



FINAL 3-MONTH REPORT ON FENCELINE AND INTERIOR FUGITIVE MONITORING – COKE OVEN BATTERIES ICR

EES Coke Battery, L.L.C.
River Rouge, MI Facility

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TABLE OF CONTENTS

1. Project Overview	1
Test Program Summary	1
Test Program Details	3
Parameters	3
Schedule	5
Discussion	7
2. Results	14
3. Description of Monitoring Sites.....	63
Site overview	63
4. Methodology	66
Procedures and Regulatory References	66
Title 40 CFR Part 63, Appendix A	66
5. Appendix.....	67
Appendix A: Sample Calcs	A
Appendix B: Field Data and Parameters.....	B
Appendix C: QA/QC Data	C
Appendix D: Laboratory Data	D
Appendix E: Meteorological Data.....	E

LIST OF TABLES

Table 1-1: Fenceline and Interior Monitoring Schedule of Activities – 3-Month Test Program	5
Table 1-1 Fenceline and Interior Monitoring Schedule of Activities – 3-Month Test Program (Continued)	6
Table 1-1 Fenceline and Interior Monitoring Schedule of Activities – 3-Month Test Program (Continued)	7
Table 1-2: Monitoring/Testing Site Naming and Specifications	8
Table 1-3: Corrective Actions	12
Table 2-1: Fenceline BTEX Results – Sampler 01 – EPA Method 325A/B (Runs 1 – 7)	15
Table 2-2: Fenceline BTEX Results – Sampler 02 – EPA Method 325A/B (Runs 1 – 7)	17
Table 2-3: Fenceline BTEX Results – Sampler 03 – EPA Method 325A/B (Runs 1 – 7)	19
Table 2-4: Fenceline BTEX Results – Sampler 04 – EPA Method 325A/B (Runs 1 – 7)	21
Table 2-5: Fenceline BTEX Results – Sampler 05 – EPA Method 325A/B (Runs 1 – 7)	23
Table 2-6: Fenceline BTEX Results – Sampler 06 – EPA Method 325A/B (Runs 1 – 7)	25
Table 2-7: Fenceline BTEX Results – Sampler 07 – EPA Method 325A/B (Runs 1 – 7)	27
Table 2-8: Fenceline BTEX Results – Sampler 08 – EPA Method 325A/B (Runs 1 – 7)	29
Table 2-9: Fenceline BTEX Results – Sampler 09 - EPA Method 325A/B (Runs 1 – 7)	31
Table 2-10: Fenceline BTEX Results – Sampler 10 - EPA Method 325A/B (Runs 1 – 7)	33
Table 2-11: Fenceline BTEX Results – Sampler 11 - EPA Method 325A/B (Runs 1 – 7)	35
Table 2-12: Fenceline BTEX Results – Sampler 12 - EPA Method 325A/B (Runs 1 – 7)	37
Table 2-13: Meteorological Data Summary of Results – EPA Method 325A/B – Runs 1 - 7	39
Figure 2-13: Meteorological Wind Rose Charts – EPA Method 325A/B 14-Day Monitoring Period (Runs 1 – 4)...	40
Figure 2-14: Meteorological Wind Rose Charts – EPA Method 325A/B 14-Day Monitoring Period (Run 5 - 7)	41
Table 2-14: Fenceline and Interior Stations – TO-13A (PAH) Results – Run 1 (Revision 1)	42
Table 2-15: Fenceline and Interior Stations – TO-13A (PAH) Results – Run 2 (Revision 1)	43
Table 2-16: Fenceline and Interior Stations – TO-13A (PAH) Results – Run 3	44
Table 2-17: Fenceline and Interior Stations – TO-13A (PAH) Results – Run 4	45
Table 2-18: Fenceline and Interior Stations – TO-13A (PAH) Results – Run 5	46
Table 2-19: Fenceline and Interior Stations – TO-13A (PAH) Results – Run 6	47
Table 2-20: Fenceline and Interior Stations – TO-15 (VOC) – Run 1 Results	48
Table 2-20: Fenceline and Interior Stations – TO-15 (VOC) – Run 1 Results (Continued)	49
Table 2-21: Fenceline and Interior Stations – TO-15 (VOC) – Run 2 Results	50
Table 2-21: Fenceline and Interior Stations – TO-15 (VOC) – Run 2 Results (Continued)	51

Table 2-22: Fenceline and Interior Stations – TO-15 (VOC) – Run 3 Results	52
Table 2-22: Fenceline and Interior Stations – TO-15 (VOC) – Run 3 Results (Continued).....	53
Table 2-23: Fenceline and Interior Stations – TO-15 (VOC) – Run 4 Results	54
Table 2-23: Fenceline and Interior Stations – TO-15 (VOC) – Run 4 Results (Continued).....	55
Table 2-24: Fenceline and Interior Stations – TO-15 (VOC) – Run 5 Results	56
Table 2-24: Fenceline and Interior Stations – TO-15 (VOC) – Run 5 Results (Continued).....	57
Table 2-25: Fenceline and Interior Stations – TO-15 (VOC) – Run 6 Results	58
Table 2-25: Fenceline and Interior Stations – TO-15 (VOC) – Run 6 Results (Continued).....	59

LIST OF FIGURES

Figure 1-1: EES Coke River Rouge – Fenceline Sampling Locations and MET Station – EPA Method 325A (BTEX) ..	9
Figure 1-2: EES Coke River Rouge – Fenceline and Interior Sampling Locations – TO-13A (PAH) and TO-15 (VOC)	10
Figure 1-3: Corrective Actions – Downwind Station 1 (DW1) – Run 6 As-Found Condition	13
Figure 2-1: Fenceline BTEX Chart – Sampler 01 - EPA Method 325A/B (Runs 1 – 7)	16
Figure 2-2: Fenceline BTEX Chart – Sampler 02 - EPA Method 325A/B (Runs 1 – 7)	18
Figure 2-3: Fenceline BTEX Chart – Sampler 03 - EPA Method 325A/B (Runs 1 – 7)	20
Figure 2-4: Fenceline BTEX Chart – Sampler 04 - EPA Method 325A/B (Runs 1 – 7)	22
Figure 2-5: Fenceline BTEX Chart – Sampler 05 - EPA Method 325A/B (Runs 1 – 7)	24
Figure 2-6: Fenceline BTEX Results – Sampler 06 – EPA Method 325A/B (Runs 1 – 7)	26
Figure 2-7: Fenceline BTEX Results – Sampler 07 – EPA Method 325A/B (Runs 1 – 7)	28
Figure 2-8: Fenceline BTEX Chart – Sampler 08 - EPA Method 325A/B (Runs 1 – 7)	30
Figure 2-9: Fenceline BTEX Chart – Sampler 09 - EPA Method 325A/B (Runs 1 – 7)	32
Figure 2-10: Fenceline BTEX Chart – Sampler 10 - EPA Method 325A/B (Runs 1 – 7)	34
Figure 2-11: Fenceline BTEX Chart – Sampler 11 - EPA Method 325A/B (Runs 1 – 7)	36
Figure 2-12: Fenceline BTEX Chart – Sampler 12 - EPA Method 325A/B (Runs 1 – 7)	38
Figure 2-15: Meteorological Wind Rose Charts - TO-13A and TO-15 - 24-Hour Sampling Periods (Run 1 and Run 2)	60
Figure 2-16: Meteorological Wind Rose Charts - TO-13A and TO-15 - 24-Hour Sampling Periods (Runs 3 - 6)	61
Figure 3-1: EES Coke River Rouge Facility – TO-13A and TO-15 Colocated Sampling Location – Upwind Station (Example)	64
Figure 3-2: EES Coke River Rouge Facility– EPA Method 325B (BTEX) - Sampler 04 (Samplers 01-12 Similar)	64

ACRONYMS & ABBREVIATIONS

AAS (atomic absorption spectrometry)
 acfm (actual cubic feet per minute)
 ACI (activated carbon injection)
 ADL (above detection limit)
 AIG (ammonia injection grid)
 APC (air pollution control)
 AQCS (air quality control system(s))
 ASME (American Society of Mechanical Engineers)
 ASTM (American Society for Testing and Materials)
 BDL (below detection limit)
 Btu (British thermal units)
 CAM (compliance assurance monitoring)
 CARB (California Air Resources Board)
 CCM (Controlled Condensation Method)
 CE (capture efficiency)
 °C (degrees Celsius)
 CEMS (continuous emissions monitoring system(s))
 CFB (circulating fluidized bed)
 CFR (Code of Federal Regulations)
 cm (centimeter(s))
 COMS (continuous opacity monitoring system(s))
 CT (combustion turbine)
 CTI (Cooling Technology Institute)
 CTM (Conditional Test Method)
 CVAAS (cold vapor atomic absorption spectroscopy)
 CVAFS (cold vapor atomic fluorescence spectrometry)
 DI H₂O (de-ionized water)
 %dv (percent, dry volume)
 DLL (detection level limited)
 DE (destruction efficiency)
 DCI (dry carbon injection)
 DGM (dry gas meter)
 dscf (dry standard cubic feet)
 dscfm (dry standard cubic feet per minute)
 dscm (dry standard cubic meter)
 ESP (electrostatic precipitator)
 FAMS (flue gas adsorbent mercury speciation)
 °F (degrees Fahrenheit)
 FB (field blank)
 FCC (fluidized catalytic cracking)
 FCCU (fluidized catalytic cracking unit)
 FEGT (furnace exit gas temperatures)
 FF (fabric filter)
 FGD (flue gas desulfurization)
 FIA (flame ionization analyzer)
 FID (flame ionization detector)
 FPD (flame photometric detection)
 FRB (field reagent blank)
 FSTM (flue gas sorbent total mercury)
 ft (feet or foot)
 ft² (square feet)

ft³ (cubic feet)
 ft/sec (feet per second)
 FTIR (Fourier Transform Infrared Spectroscopy)
 FTRB (field train reagent blank)
 g (gram(s))
 GC (gas chromatography)
 GFAAS (graphite furnace atomic absorption spectroscopy)
 GFC (gas filter correlation)
 gr/dscf (grains per dry standard cubic feet)
 > (greater than)/ ≥ (greater than or equal to)
 g/s (grams per second)
 H₂O (water)
 HAP(s) (hazardous air pollutant(s))
 HI (heat input)
 hr (hour(s))
 HR GC/MS (high-resolution gas chromatography and mass spectrometry)
 HRVOC (highly reactive volatile organic compounds)
 HSRG(s) (heat recovery steam generator(s))
 HVT (high velocity thermocouple)
 IC (ion chromatography)
 IC/PCR (ion chromatography with post column reactor)
 ICP/MS (inductively coupled argon plasma mass spectrometry)
 ID (induced draft)
 in. (inch(es))
 in. H₂O (inches water)
 in. Hg (inches mercury)
 IPA (isopropyl alcohol)
 ISE (ion-specific electrode)
 kg (kilogram(s))
 kg/hr (kilogram(s) per hour)
 < (less than)/ ≤ (less than or equal to)
 L (liter(s))
 lb (pound(s))
 lb/hr (pound per hour)
 lb/MMBtu (pound per million British thermal units)
 lb/TBtu (pound per trillion British thermal units)
 lb/lb-mole (pound per pound mole)
 LR GC/MS (low-resolution gas chromatography and mass spectrometry)
 m (meter)
 m³ (cubic meter)
 MACT (maximum achievable control technology)
 MASS® (Multi-Point Automated Sampling System)
 MATS (Mercury and Air Toxics Standards)
 MDL (method detection limit)
 µg (microgram(s))
 min. (minute(s))
 mg (milligram(s))
 ml (milliliter(s))
 MMBtu (million British thermal units)

MW (megawatt(s))
 NCASI (National Council for Air and Stream Improvement)
 ND (non-detect)
 NDIR (non-dispersive infrared)
 NDO (natural draft opening)
 NESHAP (National Emission Standards for Hazardous Air Pollutants)
 ng (nanogram(s))
 Nm³ (Normal cubic meter)
 % (percent)
 PEMS (predictive emissions monitoring systems)
 PFGC (pneumatic focusing gas chromatography)
 pg (picogram(s))
 PJFF (pulse jet fabric filter)
 ppb (parts per billion)
 PPE (personal protective equipment)
 ppm (parts per million)
 ppm_{dv} (parts per million, dry volume)
 ppm_{wv} (parts per million, wet volume)
 PSD (particle size distribution)
 psi (pound(s) per square inch)
 PTE (permanent total enclosure)
 PTFE (polytetrafluoroethylene)
 QA/QC (quality assurance/quality control)
 QI (qualified individual)
 QSTI (qualified source testing individual)
 QSTO (qualified source testing observer)
 RA (relative accuracy)
 RATA (relative accuracy test audit)
 RB (reagent blank)
 RE (removal or reduction efficiency)
 RM (reference method)
 scf (standard cubic feet)
 scfm (standard cubic feet per minute)
 SCR (selective catalytic reduction)
 SDA (spray dryer absorber)
 SNCR (selective non-catalytic reduction)
 STD (standard)
 STMS (sorbent trap monitoring system)
 TBtu (trillion British thermal units)
 TEOM (Tapered Element Oscillating Microbalance)
 TEQ (toxic equivalency quotient)
 ton/hr (ton per hour)
 ton/yr (ton per year)
 TSS (third stage separator)
 USEPA or EPA (United States Environmental Protection Agency)
 UVA (ultraviolet absorption)
 WFGD (wet flue gas desulfurization)
 %wv (percent, wet volume)

1. PROJECT OVERVIEW

TEST PROGRAM SUMMARY

EES Coke Battery, L.L.C. (EES Coke) contracted Clean Air Engineering, Inc. (CleanAir) to satisfy the U.S. Environmental Protection Agency's (EPA) Information Collection Request (ICR) received on June 29, 2022 and issued to metallurgical coke manufacturing facilities. These efforts included performing sampling and analysis of fugitive emissions at fenceline and interior locations of affected facilities. The complete program consists of a 3-month long air testing phase including interior and fenceline volatile organic compound (VOC) and polyaromatic hydrocarbon (PAH) measurements as well as a 6-month long characterization of BTEX (Benzene, Toluene, Xylene, Ethylbenzene and 1,3 Butadiene) along the complete facility fenceline. The program is being performed at the EES Coke Battery, L.L.C. facility located in River Rouge, Michigan.

The sampling approach and QA protocols for the test program are outlined in the Quality Assurance Project Plan (QAPP) submitted to and fully approved by the EPA on September 7, 2022 prior to the commencement of the sampling program. The field testing portion of the test program began on October 12, 2022. This report is being submitted as an amended final 3-month report including the results that were available for all testing performed prior to January 12, 2023 and available at the time of submittal. It may contain revisions to data previously submitted in the preliminary interim report. Revisions are noted and explained as applicable. A final report including all data obtained will be submitted once the 6-Month test program is completed.

Per the ICR instructions, EES Coke Battery, L.L.C. was required to sample and analyze BTEX compounds (Benzene, Toluene, Xylene, Ethylbenzene and 1,3 Butadiene) using EPA Methods 325A and 325B, respectively. EPA Method 325A/B is a time integrated passive sampling and analysis approach that uses sorbent tubes to collect BTEX compounds. Based on the method sampling location siting criteria and the shape and size of the EES Coke facility, a total of 12 sampling locations were chosen and positioned along the fenceline of the facility. Each sampling period (i.e. Run) is approximately 14 days in duration. The complete program will consist of 14 total runs for a total of 182 days of monitoring. This report includes the results of EPA Method 325A/B Runs 1 through 7 which concluded on January 19, 2023.

In addition to BTEX, the ICR required fenceline and interior monitoring of volatile organic compounds (VOCs) and polycyclic aromatic compounds (PAHs) using Compendium Methods TO-15A and TO-13A, respectively. After QAPP submittal, TO-13A and an alternate sampling and analysis approach using TO-15 were approved. The TO-13A method includes collection of PAHs using a high-volume sampling approach and collection on PUF sample cartridges. TO-13A analysis is by gas chromatography and mass spectrometry (GC/MS). TO-15 used an integrated summa canister sampling approach and GC/MS analysis of air samples. TO-13A and TO-15 were performed at two (2) interior process locations, two (2) downwind locations and one (1) upwind location.

A total of seven (7) TO-13A and TO-15 samples were required by the ICR. Samples were required to be co-located, obtained over an approximate 24-hour period and be within each EPA Method 325A/B 14-day sampling period. This final 3-month report includes VOC and PAH results for Runs 1 through 6, which were completed and results available at the time of report submittal. Results for all monitoring (i.e. up through Run 7) will be included in the final 6-Month test report.

In addition to fugitive emission monitoring and in accordance with EPA Method 325A, a meteorological station nearby the facility was used to provide meteorological data, including wind speed, wind direction, temperature, and barometric pressure on an hourly basis for each sampling episode. This report includes summary meteorological data (MET data) where applicable.

As required, summary data for the program was recorded into an electronic Excel workbook template provided by the EPA at the time of the ICR. This workbook includes both fugitive emission and meteorological data. The workbook for this test program is referenced as follows:

- ANSWER-FUGITIVE-Coke Enc2_Test Results_EESCoke_RiverRouge_3-Month_Final_R1.xlsx

The final workbook including all required data parameters was submitted electronically via email as instructed in the ICR. This electronic report document includes summary results for the data available for the 3-Month test program as well as raw sampling and laboratory data in support of the electronic data workbook submittal.

A summary of the test program results is presented in Section 2 Results.

TEST PROGRAM DETAILS

PARAMETERS

The base scope test program included the following measurements:

EPA Method 325A/B BTEX Parameters:

- Benzene (C₆H₆)
- Toluene (C₇H₈)
- Xylene isomers, ortho, meta, para (C₆H₄(CH₃)₂)
- Ethyl benzene (C₆H₅C₂H₅)
- Additional measurements:
 - Temperature (°C)
 - Barometric Pressure (in Hg)
 - Relative Humidity (%)

Compendium Method TO-13A – PAHs

PAHs

- | | |
|------------------------|--------------------------|
| • Acenaphthene | • Dibenzo(a,h)anthracene |
| • Acenaphthylene | • Fluoranthene |
| • Anthracene | • Fluorene |
| • Benzo(a) anthracene | • Indeno(1,2,3-cd)pyrene |
| • Benzo(a)pyrene | • 1-Methylnaphthalene |
| • Benzo(b)fluoranthene | • 2-Methylnaphthalene |
| • Benzo(e)pyrene | • Naphthalene |
| • Benzo(g,h,i)perylene | • Perylene |
| • Benzo(k)fluoranthene | • Phenanthrene |
| • Chrysene | • Pyrene |

Additional Parameters

- Temperature (°C)
- Barometric Pressure (in Hg)

Compendium Method TO-15 - VOCs

VOCs

- Acetone
- Benzene
- Benzyl chloride
- Bromodichloromethane
- Bromoform
- Bromomethane
- 1,3-Butadiene
- 2-Butanone (MEK)
- Carbon Disulfide
- Carbon Tetrachloride
- Chlorobenzene
- Chloroethane
- Chloroform
- Chloromethane
- Cyclohexane
- Dibromochloromethane
- 1,2-Dibromoethane (EDB)
- 1,2-Dichlorobenzene
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- Dichlorodifluoromethane (Freon 12)
- 1,1-Dichloroethane
- 1,2-Dichloroethane
- 1,1-Dichloroethylene
- cis-1,2-Dichloroethylene
- trans-1,2-Dichloroethylene
- 1,2-Dichloropropane
- cis-1,3-Dichloropropene
- trans-1,3-Dichloropropene
- 1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)
- 1,4-Dioxane
- Ethanol
- Ethyl Acetate
- Ethylbenzene
- 4-Ethyltoluene
- Heptane
- Hexachlorobutadiene
- Hexane
- 2-Hexanone (MBK)
- Isopropanol
- Methyl tert-Butyl Ether (MTBE)
- Methylene Chloride
- 4-Methyl-2-pentanone (MIBK)
- Naphthalene
- Propene
- Styrene
- Tetrahydrofuran
- Toluene
- 1,2,4-Trichlorobenzene
- 1,1,1-Trichloroethane
- 1,1,2-Trichloroethane
- Trichloroethylene
- Trichlorofluoromethane (Freon 11)
- 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)
- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene
- Vinyl Acetate
- Vinyl Chloride
- m&p-Xylene
- o-Xylene

Additional Parameters

- Temperature (°C)
- Barometric Pressure (in Hg)

Meteorological Parameters (Detroit-Southwest MET Station-AQS ID: 26-163-0015):

- Temperature (°F)
- Barometric Pressure (in Hg)
- Relative Humidity (%)
- Wind Speed (m/s)

SCHEDULE

The schedule of activities for the 3-month test program is shown in Table 1.

**Table 1-1:
Fenceline and Interior Monitoring Schedule of Activities – 3-Month Test Program**

Run No.	Method	Location	Start		End		Notes
			Date	Time	Date	Time	
1	EPA Method 325A/B	Sampler 01-12	10/12/2022	08:41	10/26/2022	13:30	1
1	TO-13A	Interior Station 1 (IN1)	10/13/2022	09:56	10/14/2022	08:00	
1	TO-13A	Interior Station 2 (IN2)	10/13/2022	09:34	10/14/2022	08:21	
1	TO-13A	Downwind Station 1 (DW1)	10/13/2022	10:23	10/14/2022	10:23	
1	TO-13A	Downwind Station 2 (DW2)	10/13/2022	10:45	10/14/2022	10:40	
1	TO-13A	Upwind Station (UPW)	10/13/2022	11:17	10/14/2022	11:02	
1	TO-15	Interior Station 1 (IN1)	10/25/2022	12:22	10/26/2022	11:40	
1	TO-15	Interior Station 2 (IN2)	10/25/2022	12:45	10/26/2022	11:51	
1	TO-15	Downwind Station 1 (DW1)	10/25/2022	11:45	10/26/2022	11:00	
1	TO-15	Downwind Station 2 (DW2)	10/25/2022	11:09	10/26/2022	10:35	
1	TO-15	Upwind Station (UPW)	10/25/2022	13:45	10/26/2022	13:00	
2	EPA Method 325A/B	Sampler 01-12	10/26/2022	10:40	11/9/2022	13:30	1
2	TO-13A	Interior Station 1 (IN1)	10/26/2022	16:25	10/27/2022	14:51	
2	TO-13A	Interior Station 2 (IN2)	10/26/2022	17:05	10/27/2022	15:24	
2	TO-13A	Downwind Station 1 (DW1)	10/26/2022	15:49	10/27/2022	14:20	
2	TO-13A	Downwind Station 2 (DW2)	10/26/2022	15:40	10/27/2022	13:50	
2	TO-13A	Upwind Station (UPW)	10/26/2022	17:45	10/27/2022	16:12	
2	TO-15	Interior Station 1 (IN1)	10/26/2022	15:47	10/27/2022	14:51	
2	TO-15	Interior Station 2 (IN2)	10/26/2022	17:05	10/27/2022	15:24	
2	TO-15	Downwind Station 1 (DW1)	10/26/2022	15:45	10/27/2022	14:20	
2	TO-15	Downwind Station 2 (DW2)	10/26/2022	15:40	10/27/2022	13:50	
2	TO-15	Upwind Station (UPW)	10/26/2022	17:45	10/27/2022	16:12	

Notes: 1. EPA Method 325A/B 14-day test periods overlap. The start date/time of the test period begins at the earliest sampler deployment and ends at the retrieval time of the last sampler. Individual test times for Method 325B sampler locations are included in the results tables.

