24122025.D |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | <0.841 | U | 0.841 | 1.68 | 12/21/2024 04:37 | S24122025.D |
| Chlorobenzene | 108-90-7 | <0.406 | U | 0.406 | 0.811 | 12/21/2024 04:37 | S24122025.D |
| Ethylbenzene | 100-41-4 | <0.811 | U | 0.811 | 2.03 | 12/21/2024 04:37 | S24122025.D |
| **p & m-Xylene** | 179601-23-1 | **3.01** | | 0.784 | 1.96 | 12/21/2024 04:37 | S24122025.D |
| **o-Xylene** | 95-47-6 | **1.07** | J | 0.784 | 1.96 | 12/21/2024 04:37 | S24122025.D |
| 1,2,3-Trichloropropane | 96-18-4 | <0.460 | U | 0.460 | 0.920 | 12/21/2024 04:37 | S24122025.D |
| Isopropylbenzene | 98-82-8 | <0.831 | U | 0.831 | 2.08 | 12/21/2024 04:37 | S24122025.D |
| 1,3,5-Trimethylbenzene | 108-67-8 | <0.831 | U | 0.831 | 2.08 | 12/21/2024 04:37 | S24122025.D |
| **1,2,4-Trimethylbenzene** | 95-63-6 | **1.76** | J | 0.831 | 2.08 | 12/21/2024 04:37 | S24122025.D |
| 1,3-Dichlorobenzene | 541-73-1 | <0.460 | U | 0.460 | 0.920 | 12/21/2024 04:37 | S24122025.D |
| 1,4-Dichlorobenzene | 106-46-7 | <0.460 | U | 0.460 | 0.920 | 12/21/2024 04:37 | S24122025.D |
| 1,2-Dichlorobenzene | 95-50-1 | <0.460 | U | 0.460 | 0.920 | 12/21/2024 04:37 | S24122025.D |
| 1,2,4-Trichlorobenzene | 120-82-1 | <0.884 | U | 0.884 | 1.77 | 12/21/2024 04:37 | S24122025.D |
| Naphthalene | 91-20-3 | <0.431 | U | 0.431 | 0.862 | 12/21/2024 04:37 | S24122025.D |
| 1,2,3-Trichlorobenzene | 87-61-6 | <0.884 | U | 0.884 | 1.77 | 12/21/2024 04:37 | S24122025.D |
| 2-Methylnaphthalene | 91-57-6 | <0.454 | U | 0.454 | 0.907 | 12/21/2024 04:37 | S24122025.D |

| *Analyte* | *CAS#* | *% Recovery* | *Recovery Limits* | *Q* | *Analyzed* | *File ID* |
|---|---|---|---|---|---|---|
| *Surrogate: 1,2-DCA-d4* | 17060-07-0 | *100%* | *70-130* | | *12/21/2024 04:37* | *S24122025.D* |
| *Surrogate: Toluene-d8* | 2037-26-5 | *94.3%* | *70-130* | | *12/21/2024 04:37* | *S24122025.D* |
| *Surrogate: Bromofluorobenzene* | 460-00-4 | *101%* | *70-130* | | *12/21/2024 04:37* | *S24122025.D* |

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

| | | |
|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

# *QC Information/Summary*

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

| | | |
|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

## *Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24L008 - Instrument: S System - File ID: S24112720.D**

***B24L008-ICV1 (LCSD/Second Source Verification/CALV)***

| Analyte | Result | LOQ | LOD | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 40.4 | 10 | 5 | ng | 50.0 | | 80.7 | 70-130 | | | |
| 1,1-Dichloroethene | 55.8 | 10 | 5 | ng | 50.0 | | 112 | 70-130 | | | |
| Methylene Chloride | 55.9 | 10 | 5 | ng | 50.0 | | 112 | 70-130 | | | |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 53.7 | 10 | 5 | ng | 50.0 | | 107 | 70-130 | | | |
| trans-1,2-Dichloroethene | 55.3 | 10 | 5 | ng | 50.0 | | 111 | 70-130 | | | |
| Methyl-t-butyl ether | 55.6 | 25 | 10 | ng | 50.0 | | 111 | 70-130 | | | |
| 1,1-Dichloroethane | 56.2 | 10 | 5 | ng | 50.0 | | 112 | 70-130 | | | |
| cis-1,2-Dichloroethene | 59.0 | 10 | 5 | ng | 50.0 | | 118 | 70-130 | | | |
| Chloroform | 59.8 | 10 | 5 | ng | 50.0 | | 120 | 70-130 | | | |
| 1,2-Dichloroethane | 58.8 | 10 | 5 | ng | 50.0 | | 118 | 70-130 | | | |
| 1,1,1-Trichloroethane | 57.7 | 10 | 5 | ng | 50.0 | | 115 | 70-130 | | | |
| Carbon Tetrachloride | 57.6 | 10 | 5 | ng | 50.0 | | 115 | 70-130 | | | |
| Benzene | 59.8 | 25 | 10 | ng | 50.0 | | 120 | 70-130 | | | |
| Trichloroethene | 54.1 | 10 | 5 | ng | 50.0 | | 108 | 70-130 | | | |
| 1,4-Dioxane | 58.5 | 10 | 5 | ng | 50.0 | | 117 | 70-130 | | | |
| 1,1,2-Trichloroethane | 58.5 | 10 | 5 | ng | 50.0 | | 117 | 70-130 | | | |
| Toluene | 54.2 | 25 | 10 | ng | 50.0 | | 108 | 70-130 | | | |
| 1,2-Dibromoethane (EDB) | 50.3 | 10 | 5 | ng | 50.0 | | 101 | 70-130 | | | |
| Tetrachloroethene | 54.0 | 10 | 5 | ng | 50.0 | | 108 | 70-130 | | | |
| 1,1,1,2-Tetrachloroethane | 49.9 | 10 | 5 | ng | 50.0 | | 99.8 | 70-130 | | | |
| Chlorobenzene | 51.2 | 10 | 5 | ng | 50.0 | | 102 | 70-130 | | | |
| Ethylbenzene | 53.1 | 25 | 10 | ng | 50.0 | | 106 | 70-130 | | | |
| p & m-Xylene | 52.6 | 25 | 10 | ng | 50.0 | | 105 | 70-130 | | | |
| o-Xylene | 54.0 | 25 | 10 | ng | 50.0 | | 108 | 70-130 | | | |
| 1,2,3-Trichloropropane | 44.6 | 10 | 5 | ng | 50.0 | | 89.2 | 70-130 | | | |
| Isopropylbenzene | 50.7 | 25 | 10 | ng | 50.0 | | 101 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 51.6 | 25 | 10 | ng | 50.0 | | 103 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 50.9 | 25 | 10 | ng | 50.0 | | 102 | 70-130 | | | |
| 1,3-Dichlorobenzene | 51.4 | 10 | 5 | ng | 50.0 | | 103 | 70-130 | | | |
| 1,4-Dichlorobenzene | 52.2 | 10 | 5 | ng | 50.0 | | 104 | 70-130 | | | |
| 1,2-Dichlorobenzene | 50.9 | 10 | 5 | ng | 50.0 | | 102 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 56.0 | 10 | 5 | ng | 50.0 | | 112 | 70-130 | | | |
| Naphthalene | 58.0 | 10 | 5 | ng | 50.0 | | 116 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 54.7 | 10 | 5 | ng | 50.0 | | 109 | 70-130 | | | |
| 2-Methylnaphthalene | 59.7 | 10 | 5 | ng | 50.0 | | 119 | 70-130 | | | |
| *Surrogate: 1,2-DCA-d4* | *58.7* | | | *ng* | 50.0 | | *117* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *52.1* | | | *ng* | 50.0 | | *104* | *70-130* | | | |
| *Surrogate: Bromofluorobenzene* | *50.4* | | | *ng* | 50.0 | | *101* | *70-130* | | | |

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|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

## *Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24L008 - Instrument: S System - File ID: S24112721.D**

***B24L008-ICB1 (Lab Blank/Initial Calibration Blank)***

| Analyte | Result | LOQ | LOD | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | <5 | 10 | 5 | ng | | | | | | | U |
| 1,1-Dichloroethene | <5 | 10 | 5 | ng | | | | | | | U |
| Methylene Chloride | <5 | 10 | 5 | ng | | | | | | | U |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | <5 | 10 | 5 | ng | | | | | | | U |
| trans-1,2-Dichloroethene | <5 | 10 | 5 | ng | | | | | | | U |
| Methyl-t-butyl ether | <10 | 25 | 10 | ng | | | | | | | U |
| 1,1-Dichloroethane | <5 | 10 | 5 | ng | | | | | | | U |
| cis-1,2-Dichloroethene | <5 | 10 | 5 | ng | | | | | | | U |
| Chloroform | <5 | 10 | 5 | ng | | | | | | | U |
| 1,2-Dichloroethane | <5 | 10 | 5 | ng | | | | | | | U |
| 1,1,1-Trichloroethane | <5 | 10 | 5 | ng | | | | | | | U |
| Carbon Tetrachloride | <5 | 10 | 5 | ng | | | | | | | U |
| Benzene | <10 | 25 | 10 | ng | | | | | | | U |
| Trichloroethene | <5 | 10 | 5 | ng | | | | | | | U |
| 1,4-Dioxane | <5 | 10 | 5 | ng | | | | | | | U |
| 1,1,2-Trichloroethane | <5 | 10 | 5 | ng | | | | | | | U |
| Toluene | <10 | 25 | 10 | ng | | | | | | | U |
| 1,2-Dibromoethane (EDB) | <5 | 10 | 5 | ng | | | | | | | U |
| Tetrachloroethene | <5 | 10 | 5 | ng | | | | | | | U |
| 1,1,1,2-Tetrachloroethane | <5 | 10 | 5 | ng | | | | | | | U |
| Chlorobenzene | <5 | 10 | 5 | ng | | | | | | | U |
| Ethylbenzene | <10 | 25 | 10 | ng | | | | | | | U |
| p & m-Xylene | <10 | 25 | 10 | ng | | | | | | | U |
| o-Xylene | <10 | 25 | 10 | ng | | | | | | | U |
| 1,2,3-Trichloropropane | <5 | 10 | 5 | ng | | | | | | | U |
| Isopropylbenzene | <10 | 25 | 10 | ng | | | | | | | U |
| 1,3,5-Trimethylbenzene | <10 | 25 | 10 | ng | | | | | | | U |
| 1,2,4-Trimethylbenzene | <10 | 25 | 10 | ng | | | | | | | U |
| 1,3-Dichlorobenzene | <5 | 10 | 5 | ng | | | | | | | U |
| 1,4-Dichlorobenzene | <5 | 10 | 5 | ng | | | | | | | U |
| 1,2-Dichlorobenzene | <5 | 10 | 5 | ng | | | | | | | U |
| 1,2,4-Trichlorobenzene | <5 | 10 | 5 | ng | | | | | | | U |
| Naphthalene | <5 | 10 | 5 | ng | | | | | | | U |
| 1,2,3-Trichlorobenzene | <5 | 10 | 5 | ng | | | | | | | U |
| 2-Methylnaphthalene | <5 | 10 | 5 | ng | | | | | | | U |
| *Surrogate: 1,2-DCA-d4* | *95.1* | | | *ng* | 100 | | *95.1* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *98.7* | | | *ng* | 100 | | *98.7* | *70-130* | | | |
| *Surrogate: Bromofluorobenzene* | *99.6* | | | *ng* | 100 | | *99.6* | *70-130* | | | |

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|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

## *Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24L135 - Batch: 24L0120 - Instrument: S System - File ID: S24122002.D**

***24L0120-BS1 (LCS, Calibration Source Verification)***

| Analyte | Result | LOQ | LOD | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 44.8 | 10 | 5 | ng | 50.0 | | 89.7 | 70-130 | | | |
| 1,1-Dichloroethene | 45.3 | 10 | 5 | ng | 50.0 | | 90.6 | 70-130 | | | |
| Methylene Chloride | 46.5 | 10 | 5 | ng | 50.0 | | 92.9 | 70-130 | | | |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 43.8 | 10 | 5 | ng | 50.0 | | 87.7 | 70-130 | | | |
| trans-1,2-Dichloroethene | 46.3 | 10 | 5 | ng | 50.0 | | 92.5 | 70-130 | | | |
| Methyl-t-butyl ether | 57.1 | 25 | 10 | ng | 50.0 | | 114 | 70-130 | | | |
| 1,1-Dichloroethane | 47.7 | 10 | 5 | ng | 50.0 | | 95.3 | 70-130 | | | |
| cis-1,2-Dichloroethene | 47.0 | 10 | 5 | ng | 50.0 | | 94.1 | 70-130 | | | |
| Chloroform | 47.3 | 10 | 5 | ng | 50.0 | | 94.6 | 70-130 | | | |
| 1,2-Dichloroethane | 49.0 | 10 | 5 | ng | 50.0 | | 98.1 | 70-130 | | | |
| 1,1,1-Trichloroethane | 50.8 | 10 | 5 | ng | 50.0 | | 102 | 70-130 | | | |
| Carbon Tetrachloride | 57.1 | 10 | 5 | ng | 50.0 | | 114 | 70-130 | | | |
| Benzene | 48.7 | 25 | 10 | ng | 50.0 | | 97.4 | 70-130 | | | |
| Trichloroethene | 46.6 | 10 | 5 | ng | 50.0 | | 93.3 | 70-130 | | | |
| 1,4-Dioxane | 59.3 | 10 | 5 | ng | 50.0 | | 119 | 70-130 | | | |
| 1,1,2-Trichloroethane | 53.1 | 10 | 5 | ng | 50.0 | | 106 | 70-130 | | | |
| Toluene | 48.7 | 25 | 10 | ng | 50.0 | | 97.4 | 70-130 | | | |
| 1,2-Dibromoethane (EDB) | 50.7 | 10 | 5 | ng | 50.0 | | 101 | 70-130 | | | |
| Tetrachloroethene | 58.0 | 10 | 5 | ng | 50.0 | | 116 | 70-130 | | | |
| 1,1,1,2-Tetrachloroethane | 56.6 | 10 | 5 | ng | 50.0 | | 113 | 70-130 | | | |
| Chlorobenzene | 46.8 | 10 | 5 | ng | 50.0 | | 93.6 | 70-130 | | | |
| Ethylbenzene | 52.5 | 25 | 10 | ng | 50.0 | | 105 | 70-130 | | | |
| p & m-Xylene | 58.5 | 25 | 10 | ng | 50.0 | | 117 | 70-130 | | | |
| o-Xylene | 51.7 | 25 | 10 | ng | 50.0 | | 103 | 70-130 | | | |
| 1,2,3-Trichloropropane | 48.3 | 10 | 5 | ng | 50.0 | | 96.5 | 70-130 | | | |
| Isopropylbenzene | 53.9 | 25 | 10 | ng | 50.0 | | 108 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 57.7 | 25 | 10 | ng | 50.0 | | 115 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 57.2 | 25 | 10 | ng | 50.0 | | 114 | 70-130 | | | |
| 1,3-Dichlorobenzene | 58.8 | 10 | 5 | ng | 50.0 | | 118 | 70-130 | | | |
| 1,4-Dichlorobenzene | 58.3 | 10 | 5 | ng | 50.0 | | 117 | 70-130 | | | |
| 1,2-Dichlorobenzene | 54.0 | 10 | 5 | ng | 50.0 | | 108 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 54.9 | 10 | 5 | ng | 50.0 | | 110 | 70-130 | | | |
| Naphthalene | 62.2 | 10 | 5 | ng | 50.0 | | 124 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 52.9 | 10 | 5 | ng | 50.0 | | 106 | 70-130 | | | |
| 2-Methylnaphthalene | 62.2 | 10 | 5 | ng | 50.0 | | 124 | 70-130 | | | |
| *Surrogate: 1,2-DCA-d4* | *50.8* | | | *ng* | 50.0 | | *102* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *51.7* | | | *ng* | 50.0 | | *103* | *70-130* | | | |
| *Surrogate: Bromofluorobenzene* | *54.5* | | | *ng* | 50.0 | | *109* | *70-130* | | | |

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|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

## *Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24L135 - Batch: 24L0120 - Instrument: S System - File ID: S24122003.D**