-table continued-

Table 1-1
Fenceline and Interior Monitoring Schedule of Activities – 3-Month Test Program (Continued)

Run No.	Method	Location	Date	Time	Date	Time	Notes
3	EPA Method 325A/B	Sampler 01-12	11/9/2022	10:30	11/22/2022	14:52	1
3	TO-13A	Interior Station 1 (IN1)	11/9/2022	14:30	11/10/2022	12:50	
3	TO-13A	Interior Station 2 (IN2)	11/9/2022	15:13	11/10/2022	13:40	
3	TO-13A	Downwind Station 1 (DW1)	11/9/2022	13:44	11/10/2022	12:00	
3	TO-13A	Downwind Station 2 (DW2)	11/9/2022	13:30	11/10/2022	11:33	
3	TO-13A	Upwind Station (UPW)	11/9/2022	15:50	11/10/2022	14:10	
3	TO-15	Interior Station 1 (IN1)	11/9/2022	14:30	11/10/2022	12:50	
3	TO-15	Interior Station 2 (IN2)	11/9/2022	15:13	11/10/2022	13:30	
3	TO-15	Downwind Station 1 (DW1)	11/9/2022	13:44	11/10/2022	12:00	
3	TO-15	Downwind Station 2 (DW2)	11/9/2022	13:12	11/10/2022	11:30	
3	TO-15	Upwind Station (UPW)	11/9/2022	15:50	11/10/2022	14:09	
4	EPA Method 325A/B	Sampler 01-12	11/22/2022	11:14	12/7/2022	08:52	1
4	TO-13A	Interior Station 1 (IN1)	12/5/2022	16:14	12/6/2022	14:40	
4	TO-13A	Interior Station 2 (IN2)	12/5/2022	16:39	12/6/2022	15:05	
4	TO-13A	Downwind Station 1 (DW1)	12/5/2022	15:45	12/6/2022	14:15	
4	TO-13A	Downwind Station 2 (DW2)	12/5/2022	15:15	12/6/2022	13:55	
4	TO-13A	Upwind Station (UPW)	12/5/2022	17:35	12/6/2022	15:38	
4	TO-15	Interior Station 1 (IN1)	12/5/2022	16:08	12/6/2022	14:39	
4	TO-15	Interior Station 2 (IN2)	12/5/2022	17:00	12/6/2022	15:10	
4	TO-15	Downwind Station 1 (DW1)	12/5/2022	15:43	12/6/2022	14:15	
4	TO-15	Downwind Station 2 (DW2)	12/5/2022	15:24	12/6/2022	13:48	
4	TO-15	Upwind Station (UPW)	12/5/2022	17:39	12/6/2022	15:41	
5	EPA Method 325A/B	Sampler 01-12	12/6/2022	16:15	12/21/2022	15:55	1
5	TO-13A	Interior Station 1 (IN1)	12/20/2022	12:22	12/21/2022	10:58	
5	TO-13A	Interior Station 2 (IN2)	12/20/2022	13:05	12/21/2022	11:15	
5	TO-13A	Downwind Station 1 (DW1)	12/20/2022	11:40	12/21/2022	10:30	
5	TO-13A	Downwind Station 2 (DW2)	12/20/2022	10:52	12/21/2022	10:05	
5	TO-13A	Upwind Station (UPW)	12/20/2022	14:00	12/21/2022	12:10	
5	TO-15	Interior Station 1 (IN1)	12/20/2022	12:09	12/21/2022	10:50	
5	TO-15	Interior Station 2 (IN2)	12/20/2022	15:52	12/21/2022	11:15	
5	TO-15	Downwind Station 1 (DW1)	12/20/2022	11:20	12/21/2022	10:30	
5	TO-15	Downwind Station 2 (DW2)	12/20/2022	10:35	12/21/2022	10:05	
5	TO-15	Upwind Station (UPW)	12/20/2022	13:35	12/21/2022	12:10	

Notes: 1. EPA Method 325A/B 14-day test periods overlap. The start date/time of the test period begins at the earliest sampler deployment and ends at the retrieval time of the last sampler. Individual test times for Method 325B sampler locations are included in the results tables.

-table continued-

Table 1-1
Fenceline and Interior Monitoring Schedule of Activities – 3-Month Test Program (Continued)

Run No.	Method	Location	Start		End		Notes
			Date	Time	Date	Time	
6	EPA Method 325A/B	Sampler 01-12 ¹	12/21/2022	12:45	1/5/2023	18:24	1
6	TO-13A	Interior Station 1 (IN1)	1/4/2023	17:40	1/5/2023	15:46	
6	TO-13A	Interior Station 2 (IN2)	1/4/2023	18:00	1/5/2023	16:17	
6	TO-13A	Downwind Station 1 (DW1)	1/4/2023	17:05	1/5/2023	15:10	
6	TO-13A	Downwind Station 2 (DW2)	1/4/2023	15:51	1/5/2023	14:18	
6	TO-13A	Upwind Station (UPW)	1/4/2023	18:35	1/5/2023	16:55	
6	TO-15	Interior Station 1 (IN1)	1/4/2023	17:37	1/5/2023	15:45	
6	TO-15	Interior Station 2 (IN2)	1/4/2023	18:15	1/5/2023	16:17	
6	TO-15	Downwind Station 1 (DW1)	1/4/2023	17:12	1/5/2023	15:10	
6	TO-15	Downwind Station 2 (DW2)	1/4/2023	16:15	1/5/2023	14:23	
6	TO-15	Upwind Station (UPW)	1/4/2023	18:39	1/5/2023	16:54	
7	EPA Method 325A/B	Sampler 01-12 ¹	1/5/2023	16:57	1/19/2023	17:26	1

Notes: 1. EPA Method 325A/B 14-day test periods overlap. The start date/time of the test period begins at the earliest sampler deployment and ends at the retrieval time of the last sampler. Individual test times for Method 325B sampler locations are included in the results tables.

-table continued-

DISCUSSION

Monitoring Site Naming and Specifications

Table 1-2 summarizes the names and abbreviations of each of the monitoring/testing locations for the program. The table also includes the approximate GPS locations for each location. TO-13A and TO-15 sampling locations were collocated.

Figure 1-1 shows the approximate location of each of the fenceline BTEX sampling locations (i.e. EPA Method 325A) at the EES Coke River Rouge facility as well as the proximity of the meteorological station used to provide data.

Figure 1-2 shows the approximate location of each of the fenceline and interior TO-13A and TO-15 monitoring locations at the EES Coke River Rouge facility. More detailed information on the monitoring sites is included in Section 3 of the report and the approved QAPP.

Table 1-2:
Monitoring/Testing Site Naming and Specifications

Site Designation (Abbreviation)	Approximate Site Location	Monitored Parameters	Probe / Sampling Level Above Grade (meters)
Downwind Station 1 (DW1)	42°16'58.3"N, 83°6'20.7" W	PAH (TO-13A), VOC (TO-15)	2
Downwind Station 2 (DW2)	42°17'10.80"N, 83°6'14.48"W	PAH (TO-13A), VOC (TO-15)	2
Upwind Station (UPW)	42°17'21.07"N, 83°7'5.98"W	PAH (TO-13A), VOC (TO-15)	2
Interior Station 1 (IN1)	42°16'54.22"N, 83° 6'38.09"W	PAH (TO-13A), VOC (TO-15)	2
Interior Station 2 (IN2)	42°16'50.05"N, 83° 6'36.33"W	PAH (TO-13A), VOC (TO-15)	2
Sampler 01	42°17'20.605"N, 83°6'39.286"W	BTEX, 1,3-Butadiene (EPA Method 325A/B)	2
Sampler 02	42°17'16.289"N, 83° 6'18.529"W	BTEX, 1,3-Butadiene (EPA Method 325A/B)	2
Sampler 03	42°17'5.478"N, 83° 6'17.78"W	BTEX, 1,3-Butadiene (EPA Method 325A/B)	2
Sampler 04	42°16'54.347"N, 83° 6'22.881"W	BTEX, 1,3-Butadiene (EPA Method 325A/B)	2
Sampler 05	42°16'47.608"N, 83° 6'26.388"W	BTEX, 1,3-Butadiene (EPA Method 325A/B)	2
Sampler 06	42°16'41.671"N, 83° 6'31.816"W	BTEX, 1,3-Butadiene (EPA Method 325A/B)	2
Sampler 07	42°16'33.776"N, 83° 6'35.315"W	BTEX, 1,3-Butadiene (EPA Method 325A/B)	2
Sampler 08	42°16'42.136"N, 83° 6'52.848"W	BTEX, 1,3-Butadiene (EPA Method 325A/B)	2
Sampler 09	42°16'43.55"N, 83° 6'56.34"W	BTEX, 1,3-Butadiene (EPA Method 325A/B)	2
Sampler 10	42°16'58.044"N, 83° 7'5.563"W	BTEX, 1,3-Butadiene (EPA Method 325A/B)	2
Sampler 11	42°17'1.77"N, 83° 7'7.615"W	BTEX, 1,3-Butadiene (EPA Method 325A/B)	2
Sampler 12	42°17'22.132"N, 83° 7'0.721"W	BTEX, 1,3-Butadiene (EPA Method 325A/B)	2

Figure 1-1:
EES Coke River Rouge – Fenceline Sampling Locations and MET Station – EPA Method 325A (BTEX)

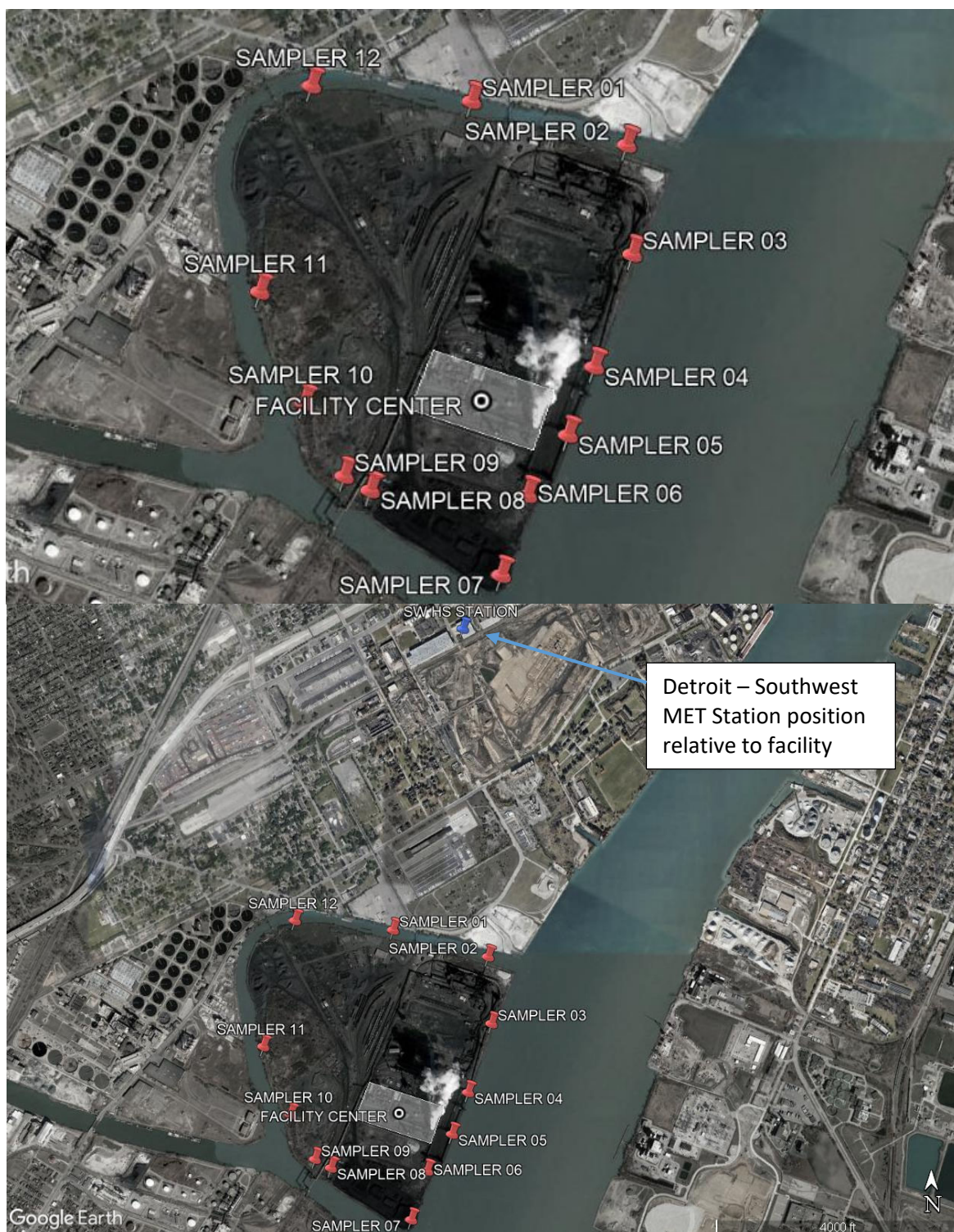
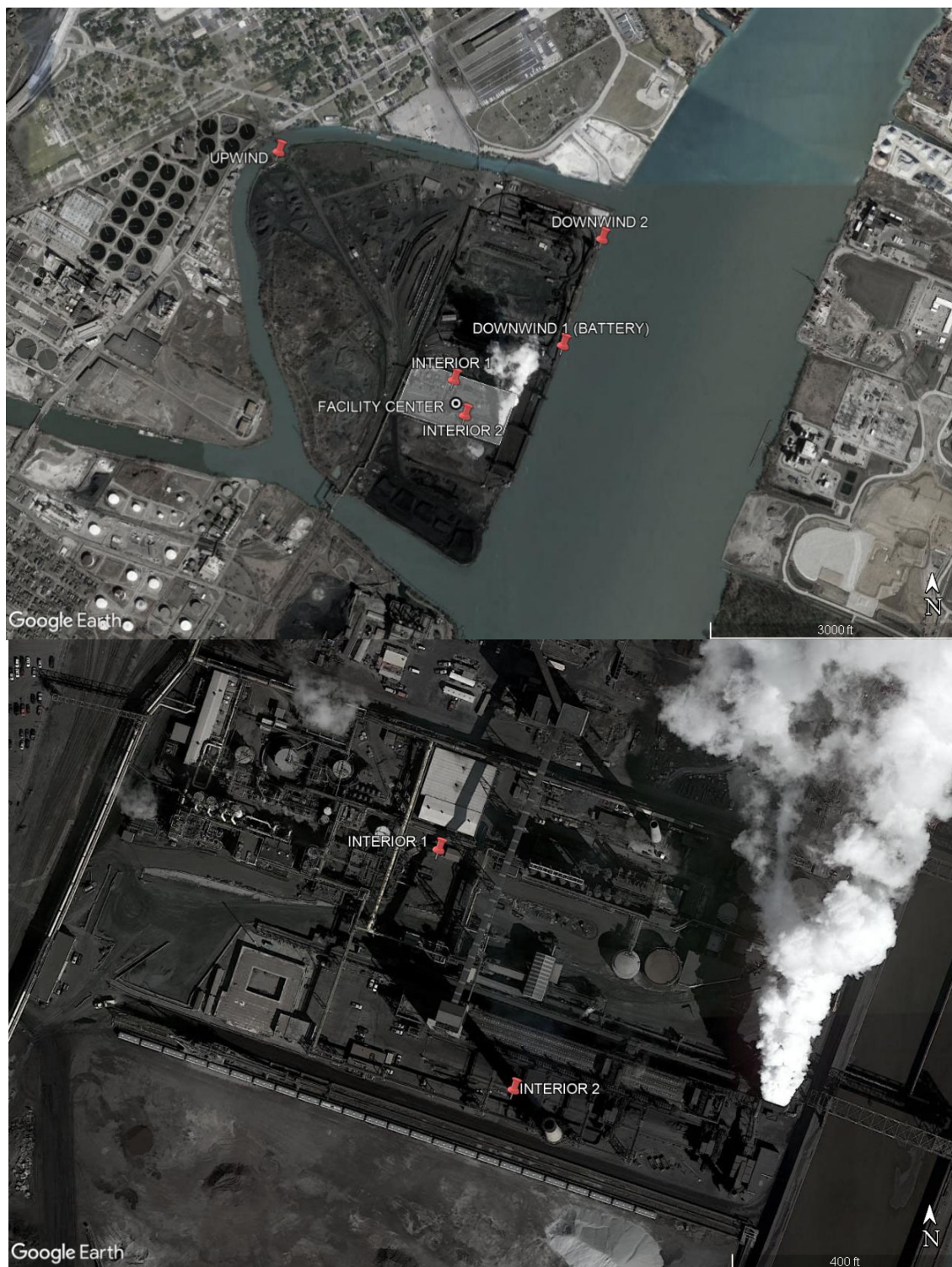


Figure 1-2:
EES Coke River Rouge – Fenceline and Interior Sampling Locations – TO-13A (PAH) and TO-15 (VOC)



Test Program Schedule and Data Availability

The start of the field test portion of the test program began on October 12, 2022 and was within the timing required in the ICR instructions. Based on the QAPP approval on September 7 2022, a report including the first 3 months of data was required to be submitted on January 24, 2023. A preliminary report (referenced: EESCoke_River Rouge_ICR Fenceline Report_Interim 3-Month_R0c.pdf) was submitted on January 24, 2022. The preliminary report included the data and results available at the time of submittal.

EES Coke requested an extension to submit a complete report including the first 3 months of quality assured data. Approval of an extension to February 10, 2023 was provided by the EPA on January 17, 2023. This report is being submitted as an amended, final 3-month report including the quality assured data available at the time of report submittal.

The reasons for delayed results noted in the preliminary report continue to contribute to extended timeframes for receipt of laboratory data and generation of quality assured results. Subsequently, this report does not contain the TO-13A and TO-15 Run 7 results. Seven (7) test periods were required by the ICR instructions and included in the approved QAPP. Run 7 results will be included in the final 6-month test report submitted at the conclusion of the test program.

Mobile Sources and Other Fugitive Emission Sources

EPA Method 325A sampling locations were selected in accordance with the method procedures to largest extent possible given the industrial environment, space limitations and the daily activities inherent at the EES Coke, River Rouge facility. During the test program, CleanAir field technicians noted significant Diesel vehicular activity (haulers and bulk tanker trucks), railcar movement and barge operation in close proximity to many of the monitoring locations. Some locations (e.g. Sampler 12 and Upwind Station) also showed significant vehicle idling periods. Although the length and impact of these activities cannot be quantified they should be considered in evaluation of the test program data.

Bulk material barges/vessels could affect the following locations due to the proximity (See Figure 1-1):

- Samplers 01, 02 and 03
- Samplers 07, 08 and 09

Samplers 08 and 09 are also located near railroad activities and could be impacted by railcar traffic.

There are also combustion sources owned by U.S. Steel Corporation – Great Lakes Works (USS-GLW.) that are near the Sampler 04 and Downwind 1 Stations that could impact the monitoring results. The sources consist of 5 total boilers, with 1 to 3 boilers typically in operation. USS-GLW placed the Zug Island operations on permanent idle since June 2020, but EES Coke uses a lease term agreement with USS-GLW to operate the boilers to meet production steam needs.

Corrective Actions

Minor corrective actions were documented during the first three months of the test program. These are shown in Table 1-3 for reference including the impact on the data validity or means of interpretation as applicable.

**Table 1-3:
Corrective Actions**

Date	Location	CA ID No. Notes	Discussion/Corrective Action
12/28/22 Run 5	TO-13A – Run 5 Interior Station 1 Interior Station 2 Downwind Station 1 Downwind Station 2 Upwind Station	CA_14796-1 TO-13A All Runs Sample Hold Time (Extraction)	<p>Sampling was completed on 12/21/22. Due to limited resources and holiday scheduling the samples were extracted 1-day beyond the 7-day holding period following sampling.</p> <p>Samples were maintained below 4°C from sample recovery until extraction. Analysis of the samples was completed on 12/31/22.</p> <p>Results of the analysis are presented in the report and flagged accordingly.</p>
1/5/23 Run 6	Downwind 1 Station (DW1)	CA_14796-2 TO-13A Run 6 – As-Found condition at the conclusion of the test run showed a power failure during the sampling event.	<p>Investigation of the power failure showed the power plug had been disturbed sometime during the sampling event causing the power failure. The power cord was re-seated and power was restored to the system.</p> <p>The initial and final elapsed timer readings were used to determine the sampling duration (17.8 hours) instead of the actual start and stop times. This result is consistent with the reading of the mechanical timer. Although the sample duration is less than the specified duration of 24 hours, there is no impact to the validity of the data obtained. A post-1- point flow audit was performed and passed. See Figure 1-3 for the DW1 Run 6 As-Found Condition on 1/5/2023.</p>

Figure 1-3:
Corrective Actions – Downwind Station 1 (DW1) – Run 6 As-Found Condition



End of Section

2. *RESULTS*

This section summarizes the test program results. Supporting documentation and laboratory data is provided in the Appendix.

Table 2-1:
Fenceline BTEX Results – Sampler 01 – EPA Method 325A/B (Runs 1 – 7)

Run	Location	Start Date/Time	Stop Date/Time	Compound	Rep. Limit (µg/scm)	Conc. (µg/scm)	Data Flags ¹	Conc. Flag Mod. ² (µg/scm)
1	Sampler 01	10/12/2022 11:43:00	10/26/2022 12:43:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	2.40		2.40
				Toluene	0.49	1.10		1.10
				Ethylbenzene	0.55	0.28	U	0.14
				m,p-Xylene	0.55	0.54	JPC	0.55
				O-Xylene	0.55	0.28	U	0.14
2	Sampler 01	10/26/2022 12:43:00	11/09/2022 12:43:00	1,3 Butadiene	0.28	0.14	U	0.07
				Benzene	0.38	2.40		2.40
				Toluene	0.49	2.10		2.10
				Ethylbenzene	0.55	0.29	J	0.55
				m,p-Xylene	0.55	1.00		1.00
				O-Xylene	0.55	0.41	J	0.55
3	Sampler 01	11/09/2022 12:43:00	11/22/2022 13:50:00	1,3 Butadiene	0.31	0.15	U	0.08
				Benzene	0.42	1.20		1.20
				Toluene	0.53	0.92		0.92
				Ethylbenzene	0.60	0.30	U	0.15
				m,p-Xylene	0.60	0.39	J	0.60
				O-Xylene	0.60	0.30	U	0.15
4	Sampler 01	11/22/2022 13:55:00	12/06/2022 16:59:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	1.60		1.60
				Toluene	0.50	1.00		1.00
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.43	J	0.56
				O-Xylene	0.56	0.28	U	0.14
5	Sampler 01	12/06/2022 16:59:00	12/21/2022 15:55:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	0.63		0.63
				Toluene	0.47	0.88		0.88
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.39	J	0.52
				O-Xylene	0.52	0.26	U	0.13
6	Sampler 01	12/21/2022 15:56:00	01/05/2023 18:24:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	2.20		2.20
				Toluene	0.47	1.00		1.00
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.32	J	0.52
				O-Xylene	0.52	0.26	U	0.13
7	Sampler 01	01/05/2023 18:25:00	01/19/2023 17:26:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	1.30		1.30
				Toluene	0.50	0.97		0.97
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.40	J	0.56
				O-Xylene	0.56	0.28	U	0.14

¹ Data flag definitions:

U-Compound analyzed for but not detected above the MDL value,

J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.