***24L0120-BLK1 (Lab Blank)***

| Analyte | Result | LOQ | LOD | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | <0.424 | 0.847 | 0.424 | µg/m³ | | | | | | | U |
| 1,1-Dichloroethene | <1.04 | 2.08 | 1.04 | µg/m³ | | | | | | | U |
| Methylene Chloride | <0.981 | 1.96 | 0.981 | µg/m³ | | | | | | | U |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | <0.386 | 0.771 | 0.386 | µg/m³ | | | | | | | U |
| trans-1,2-Dichloroethene | <0.780 | 1.56 | 0.780 | µg/m³ | | | | | | | U |
| Methyl-t-butyl ether | <1.37 | 3.43 | 1.37 | µg/m³ | | | | | | | U |
| 1,1-Dichloroethane | <0.404 | 0.808 | 0.404 | µg/m³ | | | | | | | U |
| cis-1,2-Dichloroethene | <0.648 | 1.30 | 0.648 | µg/m³ | | | | | | | U |
| Chloroform | <0.981 | 1.96 | 0.981 | µg/m³ | | | | | | | U |
| 1,2-Dichloroethane | <0.613 | 1.23 | 0.613 | µg/m³ | | | | | | | U |
| 1,1,1-Trichloroethane | <0.327 | 0.654 | 0.327 | µg/m³ | | | | | | | U |
| Carbon Tetrachloride | <0.798 | 1.60 | 0.798 | µg/m³ | | | | | | | U |
| Benzene | <1.30 | 3.24 | 1.30 | µg/m³ | | | | | | | U |
| Trichloroethene | <1.04 | 2.08 | 1.04 | µg/m³ | | | | | | | U |
| 1,4-Dioxane | <0.837 | 1.67 | 0.837 | µg/m³ | | | | | | | U |
| 1,1,2-Trichloroethane | <1.04 | 2.08 | 1.04 | µg/m³ | | | | | | | U |
| Toluene | <1.72 | 4.29 | 1.72 | µg/m³ | | | | | | | U |
| 1,2-Dibromoethane (EDB) | <0.880 | 1.76 | 0.880 | µg/m³ | | | | | | | U |
| Tetrachloroethene | <0.837 | 1.67 | 0.837 | µg/m³ | | | | | | | U |
| 1,1,1,2-Tetrachloroethane | <0.837 | 1.67 | 0.837 | µg/m³ | | | | | | | U |
| Chlorobenzene | <0.404 | 0.808 | 0.404 | µg/m³ | | | | | | | U |
| Ethylbenzene | <0.808 | 2.02 | 0.808 | µg/m³ | | | | | | | U |
| p & m-Xylene | <0.780 | 1.95 | 0.780 | µg/m³ | | | | | | | U |
| o-Xylene | <0.780 | 1.95 | 0.780 | µg/m³ | | | | | | | U |
| 1,2,3-Trichloropropane | <0.458 | 0.915 | 0.458 | µg/m³ | | | | | | | U |
| Isopropylbenzene | <0.827 | 2.07 | 0.827 | µg/m³ | | | | | | | U |
| 1,3,5-Trimethylbenzene | <0.827 | 2.07 | 0.827 | µg/m³ | | | | | | | U |
| 1,2,4-Trimethylbenzene | <0.827 | 2.07 | 0.827 | µg/m³ | | | | | | | U |
| 1,3-Dichlorobenzene | <0.458 | 0.915 | 0.458 | µg/m³ | | | | | | | U |
| 1,4-Dichlorobenzene | <0.458 | 0.915 | 0.458 | µg/m³ | | | | | | | U |
| 1,2-Dichlorobenzene | <0.458 | 0.915 | 0.458 | µg/m³ | | | | | | | U |
| 1,2,4-Trichlorobenzene | <0.880 | 1.76 | 0.880 | µg/m³ | | | | | | | U |
| Naphthalene | <0.429 | 0.858 | 0.429 | µg/m³ | | | | | | | U |
| 1,2,3-Trichlorobenzene | <0.880 | 1.76 | 0.880 | µg/m³ | | | | | | | U |
| 2-Methylnaphthalene | <0.452 | 0.903 | 0.452 | µg/m³ | | | | | | | U |
| *Surrogate: 1,2-DCA-d4* | *103* | | | *ng* | 100 | | *103* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *100* | | | *ng* | 100 | | *100* | *70-130* | | | |
| *Surrogate: Bromofluorobenzene* | *94.6* | | | *ng* | 100 | | *94.6* | *70-130* | | | |

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|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

## *Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24L135 - Instrument: S System - File ID: S24122004.D**

***B24L135-ICV1 (LCSD/Second Source Verification/CALV)***

| Analyte | Result | LOQ | LOD | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 43.6 | 10 | 5 | ng | 50.0 | | 87.3 | 70-130 | | | |
| 1,1-Dichloroethene | 45.3 | 10 | 5 | ng | 50.0 | | 90.6 | 70-130 | | | |
| Methylene Chloride | 46.8 | 10 | 5 | ng | 50.0 | | 93.5 | 70-130 | | | |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 43.9 | 10 | 5 | ng | 50.0 | | 87.7 | 70-130 | | | |
| trans-1,2-Dichloroethene | 45.9 | 10 | 5 | ng | 50.0 | | 91.8 | 70-130 | | | |
| Methyl-t-butyl ether | 58.0 | 25 | 10 | ng | 50.0 | | 116 | 70-130 | | | |
| 1,1-Dichloroethane | 48.1 | 10 | 5 | ng | 50.0 | | 96.2 | 70-130 | | | |
| cis-1,2-Dichloroethene | 46.7 | 10 | 5 | ng | 50.0 | | 93.3 | 70-130 | | | |
| Chloroform | 48.2 | 10 | 5 | ng | 50.0 | | 96.3 | 70-130 | | | |
| 1,2-Dichloroethane | 49.9 | 10 | 5 | ng | 50.0 | | 99.8 | 70-130 | | | |
| 1,1,1-Trichloroethane | 51.6 | 10 | 5 | ng | 50.0 | | 103 | 70-130 | | | |
| Carbon Tetrachloride | 58.2 | 10 | 5 | ng | 50.0 | | 116 | 70-130 | | | |
| Benzene | 49.4 | 25 | 10 | ng | 50.0 | | 98.8 | 70-130 | | | |
| Trichloroethene | 47.3 | 10 | 5 | ng | 50.0 | | 94.5 | 70-130 | | | |
| 1,4-Dioxane | 60.4 | 10 | 5 | ng | 50.0 | | 121 | 70-130 | | | |
| 1,1,2-Trichloroethane | 54.0 | 10 | 5 | ng | 50.0 | | 108 | 70-130 | | | |
| Toluene | 48.4 | 25 | 10 | ng | 50.0 | | 96.7 | 70-130 | | | |
| 1,2-Dibromoethane (EDB) | 50.6 | 10 | 5 | ng | 50.0 | | 101 | 70-130 | | | |
| Tetrachloroethene | 56.9 | 10 | 5 | ng | 50.0 | | 114 | 70-130 | | | |
| 1,1,1,2-Tetrachloroethane | 57.3 | 10 | 5 | ng | 50.0 | | 115 | 70-130 | | | |
| Chlorobenzene | 46.2 | 10 | 5 | ng | 50.0 | | 92.4 | 70-130 | | | |
| Ethylbenzene | 52.8 | 25 | 10 | ng | 50.0 | | 106 | 70-130 | | | |
| p & m-Xylene | 57.7 | 25 | 10 | ng | 50.0 | | 115 | 70-130 | | | |
| o-Xylene | 51.2 | 25 | 10 | ng | 50.0 | | 102 | 70-130 | | | |
| 1,2,3-Trichloropropane | 48.6 | 10 | 5 | ng | 50.0 | | 97.2 | 70-130 | | | |
| Isopropylbenzene | 53.2 | 25 | 10 | ng | 50.0 | | 106 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 56.9 | 25 | 10 | ng | 50.0 | | 114 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 58.7 | 25 | 10 | ng | 50.0 | | 117 | 70-130 | | | |
| 1,3-Dichlorobenzene | 59.6 | 10 | 5 | ng | 50.0 | | 119 | 70-130 | | | |
| 1,4-Dichlorobenzene | 58.0 | 10 | 5 | ng | 50.0 | | 116 | 70-130 | | | |
| 1,2-Dichlorobenzene | 54.3 | 10 | 5 | ng | 50.0 | | 109 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 55.4 | 10 | 5 | ng | 50.0 | | 111 | 70-130 | | | |
| Naphthalene | 63.1 | 10 | 5 | ng | 50.0 | | 126 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 52.8 | 10 | 5 | ng | 50.0 | | 106 | 70-130 | | | |
| 2-Methylnaphthalene | 62.4 | 10 | 5 | ng | 50.0 | | 125 | 70-130 | | | |
| *Surrogate: 1,2-DCA-d4* | *52.2* | | | *ng* | 50.0 | | *104* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *51.8* | | | *ng* | 50.0 | | *104* | *70-130* | | | |
| *Surrogate: Bromofluorobenzene* | *50.9* | | | *ng* | 50.0 | | *102* | *70-130* | | | |

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|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

## *Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24L135 - Instrument: S System - File ID: S24122032.D**

***B24L135-CCV1 (LCS, Closing Calibration Verification)***

| Analyte | Result | LOQ | LOD | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 41.7 | 10 | 5 | ng | 50.0 | | 83.4 | 70-130 | | | |
| 1,1-Dichloroethene | 43.1 | 10 | 5 | ng | 50.0 | | 86.3 | 70-130 | | | |
| Methylene Chloride | 45.4 | 10 | 5 | ng | 50.0 | | 90.8 | 70-130 | | | |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 42.9 | 10 | 5 | ng | 50.0 | | 85.9 | 70-130 | | | |
| trans-1,2-Dichloroethene | 45.8 | 10 | 5 | ng | 50.0 | | 91.6 | 70-130 | | | |
| Methyl-t-butyl ether | 59.6 | 25 | 10 | ng | 50.0 | | 119 | 70-130 | | | |
| 1,1-Dichloroethane | 48.3 | 10 | 5 | ng | 50.0 | | 96.5 | 70-130 | | | |
| cis-1,2-Dichloroethene | 46.7 | 10 | 5 | ng | 50.0 | | 93.4 | 70-130 | | | |
| Chloroform | 48.7 | 10 | 5 | ng | 50.0 | | 97.4 | 70-130 | | | |
| 1,2-Dichloroethane | 51.1 | 10 | 5 | ng | 50.0 | | 102 | 70-130 | | | |
| 1,1,1-Trichloroethane | 51.9 | 10 | 5 | ng | 50.0 | | 104 | 70-130 | | | |
| Carbon Tetrachloride | 58.7 | 10 | 5 | ng | 50.0 | | 117 | 70-130 | | | |
| Benzene | 49.4 | 25 | 10 | ng | 50.0 | | 98.8 | 70-130 | | | |
| Trichloroethene | 47.3 | 10 | 5 | ng | 50.0 | | 94.5 | 70-130 | | | |
| 1,4-Dioxane | 60.2 | 10 | 5 | ng | 50.0 | | 120 | 70-130 | | | |
| 1,1,2-Trichloroethane | 52.0 | 10 | 5 | ng | 50.0 | | 104 | 70-130 | | | |
| Toluene | 48.9 | 25 | 10 | ng | 50.0 | | 97.9 | 70-130 | | | |
| 1,2-Dibromoethane (EDB) | 51.3 | 10 | 5 | ng | 50.0 | | 103 | 70-130 | | | |
| Tetrachloroethene | 56.7 | 10 | 5 | ng | 50.0 | | 113 | 70-130 | | | |
| 1,1,1,2-Tetrachloroethane | 57.4 | 10 | 5 | ng | 50.0 | | 115 | 70-130 | | | |
| Chlorobenzene | 45.7 | 10 | 5 | ng | 50.0 | | 91.4 | 70-130 | | | |
| Ethylbenzene | 52.0 | 25 | 10 | ng | 50.0 | | 104 | 70-130 | | | |
| p & m-Xylene | 57.0 | 25 | 10 | ng | 50.0 | | 114 | 70-130 | | | |
| o-Xylene | 50.6 | 25 | 10 | ng | 50.0 | | 101 | 70-130 | | | |
| 1,2,3-Trichloropropane | 48.4 | 10 | 5 | ng | 50.0 | | 96.8 | 70-130 | | | |
| Isopropylbenzene | 52.7 | 25 | 10 | ng | 50.0 | | 105 | 70-130 | | | |
| 1,3,5-Trimethylbenzene | 56.1 | 25 | 10 | ng | 50.0 | | 112 | 70-130 | | | |
| 1,2,4-Trimethylbenzene | 56.3 | 25 | 10 | ng | 50.0 | | 113 | 70-130 | | | |
| 1,3-Dichlorobenzene | 58.5 | 10 | 5 | ng | 50.0 | | 117 | 70-130 | | | |
| 1,4-Dichlorobenzene | 58.1 | 10 | 5 | ng | 50.0 | | 116 | 70-130 | | | |
| 1,2-Dichlorobenzene | 53.9 | 10 | 5 | ng | 50.0 | | 108 | 70-130 | | | |
| 1,2,4-Trichlorobenzene | 54.3 | 10 | 5 | ng | 50.0 | | 109 | 70-130 | | | |
| Naphthalene | 63.0 | 10 | 5 | ng | 50.0 | | 126 | 70-130 | | | |
| 1,2,3-Trichlorobenzene | 52.5 | 10 | 5 | ng | 50.0 | | 105 | 70-130 | | | |
| 2-Methylnaphthalene | 63.2 | 10 | 5 | ng | 50.0 | | 126 | 70-130 | | | |
| *Surrogate: 1,2-DCA-d4* | *53.3* | | | *ng* | 50.0 | | *107* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *52.0* | | | *ng* | 50.0 | | *104* | *70-130* | | | |
| *Surrogate: Bromofluorobenzene* | *50.9* | | | *ng* | 50.0 | | *102* | *70-130* | | | |

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|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

## *Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary*

**Sequence: B24L135 - Instrument: S System - File ID: S24122033.D**

***B24L135-CCB1 (Lab Blank)***

| Analyte | Result | LOQ | LOD | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | <5 | 10 | 5 | ng | | | | | | | U |
| 1,1-Dichloroethene | <5 | 10 | 5 | ng | | | | | | | U |
| Methylene Chloride | <5 | 10 | 5 | ng | | | | | | | U |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | <5 | 10 | 5 | ng | | | | | | | U |
| trans-1,2-Dichloroethene | <5 | 10 | 5 | ng | | | | | | | U |
| Methyl-t-butyl ether | <10 | 25 | 10 | ng | | | | | | | U |
| 1,1-Dichloroethane | <5 | 10 | 5 | ng | | | | | | | U |
| cis-1,2-Dichloroethene | <5 | 10 | 5 | ng | | | | | | | U |
| Chloroform | <5 | 10 | 5 | ng | | | | | | | U |
| 1,2-Dichloroethane | <5 | 10 | 5 | ng | | | | | | | U |
| 1,1,1-Trichloroethane | <5 | 10 | 5 | ng | | | | | | | U |
| Carbon Tetrachloride | <5 | 10 | 5 | ng | | | | | | | U |
| Benzene | <10 | 25 | 10 | ng | | | | | | | U |
| Trichloroethene | <5 | 10 | 5 | ng | | | | | | | U |
| 1,4-Dioxane | <5 | 10 | 5 | ng | | | | | | | U |
| 1,1,2-Trichloroethane | <5 | 10 | 5 | ng | | | | | | | U |
| Toluene | <10 | 25 | 10 | ng | | | | | | | U |
| 1,2-Dibromoethane (EDB) | <5 | 10 | 5 | ng | | | | | | | U |
| Tetrachloroethene | <5 | 10 | 5 | ng | | | | | | | U |
| 1,1,1,2-Tetrachloroethane | <5 | 10 | 5 | ng | | | | | | | U |
| Chlorobenzene | <5 | 10 | 5 | ng | | | | | | | U |
| Ethylbenzene | <10 | 25 | 10 | ng | | | | | | | U |
| p & m-Xylene | <10 | 25 | 10 | ng | | | | | | | U |
| o-Xylene | <10 | 25 | 10 | ng | | | | | | | U |
| 1,2,3-Trichloropropane | <5 | 10 | 5 | ng | | | | | | | U |
| Isopropylbenzene | <10 | 25 | 10 | ng | | | | | | | U |
| 1,3,5-Trimethylbenzene | <10 | 25 | 10 | ng | | | | | | | U |
| 1,2,4-Trimethylbenzene | <10 | 25 | 10 | ng | | | | | | | U |
| 1,3-Dichlorobenzene | <5 | 10 | 5 | ng | | | | | | | U |
| 1,4-Dichlorobenzene | <5 | 10 | 5 | ng | | | | | | | U |
| 1,2-Dichlorobenzene | <5 | 10 | 5 | ng | | | | | | | U |
| 1,2,4-Trichlorobenzene | <5 | 10 | 5 | ng | | | | | | | U |
| Naphthalene | <5 | 10 | 5 | ng | | | | | | | U |
| 1,2,3-Trichlorobenzene | <5 | 10 | 5 | ng | | | | | | | U |
| 2-Methylnaphthalene | <5 | 10 | 5 | ng | | | | | | | U |
| *Surrogate: 1,2-DCA-d4* | *105* | | | *ng* | 100 | | *105* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *100* | | | *ng* | 100 | | *100* | *70-130* | | | |
| *Surrogate: Bromofluorobenzene* | *96.1* | | | *ng* | 100 | | *96.1* | *70-130* | | | |