PC- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

² Concentration results are modified based on the laboratory data flag.

"U" Flag - Concentration results calculated at 1/2 MDL.

"J" Flag - Concentration results calculated at reporting limit.

Figure 2-1:
Fenceline BTEX Chart – Sampler 01 - EPA Method 325A/B (Runs 1 – 7)

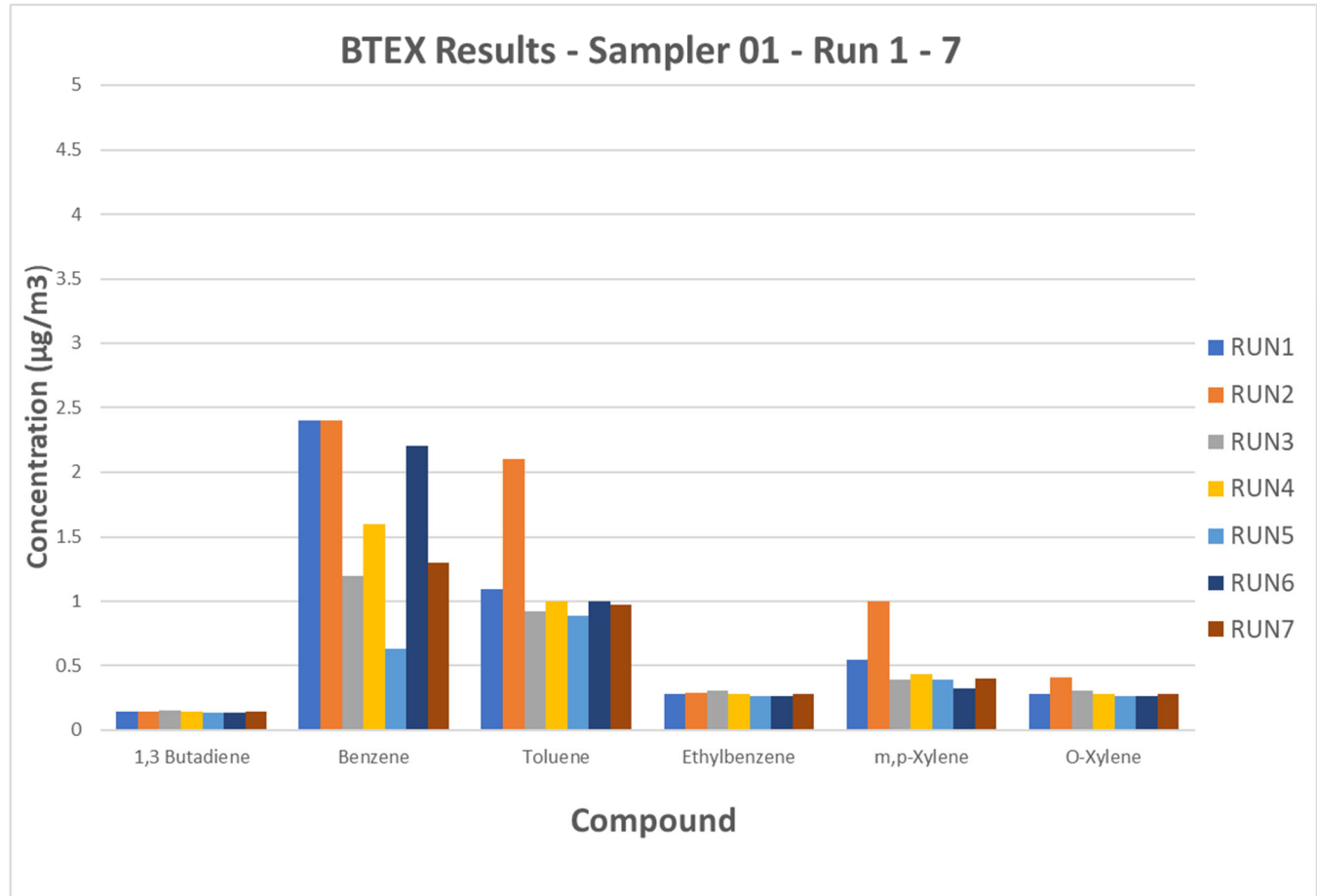


Table 2-2:
Fenceline BTEX Results – Sampler 02 – EPA Method 325A/B (Runs 1 – 7)

Run	Location	Start Date/Time	Stop Date/Time	Compound	Rep. Limit (µg/scm)	Conc. (µg/scm)	Data Flags	Conc. Flag Mod. ² (µg/scm)
1	Sampler 02	10/12/2022 08:41:00	10/26/2022 10:40:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	0.98		0.98
				Toluene	0.49	0.69		0.69
				Ethylbenzene	0.55	0.28	U	0.14
				m,p-Xylene	0.55	0.39	JPC	0.55
				O-Xylene	0.55	0.28	U	0.14
2	Sampler 02	10/26/2022 10:40:00	11/09/2022 12:55:00	1,3 Butadiene	0.28	0.14	U	0.07
				Benzene	0.38	0.91		0.91
				Toluene	0.49	1.60		1.60
				Ethylbenzene	0.55	0.28	U	0.14
				m,p-Xylene	0.55	0.85		0.85
				O-Xylene	0.55	0.31	J	0.55
3	Sampler 02	11/09/2022 12:55:00	11/22/2022 11:00:00	1,3 Butadiene	0.31	0.15	U	0.08
				Benzene	0.42	1.40		1.40
				Toluene	0.53	0.86		0.86
				Ethylbenzene	0.60	0.30	U	0.15
				m,p-Xylene	0.60	0.33	J	0.60
				O-Xylene	0.60	0.30	U	0.15
4	Sampler 02	11/22/2022 11:14:00	12/07/2022 08:26:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	1.10		1.10
				Toluene	0.46	0.75		0.75
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.34	J	0.52
				O-Xylene	0.52	0.26	U	0.13
5	Sampler 02	12/07/2022 08:28:00	12/21/2022 14:45:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	0.81		0.81
				Toluene	0.50	0.77		0.77
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.35	J	0.56
				O-Xylene	0.56	0.28	U	0.14
6	Sampler 02	12/21/2022 14:47:00	01/05/2023 18:05:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	1.20		1.20
				Toluene	0.47	0.65		0.65
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.26	U	0.13
				O-Xylene	0.52	0.26	U	0.13
7	Sampler 02	01/05/2023 18:06:00	01/19/2023 15:42:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	0.87		0.87
				Toluene	0.50	0.77		0.77
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.33	J	0.56
				O-Xylene	0.56	0.28	U	0.14

¹ Data flag definitions:

U-Compound analyzed for but not detected above the MDL value,

J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.

PC- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

² Concentration results are modified based on the laboratory data flag.

"U" Flag - Concentration results calculated at 1/2 MDL.

"J" Flag - Concentration results calculated at reporting limit.

Figure 2-2:
Fenceline BTEX Chart – Sampler 02 - EPA Method 325A/B (Runs 1 – 7)

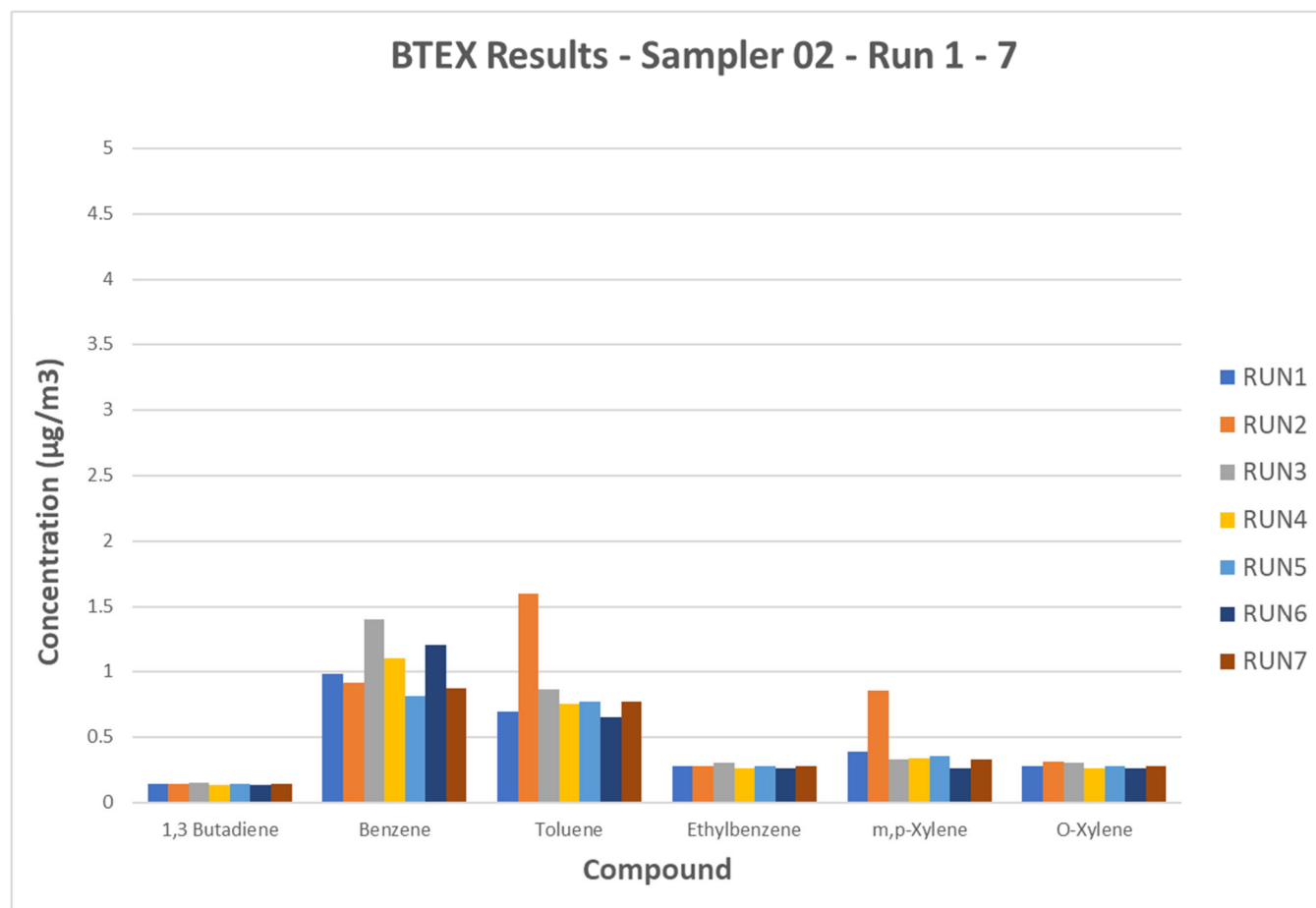


Table 2-3:
Fenceline BTEX Results – Sampler 03 – EPA Method 325A/B (Runs 1 – 7)

Run	Location	Start Date/Time	Stop Date/Time	Compound	Rep. Limit (µg/scm)	Conc. (µg/scm)	Data Flags	Conc. Flag Mod. ² (µg/scm)
1	Sampler 03	10/12/2022 10:30:00	10/26/2022 10:58:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	1.80		1.80
				Toluene	0.49	0.81		0.81
				Ethylbenzene	0.55	0.28	U	0.14
				m,p-Xylene	0.55	0.38	JPC	0.55
				O-Xylene	0.55	0.28	U	0.14
2	Sampler 03	10/26/2022 10:58:00	11/09/2022 10:30:00	1,3 Butadiene	0.28	0.14	U	0.07
				Benzene	0.38	1.20		1.20
				Toluene	0.49	1.60		1.60
				Ethylbenzene	0.55	0.28	U	0.14
				m,p-Xylene	0.55	0.83		0.83
				O-Xylene	0.55	0.32	J	0.55
3	Sampler 03	11/09/2022 10:30:00	11/22/2022 11:22:00	1,3 Butadiene	0.31	0.15	U	0.08
				Benzene	0.42	1.80		1.80
				Toluene	0.53	0.98		0.98
				Ethylbenzene	0.60	0.30	U	0.15
				m,p-Xylene	0.60	0.42	J	0.60
				O-Xylene	0.60	0.30	U	0.15
4	Sampler 03	11/22/2022 11:25:00	12/07/2022 08:36:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	1.80		1.80
				Toluene	0.46	0.99		0.99
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.39	J	0.52
				O-Xylene	0.52	0.26	U	0.13
5	Sampler 03	12/07/2022 08:38:00	12/21/2022 14:52:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	1.70		1.70
				Toluene	0.50	1.10		1.10
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.52	J	0.56
				O-Xylene	0.56	0.28	U	0.14
6	Sampler 03	12/21/2022 14:55:00	01/05/2023 18:09:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	2.60		2.60
				Toluene	0.47	0.99		0.99
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.40	J	0.52
				O-Xylene	0.52	0.26	U	0.13
7	Sampler 03	01/05/2023 18:10:00	01/19/2023 15:47:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	2.20		2.20
				Toluene	0.50	1.60		1.60
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.46	J	0.56
				O-Xylene	0.56	0.28	U	0.14

¹ Data flag definitions:

U-Compound analyzed for but not detected above the MDL value.

J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.

PC- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

² Concentration results are modified based on the laboratory data flag.

"U" Flag - Concentration results calculated at 1/2 MDL.

"J" Flag - Concentration results calculated at reporting limit.

Figure 2-3:
Fenceline BTEX Chart – Sampler 03 - EPA Method 325A/B (Runs 1 – 7)

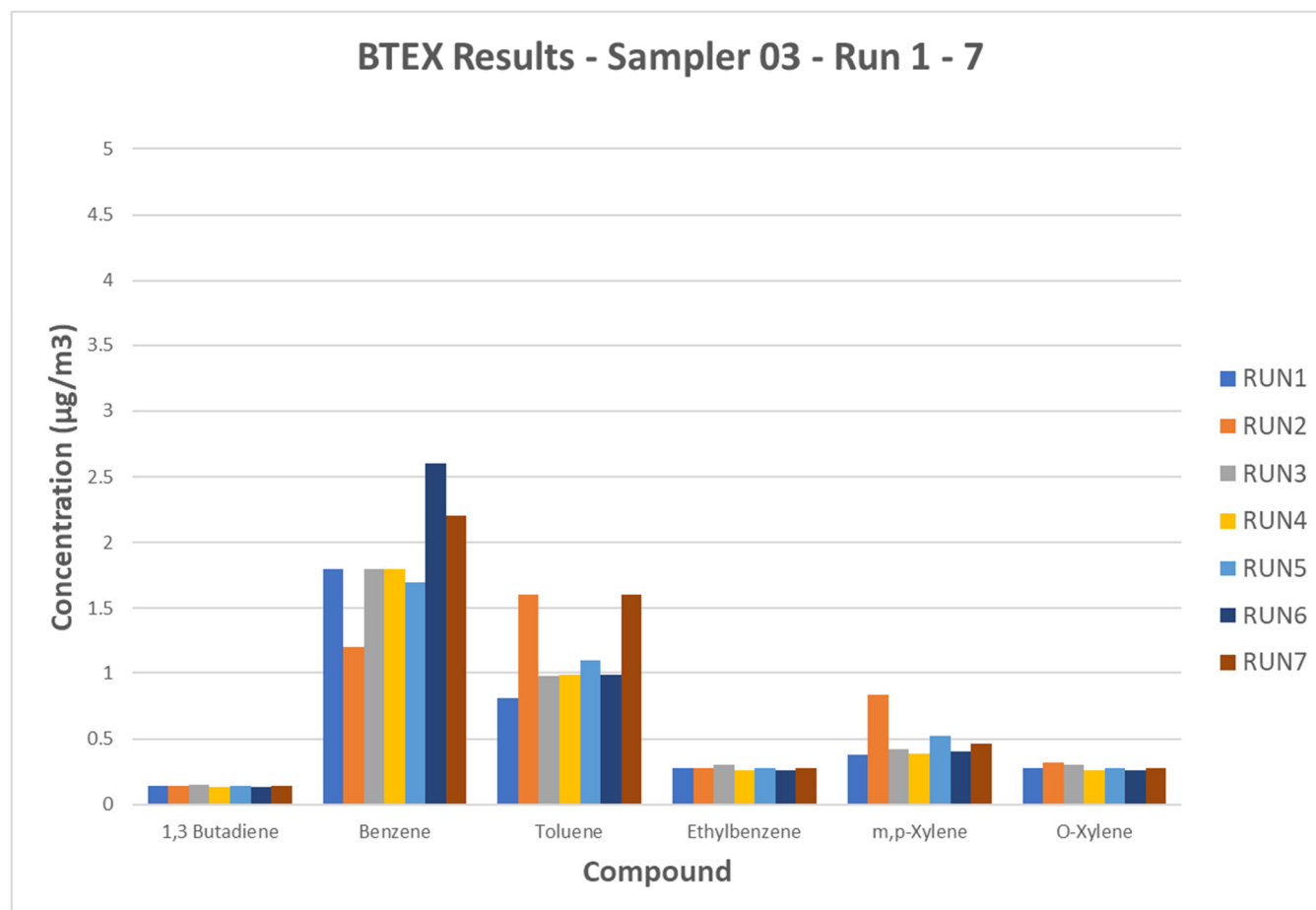


Table 2-4:
Fenceline BTEX Results – Sampler 04 – EPA Method 325A/B (Runs 1 – 7)

Run	Location	Start Date/Time	Stop Date/Time	Compound	Rep. Limit (µg/scm)	Conc. (µg/scm)	Data Flags	Conc. Flag Mod. ² (µg/scm)
1	Sampler 04	10/12/2022 10:10:00	10/26/2022 11:10:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	4.00		4.00
				Toluene	0.49	1.50		1.50
				Ethylbenzene	0.55	0.28	U	0.14
				m,p-Xylene	0.55	0.73	PC	0.73
				O-Xylene	0.55	0.28	U	0.14
2	Sampler 04	10/26/2022 11:10:00	11/09/2022 10:53:00	1,3 Butadiene	0.28	0.14	U	0.07
				Benzene	0.38	2.00		2.00
				Toluene	0.49	1.80		1.80
				Ethylbenzene	0.55	0.28	J	0.55
				m,p-Xylene	0.55	0.98		0.98
				O-Xylene	0.55	0.35	J	0.55
3	Sampler 04	11/09/2022 10:56:00	11/22/2022 11:33:00	1,3 Butadiene	0.31	0.15	U	0.08
				Benzene	0.42	4.10		4.10
				Toluene	0.53	1.60		1.60
				Ethylbenzene	0.60	0.30	U	0.15
				m,p-Xylene	0.60	0.78		0.78
				O-Xylene	0.60	0.30	U	0.15
4	Sampler 04	11/22/2022 11:38:00	12/07/2022 08:48:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	3.00		3.00
				Toluene	0.46	1.20		1.20
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.44	J	0.52
				O-Xylene	0.52	0.26	U	0.13
5	Sampler 04	12/07/2022 08:52:00	12/21/2022 15:02:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	1.90		1.90
				Toluene	0.50	1.10		1.10
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.46	J	0.56
				O-Xylene	0.56	0.28	U	0.14
6	Sampler 04	12/21/2022 15:05:00	01/05/2023 18:09:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	2.00		2.00
				Toluene	0.47	0.77		0.77
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.26	U	0.13
				O-Xylene	0.52	0.26	U	0.13
7	Sampler 04	01/05/2023 17:45:00	01/19/2023 15:55:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	3.00		3.00
				Toluene	0.50	1.80		1.80
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.41	J	0.56
				O-Xylene	0.56	0.28	U	0.14

¹ Data flag definitions:

U-Compound analyzed for but not detected above the MDL value.

J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.

PC- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

² Concentration results are modified based on the laboratory data flag.

"U" Flag - Concentration results calculated at 1/2 MDL.

"J" Flag - Concentration results calculated at reporting limit.

Figure 2-4:
Fenceline BTEX Chart – Sampler 04 - EPA Method 325A/B (Runs 1 – 7)

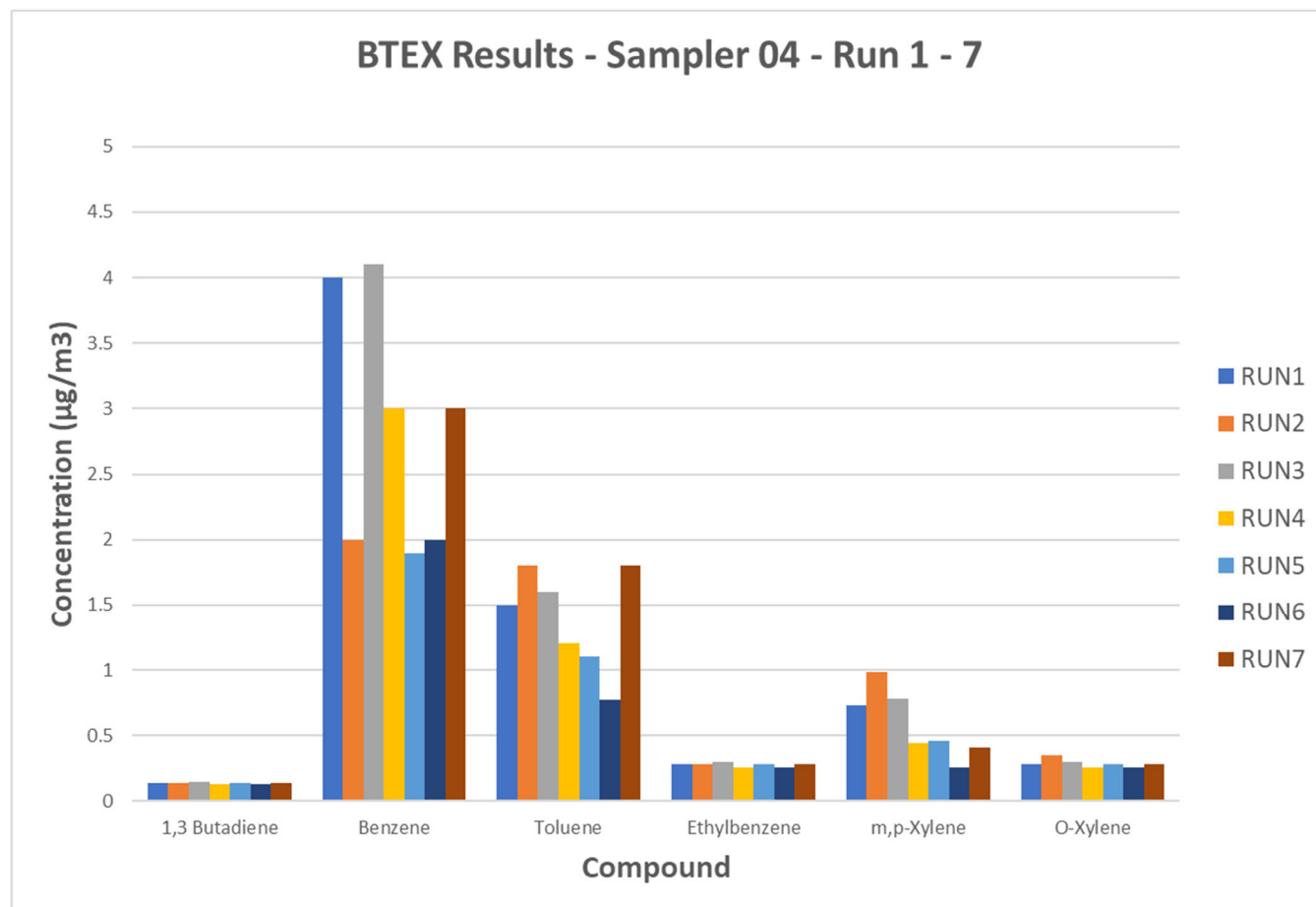


Table 2-5:
Fenceline BTEX Results – Sampler 05 – EPA Method 325A/B (Runs 1 – 7)

Run	Location	Start Date/Time	Stop Date/Time	Compound	Rep. Limit (µg/scm)	Conc. (µg/scm)	Data Flags	Conc. Flag Mod. ² (µg/scm)
1	Sampler 05	10/12/2022 09:46:00	10/26/2022 11:20:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	1.80		1.80
				Toluene	0.49	1.10		1.10
				Ethylbenzene	0.55	0.28	U	0.14
				m,p-Xylene	0.55	0.55	JPC	0.55
				O-Xylene	0.55	0.28	U	0.14
2	Sampler 05	10/26/2022 11:20:00	11/09/2022 11:00:00	1,3 Butadiene	0.28	0.14	U	0.07
				Benzene	0.38	1.90		1.90
				Toluene	0.49	1.80		1.80
				Ethylbenzene	0.55	0.29	J	0.55
				m,p-Xylene	0.55	0.88		0.88
				O-Xylene	0.55	0.35	J	0.55
3	Sampler 05	11/09/2022 11:04:00	11/22/2022 11:42:00	1,3 Butadiene	0.31	0.15	U	0.08
				Benzene	0.42	2.10		2.10
				Toluene	0.53	1.10		1.10
				Ethylbenzene	0.60	0.30	U	0.15
				m,p-Xylene	0.60	0.48	J	0.60
				O-Xylene	0.60	0.30	U	0.15
4	Sampler 05	11/22/2022 11:45:00	12/07/2022 08:52:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	1.60		1.60
				Toluene	0.46	0.83		0.83
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.32	J	0.52
				O-Xylene	0.52	0.26	U	0.13
5	Sampler 05	12/07/2022 08:53:00	12/21/2022 15:12:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	1.60		1.60
				Toluene	0.50	0.99		0.99
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.50	J	0.56
				O-Xylene	0.56	0.28	U	0.14
6	Sampler 05	12/21/2022 15:15:00	01/05/2023 17:45:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	1.20		1.20
				Toluene	0.47	0.59		0.59
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.26	U	0.13
				O-Xylene	0.52	0.26	U	0.13
7	Sampler 05	01/05/2023 17:40:00	01/19/2023 16:00:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	2.40		2.40
				Toluene	0.50	1.80		1.80
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.45	J	0.56
				O-Xylene	0.56	0.28	U	0.14

¹ Data flag definitions:

U-Compound analyzed for but not detected above the MDL value.

J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.

PC- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

² Concentration results are modified based on the laboratory data flag.

"U" Flag - Concentration results calculated at 1/2 MDL.

"J" Flag - Concentration results calculated at reporting limit.

Figure 2-5:
Fenceline BTEX Chart – Sampler 05 - EPA Method 325A/B (Runs 1 – 7)

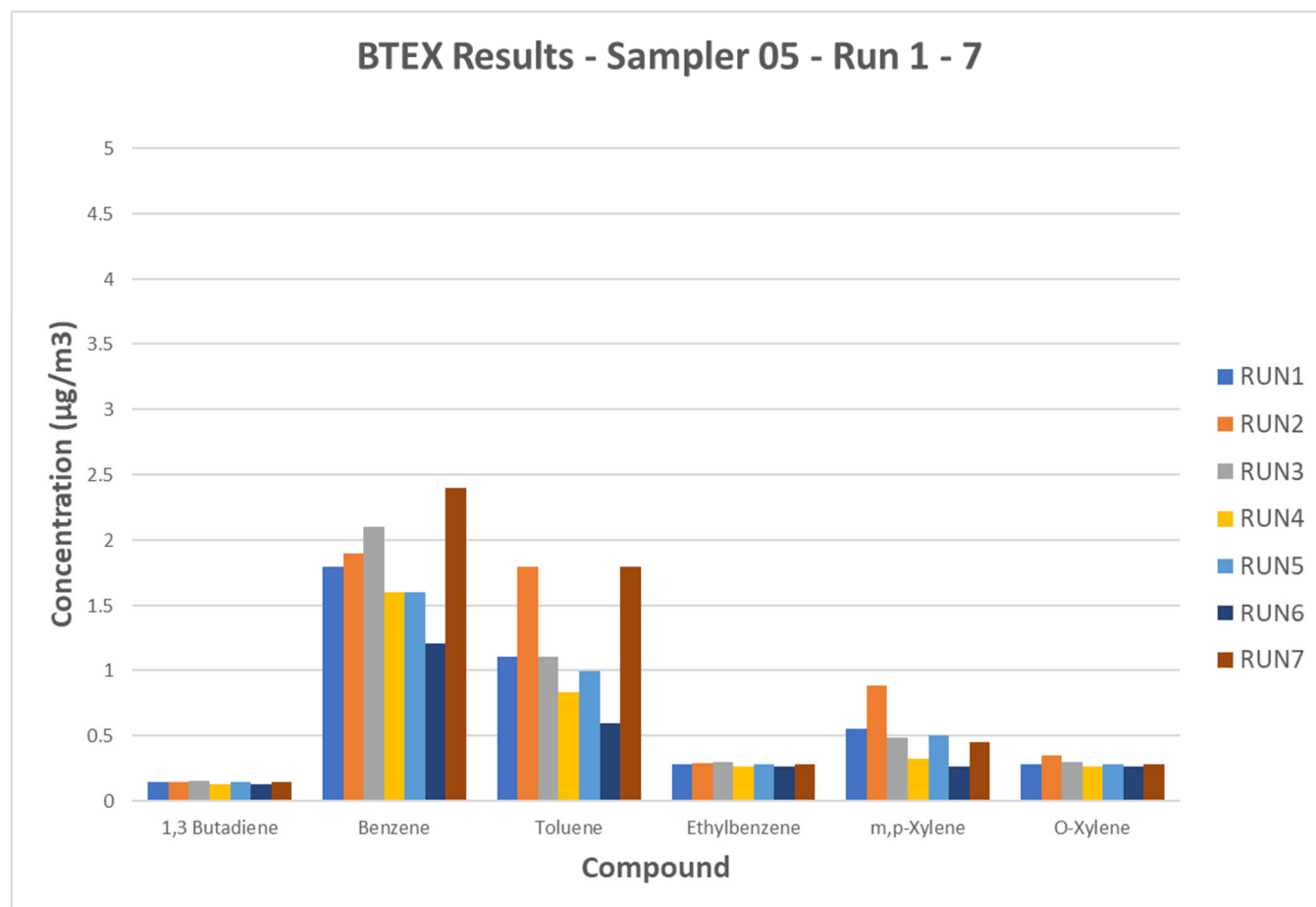


Table 2-6:
Fenceline BTEX Results – Sampler 06 – EPA Method 325A/B (Runs 1 – 7)

Run	Location	Start Date/Time	Stop Date/Time	Compound	Rep. Limit (µg/scm)	Conc. (µg/scm)	Data Flags	Conc. Flag Mod. ² (µg/scm)
1	Sampler 06	10/12/2022 13:16:00	10/26/2022 13:30:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	0.42		0.42
				Toluene	0.49	0.56		0.56
				Ethylbenzene	0.55	0.28	U	0.14
				m,p-Xylene	0.55	0.33	JPC	0.55
				O-Xylene	0.55	0.28	U	0.14
2	Sampler 06	10/26/2022 13:30:00	11/09/2022 11:21:00	1,3 Butadiene	0.28	0.14	U	0.07
				Benzene	0.38	1.20		1.20
				Toluene	0.49	1.40		1.40
				Ethylbenzene	0.55	0.28	U	0.14
				m,p-Xylene	0.55	0.73		0.73
				O-Xylene	0.55	0.28	U	0.14
3	Sampler 06	11/09/2022 11:24:00	11/22/2022 12:35:00	1,3 Butadiene	0.31	0.15	U	0.08
				Benzene	0.42	0.63		0.63
				Toluene	0.53	0.70		0.70
				Ethylbenzene	0.60	0.30	U	0.15
				m,p-Xylene	0.60	0.32	J	0.60
				O-Xylene	0.60	0.30	U	0.15
4	Sampler 06	11/22/2022 12:38:00	12/07/2022 08:05:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	0.90		0.90
				Toluene	0.46	0.73		0.73
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.26	U	0.13
				O-Xylene	0.52	0.26	U	0.13
5	Sampler 06	12/07/2022 08:07:00	12/21/2022 14:32:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	1.10		1.10
				Toluene	0.50	0.96		0.96
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.42	J	0.56
				O-Xylene	0.56	0.28	U	0.14
6	Sampler 06	12/21/2022 14:34:00	01/05/2023 17:40:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	1.10		1.10
				Toluene	0.47	0.57		0.57
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.26	U	0.13
				O-Xylene	0.52	0.26	U	0.13
7	Sampler 06	01/05/2023 17:15:00	01/19/2023 16:38:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	3.60		3.60
				Toluene	0.50	1.20		1.20
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.46	J	0.56
				O-Xylene	0.56	0.28	U	0.14

¹ Data flag definitions:

U-Compound analyzed for but not detected above the MDL value.

J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.

PC- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

² Concentration results are modified based on the laboratory data flag.

"U" Flag - Concentration results calculated at 1/2 MDL.

"J" Flag - Concentration results calculated at reporting limit.

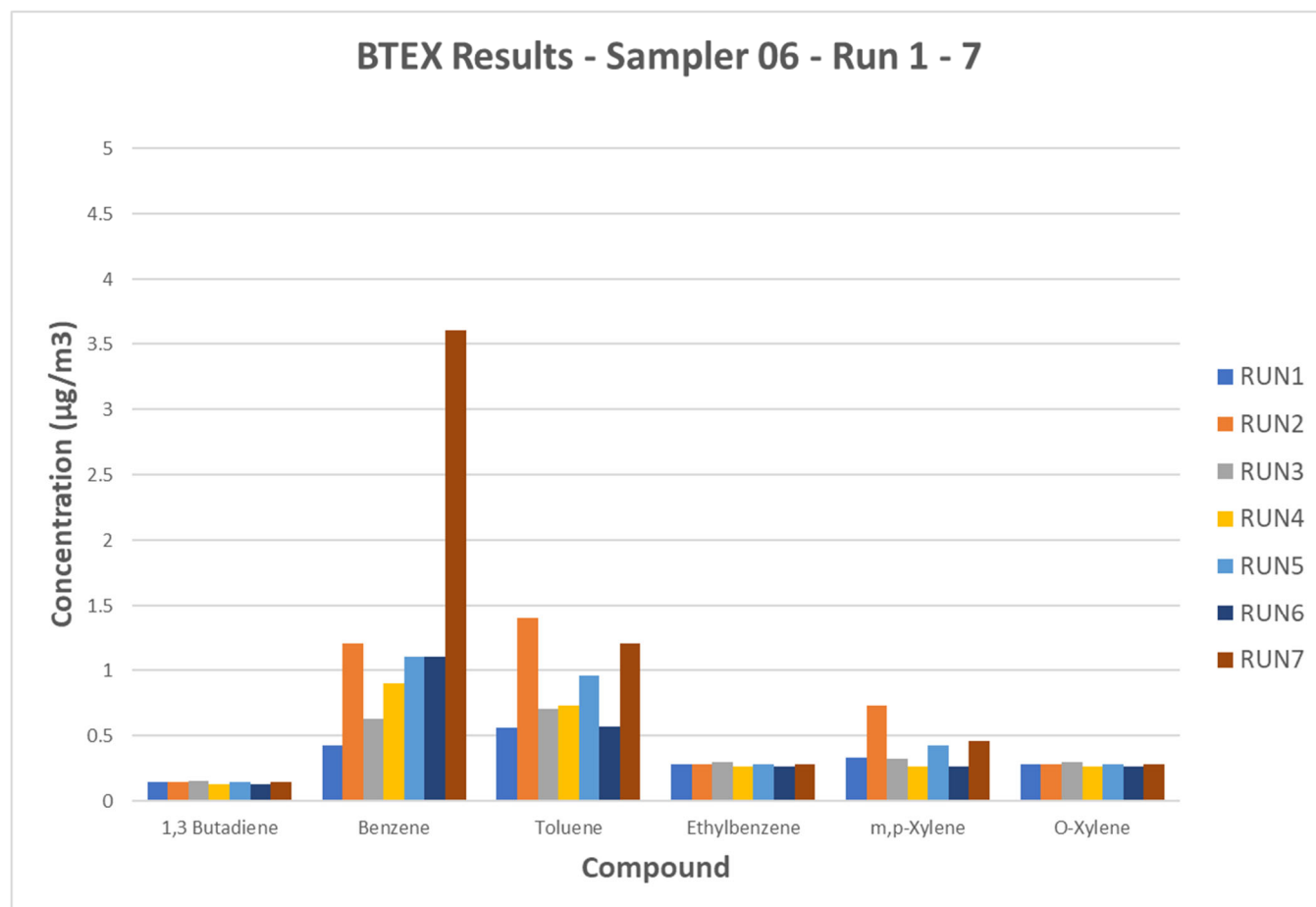


Table 2-7:
Fenceline BTEX Results – Sampler 07 – EPA Method 325A/B (Runs 1 – 7)

Run	Location	Start Date/Time	Stop Date/Time	Compound	Rep. Limit (µg/scm)	Conc. (µg/scm)	Data Flags	Conc. Flag Mod. ² (µg/scm)
1	Sampler 07	10/12/2022 13:27:00	10/26/2022 13:26:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	0.46		0.46
				Toluene	0.49	0.58		0.58
				Ethylbenzene	0.55	0.28	U	0.14
				m,p-Xylene	0.55	0.32	JPC	0.55
				O-Xylene	0.55	0.28	U	0.14
2	Sampler 07	10/26/2022 13:26:00	11/09/2022 11:28:00	1,3 Butadiene	0.28	0.14	U	0.07
				Benzene	0.38	1.00		1.00
				Toluene	0.49	1.40		1.40
				Ethylbenzene	0.55	0.28	U	0.14
				m,p-Xylene	0.55	0.64		0.64
				O-Xylene	0.55	0.28	U	0.14
3	Sampler 07	11/09/2022 11:29:00	11/22/2022 13:22:00	1,3 Butadiene	0.31	0.15	U	0.08
				Benzene	0.42	0.55		0.55
				Toluene	0.53	0.80		0.80
				Ethylbenzene	0.60	0.30	U	0.15
				m,p-Xylene	0.60	0.46	J	0.60
				O-Xylene	0.60	0.30	U	0.15
4	Sampler 07	11/22/2022 12:26:00	12/07/2022 07:55:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	0.68		0.68
				Toluene	0.46	0.70		0.70
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.27	J	0.52
				O-Xylene	0.52	0.26	U	0.13
5	Sampler 07	12/07/2022 07:59:00	12/21/2022 14:24:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	0.99		0.99
				Toluene	0.50	0.87		0.87
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.44	J	0.56
				O-Xylene	0.56	0.28	U	0.14
6	Sampler 07	12/21/2022 14:26:00	01/05/2023 17:00:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	0.82		0.82
				Toluene	0.47	0.57		0.57
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.26	U	0.13
				O-Xylene	0.52	0.26	U	0.13
7	Sampler 07	01/05/2023 17:10:00	01/19/2023 16:31:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	1.60		1.60
				Toluene	0.50	0.89		0.89
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.38	J	0.56
				O-Xylene	0.56	0.28	U	0.14

¹ Data flag definitions:

U-Compound analyzed for but not detected above the MDL value.

J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.

PC- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

² Concentration results are modified based on the laboratory data flag.

"U" Flag - Concentration results calculated at 1/2 MDL.

"J" Flag - Concentration results calculated at reporting limit.

Figure 2-7:
Fenceline BTEX Results – Sampler 07 – EPA Method 325A/B (Runs 1 – 7)

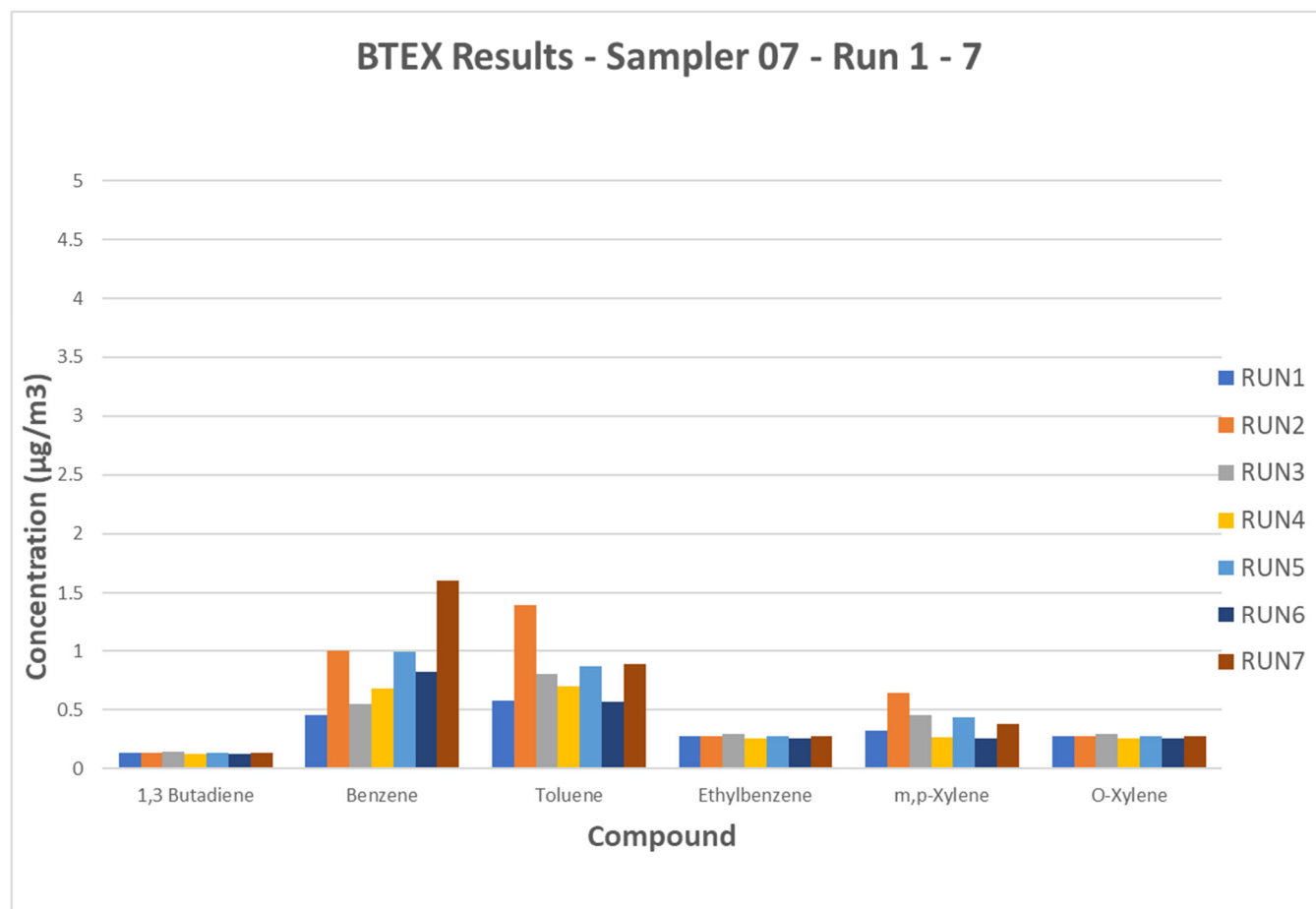


Table 2-8:
Fenceline BTEX Results – Sampler 08 – EPA Method 325A/B (Runs 1 – 7)

Run	Location	Start Date/Time	Stop Date/Time	Compound	Rep. Limit (µg/scm)	Conc. (µg/scm)	Data Flags	Conc. Flag Mod. ² (µg/scm)
1	Sampler 08	10/12/2022 12:48:00	10/26/2022 13:08:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	0.44		0.44
				Toluene	0.49	0.57		0.57
				Ethylbenzene	0.55	0.28	U	0.14
				m,p-Xylene	0.55	0.32	JPC	0.55
				O-Xylene	0.55	0.28	U	0.14
2	Sampler 08	10/26/2022 13:08:00	11/09/2022 11:49:00	1,3 Butadiene	0.28	0.14	U	0.07
				Benzene	0.38	1.00		1.00
				Toluene	0.49	1.30		1.30
				Ethylbenzene	0.55	0.28	U	0.14
				m,p-Xylene	0.55	0.58		0.58
				O-Xylene	0.55	0.28	U	0.14
3	Sampler 08	11/09/2022 11:51:00	11/22/2022 13:23:00	1,3 Butadiene	0.31	0.15	U	0.08
				Benzene	0.42	0.92		0.92
				Toluene	0.53	0.84		0.84
				Ethylbenzene	0.60	0.30	U	0.15
				m,p-Xylene	0.60	0.32	J	0.60
				O-Xylene	0.60	0.30	U	0.15
4	Sampler 08	11/22/2022 13:25:00	12/07/2022 07:35:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	0.69		0.69
				Toluene	0.46	0.62		0.62
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.26	U	0.13
				O-Xylene	0.52	0.26	U	0.13
5	Sampler 08	12/07/2022 07:35:00	12/21/2022 15:45:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	1.80		1.80
				Toluene	0.50	1.10		1.10
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.49	J	0.56
				O-Xylene	0.56	0.28	U	0.14
6	Sampler 08	12/21/2022 15:46:00	01/05/2023 17:35:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	1.30		1.30
				Toluene	0.47	0.62		0.62
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.26	U	0.13
				O-Xylene	0.52	0.26	U	0.13
7	Sampler 08	01/05/2023 17:35:00	01/19/2023 16:23:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	0.74		0.74
				Toluene	0.50	0.74		0.74
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.28	J	0.56
				O-Xylene	0.56	0.28	U	0.14

¹ Data flag definitions:

U-Compound analyzed for but not detected above the MDL value,

J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.