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|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

## *TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary*

***LCS: 24L0120-BS1 File ID: S24122002.D*** Analyzed: 12/20/24 18:27

***LCSD: B24L135-ICV1 File ID: S24122004.D*** Analyzed: 12/20/24 17:31

| 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 | 44.83 | 89.7 | | 50 | 43.63 | 87.30 | 70-130 | 2.71 | 30 | |
| 1,1-Dichloroethene | 75-35-4 | 45.30 | 90.6 | | 50 | 45.28 | 90.60 | 70-130 | 0.04 | 30 | |
| Methylene Chloride | 75-09-2 | 46.45 | 92.9 | | 50 | 46.77 | 93.50 | 70-130 | 0.69 | 30 | |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 76-13-1 | 43.83 | 87.7 | | 50 | 43.86 | 87.70 | 70-130 | 0.07 | 30 | |
| trans-1,2-Dichloroethene | 156-60-5 | 46.27 | 92.5 | | 50 | 45.89 | 91.80 | 70-130 | 0.82 | 30 | |
| Methyl-t-butyl ether | 1634-04-4 | 57.07 | 114.1 | | 50 | 58 | 116.00 | 70-130 | 1.62 | 30 | |
| 1,1-Dichloroethane | 75-34-3 | 47.65 | 95.3 | | 50 | 48.08 | 96.20 | 70-130 | 0.90 | 30 | |
| cis-1,2-Dichloroethene | 156-59-2 | 47.04 | 94.1 | | 50 | 46.65 | 93.30 | 70-130 | 0.83 | 30 | |
| Chloroform | 67-66-3 | 47.28 | 94.6 | | 50 | 48.17 | 96.30 | 70-130 | 1.86 | 30 | |
| 1,2-Dichloroethane | 107-06-2 | 49.03 | 98.1 | | 50 | 49.9 | 99.80 | 70-130 | 1.76 | 30 | |
| 1,1,1-Trichloroethane | 71-55-6 | 50.79 | 101.6 | | 50 | 51.57 | 103.00 | 70-130 | 1.52 | 30 | |
| Carbon Tetrachloride | 56-23-5 | 57.09 | 114.2 | | 50 | 58.17 | 116.00 | 70-130 | 1.87 | 30 | |
| Benzene | 71-43-2 | 48.68 | 97.4 | | 50 | 49.4 | 98.80 | 70-130 | 1.47 | 30 | |
| Trichloroethene | 79-01-6 | 46.63 | 93.3 | | 50 | 47.27 | 94.50 | 70-130 | 1.36 | 30 | |
| 1,4-Dioxane | 123-91-1 | 59.27 | 118.5 | | 50 | 60.39 | 121.00 | 70-130 | 1.87 | 30 | |
| 1,1,2-Trichloroethane | 79-00-5 | 53.05 | 106.1 | | 50 | 53.95 | 108.00 | 70-130 | 1.68 | 30 | |
| Toluene | 108-88-3 | 48.69 | 97.4 | | 50 | 48.35 | 96.70 | 70-130 | 0.70 | 30 | |
| 1,2-Dibromoethane (EDB) | 106-93-4 | 50.66 | 101.3 | | 50 | 50.56 | 101.00 | 70-130 | 0.20 | 30 | |
| Tetrachloroethene | 127-18-4 | 58.01 | 116 | | 50 | 56.9 | 114.00 | 70-130 | 1.93 | 30 | |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | 56.62 | 113.2 | | 50 | 57.26 | 115.00 | 70-130 | 1.12 | 30 | |
| Chlorobenzene | 108-90-7 | 46.81 | 93.6 | | 50 | 46.21 | 92.40 | 70-130 | 1.29 | 30 | |
| Ethylbenzene | 100-41-4 | 52.49 | 105 | | 50 | 52.84 | 106.00 | 70-130 | 0.66 | 30 | |
| p & m-Xylene | 179601-23-1 | 58.53 | 117.1 | | 50 | 57.74 | 115.00 | 70-130 | 1.36 | 30 | |
| o-Xylene | 95-47-6 | 51.67 | 103.3 | | 50 | 51.21 | 102.00 | 70-130 | 0.89 | 30 | |
| 1,2,3-Trichloropropane | 96-18-4 | 48.25 | 96.5 | | 50 | 48.6 | 97.20 | 70-130 | 0.72 | 30 | |
| Isopropylbenzene | 98-82-8 | 53.90 | 107.8 | | 50 | 53.16 | 106.00 | 70-130 | 1.38 | 30 | |
| 1,3,5-Trimethylbenzene | 108-67-8 | 57.72 | 115.4 | | 50 | 56.9 | 114.00 | 70-130 | 1.43 | 30 | |
| 1,2,4-Trimethylbenzene | 95-63-6 | 57.18 | 114.4 | | 50 | 58.68 | 117.00 | 70-130 | 2.59 | 30 | |
| 1,3-Dichlorobenzene | 541-73-1 | 58.84 | 117.7 | | 50 | 59.58 | 119.00 | 70-130 | 1.25 | 30 | |
| 1,4-Dichlorobenzene | 106-46-7 | 58.31 | 116.6 | | 50 | 57.97 | 116.00 | 70-130 | 0.58 | 30 | |
| 1,2-Dichlorobenzene | 95-50-1 | 53.97 | 107.9 | | 50 | 54.34 | 109.00 | 70-130 | 0.68 | 30 | |
| 1,2,4-Trichlorobenzene | 120-82-1 | 54.85 | 109.7 | | 50 | 55.42 | 111.00 | 70-130 | 1.03 | 30 | |
| Naphthalene | 91-20-3 | 62.23 | 124.5 | | 50 | 63.06 | 126.00 | 70-130 | 1.32 | 30 | |
| 1,2,3-Trichlorobenzene | 87-61-6 | 52.90 | 105.8 | | 50 | 52.78 | 106.00 | 70-130 | 0.23 | 30 | |
| 2-Methylnaphthalene | 91-57-6 | 62.19 | 124.4 | | 50 | 62.36 | 125.00 | 70-130 | 0.27 | 30 | |

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|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

# *Additional QC Information*

BEACON ENVIRONMENTAL

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# CERTIFICATE OF ANALYSIS

| | | |
|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

## Sample Result Calculation Summary (Concentration)

### TO-17 (Passive)

| Analyte | t<br>Sampling Time<br>minutes | DF<br>Dilution<br>Factor | Uc<br>Uptake<br>Rate | M<br>Initial Result<br>ng | C<br>Calculated Result<br>µg/m³ | File ID |
|---|---|---|---|---|---|---|
| **Lab ID:** 0008201-01 **Sample Name:** OA | | | | | **x̄ Temp (°C):** -2.00 | |
| Vinyl Chloride | 14,535 | 1.00 | 0.784 | U | U | S24122023.D |
| 1,1-Dichloroethene | 14,535 | 1.00 | 0.319 | U | U | S24122023.D |
| Methylene Chloride | 14,535 | 1.00 | 0.339 g | U | U | S24122023.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 14,535 | 1.00 | 0.861 g | U | U | S24122023.D |
| trans-1,2-Dichloroethene | 14,535 | 1.00 | 0.426 | U | U | S24122023.D |
| Methyl-t-butyl ether | 14,535 | 1.00 | 0.484 g | U | U | S24122023.D |
| 1,1-Dichloroethane | 14,535 | 1.00 | 0.822 | U | U | S24122023.D |
| cis-1,2-Dichloroethene | 14,535 | 1.00 | 0.513 | U | U | S24122023.D |
| Chloroform | 14,535 | 1.00 | 0.339 g | U | U | S24122023.D |
| 1,2-Dichloroethane | 14,535 | 1.00 | 0.542 | U | U | S24122023.D |
| 1,1,1-Trichloroethane | 14,535 | 1.00 | 1.016 | U | U | S24122023.D |
| Carbon Tetrachloride | 14,535 | 1.00 | 0.416 g | U | U | S24122023.D |
| Benzene | 14,535 | 1.00 | 0.513 | 12.65 | 1.70 | S24122023.D |
| Trichloroethene | 14,535 | 1.00 | 0.319 | U | U | S24122023.D |
| 1,4-Dioxane | 14,535 | 1.00 | 0.397 g | U | U | S24122023.D |
| 1,1,2-Trichloroethane | 14,535 | 1.00 | 0.319 g | U | U | S24122023.D |
| Toluene | 14,535 | 1.00 | 0.387 | U | U | S24122023.D |
| 1,2-Dibromoethane (EDB) | 14,535 | 1.00 | 0.377 g | U | U | S24122023.D |
| Tetrachloroethene | 14,535 | 1.00 | 0.397 | U | U | S24122023.D |
| 1,1,1,2-Tetrachloroethane | 14,535 | 1.00 | 0.397 g | U | U | S24122023.D |
| Chlorobenzene | 14,535 | 1.00 | 0.822 g | U | U | S24122023.D |
| Ethylbenzene | 14,535 | 1.00 | 0.822 | U | U | S24122023.D |
| p & m-Xylene | 14,535 | 1.00 | 0.851 | U | U | S24122023.D |
| o-Xylene | 14,535 | 1.00 | 0.851 | U | U | S24122023.D |
| 1,2,3-Trichloropropane | 14,535 | 1.00 | 0.725 g | U | U | S24122023.D |
| Isopropylbenzene | 14,535 | 1.00 | 0.803 g | U | U | S24122023.D |
| 1,3,5-Trimethylbenzene | 14,535 | 1.00 | 0.803 g | U | U | S24122023.D |
| 1,2,4-Trimethylbenzene | 14,535 | 1.00 | 0.803 g | U | U | S24122023.D |
| 1,3-Dichlorobenzene | 14,535 | 1.00 | 0.725 g | U | U | S24122023.D |
| 1,4-Dichlorobenzene | 14,535 | 1.00 | 0.725 g | U | U | S24122023.D |
| 1,2-Dichlorobenzene | 14,535 | 1.00 | 0.725 g | U | U | S24122023.D |
| 1,2,4-Trichlorobenzene | 14,535 | 1.00 | 0.377 g | U | U | S24122023.D |
| Naphthalene | 14,535 | 1.00 | 0.774 g | U | U | S24122023.D |
| 1,2,3-Trichlorobenzene | 14,535 | 1.00 | 0.377 g | U | U | S24122023.D |
| 2-Methylnaphthalene | 14,535 | 1.00 | 0.735 g | U | U | S24122023.D |

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|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

# Sample Result Calculation Summary (Concentration)

## TO-17 (Passive)

| Analyte | t<br>Sampling Time<br>minutes | DF<br>Dilution<br>Factor | Uc<br>Uptake<br>Rate | M<br>Initial Result<br>ng | C<br>Calculated Result<br>µg/m³ | File ID |
|---|---|---|---|---|---|---|
| **Lab ID:** 0008201-02 **Sample Name:** 325-B | | | | | **x̄ Temp (°C):** 18.00 | |
| Vinyl Chloride | 14,400 | 1.00 | 0.812 | U | U | S24122024.D |
| 1,1-Dichloroethene | 14,400 | 1.00 | 0.331 | U | U | S24122024.D |
| Methylene Chloride | 14,400 | 1.00 | 0.351 g | U | U | S24122024.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 14,400 | 1.00 | 0.892 g | U | U | S24122024.D |
| trans-1,2-Dichloroethene | 14,400 | 1.00 | 0.441 | U | U | S24122024.D |
| Methyl-t-butyl ether | 14,400 | 1.00 | 0.501 g | U | U | S24122024.D |
| 1,1-Dichloroethane | 14,400 | 1.00 | 0.852 | U | U | S24122024.D |
| cis-1,2-Dichloroethene | 14,400 | 1.00 | 0.531 | U | U | S24122024.D |
| Chloroform | 14,400 | 1.00 | 0.351 g | U | U | S24122024.D |
| 1,2-Dichloroethane | 14,400 | 1.00 | 0.561 | U | U | S24122024.D |
| 1,1,1-Trichloroethane | 14,400 | 1.00 | 1.052 | U | U | S24122024.D |
| Carbon Tetrachloride | 14,400 | 1.00 | 0.431 g | U | U | S24122024.D |
| Benzene | 14,400 | 1.00 | 0.531 | 33.64 | 4.40 | S24122024.D |
| Trichloroethene | 14,400 | 1.00 | 0.331 | U | U | S24122024.D |
| 1,4-Dioxane | 14,400 | 1.00 | 0.411 g | U | U | S24122024.D |
| 1,1,2-Trichloroethane | 14,400 | 1.00 | 0.331 g | U | U | S24122024.D |
| Toluene | 14,400 | 1.00 | 0.401 | 80.54 | 14.0 | S24122024.D |
| 1,2-Dibromoethane (EDB) | 14,400 | 1.00 | 0.391 g | U | U | S24122024.D |
| Tetrachloroethene | 14,400 | 1.00 | 0.411 | U | U | S24122024.D |
| 1,1,1,2-Tetrachloroethane | 14,400 | 1.00 | 0.411 g | U | U | S24122024.D |
| Chlorobenzene | 14,400 | 1.00 | 0.852 g | U | U | S24122024.D |
| Ethylbenzene | 14,400 | 1.00 | 0.852 | 21.47 | 1.75 | S24122024.D |
| p & m-Xylene | 14,400 | 1.00 | 0.882 | 91.46 | 7.20 | S24122024.D |
| o-Xylene | 14,400 | 1.00 | 0.882 | 30.73 | 2.42 | S24122024.D |
| 1,2,3-Trichloropropane | 14,400 | 1.00 | 0.752 g | U | U | S24122024.D |
| Isopropylbenzene | 14,400 | 1.00 | 0.832 g | U | U | S24122024.D |
| 1,3,5-Trimethylbenzene | 14,400 | 1.00 | 0.832 g | U | U | S24122024.D |
| 1,2,4-Trimethylbenzene | 14,400 | 1.00 | 0.832 g | 40.46 | 3.38 | S24122024.D |
| 1,3-Dichlorobenzene | 14,400 | 1.00 | 0.752 g | U | U | S24122024.D |
| 1,4-Dichlorobenzene | 14,400 | 1.00 | 0.752 g | U | U | S24122024.D |
| 1,2-Dichlorobenzene | 14,400 | 1.00 | 0.752 g | U | U | S24122024.D |
| 1,2,4-Trichlorobenzene | 14,400 | 1.00 | 0.391 g | U | U | S24122024.D |
| Naphthalene | 14,400 | 1.00 | 0.802 g | 5.17 | 0.448 | S24122024.D |
| 1,2,3-Trichlorobenzene | 14,400 | 1.00 | 0.391 g | U | U | S24122024.D |
| 2-Methylnaphthalene | 14,400 | 1.00 | 0.762 g | U | U | S24122024.D |

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|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

# Sample Result Calculation Summary (Concentration)

## TO-17 (Passive)

| Analyte | t<br>Sampling Time<br>minutes | DF<br>Dilution<br>Factor | Uc<br>Uptake<br>Rate | M<br>Initial Result<br>ng | C<br>Calculated Result<br>µg/m³ | File ID |
|---|---|---|---|---|---|---|
| **Lab ID:** 0008201-03 **Sample Name:** 327-B | | | | | **x̄ Temp (°C):** 18.00 | |
| Vinyl Chloride | 14,466 | 1.00 | 0.812 | U | U | S24122025.D |
| 1,1-Dichloroethene | 14,466 | 1.00 | 0.331 | U | U | S24122025.D |
| Methylene Chloride | 14,466 | 1.00 | 0.351 g | 7.70 | 1.52 | S24122025.D |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 14,466 | 1.00 | 0.892 g | U | U | S24122025.D |
| trans-1,2-Dichloroethene | 14,466 | 1.00 | 0.441 | U | U | S24122025.D |
| Methyl-t-butyl ether | 14,466 | 1.00 | 0.501 g | U | U | S24122025.D |
| 1,1-Dichloroethane | 14,466 | 1.00 | 0.852 | U | U | S24122025.D |
| cis-1,2-Dichloroethene | 14,466 | 1.00 | 0.531 | U | U | S24122025.D |
| Chloroform | 14,466 | 1.00 | 0.351 g | U | U | S24122025.D |
| 1,2-Dichloroethane | 14,466 | 1.00 | 0.561 | U | U | S24122025.D |
| 1,1,1-Trichloroethane | 14,466 | 1.00 | 1.052 | U | U | S24122025.D |
| Carbon Tetrachloride | 14,466 | 1.00 | 0.431 g | U | U | S24122025.D |
| Benzene | 14,466 | 1.00 | 0.531 | 21.80 | 2.84 | S24122025.D |
| Trichloroethene | 14,466 | 1.00 | 0.331 | U | U | S24122025.D |
| 1,4-Dioxane | 14,466 | 1.00 | 0.411 g | U | U | S24122025.D |
| 1,1,2-Trichloroethane | 14,466 | 1.00 | 0.331 g | U | U | S24122025.D |
| Toluene | 14,466 | 1.00 | 0.401 | 31.10 | 5.36 | S24122025.D |
| 1,2-Dibromoethane (EDB) | 14,466 | 1.00 | 0.391 g | U | U | S24122025.D |
| Tetrachloroethene | 14,466 | 1.00 | 0.411 | U | U | S24122025.D |
| 1,1,1,2-Tetrachloroethane | 14,466 | 1.00 | 0.411 g | U | U | S24122025.D |
| Chlorobenzene | 14,466 | 1.00 | 0.852 g | U | U | S24122025.D |
| Ethylbenzene | 14,466 | 1.00 | 0.852 | U | U | S24122025.D |
| p & m-Xylene | 14,466 | 1.00 | 0.882 | 38.39 | 3.01 | S24122025.D |
| o-Xylene | 14,466 | 1.00 | 0.882 | 13.67 | 1.07 | S24122025.D |
| 1,2,3-Trichloropropane | 14,466 | 1.00 | 0.752 g | U | U | S24122025.D |
| Isopropylbenzene | 14,466 | 1.00 | 0.832 g | U | U | S24122025.D |
| 1,3,5-Trimethylbenzene | 14,466 | 1.00 | 0.832 g | U | U | S24122025.D |
| 1,2,4-Trimethylbenzene | 14,466 | 1.00 | 0.832 g | 21.22 | 1.76 | S24122025.D |
| 1,3-Dichlorobenzene | 14,466 | 1.00 | 0.752 g | U | U | S24122025.D |
| 1,4-Dichlorobenzene | 14,466 | 1.00 | 0.752 g | U | U | S24122025.D |
| 1,2-Dichlorobenzene | 14,466 | 1.00 | 0.752 g | U | U | S24122025.D |
| 1,2,4-Trichlorobenzene | 14,466 | 1.00 | 0.391 g | U | U | S24122025.D |
| Naphthalene | 14,466 | 1.00 | 0.802 g | U | U | S24122025.D |
| 1,2,3-Trichlorobenzene | 14,466 | 1.00 | 0.391 g | U | U | S24122025.D |
| 2-Methylnaphthalene | 14,466 | 1.00 | 0.762 g | U | U | S24122025.D |

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| | | |
|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

Calculations:

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

$$Uc = U * \left(\left(\frac{Ts + 273.15}{Tu + 273.15}\right)^{1/2}\right)$$

where:
- C = concentration (µg/m$^3$)
- M = mass (ng)
- DF = dilution factor
- Uc = uptake rate (ml/min), corrected
- t = sampling time (minutes)
- U = compound specific uptake rate
- Tu = uptake rate study temperature
- Ts = sample average temperature

**Note:** Tu is 16.65°C

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

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

BEACON ENVIRONMENTAL

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# CERTIFICATE OF ANALYSIS

| | | |
|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

## Method Detection and Reporting Limit Calculations (Concentration)

### TO-17 (Passive)

| Analyte | t Sampling Time minutes | DF Dilution Factor | Uc Uptake Rate | M Initial (ng) LOQ | M Initial (ng) LOD | C Calculated (µg/m³) LOQ | C Calculated (µg/m³) LOD |
|---|---|---|---|---|---|---|---|
| **Lab ID:** 0008201-01 | **Sample Name:** OA | | | | | **x̄ Temp (°C):** -2.00 | |
| Vinyl Chloride | 14,535 | 1.00 | 0.784 | 10.00 | 5.00 | 0.878 | 0.439 |
| 1,1-Dichloroethene | 14,535 | 1.00 | 0.319 | 10.00 | 5.00 | 2.16 | 1.08 |
| Methylene Chloride | 14,535 | 1.00 | 0.339 g | 10.00 | 5.00 | 2.03 | 1.02 |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 14,535 | 1.00 | 0.861 g | 10.00 | 5.00 | 0.799 | 0.400 |
| trans-1,2-Dichloroethene | 14,535 | 1.00 | 0.426 | 10.00 | 5.00 | 1.62 | 0.808 |
| Methyl-t-butyl ether | 14,535 | 1.00 | 0.484 g | 25.00 | 10.00 | 3.56 | 1.42 |
| 1,1-Dichloroethane | 14,535 | 1.00 | 0.822 | 10.00 | 5.00 | 0.837 | 0.418 |
| cis-1,2-Dichloroethene | 14,535 | 1.00 | 0.513 | 10.00 | 5.00 | 1.34 | 0.671 |
| Chloroform | 14,535 | 1.00 | 0.339 g | 10.00 | 5.00 | 2.03 | 1.02 |
| 1,2-Dichloroethane | 14,535 | 1.00 | 0.542 | 10.00 | 5.00 | 1.27 | 0.635 |
| 1,1,1-Trichloroethane | 14,535 | 1.00 | 1.016 | 10.00 | 5.00 | 0.677 | 0.339 |
| Carbon Tetrachloride | 14,535 | 1.00 | 0.416 g | 10.00 | 5.00 | 1.65 | 0.827 |
| Benzene | 14,535 | 1.00 | 0.513 | 25.00 | 10.00 | 3.36 | 1.34 |
| Trichloroethene | 14,535 | 1.00 | 0.319 | 10.00 | 5.00 | 2.16 | 1.08 |
| 1,4-Dioxane | 14,535 | 1.00 | 0.397 g | 10.00 | 5.00 | 1.73 | 0.867 |
| 1,1,2-Trichloroethane | 14,535 | 1.00 | 0.319 g | 10.00 | 5.00 | 2.16 | 1.08 |
| Toluene | 14,535 | 1.00 | 0.387 | 25.00 | 10.00 | 4.45 | 1.78 |
| 1,2-Dibromoethane (EDB) | 14,535 | 1.00 | 0.377 g | 10.00 | 5.00 | 1.82 | 0.912 |
| Tetrachloroethene | 14,535 | 1.00 | 0.397 | 10.00 | 5.00 | 1.73 | 0.867 |
| 1,1,1,2-Tetrachloroethane | 14,535 | 1.00 | 0.397 g | 10.00 | 5.00 | 1.73 | 0.867 |
| Chlorobenzene | 14,535 | 1.00 | 0.822 g | 10.00 | 5.00 | 0.837 | 0.418 |
| Ethylbenzene | 14,535 | 1.00 | 0.822 | 25.00 | 10.00 | 2.09 | 0.837 |
| p & m-Xylene | 14,535 | 1.00 | 0.851 | 25.00 | 10.00 | 2.02 | 0.808 |
| o-Xylene | 14,535 | 1.00 | 0.851 | 25.00 | 10.00 | 2.02 | 0.808 |
| 1,2,3-Trichloropropane | 14,535 | 1.00 | 0.725 g | 10.00 | 5.00 | 0.948 | 0.474 |
| Isopropylbenzene | 14,535 | 1.00 | 0.803 g | 25.00 | 10.00 | 2.14 | 0.857 |
| 1,3,5-Trimethylbenzene | 14,535 | 1.00 | 0.803 g | 25.00 | 10.00 | 2.14 | 0.857 |
| 1,2,4-Trimethylbenzene | 14,535 | 1.00 | 0.803 g | 25.00 | 10.00 | 2.14 | 0.857 |
| 1,3-Dichlorobenzene | 14,535 | 1.00 | 0.725 g | 10.00 | 5.00 | 0.948 | 0.474 |
| 1,4-Dichlorobenzene | 14,535 | 1.00 | 0.725 g | 10.00 | 5.00 | 0.948 | 0.474 |
| 1,2-Dichlorobenzene | 14,535 | 1.00 | 0.725 g | 10.00 | 5.00 | 0.948 | 0.474 |
| 1,2,4-Trichlorobenzene | 14,535 | 1.00 | 0.377 g | 10.00 | 5.00 | 1.82 | 0.912 |
| Naphthalene | 14,535 | 1.00 | 0.774 g | 10.00 | 5.00 | 0.889 | 0.445 |
| 1,2,3-Trichlorobenzene | 14,535 | 1.00 | 0.377 g | 10.00 | 5.00 | 1.82 | 0.912 |
| 2-Methylnaphthalene | 14,535 | 1.00 | 0.735 g | 10.00 | 5.00 | 0.936 | 0.468 |

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1.410.838.8780

| | | |
|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

# Method Detection and Reporting Limit Calculations (Concentration)

## TO-17 (Passive)

| Analyte | t Sampling Time minutes | DF Dilution Factor | Uc Uptake Rate | M Initial (ng) LOQ | M Initial (ng) LOD | C Calculated (µg/m³) LOQ | C Calculated (µg/m³) LOD |
|---|---|---|---|---|---|---|---|
| **Lab ID:** 0008201-02 | **Sample Name:** 325-B | | | | | **x̄ Temp (°C):** 18.00 | |
| Vinyl Chloride | 14,400 | 1.00 | 0.812 | 10.00 | 5.00 | 0.855 | 0.428 |
| 1,1-Dichloroethene | 14,400 | 1.00 | 0.331 | 10.00 | 5.00 | 2.10 | 1.05 |
| Methylene Chloride | 14,400 | 1.00 | 0.351 g | 10.00 | 5.00 | 1.98 | 0.990 |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 14,400 | 1.00 | 0.892 g | 10.00 | 5.00 | 0.778 | 0.389 |
| trans-1,2-Dichloroethene | 14,400 | 1.00 | 0.441 | 10.00 | 5.00 | 1.57 | 0.787 |
| Methyl-t-butyl ether | 14,400 | 1.00 | 0.501 g | 25.00 | 10.00 | 3.46 | 1.39 |
| 1,1-Dichloroethane | 14,400 | 1.00 | 0.852 | 10.00 | 5.00 | 0.815 | 0.408 |
| cis-1,2-Dichloroethene | 14,400 | 1.00 | 0.531 | 10.00 | 5.00 | 1.31 | 0.654 |
| Chloroform | 14,400 | 1.00 | 0.351 g | 10.00 | 5.00 | 1.98 | 0.990 |
| 1,2-Dichloroethane | 14,400 | 1.00 | 0.561 | 10.00 | 5.00 | 1.24 | 0.619 |
| 1,1,1-Trichloroethane | 14,400 | 1.00 | 1.052 | 10.00 | 5.00 | 0.660 | 0.330 |
| Carbon Tetrachloride | 14,400 | 1.00 | 0.431 g | 10.00 | 5.00 | 1.61 | 0.806 |
| Benzene | 14,400 | 1.00 | 0.531 | 25.00 | 10.00 | 3.27 | 1.31 |
| Trichloroethene | 14,400 | 1.00 | 0.331 | 10.00 | 5.00 | 2.10 | 1.05 |
| 1,4-Dioxane | 14,400 | 1.00 | 0.411 g | 10.00 | 5.00 | 1.69 | 0.845 |
| 1,1,2-Trichloroethane | 14,400 | 1.00 | 0.331 g | 10.00 | 5.00 | 2.10 | 1.05 |
| Toluene | 14,400 | 1.00 | 0.401 | 25.00 | 10.00 | 4.33 | 1.73 |
| 1,2-Dibromoethane (EDB) | 14,400 | 1.00 | 0.391 g | 10.00 | 5.00 | 1.78 | 0.888 |
| Tetrachloroethene | 14,400 | 1.00 | 0.411 | 10.00 | 5.00 | 1.69 | 0.845 |
| 1,1,1,2-Tetrachloroethane | 14,400 | 1.00 | 0.411 g | 10.00 | 5.00 | 1.69 | 0.845 |
| Chlorobenzene | 14,400 | 1.00 | 0.852 g | 10.00 | 5.00 | 0.815 | 0.408 |
| Ethylbenzene | 14,400 | 1.00 | 0.852 | 25.00 | 10.00 | 2.04 | 0.815 |
| p & m-Xylene | 14,400 | 1.00 | 0.882 | 25.00 | 10.00 | 1.97 | 0.787 |
| o-Xylene | 14,400 | 1.00 | 0.882 | 25.00 | 10.00 | 1.97 | 0.787 |
| 1,2,3-Trichloropropane | 14,400 | 1.00 | 0.752 g | 10.00 | 5.00 | 0.924 | 0.462 |
| Isopropylbenzene | 14,400 | 1.00 | 0.832 g | 25.00 | 10.00 | 2.09 | 0.835 |
| 1,3,5-Trimethylbenzene | 14,400 | 1.00 | 0.832 g | 25.00 | 10.00 | 2.09 | 0.835 |
| 1,2,4-Trimethylbenzene | 14,400 | 1.00 | 0.832 g | 25.00 | 10.00 | 2.09 | 0.835 |
| 1,3-Dichlorobenzene | 14,400 | 1.00 | 0.752 g | 10.00 | 5.00 | 0.924 | 0.462 |
| 1,4-Dichlorobenzene | 14,400 | 1.00 | 0.752 g | 10.00 | 5.00 | 0.924 | 0.462 |
| 1,2-Dichlorobenzene | 14,400 | 1.00 | 0.752 g | 10.00 | 5.00 | 0.924 | 0.462 |
| 1,2,4-Trichlorobenzene | 14,400 | 1.00 | 0.391 g | 10.00 | 5.00 | 1.78 | 0.888 |
| Naphthalene | 14,400 | 1.00 | 0.802 g | 10.00 | 5.00 | 0.866 | 0.433 |
| 1,2,3-Trichlorobenzene | 14,400 | 1.00 | 0.391 g | 10.00 | 5.00 | 1.78 | 0.888 |
| 2-Methylnaphthalene | 14,400 | 1.00 | 0.762 g | 10.00 | 5.00 | 0.912 | 0.456 |

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| | | |
|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

# Method Detection and Reporting Limit Calculations (Concentration)

## TO-17 (Passive)

| Analyte | t Sampling Time minutes | DF Dilution Factor | Uc Uptake Rate | M Initial (ng) LOQ | M Initial (ng) LOD | C Calculated (µg/m³) LOQ | C Calculated (µg/m³) LOD |
|---|---|---|---|---|---|---|---|
| **Lab ID:** 0008201-03 | **Sample Name:** 327-B | | | | | **X̄ Temp (°C):** 18.00 | |
| Vinyl Chloride | 14,466 | 1.00 | 0.812 | 10.00 | 5.00 | 0.851 | 0.426 |
| 1,1-Dichloroethene | 14,466 | 1.00 | 0.331 | 10.00 | 5.00 | 2.09 | 1.04 |
| Methylene Chloride | 14,466 | 1.00 | 0.351 g | 10.00 | 5.00 | 1.97 | 0.985 |
| 1,1,2-Trichlorotrifluoroethane (Fr.113) | 14,466 | 1.00 | 0.892 g | 10.00 | 5.00 | 0.775 | 0.387 |
| trans-1,2-Dichloroethene | 14,466 | 1.00 | 0.441 | 10.00 | 5.00 | 1.57 | 0.784 |
| Methyl-t-butyl ether | 14,466 | 1.00 | 0.501 g | 25.00 | 10.00 | 3.45 | 1.38 |
| 1,1-Dichloroethane | 14,466 | 1.00 | 0.852 | 10.00 | 5.00 | 0.811 | 0.406 |
| cis-1,2-Dichloroethene | 14,466 | 1.00 | 0.531 | 10.00 | 5.00 | 1.30 | 0.651 |
| Chloroform | 14,466 | 1.00 | 0.351 g | 10.00 | 5.00 | 1.97 | 0.985 |
| 1,2-Dichloroethane | 14,466 | 1.00 | 0.561 | 10.00 | 5.00 | 1.23 | 0.616 |
| 1,1,1-Trichloroethane | 14,466 | 1.00 | 1.052 | 10.00 | 5.00 | 0.657 | 0.328 |
| Carbon Tetrachloride | 14,466 | 1.00 | 0.431 g | 10.00 | 5.00 | 1.60 | 0.802 |
| Benzene | 14,466 | 1.00 | 0.531 | 25.00 | 10.00 | 3.25 | 1.30 |
| Trichloroethene | 14,466 | 1.00 | 0.331 | 10.00 | 5.00 | 2.09 | 1.04 |
| 1,4-Dioxane | 14,466 | 1.00 | 0.411 g | 10.00 | 5.00 | 1.68 | 0.841 |
| 1,1,2-Trichloroethane | 14,466 | 1.00 | 0.331 g | 10.00 | 5.00 | 2.09 | 1.04 |
| Toluene | 14,466 | 1.00 | 0.401 | 25.00 | 10.00 | 4.31 | 1.72 |
| 1,2-Dibromoethane (EDB) | 14,466 | 1.00 | 0.391 g | 10.00 | 5.00 | 1.77 | 0.884 |
| Tetrachloroethene | 14,466 | 1.00 | 0.411 | 10.00 | 5.00 | 1.68 | 0.841 |
| 1,1,1,2-Tetrachloroethane | 14,466 | 1.00 | 0.411 g | 10.00 | 5.00 | 1.68 | 0.841 |
| Chlorobenzene | 14,466 | 1.00 | 0.852 g | 10.00 | 5.00 | 0.811 | 0.406 |
| Ethylbenzene | 14,466 | 1.00 | 0.852 | 25.00 | 10.00 | 2.03 | 0.811 |
| p & m-Xylene | 14,466 | 1.00 | 0.882 | 25.00 | 10.00 | 1.96 | 0.784 |
| o-Xylene | 14,466 | 1.00 | 0.882 | 25.00 | 10.00 | 1.96 | 0.784 |
| 1,2,3-Trichloropropane | 14,466 | 1.00 | 0.752 g | 10.00 | 5.00 | 0.920 | 0.460 |
| Isopropylbenzene | 14,466 | 1.00 | 0.832 g | 25.00 | 10.00 | 2.08 | 0.831 |
| 1,3,5-Trimethylbenzene | 14,466 | 1.00 | 0.832 g | 25.00 | 10.00 | 2.08 | 0.831 |
| 1,2,4-Trimethylbenzene | 14,466 | 1.00 | 0.832 g | 25.00 | 10.00 | 2.08 | 0.831 |
| 1,3-Dichlorobenzene | 14,466 | 1.00 | 0.752 g | 10.00 | 5.00 | 0.920 | 0.460 |
| 1,4-Dichlorobenzene | 14,466 | 1.00 | 0.752 g | 10.00 | 5.00 | 0.920 | 0.460 |
| 1,2-Dichlorobenzene | 14,466 | 1.00 | 0.752 g | 10.00 | 5.00 | 0.920 | 0.460 |
| 1,2,4-Trichlorobenzene | 14,466 | 1.00 | 0.391 g | 10.00 | 5.00 | 1.77 | 0.884 |
| Naphthalene | 14,466 | 1.00 | 0.802 g | 10.00 | 5.00 | 0.862 | 0.431 |
| 1,2,3-Trichlorobenzene | 14,466 | 1.00 | 0.391 g | 10.00 | 5.00 | 1.77 | 0.884 |
| 2-Methylnaphthalene | 14,466 | 1.00 | 0.762 g | 10.00 | 5.00 | 0.907 | 0.454 |