PC- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

² Concentration results are modified based on the laboratory data flag.

"U" Flag - Concentration results calculated at 1/2 MDL.

"J" Flag - Concentration results calculated at reporting limit.

Figure 2-8:
Fenceline BTEX Chart – Sampler 08 - EPA Method 325A/B (Runs 1 – 7)

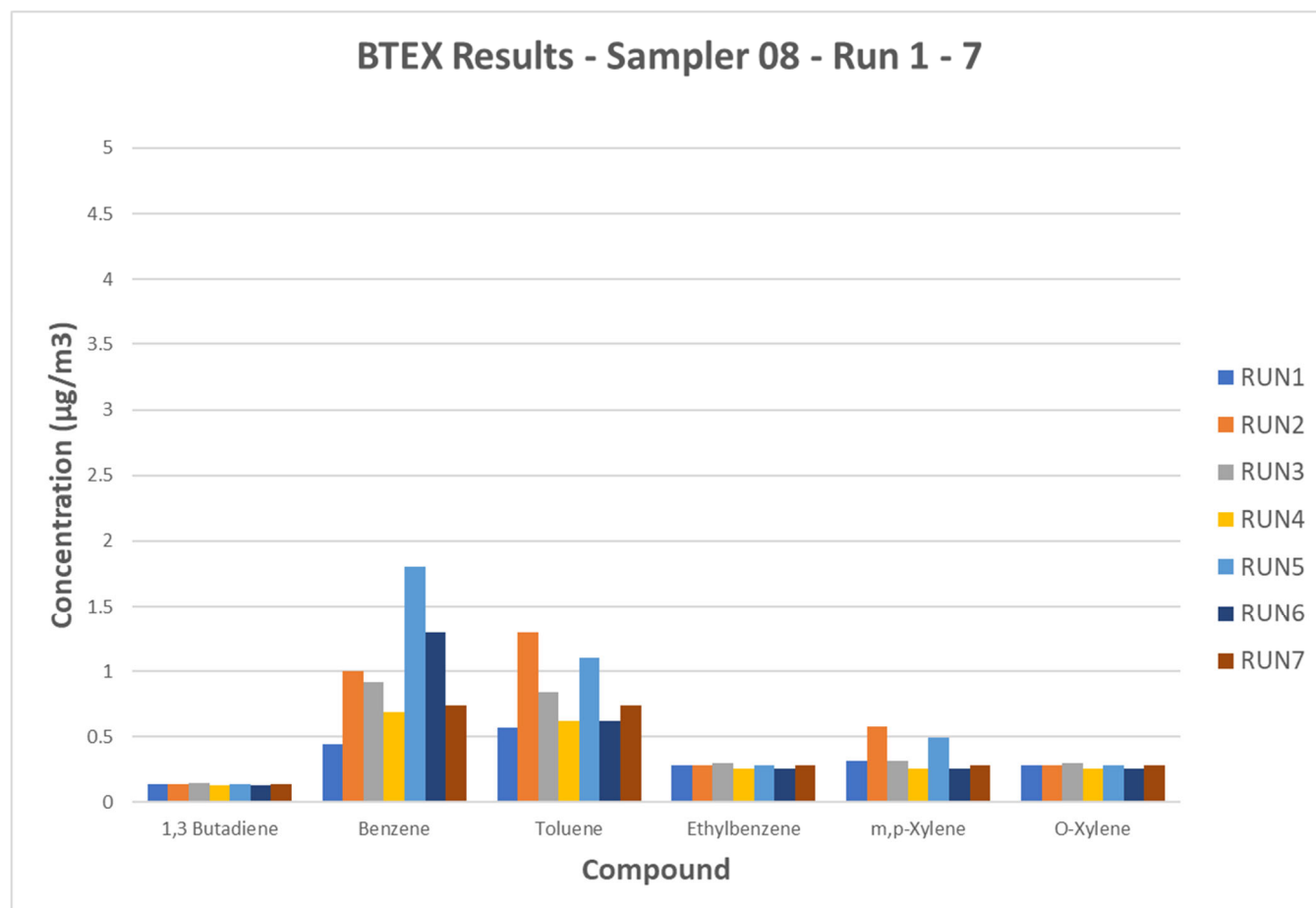


Table 2-9:
Fenceline BTEX Results – Sampler 09 - EPA Method 325A/B (Runs 1 – 7)

Run	Location	Start Date/Time	Stop Date/Time	Compound	Rep. Limit (µg/scm)	Conc. (µg/scm)	Data Flags	Conc. Flag Mod. ² (µg/scm)
1	Sampler 09	10/12/2022 12:42:00	10/26/2022 12:55:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	0.50		0.50
				Toluene	0.49	0.56		0.56
				Ethylbenzene	0.55	0.28	U	0.14
				m,p-Xylene	0.55	0.29	JPC	0.55
				O-Xylene	0.55	0.28	U	0.14
2	Sampler 09	10/26/2022 12:55:00	11/09/2022 11:39:00	1,3 Butadiene	0.28	0.14	U	0.07
				Benzene	0.38	1.20		1.20
				Toluene	0.49	1.40		1.40
				Ethylbenzene	0.55	0.28	U	0.14
				m,p-Xylene	0.55	0.75		0.75
				O-Xylene	0.55	0.28	U	0.14
3	Sampler 09	11/09/2022 11:43:00	11/22/2022 13:15:00	1,3 Butadiene	0.31	0.15	U	0.08
				Benzene	0.42	0.95		0.95
				Toluene	0.53	0.92		0.92
				Ethylbenzene	0.60	0.30	U	0.15
				m,p-Xylene	0.60	0.39	J	0.60
				O-Xylene	0.60	0.30	U	0.15
4	Sampler 09	11/22/2022 13:18:00	12/07/2022 07:30:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	0.84		0.84
				Toluene	0.46	0.66		0.66
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.27	J	0.52
				O-Xylene	0.52	0.26	U	0.13
5	Sampler 09	12/07/2022 07:30:00	12/21/2022 15:35:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	2.00		2.00
				Toluene	0.50	1.30		1.30
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.76		0.76
				O-Xylene	0.56	0.28	U	0.14
6	Sampler 09	12/21/2022 15:38:00	01/05/2023 17:25:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	1.30		1.30
				Toluene	0.47	0.71		0.71
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.26	U	0.13
				O-Xylene	0.52	0.26	U	0.13
7	Sampler 09	01/05/2023 17:28:00	01/19/2023 16:17:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	0.75		0.75
				Toluene	0.50	0.88		0.88
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.33	J	0.56
				O-Xylene	0.56	0.28	U	0.14

¹ Data flag definitions:

U-Compound analyzed for but not detected above the MDL value.

J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.

PC- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

² Concentration results are modified based on the laboratory data flag.

"U" Flag - Concentration results calculated at 1/2 MDL.

"J" Flag - Concentration results calculated at reporting limit.

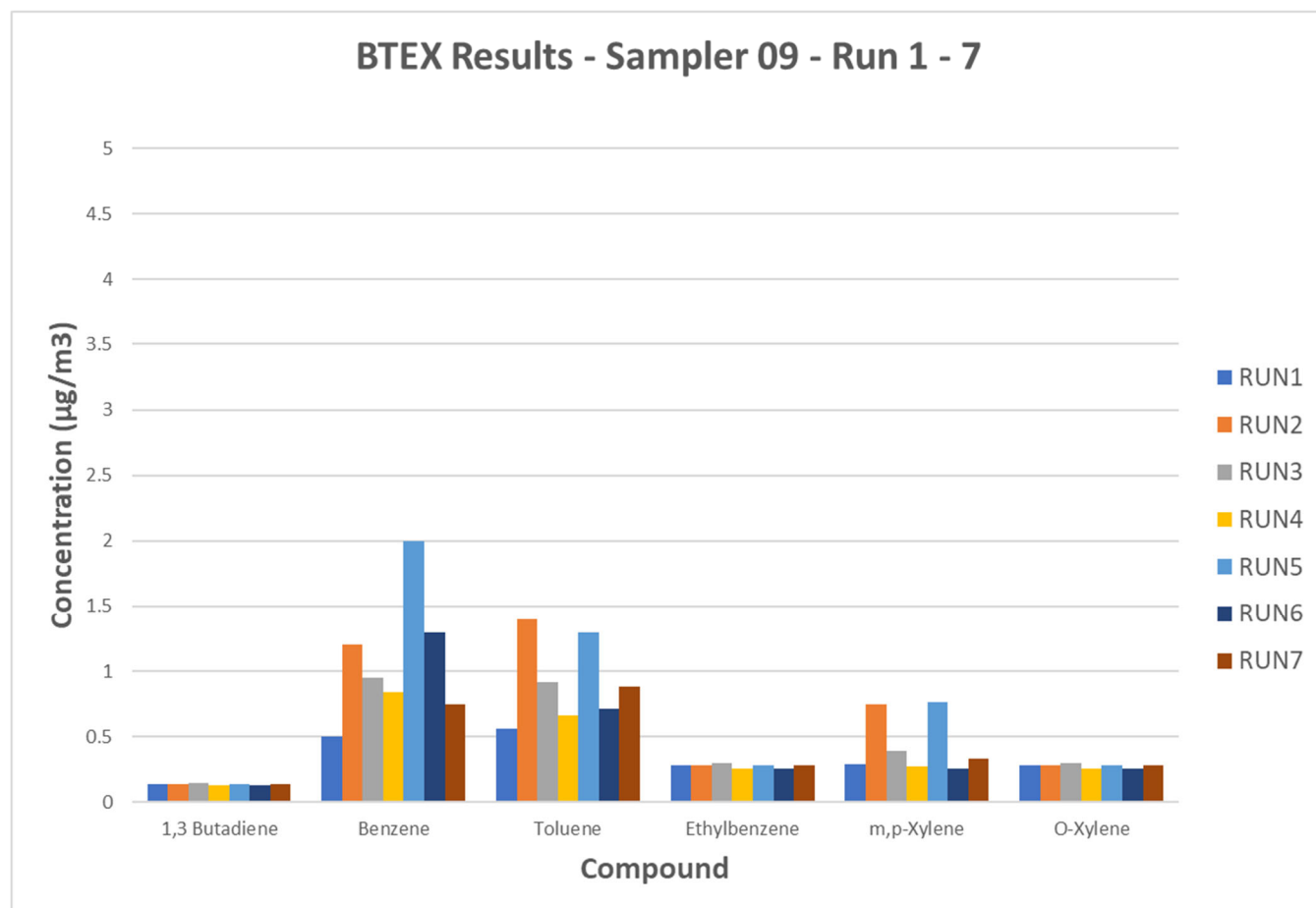


Table 2-10:
Fenceline BTEX Results – Sampler 10 - EPA Method 325A/B (Runs 1 – 7)

Run	Location	Start Date/Time	Stop Date/Time	Compound	Rep. Limit (µg/scm)	Conc. (µg/scm)	Data Flags	Conc. Flag Mod. ² (µg/scm)
1	Sampler 10	10/12/2022 12:24:00	10/26/2022 12:32:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	0.48		0.48
				Toluene	0.49	0.60		0.60
				Ethylbenzene	0.55	0.28	U	0.14
				m,p-Xylene	0.55	0.28	JPC	0.55
				O-Xylene	0.55	0.28	U	0.14
2	Sampler 10	10/26/2022 12:32:00	11/09/2022 12:28:00	1,3 Butadiene	0.28	0.14	U	0.07
				Benzene	0.38	1.10		1.10
				Toluene	0.49	1.70		1.70
				Ethylbenzene	0.55	0.28	U	0.14
				m,p-Xylene	0.55	0.81		0.81
				O-Xylene	0.55	0.28	J	0.55
3	Sampler 10	11/09/2022 12:30:00	11/22/2022 14:42:00	1,3 Butadiene	0.31	0.15	U	0.08
				Benzene	0.42	0.43		0.43
				Toluene	0.53	0.62		0.62
				Ethylbenzene	0.60	0.30	U	0.15
				m,p-Xylene	0.60	0.30	U	0.15
				O-Xylene	0.60	0.30	U	0.15
4	Sampler 10	11/22/2022 14:53:00	12/06/2022 16:25:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	0.57		0.57
				Toluene	0.50	0.79		0.79
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.31	J	0.56
				O-Xylene	0.56	0.28	U	0.14
5	Sampler 10	12/06/2022 16:25:00	12/21/2022 12:50:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	0.86		0.86
				Toluene	0.47	0.88		0.88
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.40	J	0.52
				O-Xylene	0.52	0.26	U	0.13
6	Sampler 10	12/21/2022 12:55:00	01/05/2023 16:58:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	0.89		0.89
				Toluene	0.47	0.63		0.63
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.26	U	0.13
				O-Xylene	0.52	0.26	U	0.13
7	Sampler 10	01/05/2023 16:59:00	01/19/2023 17:08:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	2.40		2.40
				Toluene	0.50	0.96		0.96
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.39	J	0.56
				O-Xylene	0.56	0.28	U	0.14

¹ Data flag definitions:

U-Compound analyzed for but not detected above the MDL value,

J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.

PC- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

² Concentration results are modified based on the laboratory data flag.

"U" Flag - Concentration results calculated at 1/2 MDL.

"J" Flag - Concentration results calculated at reporting limit.

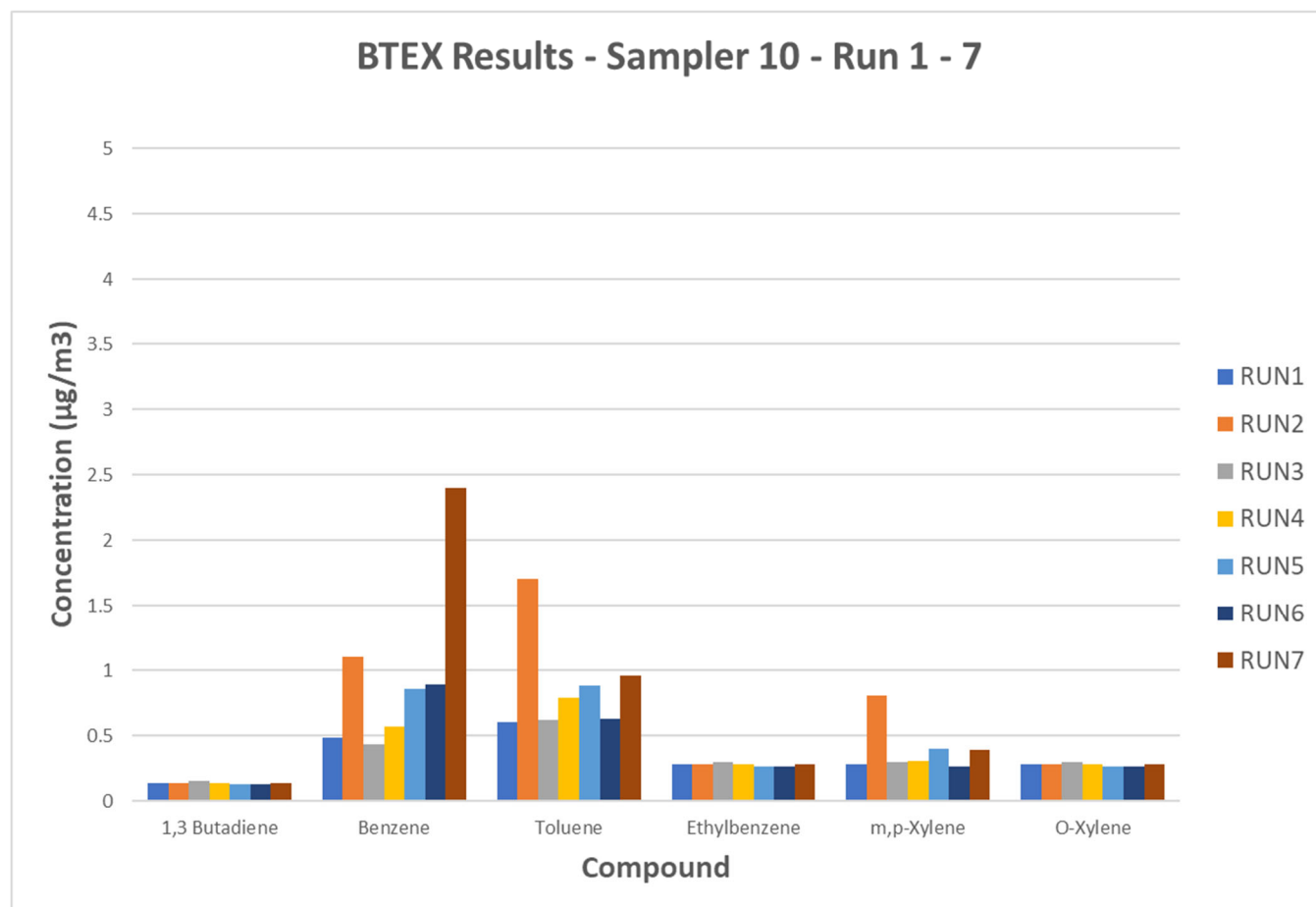


Table 2-11:
Fenceline BTEX Results – Sampler 11 - EPA Method 325A/B (Runs 1 – 7)

Run	Location	Start Date/Time	Stop Date/Time	Compound	Rep. Limit (µg/scm)	Conc. (µg/scm)	Data Flags	Conc. Flag Mod. ² (µg/scm)
1	Sampler 11	10/12/2022 12:15:00	10/26/2022 12:20:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	0.46		0.46
				Toluene	0.49	0.54		0.54
				Ethylbenzene	0.55	0.28	U	0.14
				m,p-Xylene	0.55	0.28	UPC	0.28
				O-Xylene	0.55	0.28	U	0.14
2	Sampler 11	10/26/2022 12:20:00	11/09/2022 12:14:00	1,3 Butadiene	0.28	0.14	U	0.07
				Benzene	0.38	0.96		0.96
				Toluene	0.49	1.60		1.60
				Ethylbenzene	0.55	0.28	U	0.14
				m,p-Xylene	0.55	0.76		0.76
				O-Xylene	0.55	0.29	J	0.55
3	Sampler 11	11/09/2022 12:16:00	11/22/2022 14:52:00	1,3 Butadiene	0.31	0.15	U	0.08
				Benzene	0.42	0.50		0.50
				Toluene	0.53	0.67		0.67
				Ethylbenzene	0.60	0.30	U	0.15
				m,p-Xylene	0.60	0.32	J	0.60
				O-Xylene	0.60	0.30	U	0.15
4	Sampler 11	11/22/2022 14:54:00	12/06/2022 16:02:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	0.83		0.83
				Toluene	0.50	0.92		0.92
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.42	J	0.56
				O-Xylene	0.56	0.28	U	0.14
5	Sampler 11	12/06/2022 16:15:00	12/21/2022 12:40:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	0.78		0.78
				Toluene	0.47	0.86		0.86
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.38	J	0.52
				O-Xylene	0.52	0.26	U	0.13
6	Sampler 11	12/21/2022 12:45:00	01/05/2023 16:55:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	0.84		0.84
				Toluene	0.47	0.74		0.74
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.26	U	0.13
				O-Xylene	0.52	0.26	U	0.13
7	Sampler 11	01/05/2023 16:57:00	01/19/2023 17:02:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	1.70		1.70
				Toluene	0.50	0.94		0.94
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.39	J	0.56
				O-Xylene	0.56	0.28	U	0.14

¹ Data flag definitions:

U-Compound analyzed for but not detected above the MDL value,

J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.

PC- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

² Concentration results are modified based on the laboratory data flag.

"U" Flag - Concentration results calculated at 1/2 MDL.

"J" Flag - Concentration results calculated at reporting limit.

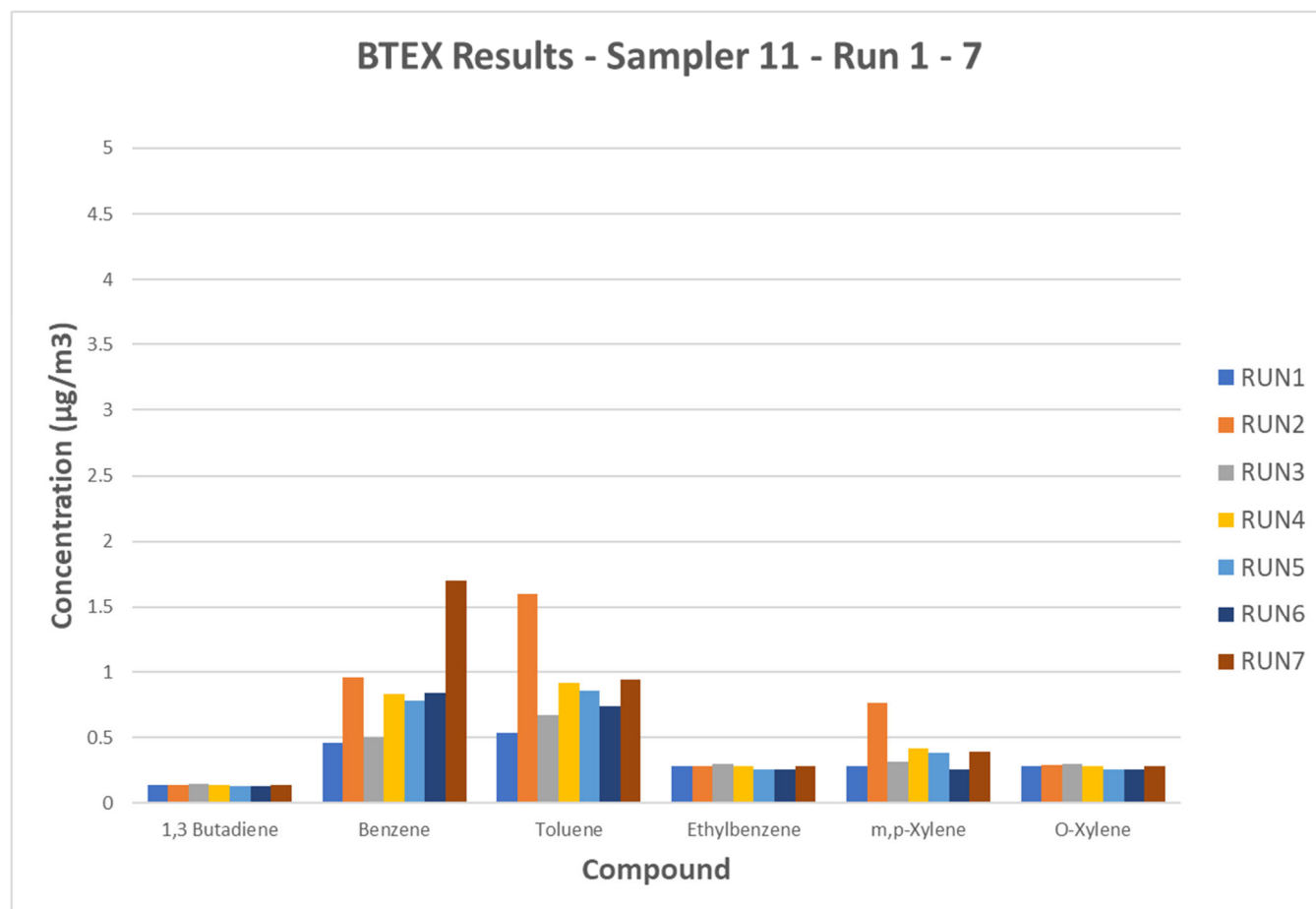


Table 2-12:
Fenceline BTEX Results – Sampler 12 - EPA Method 325A/B (Runs 1 – 7)

Run	Location	Start Date/Time	Stop Date/Time	Compound	Rep. Limit (µg/scm)	Conc. (µg/scm)	Data Flags	Conc. Flag Mod. ² (µg/scm)
1	Sampler 12	10/12/2022 11:28:00	10/26/2022 12:10:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	0.70		0.70
				Toluene	0.49	0.60		0.60
				Ethylbenzene	0.55	0.28	U	0.14
				m,p-Xylene	0.55	0.30	JPC	0.55
				O-Xylene	0.55	0.28	U	0.14
2	Sampler 12	10/26/2022 12:10:00	11/09/2022 12:00:00	1,3 Butadiene	0.28	0.14	U	0.07
				Benzene	0.38	0.90		0.90
				Toluene	0.49	1.80		1.80
				Ethylbenzene	0.55	0.29	J	0.55
				m,p-Xylene	0.55	0.93		0.93
				O-Xylene	0.55	0.35	J	0.55
3	Sampler 12	11/09/2022 12:01:00	11/22/2022 14:13:00	1,3 Butadiene	0.31	0.15	U	0.08
				Benzene	0.42	0.59		0.59
				Toluene	0.53	1.00		1.00
				Ethylbenzene	0.60	0.30	U	0.15
				m,p-Xylene	0.60	0.55	J	0.60
				O-Xylene	0.60	0.30	U	0.15
4	Sampler 12	11/22/2022 14:15:00	12/06/2022 16:49:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	0.65		0.65
				Toluene	0.50	1.10		1.10
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.35	J	0.56
				O-Xylene	0.56	0.28	U	0.14
5	Sampler 12	12/06/2022 16:51:00	12/21/2022 14:00:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	0.60		0.60
				Toluene	0.47	0.87		0.87
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.46	J	0.52
				O-Xylene	0.52	0.26	U	0.13
6	Sampler 12	12/21/2022 14:05:00	01/05/2023 18:15:00	1,3 Butadiene	0.27	0.13	U	0.07
				Benzene	0.36	0.91		0.91
				Toluene	0.47	0.68		0.68
				Ethylbenzene	0.52	0.26	U	0.13
				m,p-Xylene	0.52	0.26	U	0.13
				O-Xylene	0.52	0.26	U	0.13
7	Sampler 12	01/05/2023 18:17:00	01/19/2023 17:20:00	1,3 Butadiene	0.29	0.14	U	0.07
				Benzene	0.38	0.87		0.87
				Toluene	0.50	0.89		0.89
				Ethylbenzene	0.56	0.28	U	0.14
				m,p-Xylene	0.56	0.36	J	0.56
				O-Xylene	0.56	0.28	U	0.14

¹ Data flag definitions:

U-Compound analyzed for but not detected above the MDL value,

J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.

PC- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

² Concentration results are modified based on the laboratory data flag.

"U" Flag - Concentration results calculated at 1/2 MDL.

"J" Flag - Concentration results calculated at reporting limit.

Figure 2-12:
Fenceline BTEX Chart – Sampler 12 - EPA Method 325A/B (Runs 1 – 7)

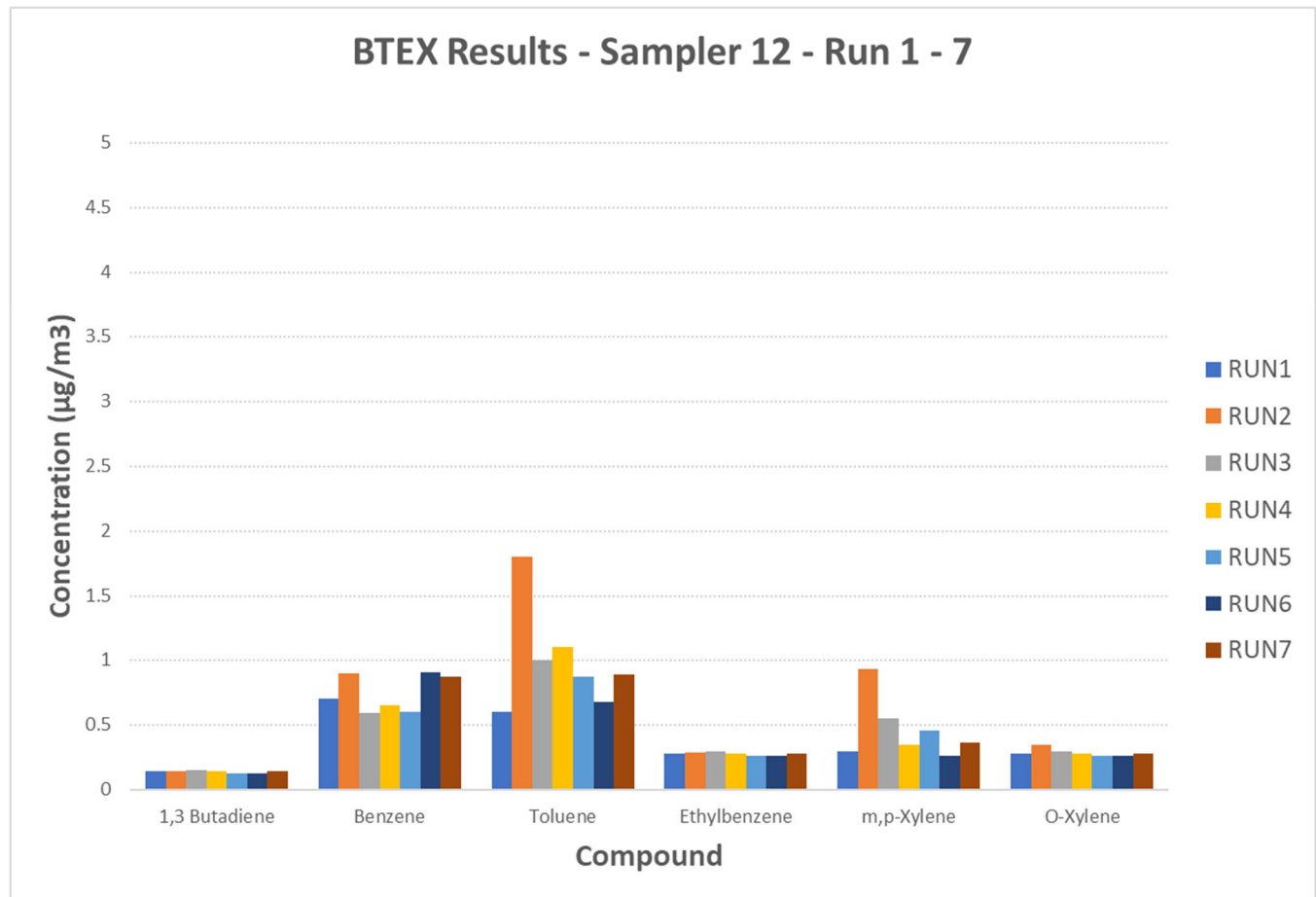


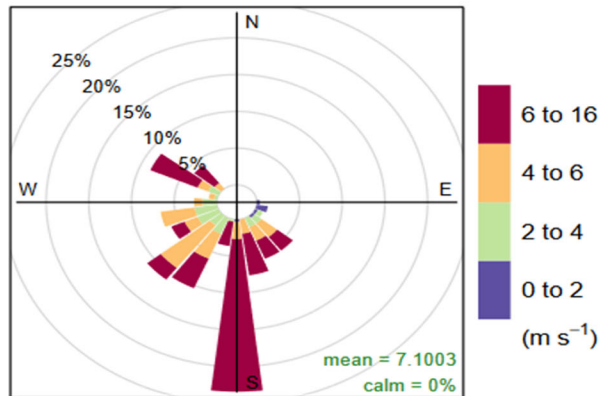
Table 2-13:
Meteorological Data Summary of Results – EPA Method 325A/B – Runs 1 - 7

Run ¹	Start Date	End Date	Temperature (°C)	Barometric Pressure (mm Hg)
1	10/12/2022	10/25/2022	12.6	740.9
2	10/26/2022	11/8/2022	12.7	749.0
3	11/9/2022	11/21/2022	3.6	747.5
4	11/22/2022	12/6/2022	4.9	745.7
4	11/22/2022	12/7/2022	5.1	746.0
5	12/6/2022	12/21/2022	1.9	748.7
5	12/7/2022	12/21/2022	1.6	749.0
6	12/22/2022	1/4/2023	0.7	742.4
7	1/5/2023	1/18/2023	1.5	743.5

¹ The EPA Method 325A/B sampling period was started over a 2-day period to accommodate all samplers.

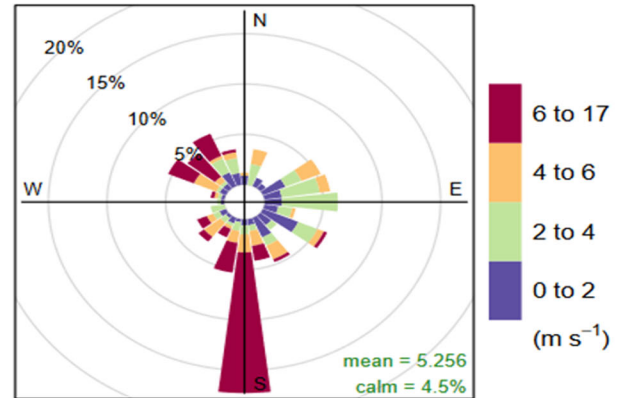
Figure 2-13:
Meteorological Wind Rose Charts – EPA Method 325A/B 14-Day Monitoring Period (Runs 1 – 4)

RUN1: 10/12/2022–10/25/2022



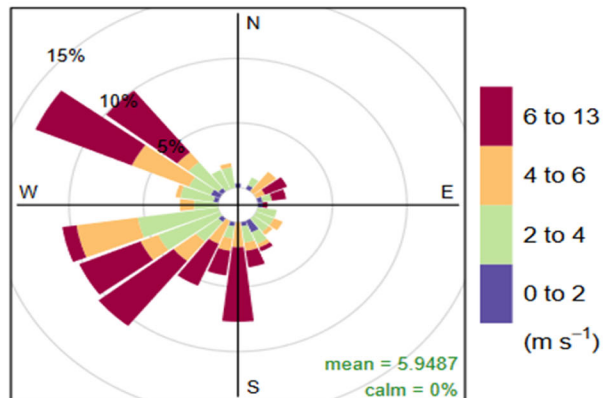
Frequency of counts by wind direction (%)

RUN2: 10/26/2022–11/08/2022



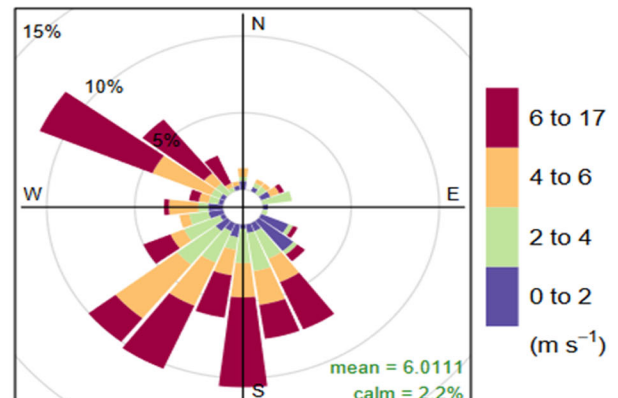
Frequency of counts by wind direction (%)

RUN3: 11/09/2022–11/21/2022



Frequency of counts by wind direction (%)

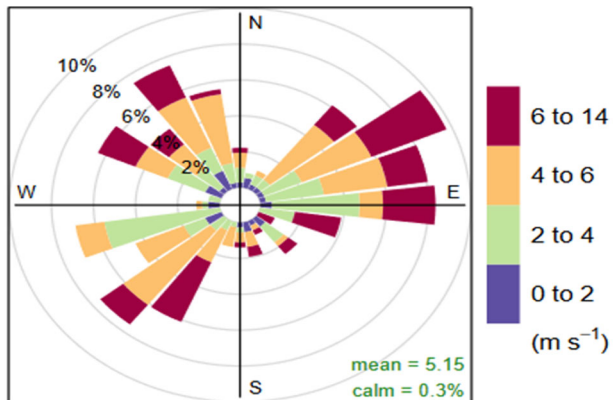
RUN4: 11/22/2022–12/06/2022



Frequency of counts by wind direction (%)

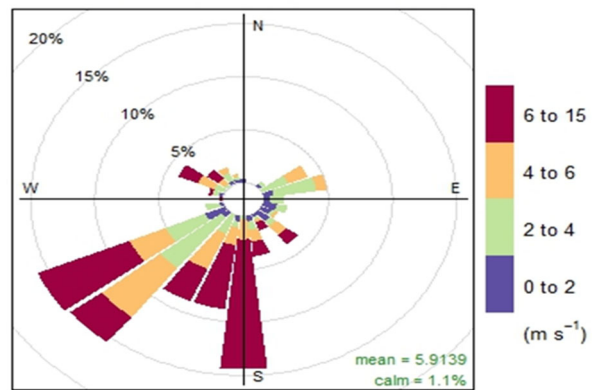
Figure 2-14:
Meteorological Wind Rose Charts – EPA Method 325A/B 14-Day Monitoring Period (Run 5 - 7)

RUN5: 12/07/2022–12/21/2022



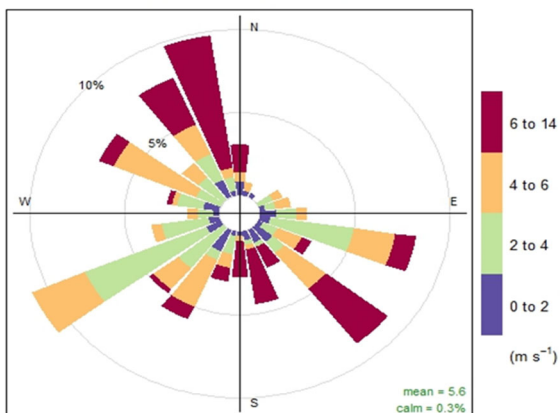
Frequency of counts by wind direction (%)

RUN6: 12/22/2022:01/05/2023



Frequency of counts by wind direction (%)

RUN7: 1/5/2023:1/19/2023



Frequency of counts by wind direction (%)

Table 2-14:
Fenceline and Interior Stations – TO-13A (PAH) Results – Run 1 (Revision 1)

Run No.		1	1	1	1	1
Sampling Location		IN1	IN2	DW1	DW2	UPW
Start Date (2022)		Oct 13	Oct 13	Oct 13	Oct 13	Oct 13
Start Time (approx.)		09:56	09:34	10:23	10:45	11:17
Stop Date (2022)		Oct 14	Oct 14	Oct 14	Oct 14	Oct 14
Stop Time (approx.)		08:00	08:21	10:23	10:40	11:02
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	737.7	737.7	738.0	738.0	738.1
T _s	Temperature (°K)	283.9	283.9	283.4	283.4	283.4
B _w	Relative Humidity (%)	75.0	75.0	75.0	75.0	75.0
Sampling Parameters						
θ	Total sampling time (min)	1,324	1,367	1,440	1,435	1,425
Q _s	Sample flow rate, standard (m ³ /min)	0.2329	0.2211	0.2233	0.2237	0.2239
V _{mstd}	Volume metered, standard (scm)	308.30	302.21	321.60	320.95	319.06
PAHs						
Acenaphthene	(µg/scm)	0.0357	0.0218	0.0143	0.0184	0.0088
Acenaphthylene (µg/dscm)	(µg/scm)	1.0380	0.5294	0.0435	0.1184	0.0008
Anthracene (µg/dscm)	(µg/scm)	0.1135	0.0304	0.0255	0.0499	0.0007
Benzo(a) anthracene (µg/dscm)	(µg/scm)	0.0357	0.0027	0.0404	0.0181	0.0010
Benzo(a)pyrene (µg/dscm)	(µg/scm)	0.0081	0.0018	0.0271	0.0093	0.0010
Benzo(b)fluoranthene (µg/dscm)	(µg/scm)	0.0250	0.0033	0.0466	0.0190	0.0017
Benzo(e)pyrene (µg/dscm)	(µg/scm)	0.0097	0.0018	0.0230	0.0097	0.0010
Benzo(g,h,i)perylene (µg/dscm)	(µg/scm)	0.0049	0.0016	0.0183	0.0072	0.0010
Benzo(k)fluoranthene	(µg/scm)	0.0094	0.0012	0.0168	0.0065	<0.0006
Chrysene (µg/dscm)	(µg/scm)	0.0422	0.0030	0.0373	0.0187	0.0012
Dibenzo(a,h)anthracene	(µg/scm)	<0.0006	<0.0007	0.0059	<0.0006	<0.0006
Fluoranthene (µg/dscm)	(µg/scm)	0.1752	0.0182	0.0840	0.0966	0.0026
Fluorene (µg/dscm)	(µg/scm)	0.3568	0.1489	0.0373	0.0810	0.0050
Indeno(1,2,3-cd)pyrene (µg/dscm)	(µg/scm)	0.0058	0.0017	0.0215	0.0084	0.0009
1-Methylnaphthalene (µg/dscm)	(µg/scm)	0.4865	0.2052	0.0435	0.0841	0.0135
2-Methylnaphthalene (µg/dscm)	(µg/scm)	1.3948	0.5294	0.0964	0.1869	0.0263
Naphthalene (µg/dscm)	(µg/scm)	22.7054	5.6253	1.0572	2.6172	0.0407
Perylene (µg/dscm)	(µg/scm)	0.0022	<0.0007	0.0068	0.0026	<0.0006
Phenanthrene (µg/dscm)	(µg/scm)	0.5190	0.1324	0.0964	0.1994	0.0072
Pyrene (µg/dscm)	(µg/scm)	0.1006	0.0096	0.0560	0.0561	0.0016

Note: Revision 1 – UPW PAH results presented in the preliminary interim report for Run 1 and Run 2 were incorrect due to a spreadsheet error. The results were recalculated and reported in a revised table and included in the final 3-month report.

Table 2-15:
Fenceline and Interior Stations – TO-13A (PAH) Results – Run 2 (Revision 1)

Run No.		2	2	2	2	2
Sampling Location		IN1	IN2	DW1	DW2	UPW
Start Date (2022)		Oct 26	Oct 26	Oct 26	Oct 26	Oct 26
Start Time (approx.)		16:25	17:05	15:49	15:40	17:45
Stop Date (2022)		Oct 27	Oct 27	Oct 27	Oct 27	Oct 27
Stop Time (approx.)		14:51	15:24	14:20	13:50	16:12
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	750.6	751.5	750.6	750.4	751.6
T _s	Temperature (°K)	280.4	280.3	280.4	280.3	280.4
B _w	Relative Humidity (%)	84.9	84.9	84.9	84.9	84.9
Sampling Parameters						
θ	Total sampling time (min)	1,346	1,339	1,351	1,330	1,347
Q _s	Sample flow rate, standard (m ³ /min)	0.2306	0.2293	0.2263	0.2266	0.2266
V _{mstd}	Volume metered, standard (scm)	310.42	307.03	305.72	301.36	305.24
PAHs						
Acenaphthene	(µg/scm)	0.0097	0.0358	0.0062	0.0086	0.0036
Acenaphthylene (µg/dscm)	(µg/scm)	0.0934	0.8794	0.0011	0.0007	<0.0007
Anthracene (µg/dscm)	(µg/scm)	0.0164	0.1661	<0.0007	<0.0007	<0.0007
Benzo(a) anthracene (µg/dscm)	(µg/scm)	0.0023	0.0684	<0.0007	<0.0007	<0.0007
Benzo(a)pyrene (µg/dscm)	(µg/scm)	0.0018	0.0456	<0.0007	<0.0007	<0.0007
Benzo(b)fluoranthene (µg/dscm)	(µg/scm)	0.0042	0.0684	<0.0007	0.0008	<0.0007
Benzo(e)pyrene (µg/dscm)	(µg/scm)	0.0021	0.0326	<0.0007	<0.0007	<0.0007
Benzo(g,h,i)perylene (µg/dscm)	(µg/scm)	0.0017	0.0270	<0.0007	<0.0007	<0.0007
Benzo(k)fluoranthene	(µg/scm)	0.0014	0.0254	<0.0007	<0.0007	<0.0007
Chrysene (µg/dscm)	(µg/scm)	0.0035	0.0651	<0.0007	<0.0007	<0.0007
Dibenzo(a,h)anthracene	(µg/scm)	<0.0006	0.0091	<0.0007	<0.0007	<0.0007
Fluoranthene (µg/dscm)	(µg/scm)	0.0354	0.2117	0.0014	0.0016	0.0011
Fluorene (µg/dscm)	(µg/scm)	0.0741	0.4234	0.0049	0.0063	0.0033
Indeno(1,2,3-cd)pyrene (µg/dscm)	(µg/scm)	0.0019	0.0322	<0.0007	<0.0007	<0.0007
1-Methylnaphthalene (µg/dscm)	(µg/scm)	0.0644	0.2606	0.0072	0.0080	0.0059
2-Methylnaphthalene (µg/dscm)	(µg/scm)	0.1611	0.7491	0.0157	0.0156	0.0128
Naphthalene (µg/dscm)	(µg/scm)	1.8362	7.4912	0.0249	0.0176	0.0144
Perylene (µg/dscm)	(µg/scm)	<0.0006	0.0107	<0.0007	<0.0007	<0.0007
Phenanthrene (µg/dscm)	(µg/scm)	0.1289	0.5863	0.0069	0.0063	0.0046
Pyrene (µg/dscm)	(µg/scm)	0.0187	0.1661	0.0010	0.0011	0.0008

Note: Revision 1 – UPW PAH results presented in the preliminary interim report for Run 1 and Run 2 were incorrect due to a spreadsheet error. The results were recalculated and reported in a revised table and included in the final 3-month report.