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| | | |
|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

## *Laboratory Certification List*

| Certification ID | Certification No. | Description | Expires | Project Required |
|---|---|---|---|---|
| Alaska CS-LAP | 19-002 | Alaska Department of Environmental Conservation | 12/30/2024 | |
| Colorado | MD010912023 | Colorado Division of Oil and Public Safety | 11/23/2025 | |
| DoD-ELAP | 72690/L24-851 | United States Department of Defense Environmental Laboratory Accreditation | 12/31/2026 | |
| ISO/IEC 17025:2017 | 72690/L24-851 | General Requirements for the Competence of Testing and Calibration Laboratories | 12/31/2026 | |
| NEFAP | 72690/L24-846 | TNI National Environmental Field Activities Program (NEFAP) | 12/31/2026 | |
| NY-NELAP | 12097 | New York Department of Health | 04/01/2025 | |
| Utah-NELAP | MD010912024-16 | Utah Department of Health | 12/31/2025 | |
| Washington State | C1085 | The State of Washington Department of Ecology | 05/23/2025 | |

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| | | |
|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

## 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 |
| %RE | Percent Relative Error |
| RPD | Relative Percent Difference |
| RT | Retention Times in Minutes |
| RRT | Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm$0.06 control limits) |
| RV | Calibration reference value |
| VISL | EPA Vapor Intrusion Screening Level |
| 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 |
| g | Uptake rate determined using Graham's Law of Diffusion. |

### *Sample/Sample Receipt Qualifiers and Notes:*

| | |
|---|---|
| J | Value reported below limit of quantitation (LOQ). |
| U | Analyte was not detected and is reported as less than the limit of detection (LOD). The LOD has been adjusted for any dilution or concentration of the sample. |

526 Underwood Lane
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| | | |
|---|---|---|
| **Terracon** | **Site Name:** Barrel Plating Services fmr 58247140 | **Beacon Proposal:** 241122R03 |
| 4900 South Pennsylvania Ave, Ste 100 | **Site Location:** Milwaukee, WI | **Lab Work Order:** 0008201 |
| Cudahy, WI 53110 | **Project Manager:** Rachel Slonac | **Reported:** 12/24/2024 |

# *Sample Management Records*

BEACON ENVIRONMENTAL
526 Underwood Lane
Bel Air, Maryland 21014 USA
1-410-838-8780
help@beacon-usa.com

# BEACON SAMPLER CHAIN-OF-CUSTODY

| Client Information | | Project Information | |
|---|---|---|---|
| Company: Terracon | | Site Name: Barrel Plating Fmr | Project Manager: R. Slonac |
| Office Address: 4900 S Pennsylvania Ave | | Site Location: Milwaukee, WI | Client PO: P00198962 |
| City / State / Zip: Cudahy, WI 53110 | | Submitted by: B. Kappen | Turn around time (check one): |
| Phone: 414-209-7647 | | Email: bjkappen@terracon.com | [X] Normal [ ] Rush (specify)____days |

| Field Sample ID | Start Date | Start Time | Stop Date | Stop Time | Average Temp (°C) | Notes / Surface Type for Soil Gas e.g. Describe Conditions, Soil/Asphalt/Concrete/Gravel | INDOOR AIR | AMBIENT AIR | CRAWL SPACE | SEWER GAS | SOIL GAS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 325-B | 12/2/24 | 1543 | 12/12/24 | 1543 | 18 | | X | | | | |
| 327-B | 12/2/24 | 1535 | 12/12/24 | 1641 | 18 | | X | | | | |
| OA | 12/2/24 | 1551 | 12/12/24 | 1806 | -2 | | | X | | | |

Special Notes / Instructions:

| | | | |
|---|---|---|---|
| Relinquished by (signature): [signature] | Date / Time: 12/13/24 1630 | Received by (signature): FedEx | Date / Time: 12/13/24 1630 |
| Relinquished by (signature): | Date / Time: | Received by (signature): [signature] | Date / Time: 12/16/24 16:38 |
| For Lab Use Only | Beacon Job No: 8201 | Beacon Proposal: 241122R03 | Analytical Method: TO-17 |
| Courier Name: Fedex | Shipment Condition: good | Custody Seal Intact: [ ] Yes [ ] No [✓] n/a | Custody Seal No: — |

# ANALYTICAL REPORT

December 20, 2024



## Terracon - Franklin, WI

| | |
|---|---|
| Sample Delivery Group: | L1809780 |
| Samples Received: | 12/14/2024 |
| Project Number: | 58247140 |
| Description: | Barrel Plating Fmr |

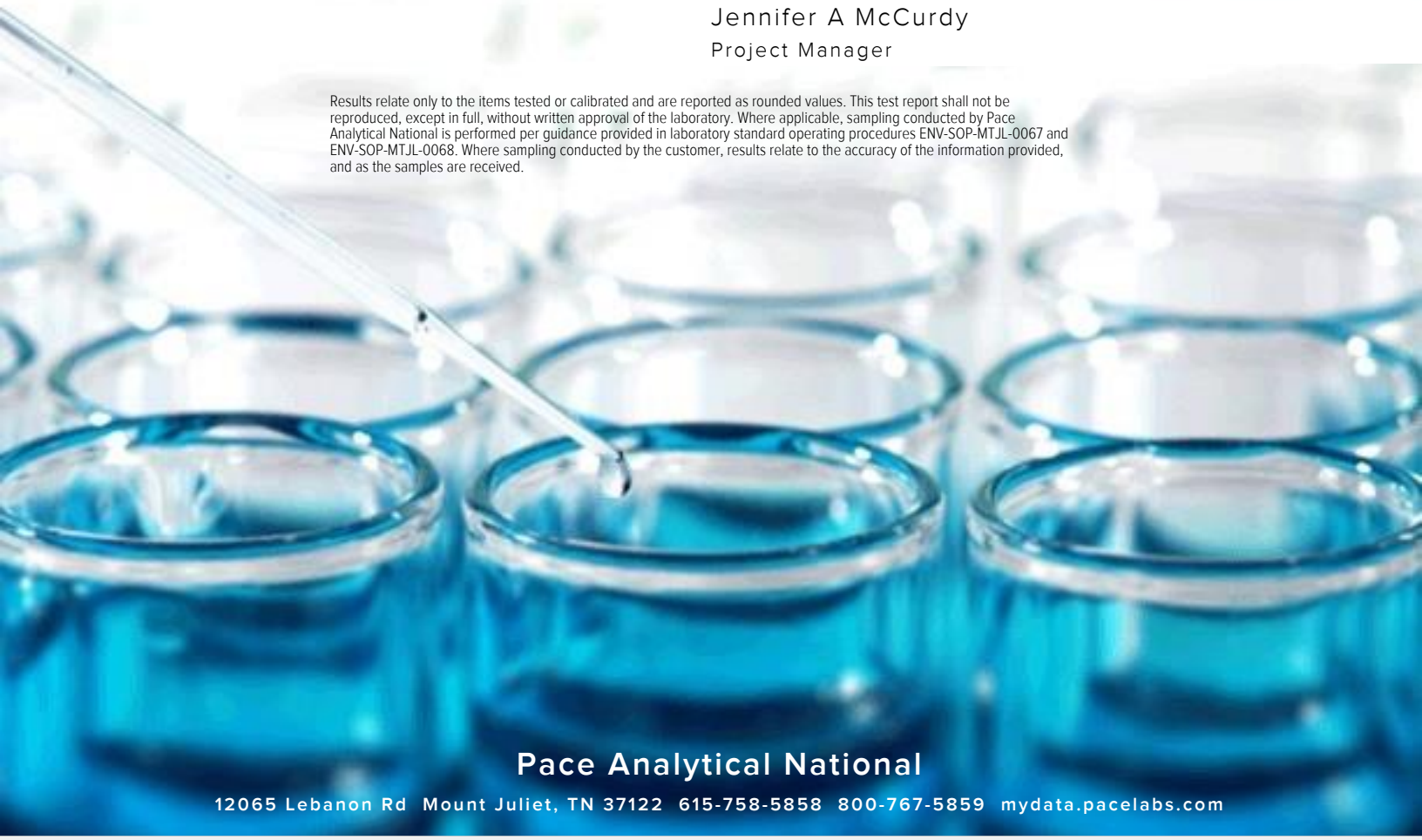
Report To:

Rachel Slonac
4900 South Pennsylvania Ave
Suite 100
Cudahy, WI 53110

Entire Report Reviewed By:

Jennifer A McCurdy
Project Manager





Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

# TABLE OF CONTENTS

## SS-1 L1809780-01 Air

Collected by: B. Kappen | Collected date/time: 12/12/24 17:29 | Received date/time: 12/14/24 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (MS) by Method TO-15 | WG2419606 | 1 | 12/16/24 18:23 | 12/16/24 18:23 | DAH | Mt. Juliet, TN |

## SS-2 L1809780-02 Air

Collected by: B. Kappen | Collected date/time: 12/12/24 16:31 | Received date/time: 12/14/24 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (MS) by Method TO-15 | WG2419606 | 1 | 12/16/24 18:51 | 12/16/24 18:51 | DAH | Mt. Juliet, TN |

## SS-3 L1809780-03 Air

Collected by: B. Kappen | Collected date/time: 12/12/24 16:47 | Received date/time: 12/14/24 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (MS) by Method TO-15 | WG2419606 | 1 | 12/16/24 19:19 | 12/16/24 19:19 | DAH | Mt. Juliet, TN |

## SVMP-1 L1809780-04 Air

Collected by: B. Kappen | Collected date/time: 12/12/24 17:49 | Received date/time: 12/14/24 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (MS) by Method TO-15 | WG2419606 | 1 | 12/16/24 19:47 | 12/16/24 19:47 | DAH | Mt. Juliet, TN |

# CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jennifer A McCurdy
Project Manager

## Volatile Organic Compounds (MS) by Method TO-15

| Analyte | CAS # | Mol. Wt. | MDL ug/m3 | RDL ug/m3 | Result ug/m3 | Qualifier | Dilution | Batch |
|---|---|---|---|---|---|---|---|---|
| Acetone | 67-64-1 | 58.10 | 1.24 | 4.11 | U | | 1 | WG2419606 |
| Benzene | 71-43-2 | 78.10 | 0.351 | 1.17 | U | | 1 | WG2419606 |
| Benzyl Chloride | 100-44-7 | 127 | 0.461 | 1.54 | U | | 1 | WG2419606 |
| Bromodichloromethane | 75-27-4 | 164 | 0.466 | 1.56 | U | | 1 | WG2419606 |
| Bromoform | 75-25-2 | 253 | 0.781 | 2.61 | U | | 1 | WG2419606 |
| Bromomethane | 74-83-9 | 94.90 | 0.364 | 1.21 | U | | 1 | WG2419606 |
| 1,3-Butadiene | 106-99-0 | 54.10 | 0.350 | 1.17 | U | | 1 | WG2419606 |
| Carbon disulfide | 75-15-0 | 76.10 | 0.498 | 1.66 | U | | 1 | WG2419606 |
| Carbon tetrachloride | 56-23-5 | 154 | 0.470 | 1.57 | U | | 1 | WG2419606 |
| Chlorobenzene | 108-90-7 | 113 | 0.545 | 1.82 | U | | 1 | WG2419606 |
| Chloroethane | 75-00-3 | 64.50 | 0.290 | 0.968 | U | | 1 | WG2419606 |
| Chloroform | 67-66-3 | 119 | 0.506 | 1.69 | 0.526 | J | 1 | WG2419606 |
| Chloromethane | 74-87-3 | 50.50 | 0.227 | 0.758 | U | | 1 | WG2419606 |
| Cyclohexane | 110-82-7 | 84.20 | 0.585 | 1.95 | U | | 1 | WG2419606 |
| Dibromochloromethane | 124-48-1 | 208 | 0.592 | 1.97 | U | | 1 | WG2419606 |
| 1,2-Dibromoethane | 106-93-4 | 188 | 0.531 | 1.77 | U | | 1 | WG2419606 |
| 1,2-Dichlorobenzene | 95-50-1 | 147 | 0.441 | 1.47 | U | | 1 | WG2419606 |
| 1,3-Dichlorobenzene | 541-73-1 | 147 | 0.453 | 1.51 | U | | 1 | WG2419606 |
| 1,4-Dichlorobenzene | 106-46-7 | 147 | 0.462 | 1.54 | U | | 1 | WG2419606 |
| 1,2-Dichloroethane | 107-06-2 | 99 | 0.296 | 0.984 | U | | 1 | WG2419606 |
| 1,1-Dichloroethane | 75-34-3 | 98 | 0.285 | 0.950 | U | | 1 | WG2419606 |
| 1,1-Dichloroethene | 75-35-4 | 96.90 | 0.296 | 0.987 | U | | 1 | WG2419606 |
| cis-1,2-Dichloroethene | 156-59-2 | 96.90 | 0.315 | 1.05 | U | | 1 | WG2419606 |
| trans-1,2-Dichloroethene | 156-60-5 | 96.90 | 0.291 | 0.971 | U | | 1 | WG2419606 |
| 1,2-Dichloropropane | 78-87-5 | 113 | 0.348 | 1.16 | U | | 1 | WG2419606 |
| cis-1,3-Dichloropropene | 10061-01-5 | 111 | 0.337 | 1.13 | U | | 1 | WG2419606 |
| trans-1,3-Dichloropropene | 10061-02-6 | 111 | 0.361 | 1.20 | U | | 1 | WG2419606 |
| Ethanol | 64-17-5 | 46.10 | 4.47 | 14.9 | U | | 1 | WG2419606 |
| Ethylbenzene | 100-41-4 | 106 | 0.337 | 1.12 | U | | 1 | WG2419606 |
| 4-Ethyltoluene | 622-96-8 | 120 | 0.435 | 1.45 | U | | 1 | WG2419606 |
| Ethyl acetate | 141-78-6 | 88 | 0.594 | 1.98 | U | | 1 | WG2419606 |
| Trichlorofluoromethane | 75-69-4 | 137.40 | 0.433 | 1.44 | U | | 1 | WG2419606 |
| Dichlorodifluoromethane | 75-71-8 | 120.92 | 0.399 | 1.33 | U | | 1 | WG2419606 |
| 1,1,2-Trichlorotrifluoroethane | 76-13-1 | 187.40 | 0.576 | 1.92 | U | | 1 | WG2419606 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 171 | 0.529 | 1.76 | U | | 1 | WG2419606 |
| Heptane | 142-82-5 | 100 | 0.466 | 1.55 | U | | 1 | WG2419606 |
| Hexachloro-1,3-butadiene | 87-68-3 | 261 | 0.854 | 2.85 | U | | 1 | WG2419606 |
| n-Hexane | 110-54-3 | 86.20 | 0.504 | 1.68 | U | | 1 | WG2419606 |
| Isopropylbenzene | 98-82-8 | 120.20 | 0.355 | 1.18 | U | | 1 | WG2419606 |
| Methylene Chloride | 75-09-2 | 84.90 | 0.587 | 1.95 | U | | 1 | WG2419606 |
| Methyl Butyl Ketone | 591-78-6 | 100 | 0.544 | 1.81 | U | | 1 | WG2419606 |
| 2-Butanone (MEK) | 78-93-3 | 72.10 | 0.342 | 1.14 | U | | 1 | WG2419606 |
| 4-Methyl-2-pentanone (MIBK) | 108-10-1 | 100.10 | 0.434 | 1.45 | U | | 1 | WG2419606 |
| Methyl methacrylate | 80-62-6 | 100.12 | 0.692 | 2.31 | U | | 1 | WG2419606 |
| MTBE | 1634-04-4 | 88.10 | 0.293 | 0.976 | U | | 1 | WG2419606 |
| Naphthalene | 91-20-3 | 128 | 3.23 | 10.8 | U | | 1 | WG2419606 |
| 2-Propanol | 67-63-0 | 60.10 | 1.67 | 5.58 | U | | 1 | WG2419606 |
| Propene | 115-07-1 | 42.10 | 0.368 | 1.23 | U | | 1 | WG2419606 |
| Styrene | 100-42-5 | 104 | 0.341 | 1.14 | U | | 1 | WG2419606 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 168 | 0.478 | 1.59 | U | | 1 | WG2419606 |
| Tetrachloroethylene | 127-18-4 | 166 | 0.754 | 2.51 | 5.84 | | 1 | WG2419606 |
| Tetrahydrofuran | 109-99-9 | 72.10 | 0.484 | 1.61 | U | | 1 | WG2419606 |
| Toluene | 108-88-3 | 92.10 | 0.490 | 1.63 | U | | 1 | WG2419606 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 181 | 3.42 | 11.4 | U | | 1 | WG2419606 |
| 1,1,1-Trichloroethane | 71-55-6 | 133 | 0.391 | 1.30 | U | | 1 | WG2419606 |
| 1,1,2-Trichloroethane | 79-00-5 | 133 | 0.372 | 1.24 | U | | 1 | WG2419606 |

## Volatile Organic Compounds (MS) by Method TO-15

| Analyte | CAS # | Mol. Wt. | MDL ug/m3 | RDL ug/m3 | Result ug/m3 | Qualifier | Dilution | Batch |
|---|---|---|---|---|---|---|---|---|
| Trichloroethylene | 79-01-6 | 131 | 0.364 | 1.22 | 2.85 | | 1 | WG2419606 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 120 | 0.455 | 1.52 | U | | 1 | WG2419606 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 120 | 0.419 | 1.39 | U | | 1 | WG2419606 |
| 2,2,4-Trimethylpentane | 540-84-1 | 114.22 | 0.420 | 1.40 | U | | 1 | WG2419606 |
| Vinyl chloride | 75-01-4 | 62.50 | 0.211 | 0.703 | U | | 1 | WG2419606 |
| Vinyl Bromide | 593-60-2 | 106.95 | 0.328 | 1.09 | U | | 1 | WG2419606 |
| Vinyl acetate | 108-05-4 | 86.10 | 0.341 | 1.14 | U | | 1 | WG2419606 |
| Xylenes, Total | 1330-20-7 | 106.16 | 0.385 | 1.29 | U | | 1 | WG2419606 |
| m&p-Xylene | 179601-23-1 | 106 | 0.754 | 2.51 | U | | 1 | WG2419606 |
| o-Xylene | 95-47-6 | 106 | 0.385 | 1.28 | U | | 1 | WG2419606 |
| *(S) 1,4-Bromofluorobenzene* | *460-00-4* | *175* | | | *88.9* | | *60.0-140* | WG2419606 |

## Volatile Organic Compounds (MS) by Method TO-15

| Analyte | CAS # | Mol. Wt. | MDL ug/m3 | RDL ug/m3 | Result ug/m3 | Qualifier | Dilution | Batch |
|---|---|---|---|---|---|---|---|---|
| Acetone | 67-64-1 | 58.10 | 1.24 | 4.11 | 6.15 | | 1 | WG2419606 |
| Benzene | 71-43-2 | 78.10 | 0.351 | 1.17 | U | | 1 | WG2419606 |
| Benzyl Chloride | 100-44-7 | 127 | 0.461 | 1.54 | U | | 1 | WG2419606 |
| Bromodichloromethane | 75-27-4 | 164 | 0.466 | 1.56 | U | | 1 | WG2419606 |
| Bromoform | 75-25-2 | 253 | 0.781 | 2.61 | U | | 1 | WG2419606 |
| Bromomethane | 74-83-9 | 94.90 | 0.364 | 1.21 | U | | 1 | WG2419606 |
| 1,3-Butadiene | 106-99-0 | 54.10 | 0.350 | 1.17 | U | | 1 | WG2419606 |
| Carbon disulfide | 75-15-0 | 76.10 | 0.498 | 1.66 | U | | 1 | WG2419606 |
| Carbon tetrachloride | 56-23-5 | 154 | 0.470 | 1.57 | U | | 1 | WG2419606 |
| Chlorobenzene | 108-90-7 | 113 | 0.545 | 1.82 | U | | 1 | WG2419606 |
| Chloroethane | 75-00-3 | 64.50 | 0.290 | 0.968 | U | | 1 | WG2419606 |
| Chloroform | 67-66-3 | 119 | 0.506 | 1.69 | U | | 1 | WG2419606 |
| Chloromethane | 74-87-3 | 50.50 | 0.227 | 0.758 | U | | 1 | WG2419606 |
| Cyclohexane | 110-82-7 | 84.20 | 0.585 | 1.95 | U | | 1 | WG2419606 |
| Dibromochloromethane | 124-48-1 | 208 | 0.592 | 1.97 | U | | 1 | WG2419606 |
| 1,2-Dibromoethane | 106-93-4 | 188 | 0.531 | 1.77 | U | | 1 | WG2419606 |
| 1,2-Dichlorobenzene | 95-50-1 | 147 | 0.441 | 1.47 | U | | 1 | WG2419606 |
| 1,3-Dichlorobenzene | 541-73-1 | 147 | 0.453 | 1.51 | U | | 1 | WG2419606 |
| 1,4-Dichlorobenzene | 106-46-7 | 147 | 0.462 | 1.54 | U | | 1 | WG2419606 |
| 1,2-Dichloroethane | 107-06-2 | 99 | 0.296 | 0.984 | U | | 1 | WG2419606 |
| 1,1-Dichloroethane | 75-34-3 | 98 | 0.285 | 0.950 | U | | 1 | WG2419606 |
| 1,1-Dichloroethene | 75-35-4 | 96.90 | 0.296 | 0.987 | U | | 1 | WG2419606 |
| cis-1,2-Dichloroethene | 156-59-2 | 96.90 | 0.315 | 1.05 | U | | 1 | WG2419606 |
| trans-1,2-Dichloroethene | 156-60-5 | 96.90 | 0.291 | 0.971 | U | | 1 | WG2419606 |
| 1,2-Dichloropropane | 78-87-5 | 113 | 0.348 | 1.16 | U | | 1 | WG2419606 |
| cis-1,3-Dichloropropene | 10061-01-5 | 111 | 0.337 | 1.13 | U | | 1 | WG2419606 |
| trans-1,3-Dichloropropene | 10061-02-6 | 111 | 0.361 | 1.20 | U | | 1 | WG2419606 |
| Ethanol | 64-17-5 | 46.10 | 4.47 | 14.9 | 7.32 | J | 1 | WG2419606 |
| Ethylbenzene | 100-41-4 | 106 | 0.337 | 1.12 | U | | 1 | WG2419606 |
| 4-Ethyltoluene | 622-96-8 | 120 | 0.435 | 1.45 | U | | 1 | WG2419606 |
| Ethyl acetate | 141-78-6 | 88 | 0.594 | 1.98 | U | | 1 | WG2419606 |
| Trichlorofluoromethane | 75-69-4 | 137.40 | 0.433 | 1.44 | 1.18 | J | 1 | WG2419606 |
| Dichlorodifluoromethane | 75-71-8 | 120.92 | 0.399 | 1.33 | 2.31 | | 1 | WG2419606 |
| 1,1,2-Trichlorotrifluoroethane | 76-13-1 | 187.40 | 0.576 | 1.92 | U | | 1 | WG2419606 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 171 | 0.529 | 1.76 | U | | 1 | WG2419606 |
| Heptane | 142-82-5 | 100 | 0.466 | 1.55 | U | | 1 | WG2419606 |
| Hexachloro-1,3-butadiene | 87-68-3 | 261 | 0.854 | 2.85 | U | | 1 | WG2419606 |
| n-Hexane | 110-54-3 | 86.20 | 0.504 | 1.68 | U | | 1 | WG2419606 |
| Isopropylbenzene | 98-82-8 | 120.20 | 0.355 | 1.18 | U | | 1 | WG2419606 |
| Methylene Chloride | 75-09-2 | 84.90 | 0.587 | 1.95 | U | | 1 | WG2419606 |
| Methyl Butyl Ketone | 591-78-6 | 100 | 0.544 | 1.81 | U | | 1 | WG2419606 |
| 2-Butanone (MEK) | 78-93-3 | 72.10 | 0.342 | 1.14 | U | | 1 | WG2419606 |
| 4-Methyl-2-pentanone (MIBK) | 108-10-1 | 100.10 | 0.434 | 1.45 | U | | 1 | WG2419606 |
| Methyl methacrylate | 80-62-6 | 100.12 | 0.692 | 2.31 | U | | 1 | WG2419606 |
| MTBE | 1634-04-4 | 88.10 | 0.293 | 0.976 | U | | 1 | WG2419606 |
| Naphthalene | 91-20-3 | 128 | 3.23 | 10.8 | U | | 1 | WG2419606 |
| 2-Propanol | 67-63-0 | 60.10 | 1.67 | 5.58 | U | | 1 | WG2419606 |
| Propene | 115-07-1 | 42.10 | 0.368 | 1.23 | U | | 1 | WG2419606 |
| Styrene | 100-42-5 | 104 | 0.341 | 1.14 | U | | 1 | WG2419606 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 168 | 0.478 | 1.59 | U | | 1 | WG2419606 |
| Tetrachloroethylene | 127-18-4 | 166 | 0.754 | 2.51 | 3.40 | | 1 | WG2419606 |
| Tetrahydrofuran | 109-99-9 | 72.10 | 0.484 | 1.61 | U | | 1 | WG2419606 |
| Toluene | 108-88-3 | 92.10 | 0.490 | 1.63 | U | | 1 | WG2419606 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 181 | 3.42 | 11.4 | U | | 1 | WG2419606 |
| 1,1,1-Trichloroethane | 71-55-6 | 133 | 0.391 | 1.30 | U | | 1 | WG2419606 |
| 1,1,2-Trichloroethane | 79-00-5 | 133 | 0.372 | 1.24 | U | | 1 | WG2419606 |

## Volatile Organic Compounds (MS) by Method TO-15

| Analyte | CAS # | Mol. Wt. | MDL ug/m3 | RDL ug/m3 | Result ug/m3 | Qualifier | Dilution | Batch |
|---|---|---|---|---|---|---|---|---|
| Trichloroethylene | 79-01-6 | 131 | 0.364 | 1.22 | 1.88 | | 1 | WG2419606 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 120 | 0.455 | 1.52 | U | | 1 | WG2419606 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 120 | 0.419 | 1.39 | U | | 1 | WG2419606 |
| 2,2,4-Trimethylpentane | 540-84-1 | 114.22 | 0.420 | 1.40 | U | | 1 | WG2419606 |
| Vinyl chloride | 75-01-4 | 62.50 | 0.211 | 0.703 | U | | 1 | WG2419606 |
| Vinyl Bromide | 593-60-2 | 106.95 | 0.328 | 1.09 | U | | 1 | WG2419606 |
| Vinyl acetate | 108-05-4 | 86.10 | 0.341 | 1.14 | U | | 1 | WG2419606 |
| Xylenes, Total | 1330-20-7 | 106.16 | 0.385 | 1.29 | U | | 1 | WG2419606 |
| m&p-Xylene | 179601-23-1 | 106 | 0.754 | 2.51 | U | | 1 | WG2419606 |
| o-Xylene | 95-47-6 | 106 | 0.385 | 1.28 | U | | 1 | WG2419606 |
| *(S) 1,4-Bromofluorobenzene* | *460-00-4* | *175* | | | *92.3* | | *60.0-140* | WG2419606 |

## Volatile Organic Compounds (MS) by Method TO-15

| Analyte | CAS # | Mol. Wt. | MDL ug/m3 | RDL ug/m3 | Result ug/m3 | Qualifier | Dilution | Batch |
|---|---|---|---|---|---|---|---|---|
| Acetone | 67-64-1 | 58.10 | 1.24 | 4.11 | 2.61 | J | 1 | WG2419606 |
| Benzene | 71-43-2 | 78.10 | 0.351 | 1.17 | U | | 1 | WG2419606 |
| Benzyl Chloride | 100-44-7 | 127 | 0.461 | 1.54 | U | | 1 | WG2419606 |
| Bromodichloromethane | 75-27-4 | 164 | 0.466 | 1.56 | U | | 1 | WG2419606 |
| Bromoform | 75-25-2 | 253 | 0.781 | 2.61 | U | | 1 | WG2419606 |
| Bromomethane | 74-83-9 | 94.90 | 0.364 | 1.21 | U | | 1 | WG2419606 |
| 1,3-Butadiene | 106-99-0 | 54.10 | 0.350 | 1.17 | U | | 1 | WG2419606 |
| Carbon disulfide | 75-15-0 | 76.10 | 0.498 | 1.66 | U | | 1 | WG2419606 |
| Carbon tetrachloride | 56-23-5 | 154 | 0.470 | 1.57 | U | | 1 | WG2419606 |
| Chlorobenzene | 108-90-7 | 113 | 0.545 | 1.82 | U | | 1 | WG2419606 |
| Chloroethane | 75-00-3 | 64.50 | 0.290 | 0.968 | U | | 1 | WG2419606 |
| Chloroform | 67-66-3 | 119 | 0.506 | 1.69 | 0.599 | J | 1 | WG2419606 |
| Chloromethane | 74-87-3 | 50.50 | 0.227 | 0.758 | U | | 1 | WG2419606 |
| Cyclohexane | 110-82-7 | 84.20 | 0.585 | 1.95 | U | | 1 | WG2419606 |
| Dibromochloromethane | 124-48-1 | 208 | 0.592 | 1.97 | U | | 1 | WG2419606 |
| 1,2-Dibromoethane | 106-93-4 | 188 | 0.531 | 1.77 | U | | 1 | WG2419606 |
| 1,2-Dichlorobenzene | 95-50-1 | 147 | 0.441 | 1.47 | U | | 1 | WG2419606 |
| 1,3-Dichlorobenzene | 541-73-1 | 147 | 0.453 | 1.51 | U | | 1 | WG2419606 |
| 1,4-Dichlorobenzene | 106-46-7 | 147 | 0.462 | 1.54 | U | | 1 | WG2419606 |
| 1,2-Dichloroethane | 107-06-2 | 99 | 0.296 | 0.984 | U | | 1 | WG2419606 |
| 1,1-Dichloroethane | 75-34-3 | 98 | 0.285 | 0.950 | U | | 1 | WG2419606 |
| 1,1-Dichloroethene | 75-35-4 | 96.90 | 0.296 | 0.987 | U | | 1 | WG2419606 |
| cis-1,2-Dichloroethene | 156-59-2 | 96.90 | 0.315 | 1.05 | U | | 1 | WG2419606 |
| trans-1,2-Dichloroethene | 156-60-5 | 96.90 | 0.291 | 0.971 | 0.364 | J | 1 | WG2419606 |
| 1,2-Dichloropropane | 78-87-5 | 113 | 0.348 | 1.16 | U | | 1 | WG2419606 |
| cis-1,3-Dichloropropene | 10061-01-5 | 111 | 0.337 | 1.13 | U | | 1 | WG2419606 |
| trans-1,3-Dichloropropene | 10061-02-6 | 111 | 0.361 | 1.20 | U | | 1 | WG2419606 |
| Ethanol | 64-17-5 | 46.10 | 4.47 | 14.9 | U | | 1 | WG2419606 |
| Ethylbenzene | 100-41-4 | 106 | 0.337 | 1.12 | U | | 1 | WG2419606 |
| 4-Ethyltoluene | 622-96-8 | 120 | 0.435 | 1.45 | U | | 1 | WG2419606 |
| Ethyl acetate | 141-78-6 | 88 | 0.594 | 1.98 | U | | 1 | WG2419606 |
| Trichlorofluoromethane | 75-69-4 | 137.40 | 0.433 | 1.44 | U | | 1 | WG2419606 |
| Dichlorodifluoromethane | 75-71-8 | 120.92 | 0.399 | 1.33 | 2.15 | | 1 | WG2419606 |
| 1,1,2-Trichlorotrifluoroethane | 76-13-1 | 187.40 | 0.576 | 1.92 | U | | 1 | WG2419606 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 171 | 0.529 | 1.76 | U | | 1 | WG2419606 |
| Heptane | 142-82-5 | 100 | 0.466 | 1.55 | U | | 1 | WG2419606 |
| Hexachloro-1,3-butadiene | 87-68-3 | 261 | 0.854 | 2.85 | U | | 1 | WG2419606 |
| n-Hexane | 110-54-3 | 86.20 | 0.504 | 1.68 | U | | 1 | WG2419606 |
| Isopropylbenzene | 98-82-8 | 120.20 | 0.355 | 1.18 | U | | 1 | WG2419606 |
| Methylene Chloride | 75-09-2 | 84.90 | 0.587 | 1.95 | U | | 1 | WG2419606 |
| Methyl Butyl Ketone | 591-78-6 | 100 | 0.544 | 1.81 | U | | 1 | WG2419606 |
| 2-Butanone (MEK) | 78-93-3 | 72.10 | 0.342 | 1.14 | U | | 1 | WG2419606 |
| 4-Methyl-2-pentanone (MIBK) | 108-10-1 | 100.10 | 0.434 | 1.45 | U | | 1 | WG2419606 |
| Methyl methacrylate | 80-62-6 | 100.12 | 0.692 | 2.31 | U | | 1 | WG2419606 |
| MTBE | 1634-04-4 | 88.10 | 0.293 | 0.976 | U | | 1 | WG2419606 |
| Naphthalene | 91-20-3 | 128 | 3.23 | 10.8 | U | | 1 | WG2419606 |
| 2-Propanol | 67-63-0 | 60.10 | 1.67 | 5.58 | U | | 1 | WG2419606 |
| Propene | 115-07-1 | 42.10 | 0.368 | 1.23 | U | | 1 | WG2419606 |
| Styrene | 100-42-5 | 104 | 0.341 | 1.14 | U | | 1 | WG2419606 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 168 | 0.478 | 1.59 | U | | 1 | WG2419606 |
| Tetrachloroethylene | 127-18-4 | 166 | 0.754 | 2.51 | 11.8 | | 1 | WG2419606 |
| Tetrahydrofuran | 109-99-9 | 72.10 | 0.484 | 1.61 | U | | 1 | WG2419606 |
| Toluene | 108-88-3 | 92.10 | 0.490 | 1.63 | 0.671 | J | 1 | WG2419606 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 181 | 3.42 | 11.4 | U | | 1 | WG2419606 |
| 1,1,1-Trichloroethane | 71-55-6 | 133 | 0.391 | 1.30 | 0.410 | J | 1 | WG2419606 |
| 1,1,2-Trichloroethane | 79-00-5 | 133 | 0.372 | 1.24 | U | | 1 | WG2419606 |