Table 2-16:
Fenceline and Interior Stations – TO-13A (PAH) Results – Run 3

Run No.		3	3	3	3	3
Sampling Location		IN1	IN2	DW1	DW2	UPW
Start Date (2022)		Nov 9	Nov 9	Nov 9	Nov 9	Nov 9
Start Time (approx.)		14:30	15:13	13:44	13:30	15:50
Stop Date (2022)		Nov 10	Nov 10	Nov 10	Nov 10	Nov 10
Stop Time (approx.)		12:50	13:40	12:00	11:33	14:10
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	754.6	754.6	754.6	754.6	754.6
T _s	Temperature (°K)	288.6	288.6	288.6	288.6	288.6
B _w	Relative Humidity (%)	45.0	45.0	45.0	45.0	45.0
Sampling Parameters						
θ	Total sampling time (min)	1,340	1,347	1,336	1,323	1,340
Q _s	Sample flow rate, standard (m ³ /min)	0.2240	0.2217	0.2128	0.2241	0.2266
V _{mstd}	Volume metered, standard (scm)	300.11	298.62	284.30	296.45	303.65
PAHs						
Acenaphthene	(µg/scm)	0.0333	0.0100	0.0034	0.0057	0.0109
Acenaphthylene (µg/dscm)	(µg/scm)	0.3665	0.1105	<0.0007	<0.0007	<0.0007
Anthracene (µg/dscm)	(µg/scm)	0.0966	0.0107	<0.0007	<0.0007	<0.0007
Benzo(a) anthracene (µg/dscm)	(µg/scm)	0.0666	<0.0007	<0.0007	<0.0007	<0.0007
Benzo(a)pyrene (µg/dscm)	(µg/scm)	0.0500	<0.0007	<0.0007	<0.0007	<0.0007
Benzo(b)fluoranthene (µg/dscm)	(µg/scm)	0.0800	0.0040	<0.0007	<0.0007	<0.0007
Benzo(e)pyrene (µg/dscm)	(µg/scm)	0.0400	<0.0007	<0.0007	<0.0007	<0.0007
Benzo(g,h,i)perylene (µg/dscm)	(µg/scm)	0.0333	<0.0007	<0.0007	<0.0007	<0.0007
Benzo(k)fluoranthene	(µg/scm)	0.0263	<0.0007	<0.0007	<0.0007	<0.0007
Chrysene (µg/dscm)	(µg/scm)	0.0633	0.0037	<0.0007	<0.0007	<0.0007
Dibenzo(a,h)anthracene	(µg/scm)	0.0097	<0.0007	<0.0007	<0.0007	<0.0007
Fluoranthene (µg/dscm)	(µg/scm)	0.2232	0.0181	<0.0007	0.0008	0.0063
Fluorene (µg/dscm)	(µg/scm)	0.2366	0.0569	0.0035	0.0044	0.0128
Indeno(1,2,3-cd)pyrene (µg/dscm)	(µg/scm)	0.0400	<0.0007	<0.0007	<0.0007	<0.0007
1-Methylnaphthalene (µg/dscm)	(µg/scm)	0.2133	0.0603	0.0033	0.0037	0.0105
2-Methylnaphthalene (µg/dscm)	(µg/scm)	0.5331	0.1507	0.0060	0.0064	0.0211
Naphthalene (µg/dscm)	(µg/scm)	6.9974	1.5739	0.0123	0.0098	0.0362
Perylene (µg/dscm)	(µg/scm)	0.0130	<0.0007	<0.0007	<0.0007	<0.0007
Phenanthrene (µg/dscm)	(µg/scm)	0.4665	0.0703	0.0039	0.0034	0.0211
Pyrene (µg/dscm)	(µg/scm)	0.1499	0.0097	<0.0007	<0.0007	0.0036

Table 2-17:
Fenceline and Interior Stations – TO-13A (PAH) Results – Run 4

Run No.		4	4	4	4	4
Sampling Location		IN1	IN2	DW1	DW2	UPW
Start Date (2022)		Dec 5	Dec 5	Dec 5	Dec 5	Dec 5
Start Time (approx.)		16:14	16:39	15:45	15:15	17:35
Stop Date (2022)		Dec 6	Dec 6	Dec 6	Dec 6	Dec 6
Stop Time (approx.)		14:40	15:05	14:15	13:55	15:38
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	748.3	748.3	748.3	748.3	748.3
T _s	Temperature (°K)	279.5	279.5	279.5	279.5	279.5
B _w	Relative Humidity (%)	60.0	60.0	60.0	60.0	60.0
Sampling Parameters						
θ	Total sampling time (min)	1,346	1,346	1,350	1,360	1,323
Q _s	Sample flow rate, standard (m ³ /min)	0.2399	0.2241	0.2263	0.2266	0.2312
V _{mstd}	Volume metered, standard (scm)	322.86	301.63	305.50	308.14	305.89
PAHs						
Acenaphthene	(µg/scm)	0.0189	0.0196	0.0052	0.0049	0.0065
Acenaphthylene (µg/dscm)	(µg/scm)	0.3097	0.3647	0.0039	<0.0032	<0.0033
Anthracene (µg/dscm)	(µg/scm)	0.0341	0.0497	<0.0033	0.0120	0.0092
Benzo(a) anthracene (µg/dscm)	(µg/scm)	0.0121	0.0265	<0.0033	<0.0032	<0.0033
Benzo(a)pyrene (µg/dscm)	(µg/scm)	0.0084	0.0179	<0.0033	<0.0032	<0.0033
Benzo(b)fluoranthene (µg/dscm)	(µg/scm)	0.0152	0.0232	<0.0033	<0.0032	<0.0033
Benzo(e)pyrene (µg/dscm)	(µg/scm)	0.0071	0.0109	<0.0033	<0.0032	<0.0033
Benzo(g,h,i)perylene (µg/dscm)	(µg/scm)	0.0056	0.0096	<0.0033	<0.0032	<0.0033
Benzo(k)fluoranthene	(µg/scm)	0.0056	0.0093	<0.0033	<0.0032	<0.0033
Chrysene (µg/dscm)	(µg/scm)	0.0133	0.0219	<0.0033	<0.0032	<0.0033
Dibenzo(a,h)anthracene	(µg/scm)	<0.0031	<0.0033	<0.0033	<0.0032	<0.0033
Fluoranthene (µg/dscm)	(µg/scm)	0.0650	0.0763	0.0056	0.0065	<0.0033
Fluorene (µg/dscm)	(µg/scm)	0.1363	0.1392	0.0088	0.0058	0.0065
Indeno(1,2,3-cd)pyrene (µg/dscm)	(µg/scm)	0.0065	0.0109	<0.0033	<0.0032	<0.0033
1-Methylnaphthalene (µg/dscm)	(µg/scm)	0.1456	0.1260	0.0059	0.0045	0.0082
2-Methylnaphthalene (µg/dscm)	(µg/scm)	0.3717	0.2719	0.0115	0.0088	0.0154
Naphthalene (µg/dscm)	(µg/scm)	3.7168	2.4201	0.0589	0.0250	0.0245
Perylene (µg/dscm)	(µg/scm)	<0.0031	0.0043	<0.0033	<0.0032	<0.0033
Phenanthrene (µg/dscm)	(µg/scm)	0.1920	0.1724	0.0190	0.0107	0.0082
Pyrene (µg/dscm)	(µg/scm)	0.0403	0.0431	<0.0033	0.0036	<0.0033

Table 2-18:
Fenceline and Interior Stations – TO-13A (PAH) Results – Run 5

Run No.		5	5	5	5	5
Sampling Location		IN1	IN2	DW1	DW2	UPW
Start Date (2022)		Dec 20	Dec 20	Dec 20	Dec 20	Dec 20
Start Time (approx.)		12:22	13:05	11:40	10:52	14:00
Stop Date (2022)		Dec 21	Dec 21	Dec 21	Dec 21	Dec 21
Stop Time (approx.)		10:58	11:15	10:30	10:05	12:10
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	755.7	755.7	755.7	755.7	755.7
T _s	Temperature (°K)	271.8	271.8	271.8	271.8	271.8
B _w	Relative Humidity (%)	72.0	72.0	72.0	72.0	72.0
Sampling Parameters						
θ	Total sampling time (min) ¹	1,356	1,330	1,370	1,393	1,330
Q _s	Sample flow rate, standard (m ³ /min)	0.2476	0.2214	0.2234	0.2223	0.2252
V _{mstd}	Volume metered, standard (scm)	335.80	294.44	306.09	309.72	299.54
PAHs						
Acenaphthene	(µg/scm)	0.0417	0.0163	0.0042	0.0055	0.0037
Acenaphthylene (µg/dscm)	(µg/scm)	1.8165	0.7132	0.0193	0.0255	0.0028
Anthracene (µg/dscm)	(µg/scm)	0.0923	0.0323	0.0078	0.0071	<0.0013
Benzo(a) anthracene (µg/dscm)	(µg/scm)	0.0086	0.0017	0.0049	0.0045	<0.0013
Benzo(a)pyrene (µg/dscm)	(µg/scm)	0.0042	<0.0014	0.0033	0.0029	<0.0013
Benzo(b)fluoranthene (µg/dscm)	(µg/scm)	0.0066	0.0018	0.0052	0.0048	<0.0013
Benzo(e)pyrene (µg/dscm)	(µg/scm)	0.0033	<0.0014	0.0025	0.0024	<0.0013
Benzo(g,h,i)perylene (µg/dscm)	(µg/scm)	0.0026	<0.0014	0.0022	0.0020	<0.0013
Benzo(k)fluoranthene	(µg/scm)	0.0025	<0.0014	0.0019	0.0017	<0.0013
Chrysene (µg/dscm)	(µg/scm)	0.0080	0.0019	0.0049	0.0045	<0.0013
Dibenzo(a,h)anthracene	(µg/scm)	<0.0012	<0.0014	<0.0013	<0.0013	<0.0013
Fluoranthene (µg/dscm)	(µg/scm)	0.0774	0.0194	0.0170	0.0158	0.0019
Fluorene (µg/dscm)	(µg/scm)	0.4169	0.1528	0.0114	0.0129	0.0033
Indeno(1,2,3-cd)pyrene (µg/dscm)	(µg/scm)	0.0030	<0.0014	0.0025	0.0024	<0.0013
1-Methylnaphthalene (µg/dscm)	(µg/scm)	0.7445	0.2106	0.0189	0.0220	0.0150
2-Methylnaphthalene (µg/dscm)	(µg/scm)	1.9059	0.5094	0.0327	0.0452	0.0257
Naphthalene (µg/dscm)	(µg/scm)	47.6468	8.8304	0.2581	0.4843	0.0801
Perylene (µg/dscm)	(µg/scm)	0.0012	<0.0014	<0.0013	<0.0013	<0.0013
Phenanthrene (µg/dscm)	(µg/scm)	0.3574	0.1494	0.0327	0.0323	0.0063
Pyrene (µg/dscm)	(µg/scm)	0.0476	0.0115	0.0114	0.0107	0.0014

Note: Extraction of the TO-13A samples was 1 day beyond the 7 day holding period following the conclusion of sampling.

Table 2-19:
Fenceline and Interior Stations – TO-13A (PAH) Results – Run 6

Run No.		6	6	6	6	6
Sampling Location		IN1	IN2	DW1	DW2	UPW
Start Date (2023)		Jan 4	Jan 4	Jan 4	Jan 4	Jan 4
Start Time (approx.)		17:40	18:00	17:05	15:51	18:35
Stop Date (2023)		Jan 5	Jan 5	Jan 5	Jan 5	Jan 5
Stop Time (approx.)		15:46	16:17	15:10	14:18	16:55
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	740.6	740.6	740.6	740.6	740.6
T _s	Temperature (°K)	278.8	278.8	278.8	278.8	278.8
B _w	Relative Humidity (%)	75.0	75.0	75.0	75.0	75.0
Sampling Parameters						
θ	Total sampling time (min) ¹	1,326	1,337	1,068	1,347	1,340
Q _s	Sample flow rate, standard (m ³ /min)	0.2345	0.2233	0.2255	0.2257	0.2258
V _{mstd}	Volume metered, standard (scm)	310.89	298.55	240.78	304.08	302.52
PAHs						
Acenaphthene	(µg/scm)	0.0125	0.0137	0.0116	0.0066	<0.0066
Acenaphthylene	(µg/dscm)	0.2638	0.2010	0.0665	0.0250	<0.0066
Anthracene	(µg/dscm)	0.0241	0.0275	0.0498	0.0181	<0.0066
Benzo(a) anthracene	(µg/dscm)	<0.0064	<0.0067	0.0316	0.0122	<0.0066
Benzo(a)pyrene	(µg/dscm)	<0.0064	<0.0067	0.0216	0.0086	<0.0066
Benzo(b)fluoranthene	(µg/dscm)	<0.0064	<0.0067	0.0374	0.0135	<0.0066
Benzo(e)pyrene	(µg/dscm)	<0.0064	<0.0067	0.0179	<0.0066	<0.0066
Benzo(g,h,i)perylene	(µg/dscm)	<0.0064	<0.0067	0.0145	<0.0066	<0.0066
Benzo(k)fluoranthene	(µg/dscm)	<0.0064	<0.0067	0.0133	<0.0066	<0.0066
Chrysene	(µg/dscm)	<0.0064	<0.0067	0.0332	0.0122	<0.0066
Dibenzo(a,h)anthracene	(µg/dscm)	<0.0064	<0.0067	<0.0083	<0.0066	<0.0066
Fluoranthene	(µg/dscm)	0.0267	0.0188	0.1163	0.0395	<0.0066
Fluorene	(µg/dscm)	0.1319	0.1541	0.0789	0.0286	<0.0066
Indeno(1,2,3-cd)pyrene	(µg/dscm)	<0.0064	<0.0067	0.0162	<0.0066	<0.0066
1-Methylnaphthalene	(µg/dscm)	0.1222	0.1139	0.0457	0.0247	<0.0066
2-Methylnaphthalene	(µg/dscm)	0.3088	0.2345	0.1038	0.0526	0.0106
Naphthalene	(µg/dscm) - Flag (L-05) ²	3.8599	2.3447	0.7891	0.5920	0.0562
Perylene	(µg/dscm)	<0.0064	<0.0067	<0.0083	<0.0066	<0.0066
Phenanthrene	(µg/dscm)	0.1415	0.1440	0.1952	0.0691	0.0119
Pyrene	(µg/dscm)	0.0167	0.0111	0.0748	0.0266	<0.0066

¹ Power was lost during the DW1 sampling event. The total sample time was determined using the initial and final elapsed timer values. See corrective actions for more information.

² The laboratory qualifications included a L-05 data flag for all Naphthalene results. The laboratory fortified blank/control sample recovery was outside limits. Therefore, the lab report indicated "Reported value for this compound is likely to be biased on the high side".

Table 2-20:
Fenceline and Interior Stations – TO-15 (VOC) – Run 1 Results

Run No.		1	1	1	1	1
Sampling Location		IN1	IN2	DW1 ¹	DW2	UPW
Start Date (2022)		Oct 25	Oct 25	Oct 25	Oct 25	Oct 25
Start Time (approx.)		12:22	12:45	11:45	11:09	13:45
Stop Date (2022)		Oct 26	Oct 26	Oct 26	Oct 26	Oct 26
Stop Time (approx.)		11:40	11:51	11:00	10:35	13:00
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	737.7	737.7	738.0	738.0	738.1
T _s	Temperature (°K)	283.9	283.9	283.4	283.4	283.4
B _w	Relative Humidity (%)	75.0	75.0	75.0	75.0	75.0
Results²						
Acetone	(µg/m ³)	12	9.5	12	17	15
Benzene	(µg/m ³)	45	1.7	0.46	0.69	1.4
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.18	<0.18	<0.18
Bromodichloromethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Bromoform	(µg/m ³)	<0.36	<0.36	<0.36	<0.36	<0.36
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,3-Butadiene	(µg/m ³)	0.6	<0.078	<0.078	<0.078	<0.078
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.1	<4.1	<4.1
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
Carbon Tetrachloride	(µg/m ³)	0.46	0.47	0.445	0.43	0.44
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
Chloroethane	(µg/m ³)	<0.093	<0.093	<0.093	<0.093	<0.093
Chloroform	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Chloromethane	(µg/m ³)	0.94	0.85	0.945	0.9	0.95
Cyclohexane	(µg/m ³)	0.24	0.14	0.32	<0.12	0.14
Dibromochloromethane	(µg/m ³)	<0.30	<0.30	<0.30	<0.30	<0.30
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.27	<0.27	<0.27
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	1	1	1.15	1.2	0.98
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
1,2-Dichloro-1,1,2,2-tetrafluoroethane	(µg/m ³)	<0.25	<0.25	<0.25	<0.25	<0.25
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3

¹ A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

² A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

Table 2-20:
Fenceline and Interior Stations – TO-15 (VOC) – Run 1 Results (Continued)

Run No.		1	1	1	1	1
Sampling Location		IN1	IN2	DW1 ¹	DW2	UPW
Start Date (2022)		Oct 25	Oct 25	Oct 25	Oct 25	Oct 25
Start Time (approx.)		12:22	12:45	11:45	11:09	13:45
Stop Date (2022)		Oct 26	Oct 26	Oct 26	Oct 26	Oct 26
Stop Time (approx.)		11:40	11:51	11:00	10:35	13:00
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	737.7	737.7	738.0	738.0	738.1
T _s	Temperature (°K)	283.9	283.9	283.4	283.4	283.4
B _w	Relative Humidity (%)	75.0	75.0	75.0	75.0	75.0
Results²						
	Ethanol (µg/m ³)	7.7	8	6.65	9.2	6.9
	Ethyl Acetate (µg/m ³)	4.2	<1.3	<1.3	1.4	<1.3
	Ethylbenzene (µg/m ³)	0.23	<0.15	<0.15	<0.15	0.16
	4-Ethyltoluene (µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
	Heptane (µg/m ³)	0.33	0.23	0.155	0.16	0.31
	Hexachlorobutadiene (µg/m ³)	<0.37	<0.37	<0.37	<0.37	<0.37
	Hexane (µg/m ³)	7.1	9.5	5.95	<4.9	6.6
	2-Hexanone (MBK) (µg/m ³)	0.27	<0.14	0.2	0.23	0.28
	Isopropanol (µg/m ³)	<3.4	<3.4	<3.4	<3.4	<3.4
	Methyl tert-Butyl Ether (MTBE) (µg/m ³)	<0.13	<0.13	<0.13	<0.13	<0.13
	Methylene Chloride (µg/m ³)	<1.2	<1.2	<1.2	<1.2	<1.2
	4-Methyl-2-pentanone (MIBK) (µg/m ³)	0.19	<0.14	<0.14	<0.14	<0.14
	Naphthalene (µg/m ³)	52	9.6	<0.18	<0.18	0.43
	Propene (µg/m ³)	5.3	<2.4	<2.4	<2.4	<2.4
	Styrene (µg/m ³)	1.8	<0.15	<0.15	<0.15	<0.15
	1,1,2,2-Tetrachloroethane (µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
	Tetrachloroethylene (µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
	Tetrahydrofuran (µg/m ³)	<1.0	<1.0	<1.0	<1.0	<1.0
	Toluene (µg/m ³)	11	0.81	0.42	0.71	0.76
	1,2,4-Trichlorobenzene (µg/m ³)	<0.26	<0.26	<0.26	<0.26	<0.26
	1,1,1-Trichloroethane (µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
	1,1,2-Trichloroethane (µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
	Trichloroethylene (µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
	Trichlorofluoromethane (Freon 11) (µg/m ³)	1.1	1.1	1.15	1.2	1.1
	1,1,2-Trichloro-1,2,2-trifluoroethane (F) (µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
	1,2,4-Trimethylbenzene (µg/m ³)	0.71	<0.17	<0.17	<0.17	0.21
	1,3,5-Trimethylbenzene (µg/m ³)	0.34	<0.17	<0.17	<0.17	<0.17
	Vinyl Acetate (µg/m ³)	<2.5	<2.5	<2.5	<2.5	<2.5
	Vinyl Chloride (µg/m ³)	<0.090	<0.090	<0.090	<0.090	<0.090
	m&p-Xylene (µg/m ³)	3.5	<0.30	<0.30	0.49	0.51
	o-Xylene (µg/m ³)	0.86	<0.15	<0.15	0.16	0.2

¹ A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

² A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

Table 2-21:
Fenceline and Interior Stations – TO-15 (VOC) – Run 2 Results

Run No.		2	2	2	2	2
Sampling Location		IN1	IN2	DW1	DW2	UPW ¹
Start Date (2022)		Oct 26	Oct 26	Oct 26	Oct 26	Oct 26
Start Time (approx.)		15:47	17:05	15:45	15:40	17:45
Stop Date (2022)		Oct 27	Oct 27	Oct 27	Oct 27	Oct 27
Stop Time (approx.)		14:51	15:24	14:20	13:50	16:12
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	750.6	751.5	750.6	750.4	751.6
T _s	Temperature (°K)	280.4	280.3	280.4	280.3	280.4
B _w	Relative Humidity (%)	84.9	84.9	84.9	84.9	84.9
Results²						
Acetone	(µg/m ³)	6.7	5.4	11	4.9	6.95
Benzene	(µg/m ³)	25	28	0.49	1.2	0.55
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.18	<0.18	<0.18
Bromodichloromethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Bromoform	(µg/m ³)	<0.36	<0.36	<0.36	<0.36	<0.36
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,3-Butadiene	(µg/m ³)	0.32	0.42	<0.078	<0.078	0.081
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.1	<4.1	<4.1
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
Carbon Tetrachloride	(µg/m ³)	0.45	0.4	0.41	0.47	0.435
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
Chloroethane	(µg/m ³)	<0.093	<0.093	<0.093	<0.093	<0.093
Chloroform	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Chloromethane	(µg/m ³)	0.89	0.87	0.78	0.77	0.8
Cyclohexane	(µg/m ³)	0.21	0.19	<0.12	<0.12	0.13
Dibromochloromethane	(µg/m ³)	<0.30	<0.30	<0.30	<0.30	<0.30
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.27	<0.27	<0.27
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	1.2	1.1	1.1	1.1	1.05
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
1,2-Dichloro-1,1,2,2-tetrafluoroethane	(µg/m ³)	<0.25	<0.25	<0.25	<0.25	<0.25
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3

¹ A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

² A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

Table 2-20:
Fenceline and Interior Stations – TO-15 (VOC) – Run 2 Results (Continued)