## Volatile Organic Compounds (MS) by Method TO-15

| Analyte | CAS # | Mol. Wt. | MDL ug/m3 | RDL ug/m3 | Result ug/m3 | Qualifier | Dilution | Batch |
|---|---|---|---|---|---|---|---|---|
| Trichloroethylene | 79-01-6 | 131 | 0.364 | 1.22 | 5.79 | | 1 | WG2419606 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 120 | 0.455 | 1.52 | U | | 1 | WG2419606 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 120 | 0.419 | 1.39 | U | | 1 | WG2419606 |
| 2,2,4-Trimethylpentane | 540-84-1 | 114.22 | 0.420 | 1.40 | U | | 1 | WG2419606 |
| Vinyl chloride | 75-01-4 | 62.50 | 0.211 | 0.703 | U | | 1 | WG2419606 |
| Vinyl Bromide | 593-60-2 | 106.95 | 0.328 | 1.09 | U | | 1 | WG2419606 |
| Vinyl acetate | 108-05-4 | 86.10 | 0.341 | 1.14 | U | | 1 | WG2419606 |
| Xylenes, Total | 1330-20-7 | 106.16 | 0.385 | 1.29 | U | | 1 | WG2419606 |
| m&p-Xylene | 179601-23-1 | 106 | 0.754 | 2.51 | U | | 1 | WG2419606 |
| o-Xylene | 95-47-6 | 106 | 0.385 | 1.28 | U | | 1 | WG2419606 |
| *(S) 1,4-Bromofluorobenzene* | *460-00-4* | *175* | | | *85.2* | | *60.0-140* | WG2419606 |

## Volatile Organic Compounds (MS) by Method TO-15

| Analyte | CAS # | Mol. Wt. | MDL ug/m3 | RDL ug/m3 | Result ug/m3 | Qualifier | Dilution | Batch |
|---|---|---|---|---|---|---|---|---|
| Acetone | 67-64-1 | 58.10 | 1.24 | 4.11 | 7.06 | | 1 | WG2419606 |
| Benzene | 71-43-2 | 78.10 | 0.351 | 1.17 | 0.473 | J | 1 | WG2419606 |
| Benzyl Chloride | 100-44-7 | 127 | 0.461 | 1.54 | U | | 1 | WG2419606 |
| Bromodichloromethane | 75-27-4 | 164 | 0.466 | 1.56 | U | | 1 | WG2419606 |
| Bromoform | 75-25-2 | 253 | 0.781 | 2.61 | U | | 1 | WG2419606 |
| Bromomethane | 74-83-9 | 94.90 | 0.364 | 1.21 | U | | 1 | WG2419606 |
| 1,3-Butadiene | 106-99-0 | 54.10 | 0.350 | 1.17 | U | | 1 | WG2419606 |
| Carbon disulfide | 75-15-0 | 76.10 | 0.498 | 1.66 | U | | 1 | WG2419606 |
| Carbon tetrachloride | 56-23-5 | 154 | 0.470 | 1.57 | U | | 1 | WG2419606 |
| Chlorobenzene | 108-90-7 | 113 | 0.545 | 1.82 | U | | 1 | WG2419606 |
| Chloroethane | 75-00-3 | 64.50 | 0.290 | 0.968 | U | | 1 | WG2419606 |
| Chloroform | 67-66-3 | 119 | 0.506 | 1.69 | 1.28 | J | 1 | WG2419606 |
| Chloromethane | 74-87-3 | 50.50 | 0.227 | 0.758 | U | | 1 | WG2419606 |
| Cyclohexane | 110-82-7 | 84.20 | 0.585 | 1.95 | U | | 1 | WG2419606 |
| Dibromochloromethane | 124-48-1 | 208 | 0.592 | 1.97 | U | | 1 | WG2419606 |
| 1,2-Dibromoethane | 106-93-4 | 188 | 0.531 | 1.77 | U | | 1 | WG2419606 |
| 1,2-Dichlorobenzene | 95-50-1 | 147 | 0.441 | 1.47 | U | | 1 | WG2419606 |
| 1,3-Dichlorobenzene | 541-73-1 | 147 | 0.453 | 1.51 | U | | 1 | WG2419606 |
| 1,4-Dichlorobenzene | 106-46-7 | 147 | 0.462 | 1.54 | U | | 1 | WG2419606 |
| 1,2-Dichloroethane | 107-06-2 | 99 | 0.296 | 0.984 | U | | 1 | WG2419606 |
| 1,1-Dichloroethane | 75-34-3 | 98 | 0.285 | 0.950 | U | | 1 | WG2419606 |
| 1,1-Dichloroethene | 75-35-4 | 96.90 | 0.296 | 0.987 | U | | 1 | WG2419606 |
| cis-1,2-Dichloroethene | 156-59-2 | 96.90 | 0.315 | 1.05 | U | | 1 | WG2419606 |
| trans-1,2-Dichloroethene | 156-60-5 | 96.90 | 0.291 | 0.971 | U | | 1 | WG2419606 |
| 1,2-Dichloropropane | 78-87-5 | 113 | 0.348 | 1.16 | U | | 1 | WG2419606 |
| cis-1,3-Dichloropropene | 10061-01-5 | 111 | 0.337 | 1.13 | U | | 1 | WG2419606 |
| trans-1,3-Dichloropropene | 10061-02-6 | 111 | 0.361 | 1.20 | U | | 1 | WG2419606 |
| Ethanol | 64-17-5 | 46.10 | 4.47 | 14.9 | 19.2 | | 1 | WG2419606 |
| Ethylbenzene | 100-41-4 | 106 | 0.337 | 1.12 | U | | 1 | WG2419606 |
| 4-Ethyltoluene | 622-96-8 | 120 | 0.435 | 1.45 | U | | 1 | WG2419606 |
| Ethyl acetate | 141-78-6 | 88 | 0.594 | 1.98 | U | | 1 | WG2419606 |
| Trichlorofluoromethane | 75-69-4 | 137.40 | 0.433 | 1.44 | 1.31 | J | 1 | WG2419606 |
| Dichlorodifluoromethane | 75-71-8 | 120.92 | 0.399 | 1.33 | 2.29 | | 1 | WG2419606 |
| 1,1,2-Trichlorotrifluoroethane | 76-13-1 | 187.40 | 0.576 | 1.92 | U | | 1 | WG2419606 |
| 1,2-Dichlorotetrafluoroethane | 76-14-2 | 171 | 0.529 | 1.76 | U | | 1 | WG2419606 |
| Heptane | 142-82-5 | 100 | 0.466 | 1.55 | U | | 1 | WG2419606 |
| Hexachloro-1,3-butadiene | 87-68-3 | 261 | 0.854 | 2.85 | U | | 1 | WG2419606 |
| n-Hexane | 110-54-3 | 86.20 | 0.504 | 1.68 | 1.15 | J | 1 | WG2419606 |
| Isopropylbenzene | 98-82-8 | 120.20 | 0.355 | 1.18 | 0.405 | J | 1 | WG2419606 |
| Methylene Chloride | 75-09-2 | 84.90 | 0.587 | 1.95 | U | | 1 | WG2419606 |
| Methyl Butyl Ketone | 591-78-6 | 100 | 0.544 | 1.81 | U | | 1 | WG2419606 |
| 2-Butanone (MEK) | 78-93-3 | 72.10 | 0.342 | 1.14 | 1.18 | | 1 | WG2419606 |
| 4-Methyl-2-pentanone (MIBK) | 108-10-1 | 100.10 | 0.434 | 1.45 | U | | 1 | WG2419606 |
| Methyl methacrylate | 80-62-6 | 100.12 | 0.692 | 2.31 | U | | 1 | WG2419606 |
| MTBE | 1634-04-4 | 88.10 | 0.293 | 0.976 | U | | 1 | WG2419606 |
| Naphthalene | 91-20-3 | 128 | 3.23 | 10.8 | U | | 1 | WG2419606 |
| 2-Propanol | 67-63-0 | 60.10 | 1.67 | 5.58 | 1.96 | J | 1 | WG2419606 |
| Propene | 115-07-1 | 42.10 | 0.368 | 1.23 | 5.89 | | 1 | WG2419606 |
| Styrene | 100-42-5 | 104 | 0.341 | 1.14 | U | | 1 | WG2419606 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 168 | 0.478 | 1.59 | U | | 1 | WG2419606 |
| Tetrachloroethylene | 127-18-4 | 166 | 0.754 | 2.51 | 4.71 | | 1 | WG2419606 |
| Tetrahydrofuran | 109-99-9 | 72.10 | 0.484 | 1.61 | U | | 1 | WG2419606 |
| Toluene | 108-88-3 | 92.10 | 0.490 | 1.63 | 2.52 | | 1 | WG2419606 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 181 | 3.42 | 11.4 | U | | 1 | WG2419606 |
| 1,1,1-Trichloroethane | 71-55-6 | 133 | 0.391 | 1.30 | U | | 1 | WG2419606 |
| 1,1,2-Trichloroethane | 79-00-5 | 133 | 0.372 | 1.24 | U | | 1 | WG2419606 |

## Volatile Organic Compounds (MS) by Method TO-15

| Analyte | CAS # | Mol. Wt. | MDL ug/m3 | RDL ug/m3 | Result ug/m3 | Qualifier | Dilution | Batch |
|---|---|---|---|---|---|---|---|---|
| Trichloroethylene | 79-01-6 | 131 | 0.364 | 1.22 | 1.79 | | 1 | WG2419606 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 120 | 0.455 | 1.52 | U | | 1 | WG2419606 |
| 1,3,5-Trimethylbenzene | 108-67-8 | 120 | 0.419 | 1.39 | U | | 1 | WG2419606 |
| 2,2,4-Trimethylpentane | 540-84-1 | 114.22 | 0.420 | 1.40 | U | | 1 | WG2419606 |
| Vinyl chloride | 75-01-4 | 62.50 | 0.211 | 0.703 | U | | 1 | WG2419606 |
| Vinyl Bromide | 593-60-2 | 106.95 | 0.328 | 1.09 | U | | 1 | WG2419606 |
| Vinyl acetate | 108-05-4 | 86.10 | 0.341 | 1.14 | U | | 1 | WG2419606 |
| Xylenes, Total | 1330-20-7 | 106.16 | 0.385 | 1.29 | U | | 1 | WG2419606 |
| m&p-Xylene | 179601-23-1 | 106 | 0.754 | 2.51 | U | | 1 | WG2419606 |
| o-Xylene | 95-47-6 | 106 | 0.385 | 1.28 | U | | 1 | WG2419606 |
| *(S) 1,4-Bromofluorobenzene* | *460-00-4* | *175* | | | *91.5* | | *60.0-140* | WG2419606 |

## Method Blank (MB)

(MB) R4159038-3 12/16/24 11:02

| Analyte | MB Result ug/m3 | MB Qualifier | MB MDL ug/m3 | MB RDL ug/m3 |
|---|---|---|---|---|
| Acetone | U | | 1.24 | 2.97 |
| Benzene | U | | 0.351 | 0.639 |
| Benzyl Chloride | U | | 0.461 | 1.04 |
| Bromodichloromethane | U | | 0.466 | 1.34 |
| Bromoform | U | | 0.781 | 6.52 |
| Bromomethane | U | | 0.364 | 0.776 |
| 1,3-Butadiene | U | | 0.350 | 4.43 |
| Carbon disulfide | U | | 0.498 | 1.24 |
| Carbon tetrachloride | U | | 0.470 | 1.26 |
| Chlorobenzene | U | | 0.545 | 0.924 |
| Chloroethane | U | | 0.290 | 0.528 |
| Chloroform | U | | 0.506 | 0.973 |
| Chloromethane | U | | 0.227 | 0.413 |
| Cyclohexane | U | | 0.585 | 0.689 |
| Dibromochloromethane | U | | 0.592 | 1.70 |
| 1,2-Dibromoethane | U | | 0.531 | 1.54 |
| 1,2-Dichlorobenzene | U | | 0.441 | 1.20 |
| 1,3-Dichlorobenzene | U | | 0.453 | 1.20 |
| 1,4-Dichlorobenzene | U | | 0.462 | 1.20 |
| 1,2-Dichloroethane | U | | 0.296 | 0.810 |
| 1,1-Dichloroethane | U | | 0.285 | 0.802 |
| 1,1-Dichloroethene | U | | 0.296 | 0.793 |
| cis-1,2-Dichloroethene | U | | 0.315 | 0.793 |
| trans-1,2-Dichloroethene | U | | 0.291 | 0.793 |
| 1,2-Dichloropropane | U | | 0.348 | 0.924 |
| cis-1,3-Dichloropropene | U | | 0.337 | 0.908 |
| trans-1,3-Dichloropropene | U | | 0.361 | 0.908 |
| Ethanol | U | | 4.47 | 4.71 |
| Ethylbenzene | U | | 0.337 | 0.867 |
| 4-Ethyltoluene | U | | 0.435 | 0.982 |
| Ethyl acetate | U | | 0.594 | 2.27 |
| Trichlorofluoromethane | U | | 0.433 | 1.12 |
| Dichlorodifluoromethane | U | | 0.399 | 0.989 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.576 | 1.53 |
| 1,2-Dichlorotetrafluoroethane | U | | 0.529 | 1.40 |
| Heptane | U | | 0.466 | 0.818 |
| Hexachloro-1,3-butadiene | U | | 0.854 | 6.73 |
| n-Hexane | U | | 0.504 | 2.22 |
| Isopropylbenzene | U | | 0.355 | 0.983 |
| Methylene Chloride | U | | 0.587 | 0.694 |

## Method Blank (MB)

(MB) R4159038-3 12/16/24 11:02

| Analyte | MB Result ug/m3 | MB Qualifier | MB MDL ug/m3 | MB RDL ug/m3 |
|---|---|---|---|---|
| Methyl Butyl Ketone | U | | 0.544 | 5.11 |
| 2-Butanone (MEK) | U | | 0.342 | 3.69 |
| 4-Methyl-2-pentanone (MIBK) | U | | 0.434 | 5.12 |
| Methyl methacrylate | U | | 0.692 | 0.819 |
| MTBE | U | | 0.293 | 0.721 |
| Naphthalene | U | | 3.23 | 3.30 |
| 2-Propanol | U | | 1.67 | 3.07 |
| Propene | U | | 0.368 | 2.15 |
| Styrene | U | | 0.341 | 1.70 |
| 1,1,2,2-Tetrachloroethane | U | | 0.478 | 1.37 |
| Tetrachloroethylene | U | | 0.754 | 1.36 |
| Tetrahydrofuran | U | | 0.484 | 0.590 |
| Toluene | U | | 0.490 | 1.88 |
| 1,2,4-Trichlorobenzene | U | | 3.42 | 4.66 |
| 1,1,1-Trichloroethane | U | | 0.391 | 1.09 |
| 1,1,2-Trichloroethane | U | | 0.372 | 1.09 |
| Trichloroethylene | U | | 0.364 | 1.07 |
| 1,2,4-Trimethylbenzene | U | | 0.455 | 0.982 |
| 1,3,5-Trimethylbenzene | U | | 0.419 | 0.982 |
| 2,2,4-Trimethylpentane | U | | 0.420 | 0.934 |
| Vinyl chloride | U | | 0.211 | 0.511 |
| Vinyl Bromide | U | | 0.328 | 0.875 |
| Vinyl acetate | U | | 0.341 | 2.22 |
| Xylenes, Total | U | | 0.385 | 2.61 |
| m&p-Xylene | U | | 0.754 | 1.73 |
| o-Xylene | U | | 0.385 | 0.867 |
| *(S) 1,4-Bromofluorobenzene* | *95.3* | | | *60.0-140* |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4159038-1 12/16/24 10:06 • (LCSD) R4159038-2 12/16/24 10:35

| Analyte | Spike Amount ug/m3 | LCS Result ug/m3 | LCSD Result ug/m3 | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | 8.91 | 10.1 | 10.2 | 113 | 115 | 70.0-130 | | | 1.64 | 25 |
| Benzene | 12.0 | 12.7 | 12.9 | 106 | 108 | 70.0-130 | | | 1.74 | 25 |
| Benzyl Chloride | 19.5 | 18.9 | 19.5 | 97.1 | 100 | 70.0-152 | | | 2.98 | 25 |
| Bromodichloromethane | 25.2 | 25.6 | 25.8 | 102 | 102 | 70.0-130 | | | 0.522 | 25 |
| Bromoform | 38.8 | 37.0 | 36.9 | 95.5 | 95.2 | 70.0-130 | | | 0.280 | 25 |
| Bromomethane | 14.6 | 14.6 | 15.3 | 100 | 105 | 70.0-130 | | | 5.19 | 25 |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4159038-1 12/16/24 10:06 • (LCSD) R4159038-2 12/16/24 10:35

| Analyte | Spike Amount ug/m3 | LCS Result ug/m3 | LCSD Result ug/m3 | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,3-Butadiene | 8.30 | 8.34 | 8.12 | 101 | 97.9 | 70.0-130 | | | 2.69 | 25 |
| Carbon disulfide | 23.3 | 24.0 | 23.7 | 103 | 102 | 70.0-130 | | | 1.04 | 25 |
| Carbon tetrachloride | 23.6 | 24.1 | 23.9 | 102 | 101 | 70.0-130 | | | 1.05 | 25 |
| Chlorobenzene | 17.3 | 18.2 | 18.3 | 105 | 105 | 70.0-130 | | | 0.508 | 25 |
| Chloroethane | 9.89 | 10.0 | 10.2 | 101 | 103 | 70.0-130 | | | 1.57 | 25 |
| Chloroform | 18.3 | 18.9 | 18.9 | 103 | 103 | 70.0-130 | | | 0.000 | 25 |
| Chloromethane | 7.75 | 8.12 | 8.22 | 105 | 106 | 70.0-130 | | | 1.26 | 25 |
| Cyclohexane | 12.9 | 13.6 | 13.9 | 105 | 107 | 70.0-130 | | | 2.01 | 25 |
| Dibromochloromethane | 31.9 | 32.0 | 31.7 | 100 | 99.5 | 70.0-130 | | | 0.801 | 25 |
| 1,2-Dibromoethane | 28.8 | 30.4 | 31.0 | 106 | 107 | 70.0-130 | | | 1.75 | 25 |
| 1,2-Dichlorobenzene | 22.5 | 24.8 | 25.6 | 110 | 113 | 70.0-130 | | | 2.86 | 25 |
| 1,3-Dichlorobenzene | 22.5 | 24.9 | 24.0 | 110 | 106 | 70.0-130 | | | 3.69 | 25 |
| 1,4-Dichlorobenzene | 22.5 | 24.1 | 24.4 | 107 | 108 | 70.0-130 | | | 1.24 | 25 |
| 1,2-Dichloroethane | 15.2 | 16.1 | 16.0 | 106 | 106 | 70.0-130 | | | 0.504 | 25 |
| 1,1-Dichloroethane | 15.0 | 15.8 | 16.1 | 105 | 107 | 70.0-130 | | | 1.76 | 25 |
| 1,1-Dichloroethene | 14.9 | 15.7 | 15.7 | 106 | 106 | 70.0-130 | | | 0.252 | 25 |
| cis-1,2-Dichloroethene | 14.9 | 16.1 | 16.6 | 109 | 112 | 70.0-130 | | | 3.14 | 25 |
| trans-1,2-Dichloroethene | 14.9 | 16.4 | 15.9 | 110 | 107 | 70.0-130 | | | 3.19 | 25 |
| 1,2-Dichloropropane | 17.3 | 18.2 | 18.3 | 105 | 106 | 70.0-130 | | | 1.01 | 25 |
| cis-1,3-Dichloropropene | 17.0 | 18.2 | 17.7 | 107 | 104 | 70.0-130 | | | 3.04 | 25 |
| trans-1,3-Dichloropropene | 17.0 | 18.3 | 18.6 | 108 | 109 | 70.0-130 | | | 1.23 | 25 |
| Ethanol | 7.07 | 7.49 | 7.09 | 106 | 100 | 55.0-148 | | | 5.43 | 25 |
| Ethylbenzene | 16.3 | 17.3 | 17.6 | 106 | 108 | 70.0-130 | | | 1.49 | 25 |
| 4-Ethyltoluene | 18.4 | 20.0 | 20.9 | 109 | 114 | 70.0-130 | | | 4.56 | 25 |
| Ethyl acetate | 13.5 | 14.9 | 15.2 | 110 | 112 | 70.0-130 | | | 1.92 | 25 |
| Trichlorofluoromethane | 21.1 | 21.5 | 21.7 | 102 | 103 | 70.0-130 | | | 1.04 | 25 |
| Dichlorodifluoromethane | 18.5 | 18.8 | 19.1 | 101 | 103 | 64.0-139 | | | 1.57 | 25 |
| 1,1,2-Trichlorotrifluoroethane | 28.7 | 29.5 | 29.7 | 103 | 103 | 70.0-130 | | | 0.776 | 25 |
| 1,2-Dichlorotetrafluoroethane | 26.2 | 27.0 | 27.8 | 103 | 106 | 70.0-130 | | | 3.06 | 25 |
| Heptane | 15.3 | 16.6 | 16.9 | 109 | 110 | 70.0-130 | | | 1.71 | 25 |
| Hexachloro-1,3-butadiene | 40.0 | 43.0 | 47.2 | 107 | 118 | 70.0-151 | | | 9.23 | 25 |
| n-Hexane | 13.2 | 13.4 | 13.4 | 101 | 101 | 70.0-130 | | | 0.264 | 25 |
| Isopropylbenzene | 18.4 | 19.8 | 20.4 | 107 | 110 | 70.0-130 | | | 2.94 | 25 |
| Methylene Chloride | 13.0 | 13.6 | 13.5 | 105 | 104 | 70.0-130 | | | 0.512 | 25 |
| Methyl Butyl Ketone | 15.3 | 17.5 | 17.2 | 114 | 112 | 70.0-149 | | | 1.42 | 25 |
| 2-Butanone (MEK) | 11.1 | 11.6 | 12.0 | 105 | 108 | 70.0-130 | | | 3.00 | 25 |
| 4-Methyl-2-pentanone (MIBK) | 15.4 | 15.2 | 15.6 | 98.9 | 102 | 70.0-139 | | | 2.66 | 25 |
| Methyl methacrylate | 15.4 | 16.4 | 16.3 | 107 | 106 | 70.0-130 | | | 0.751 | 25 |
| MTBE | 13.5 | 14.1 | 14.4 | 105 | 106 | 70.0-130 | | | 1.77 | 25 |
| Naphthalene | 19.6 | 20.8 | 20.8 | 106 | 106 | 70.0-159 | | | 0.000 | 25 |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4159038-1 12/16/24 10:06 • (LCSD) R4159038-2 12/16/24 10:35

| Analyte | Spike Amount ug/m3 | LCS Result ug/m3 | LCSD Result ug/m3 | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| 2-Propanol | 9.22 | 9.71 | 9.64 | 105 | 105 | 70.0-139 | | | 0.762 | 25 |
| Propene | 6.46 | 6.59 | 6.58 | 102 | 102 | 64.0-144 | | | 0.261 | 25 |
| Styrene | 31.9 | 34.8 | 35.2 | 109 | 110 | 70.0-130 | | | 1.22 | 25 |
| 1,1,2,2-Tetrachloroethane | 25.8 | 27.9 | 28.2 | 108 | 109 | 70.0-130 | | | 0.980 | 25 |
| Tetrachloroethylene | 25.5 | 25.0 | 26.3 | 98.1 | 103 | 70.0-130 | | | 5.03 | 25 |
| Tetrahydrofuran | 11.1 | 12.2 | 12.0 | 110 | 108 | 70.0-137 | | | 1.95 | 25 |
| Toluene | 14.1 | 14.6 | 14.5 | 103 | 103 | 70.0-130 | | | 0.776 | 25 |
| 1,2,4-Trichlorobenzene | 27.8 | 24.9 | 24.5 | 89.9 | 88.3 | 70.0-160 | | | 1.80 | 25 |
| 1,1,1-Trichloroethane | 20.4 | 20.3 | 20.9 | 99.7 | 103 | 70.0-130 | | | 2.90 | 25 |
| 1,1,2-Trichloroethane | 20.4 | 21.8 | 20.9 | 107 | 103 | 70.0-130 | | | 3.82 | 25 |
| Trichloroethylene | 20.1 | 20.4 | 21.2 | 101 | 105 | 70.0-130 | | | 3.87 | 25 |
| 1,2,4-Trimethylbenzene | 18.4 | 19.8 | 20.1 | 108 | 109 | 70.0-130 | | | 1.47 | 25 |
| 1,3,5-Trimethylbenzene | 18.4 | 20.3 | 20.9 | 110 | 113 | 70.0-130 | | | 2.62 | 25 |
| 2,2,4-Trimethylpentane | 17.5 | 18.6 | 18.7 | 106 | 107 | 70.0-130 | | | 0.500 | 25 |
| Vinyl chloride | 9.59 | 10.3 | 10.2 | 107 | 107 | 70.0-130 | | | 0.499 | 25 |
| Vinyl Bromide | 16.4 | 16.0 | 16.1 | 97.6 | 98.1 | 70.0-130 | | | 0.545 | 25 |
| Vinyl acetate | 13.2 | 14.3 | 14.1 | 109 | 106 | 70.0-130 | | | 1.99 | 25 |
| Xylenes, Total | 49.1 | 52.5 | 54.3 | 107 | 111 | 70.0-130 | | | 3.25 | 25 |
| m&p-Xylene | 32.5 | 35.1 | 35.7 | 108 | 110 | 70.0-130 | | | 1.71 | 25 |
| o-Xylene | 16.3 | 17.5 | 18.3 | 107 | 113 | 70.0-130 | | | 4.84 | 25 |
| *(S) 1,4-Bromofluorobenzene* | | | | *98.3* | *104* | *60.0-140* | | | | |

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

## Abbreviations and Definitions

| | |
|---|---|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|---|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |

# ACCREDITATIONS & LOCATIONS

## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|---|---|---|---|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey–NELAP | TN002 |
| California | 2932 | New Mexico [1] | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina [1] | DW21704 |
| Georgia | NELAP | North Carolina [3] | 41 |
| Georgia [1] | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio–VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LAO000356 |
| Kentucky [1 6] | KY90010 | South Carolina | 84004002 |
| Kentucky [2] | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee [1 4] | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas [5] | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA – ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA – ISO 17025 [5] | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA–Crypto | TN00003 | | |

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Pace® Location Requested (City/State):

# Air CHAIN-OF-CUSTODY Analytical Request Document

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

LAB USE ONLY- Affix Workorder/Login Label Here

Scan QR code for instructions M092

| | |
|---|---|
| Company Name: Terracon - Franklin, WI | Contact/Report To: Rachel Slonac |
| Street Address: 4900 South Pennsylvania Ave | Phone #: 414-209-7643 |
| City, State Zip: Cudahy, WI 53110 | E-Mail: Rachel.Slonac@terracon.com |
| Customer Project #: 58247140 | Cc E-Mail: |
| Project Name: Barrel Plating Fmr | Invoice to: |
| Site Collection Info/Facility ID (as applicable): TERRAFWI-58247140 | Invoice E-Mail: |
| Time Zone Collected: [ ] AK [ ] PT [ ] MT [X] CT [ ] ET | Purchase Order # (if applicable): |
| Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other | Quote #: |
| Regulatory Program (CAA, RCRA, etc.) as applicable: | State origin of sample(s): WI |
| Rush (Pre-approval required): 2 Day 3 day 5 day Other | Permit # as applicable: |
| Date Results Requested: | Units for Reporting: (ug/m³) PPBV mg/m³ PPMV |

Field Information

Analyses Requested

TM 12/2/24

Lab Use Only

Proj. Manager: 3828 - Jennifer A McCurdy

AcctNum / Client ID: TERRAFWI

Table #:

Profile / Template: T264191

Prelog / Bottle Ord. ID: P1114953

* Matrix Codes (Insert in Matrix box below): Ambient (A), Indoor (I), Soil Vapor (SV), Other (O)

| Customer Sample ID | Matrix * | Summa Canister ID | Flow Controller ID | Begin Collection Date | Begin Collection Time | End Collection Date | End Collection Time | Canister Pressure / Vacuum: Start Pressure / Vacuum (in Hg) | Canister Pressure / Vacuum: End Pressure / Vacuum (in Hg) | PUF / FILTER: Duration (minutes) | PUF / FILTER: Flow Rate m³/min or L/min | PUF / FILTER: Total Volume Sampled m³ or L | TO-15 Summa | | | | Sample Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SS-1 | SV | 14133 | 12375 | 12/2/24 | 1702 | 12/2/24 | 1729 | -29 | -3 | 27 | 200 | 6 | X | | | | L180 9780-01 |
| SS-2 | SV | 14138 | 11936 | ↓ | 1601 | ↓ | 1631 | -28 | -4 | 30 | 200 | 6 | X | | | | 02 |
| SS-3 | SV | 9462 | 10993 | ↓ | 1617 | ↓ | 1647 | -29 | -5 | 30 | 200 | 6 | X | | | | 03 |
| SUMP-1 | SV | 21042 | 12063 | ↓ | 1723 | ↓ | 1749 | -28 | -3 | 26 | 200 | 6 | X | | | | 04 |

Sample Receipt Checklist

COC Seal Present/Intact: Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Airs 4 Size: 1L 6L 1.4L
Tage Color: G W Y P B
Tubing Shunt
Unused: 1
T/P#:

| | |
|---|---|
| Customer Remarks / Special Conditions / Possible Hazards: | Collected By: B. Kappen<br>Printed Name:<br>Signature: |
| Additional Instructions from Pace®: | # Coolers: Thermometer ID: Correction Factor (°C): Obs. Temp. (°C): AMB Corrected Temp. (°C): |

| | | | | | |
|---|---|---|---|---|---|
| Relinquished by/Company: (Signature) Terracon | Date/Time: 12/13/2024 1630 | Received by/Company: (Signature) FedEx | Date/Time: 12/13/24 1630 | Tracking Number: Multi | |
| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) | Date/Time: | Delivered by: In- Person Courier | |
| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) | Date/Time: | (FedEX) UPS Other | |
| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) Elijah Wilson | Date/Time: 12/14 0900 | Page: 1 of: 1 | |

L1809780

| Fed Ex tracking # | Gun ID | Temperature |
|---|---|---|
| 4072 9200 9525 | N/A | AMB |
| 4072 9200 9503 | ↓ | ↓ |
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| | | |

Elijah Wilson
Name

12/13
Date