Run No.		2	2	2	2	2
Sampling Location		IN1	IN2	DW1	DW2	UPW ¹
Start Date (2022)		Oct 26	Oct 26	Oct 26	Oct 26	Oct 26
Start Time (approx.)		15:47	17:05	15:45	15:40	17:45
Stop Date (2022)		Oct 27	Oct 27	Oct 27	Oct 27	Oct 27
Stop Time (approx.)		14:51	15:24	14:20	13:50	16:12
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	750.6	751.5	750.6	750.4	751.6
T _s	Temperature (°K)	280.4	280.3	280.4	280.3	280.4
B _w	Relative Humidity (%)	84.9	84.9	84.9	84.9	84.9
Results²						
	Ethanol (µg/m ³)	6.9	5.4	5.8	4.7	6.35
	Ethyl Acetate (µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3
	Ethylbenzene (µg/m ³)	0.23	0.21	<0.15	<0.15	0.19
	4-Ethyltoluene (µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
	Heptane (µg/m ³)	0.6	0.37	0.2	0.21	0.32
	Hexachlorobutadiene (µg/m ³)	<0.37	<0.37	<0.37	<0.37	<0.37
	Hexane (µg/m ³)	<4.9	<4.9	<4.9	<4.9	<4.9
	2-Hexanone (MBK) (µg/m ³)	<0.14	<0.14	0.33	<0.14	0.28
	Isopropanol (µg/m ³)	4.1	<3.4	<3.4	<3.4	<3.4
	Methyl tert-Butyl Ether (MTBE) (µg/m ³)	<0.13	<0.13	<0.13	<0.13	<0.13
	Methylene Chloride (µg/m ³)	<1.2	<1.2	<1.2	<1.2	<1.2
	4-Methyl-2-pentanone (MIBK) (µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
	Naphthalene (µg/m ³)	11	33	0.26	<0.18	<0.18
	Propene (µg/m ³)	<2.4	2.6	<2.4	<2.4	<2.4
	Styrene (µg/m ³)	0.65	0.87	<0.15	<0.15	<0.15
	1,1,2,2-Tetrachloroethane (µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
	Tetrachloroethylene (µg/m ³)	<0.24	<0.24	<0.24	<0.24	0.37
	Tetrahydrofuran (µg/m ³)	<1.0	<1.0	<1.0	<1.0	<1.0
	Toluene (µg/m ³)	5.1	5.7	0.81	0.77	1.25
	1,2,4-Trichlorobenzene (µg/m ³)	<0.26	<0.26	<0.26	<0.26	<0.26
	1,1,1-Trichloroethane (µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
	1,1,2-Trichloroethane (µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
	Trichloroethylene (µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
	Trichlorofluoromethane (Freon 11) (µg/m ³)	1.1	1.2	1.2	1.1	1.1
	1,1,2-Trichloro-1,2,2-trifluoroethane (F) (µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
	1,2,4-Trimethylbenzene (µg/m ³)	0.55	0.57	<0.17	0.2	0.245
	1,3,5-Trimethylbenzene (µg/m ³)	0.21	0.22	<0.17	<0.17	<0.17
	Vinyl Acetate (µg/m ³)	<2.5	<2.5	<2.5	<2.5	<2.5
	Vinyl Chloride (µg/m ³)	<0.090	<0.090	<0.090	<0.090	<0.090
	m&p-Xylene (µg/m ³)	1.8	2	0.4	0.41	0.635
	o-Xylene (µg/m ³)	0.53	0.59	0.17	0.17	0.26

¹ A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

² A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

Table 2-22:
Fenceline and Interior Stations – TO-15 (VOC) – Run 3 Results

Run No.		3	3	3	3	3
Sampling Location		IN1 ¹	IN2	DW1	DW2	UPW
Start Date (2022)		Nov 9	Nov 9	Nov 9	Nov 9	Nov 9
Start Time (approx.)		16:08	17:00	15:43	15:24	17:39
Stop Date (2022)		Nov 10	Nov 10	Nov 10	Nov 10	Nov 10
Stop Time (approx.)		14:39	15:10	14:15	13:48	15:41
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	754.6	754.6	754.6	754.6	754.6
T _s	Temperature (°K)	288.6	288.6	288.6	288.6	288.6
B _w	Relative Humidity (%)	45.0	45.0	45.0	45.0	45.0
Results²						
Acetone	(µg/m ³)	8.9	8.9	3.9	3.9	11
Benzene	(µg/m ³)	37	37	1.4	0.94	0.98
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.18	<0.18	<0.18
Bromodichloromethane	(µg/m ³)	<0.23	<0.23	<0.23	<0.23	<0.23
Bromoform	(µg/m ³)	<0.36	<0.36	<0.36	<0.36	<0.36
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,3-Butadiene	(µg/m ³)	0.19	0.19	<0.077	<0.077	<0.077
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.1	<4.1	<4.1
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
Carbon Tetrachloride	(µg/m ³)	0.4	0.4	0.5	0.5	0.49
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
Chloroethane	(µg/m ³)	<0.092	<0.092	<0.092	<0.092	<0.092
Chloroform	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Chloromethane	(µg/m ³)	0.975	0.975	1.1	1.1	1.1
Cyclohexane	(µg/m ³)	0.185	0.185	0.15	<0.12	0.16
Dibromochloromethane	(µg/m ³)	<0.3	<0.3	<0.30	<0.30	<0.30
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.27	<0.27	<0.27
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	2.2	2.2	4.5	3	2.6
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
1,2-Dichloro-1,1,2,2-tetrafluoroethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3

¹ A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

² A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

Table 2-20:
Fenceline and Interior Stations – TO-15 (VOC) – Run 3 Results (Continued)

Run No.		3	3	3	3	3
Sampling Location		IN1 ¹	IN2	DW1	DW2	UPW
Start Date (2022)		Nov 9	Nov 9	Nov 9	Nov 9	Nov 9
Start Time (approx.)		16:08	17:00	15:43	15:24	17:39
Stop Date (2022)		Nov 10	Nov 10	Nov 10	Nov 10	Nov 10
Stop Time (approx.)		14:39	15:10	14:15	13:48	15:41
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	754.6	754.6	754.6	754.6	754.6
T _s	Temperature (°K)	288.6	288.6	288.6	288.6	288.6
B _w	Relative Humidity (%)	45.0	45.0	45.0	45.0	45.0
Results²						
	Ethanol (µg/m ³)	9.75	6	4.7	4.3	8.1
	Ethyl Acetate (µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3
	Ethylbenzene (µg/m ³)	0.23	<0.15	<0.15	<0.15	<0.15
	4-Ethyltoluene (µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
	Heptane (µg/m ³)	0.295	0.2	0.28	0.22	0.28
	Hexachlorobutadiene (µg/m ³)	<0.37	<0.37	<0.37	<0.37	<0.37
	Hexane (µg/m ³)	<4.9	<4.9	<4.9	<4.9	<4.9
	2-Hexanone (MBK) (µg/m ³)	0.46	<0.29	<0.29	<0.29	0.4
	Isopropanol (µg/m ³)	<3.4	<3.4	<3.4	<3.4	<3.4
	Methyl tert-Butyl Ether (MTBE) (µg/m ³)	<0.13	<0.13	<0.13	<0.13	<0.13
	Methylene Chloride (µg/m ³)	<1.2	<1.2	<1.2	<1.2	<1.2
	4-Methyl-2-pentanone (MIBK) (µg/m ³)	<0.092	<0.14	<0.14	<0.14	<0.14
	Naphthalene (µg/m ³)	34.5	5.7	0.22	0.26	<0.18
	Propene (µg/m ³)	<2.4	<2.4	<2.4	<2.4	<2.4
	Styrene (µg/m ³)	1.75	<0.15	<0.15	<0.15	<0.15
	1,1,2,2-Tetrachloroethane (µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
	Tetrachloroethylene (µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
	Tetrahydrofuran (µg/m ³)	<1	<1.0	<1.0	<1.0	<1.0
	Toluene (µg/m ³)	8.5	0.89	0.57	0.52	1
	1,2,4-Trichlorobenzene (µg/m ³)	<0.26	<0.26	<0.26	<0.26	<0.26
	1,1,1-Trichloroethane (µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
	1,1,2-Trichloroethane (µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
	Trichloroethylene (µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
	Trichlorofluoromethane (Freon 11) (µg/m ³)	1.15	1.3	1.5	1.4	1.3
	1,1,2-Trichloro-1,2,2-trifluoroethane (F) (µg/m ³)	0	<1.1	<1.1	<1.1	<1.1
	1,2,4-Trimethylbenzene (µg/m ³)	0	<0.17	<0.17	<0.17	<0.17
	1,3,5-Trimethylbenzene (µg/m ³)	0	<0.17	<0.17	<0.17	<0.17
	Vinyl Acetate (µg/m ³)	0	<2.5	<2.5	<2.5	<2.5
	Vinyl Chloride (µg/m ³)	0	<0.089	<0.089	<0.089	<0.089
	m&p-Xylene (µg/m ³)	0	0.39	<0.30	<0.30	0.36
	o-Xylene (µg/m ³)	0	0.16	<0.15	<0.15	0.18

¹ A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

² A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

Table 2-23:
Fenceline and Interior Stations – TO-15 (VOC) – Run 4 Results

Run No.		4	4	4	4	4
Sampling Location		IN1	IN2 ¹	DW1	DW2	UPW
Start Date (2022)		Dec 5	Dec 5	Dec 5	Dec 5	Dec 5
Start Time (approx.)		16:08	17:00	15:43	15:24	17:39
Stop Date (2022)		Dec 6	Dec 6	Dec 6	Dec 6	Dec 6
Stop Time (approx.)		14:39	15:10	14:15	13:48	15:41
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	748.3	748.3	748.3	748.3	748.3
T _s	Temperature (°K)	279.5	279.5	279.5	279.5	279.5
B _w	Relative Humidity (%)	60.0	60.0	60.0	60.0	60.0
Results²						
Acetone	(µg/m ³)	5.7	6.0	3.9	3.9	11
Benzene	(µg/m ³)	37	2.85	1.4	0.94	0.98
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.18	<0.18	<0.18
Bromodichloromethane	(µg/m ³)	<0.23	<0.23	<0.23	<0.23	<0.23
Bromoform	(µg/m ³)	<0.36	<0.36	<0.36	<0.36	<0.36
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,3-Butadiene	(µg/m ³)	<0.077	<0.077	<0.077	<0.077	<0.077
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.1	<4.1	<4.1
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
Carbon Tetrachloride	(µg/m ³)	0.48	0.49	0.5	0.5	0.49
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
Chloroethane	(µg/m ³)	<0.092	<0.092	<0.092	<0.092	<0.092
Chloroform	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Chloromethane	(µg/m ³)	0.99	1.05	1.1	1.1	1.1
Cyclohexane	(µg/m ³)	0.16	0.12	0.15	<0.12	0.16
Dibromochloromethane	(µg/m ³)	<0.30	<0.30	<0.30	<0.30	<0.30
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.27	<0.27	<0.27
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	2.6	2.6	4.5	3	2.6
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
1,2-Dichloro-1,1,2,2-tetrafluoroethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3

¹ A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

² A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

Table 2-20:
Fenceline and Interior Stations – TO-15 (VOC) – Run 4 Results (Continued)

Run No.		4	4	4	4	4
Sampling Location		IN1	IN2 ¹	DW1	DW2	UPW
Start Date (2022)		Dec 5	Dec 5	Dec 5	Dec 5	Dec 5
Start Time (approx.)		16:08	17:00	15:43	15:24	17:39
Stop Date (2022)		Dec 6	Dec 6	Dec 6	Dec 6	Dec 6
Stop Time (approx.)		14:39	15:10	14:15	13:48	15:41
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	748.3	748.3	748.3	748.3	748.3
T _s	Temperature (°K)	279.5	279.5	279.5	279.5	279.5
B _w	Relative Humidity (%)	60.0	60.0	60.0	60.0	60.0
Results²						
Ethanol	(µg/m ³)	5.6	5.5	4.7	4.3	8.1
Ethyl Acetate	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3
Ethylbenzene	(µg/m ³)	0.2	<0.15	<0.15	<0.15	<0.15
4-Ethyltoluene	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Heptane	(µg/m ³)	0.32	0.22	0.28	0.22	0.28
Hexachlorobutadiene	(µg/m ³)	<0.37	<0.37	<0.37	<0.37	<0.37
Hexane	(µg/m ³)	<4.9	<4.9	<4.9	<4.9	<4.9
2-Hexanone (MBK)	(µg/m ³)	<0.29	<0.29	<0.29	<0.29	0.4
Isopropanol	(µg/m ³)	<3.4	<3.4	<3.4	<3.4	<3.4
Methyl tert-Butyl Ether (MTBE)	(µg/m ³)	<0.13	<0.13	<0.13	<0.13	<0.13
Methylene Chloride	(µg/m ³)	<1.2	<1.2	<1.2	<1.2	<1.2
4-Methyl-2-pentanone (MIBK)	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
Naphthalene	(µg/m ³)	18	5.3	0.22	0.26	<0.18
Propene	(µg/m ³)	<2.4	<2.4	<2.4	<2.4	<2.4
Styrene	(µg/m ³)	0.66	0.2	<0.15	<0.15	<0.15
1,1,2,2-Tetrachloroethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrachloroethylene	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrahydrofuran	(µg/m ³)	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	(µg/m ³)	5.8	0.92	0.57	0.52	1
1,2,4-Trichlorobenzene	(µg/m ³)	<0.26	<0.26	<0.26	<0.26	<0.26
1,1,1-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
1,1,2-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichloroethylene	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichlorofluoromethane (Freon 11)	(µg/m ³)	1.3	1.3	1.5	1.4	1.3
1,1,2-Trichloro-1,2,2-trifluoroethane (F)	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
1,2,4-Trimethylbenzene	(µg/m ³)	0.35	<0.17	<0.17	<0.17	<0.17
1,3,5-Trimethylbenzene	(µg/m ³)	0.19	<0.17	<0.17	<0.17	<0.17
Vinyl Acetate	(µg/m ³)	<2.5	<2.5	<2.5	<2.5	<2.5
Vinyl Chloride	(µg/m ³)	<0.089	<0.089	<0.089	<0.089	<0.089
m&p-Xylene	(µg/m ³)	1.5	0.395	<0.30	<0.30	0.36
o-Xylene	(µg/m ³)	0.51	0.16	<0.15	<0.15	0.18

¹ A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

² A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

Table 2-24:
Fenceline and Interior Stations – TO-15 (VOC) – Run 5 Results

Run No.		5	5	5	5	5
Sampling Location		IN1	IN2	DW1	DW2	UPW ¹
Start Date (2022)		Dec 20	Dec 20	Dec 20	Dec 20	Dec 20
Start Time (approx.)		12:09	12:52	11:20	10:35	13:35
Stop Date (2022)		Dec 21	Dec 21	Dec 21	Dec 21	Dec 21
Stop Time (approx.)		10:50	11:15	10:30	10:05	13:10
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	755.7	755.7	755.7	755.7	755.7
T _s	Temperature (°K)	271.8	271.8	271.8	271.8	271.8
B _w	Relative Humidity (%)	72.0	72.0	72.0	72.0	72.0
Results²						
Acetone	(µg/m ³)	9.2	7.3	9	7.7	5.85
Benzene	(µg/m ³)	49	5.5	1.4	1.6	0.79
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.18	<0.18	<0.18
Bromodichloromethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Bromoform	(µg/m ³)	<0.36	<0.36	<0.36	<0.36	<0.36
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,3-Butadiene	(µg/m ³)	0.2	0.14	0.1	0.1	0.101
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.1	<4.1	<4.1
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
Carbon Tetrachloride	(µg/m ³)	<0.22	0.41	0.4	0.41	0.355
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
Chloroethane	(µg/m ³)	<0.093	<0.093	<0.093	<0.093	<0.093
Chloroform	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Chloromethane	(µg/m ³)	0.77	0.8	0.82	0.79	0.805
Cyclohexane	(µg/m ³)	0.17	0.16	<0.12	0.14	0.155
Dibromochloromethane	(µg/m ³)	<0.30	<0.30	<0.30	<0.30	<0.30
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.27	<0.27	<0.27
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	1.1	1.3	1.5	1.5	1.3
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	0.39
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
1,2-Dichloro-1,1,2,2-tetrafluoroethane	(µg/m ³)	<0.25	<0.25	<0.25	<0.25	<0.25
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3

¹ A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

² A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

Table 2-20:
Fenceline and Interior Stations – TO-15 (VOC) – Run 5 Results (Continued)

Run No.		5	5	5	5	5
Sampling Location		IN1	IN2	DW1	DW2	UPW ¹
Start Date (2022)		Dec 20	Dec 20	Dec 20	Dec 20	Dec 20
Start Time (approx.)		12:09	12:52	11:20	10:35	13:35
Stop Date (2022)		Dec 21	Dec 21	Dec 21	Dec 21	Dec 21
Stop Time (approx.)		10:50	11:15	10:30	10:05	13:10
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	755.7	755.7	755.7	755.7	755.7
T _s	Temperature (°K)	271.8	271.8	271.8	271.8	271.8
B _w	Relative Humidity (%)	72.0	72.0	72.0	72.0	72.0
Results²						
Ethanol	(µg/m ³)	6	5.9	4.8	4.7	8.95
Ethyl Acetate	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3
Ethylbenzene	(µg/m ³)	0.24	0.18	<0.15	<0.15	0.17
4-Ethyltoluene	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Heptane	(µg/m ³)	0.29	0.32	0.26	0.32	0.365
Hexachlorobutadiene	(µg/m ³)	<0.37	<0.37	<0.37	<0.37	<0.37
Hexane	(µg/m ³)	<4.9	<4.9	<4.9	<4.9	<4.9
2-Hexanone (MBK)	(µg/m ³)	<0.14	0.27	0.24	0.4	<0.14
Isopropanol	(µg/m ³)	<3.4	<3.4	<3.4	<3.4	<3.4
Methyl tert-Butyl Ether (MTBE)	(µg/m ³)	<0.13	<0.13	<0.13	<0.13	<0.13
Methylene Chloride	(µg/m ³)	6.9	<1.2	1.4	<1.2	<1.2
4-Methyl-2-pentanone (MIBK)	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
Naphthalene	(µg/m ³)	36	15	0.27	0.74	0.48
Propene	(µg/m ³)	<2.4	<2.4	<2.4	<2.4	<2.4
Styrene	(µg/m ³)	2.8	0.28	<0.15	<0.15	<0.15
1,1,2,2-Tetrachloroethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrachloroethylene	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrahydrofuran	(µg/m ³)	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	(µg/m ³)	13	1.7	0.82	0.87	1.05
1,2,4-Trichlorobenzene	(µg/m ³)	<0.26	<0.26	<0.26	<0.26	<0.26
1,1,1-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
1,1,2-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichloroethylene	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichlorofluoromethane (Freon 11)	(µg/m ³)	1.1	1.1	1.2	1.1	1.15
1,1,2-Trichloro-1,2,2-trifluoroethane (F)	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
1,2,4-Trimethylbenzene	(µg/m ³)	0.84	0.26	<0.17	0.22	0.23
1,3,5-Trimethylbenzene	(µg/m ³)	0.41	<0.17	<0.17	<0.17	<0.17
Vinyl Acetate	(µg/m ³)	<2.5	<2.5	<2.5	<2.5	<2.5
Vinyl Chloride	(µg/m ³)	<0.090	<0.090	<0.090	<0.090	<0.090
m&p-Xylene	(µg/m ³)	4.5	0.67	0.4	0.47	0.525
o-Xylene	(µg/m ³)	1.1	0.26	0.16	0.19	0.2

¹ A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

² A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

Table 2-25:
Fenceline and Interior Stations – TO-15 (VOC) – Run 6 Results

Run No.		6	6	6	6	6
Sampling Location		IN1	IN2 ¹	DW1	DW2	UPW
Start Date (2022)		Jan 4	Jan 4	Jan 4	Jan 4	Jan 4
Start Time (approx.)		16:08	17:00	15:43	15:24	17:39
Stop Date (2022)		Jan 5	Jan 5	Jan 5	Jan 5	Jan 5
Stop Time (approx.)		14:39	15:10	14:15	13:48	15:41
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	740.6	740.6	740.6	740.6	740.6
T _s	Temperature (°K)	278.8	278.8	278.8	278.8	278.8
B _w	Relative Humidity (%)	75.0	75.0	75.0	75.0	75.0
Results²						
Acetone	(µg/m ³)	6	7.9	13	6.2	6.9
Benzene	(µg/m ³)	29	1.35	5.6	2.2	0.45
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.21	<0.18	<0.18
Bromodichloromethane	(µg/m ³)	<0.23	<0.23	<0.27	<0.23	<0.23
Bromoform	(µg/m ³)	<0.36	<0.36	<0.41	<0.36	<0.36
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.16	<0.14	<0.14
1,3-Butadiene	(µg/m ³)	0.3	0.082	0.16	0.12	<0.077
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.7	<4.1	<4.1
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.2	<1.1	<1.1
Carbon Tetrachloride	(µg/m ³)	0.43	0.435	<0.25	0.42	0.45
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.18	<0.16	<0.16
Chloroethane	(µg/m ³)	<0.092	<0.092	<0.11	<0.092	<0.092
Chloroform	(µg/m ³)	<0.17	<0.17	<0.20	<0.17	<0.17
Chloromethane	(µg/m ³)	0.92	0.885	0.94	0.93	0.9
Cyclohexane	(µg/m ³)	<0.12	<0.12	<0.14	0.13	<0.12
Dibromochloromethane	(µg/m ³)	<0.30	<0.30	<0.34	<0.30	<0.30
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.31	<0.27	<0.27
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.24	<0.21	<0.21
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.24	<0.21	<0.21
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.24	<0.21	<0.21
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	1.3	1.2	1.2	1.3	1.3
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.16	<0.14	<0.14
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.16	<0.14	<0.14
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.16	<0.14	<0.14
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.16	<0.14	<0.14
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.16	<0.14	<0.14
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.18	<0.16	<0.16
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.18	<0.16	<0.16
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.18	<0.16	<0.16
1,2-Dichloro-1,1,2,2-tetrafluoroethane	(µg/m ³)	<0.24	<0.24	<0.28	<0.24	<0.24
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.4	<1.3	<1.3

¹ A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

² A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

Table 2-20:
Fenceline and Interior Stations – TO-15 (VOC) – Run 6 Results (Continued)

Run No.		6	6	6	6	6
Sampling Location		IN1	IN2 ¹	DW1	DW2	UPW
Start Date (2022)		Jan 4	Jan 4	Jan 4	Jan 4	Jan 4
Start Time (approx.)		16:08	17:00	15:43	15:24	17:39
Stop Date (2022)		Jan 5	Jan 5	Jan 5	Jan 5	Jan 5
Stop Time (approx.)		14:39	15:10	14:15	13:48	15:41
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	740.6	740.6	740.6	740.6	740.6
T _s	Temperature (°K)	278.8	278.8	278.8	278.8	278.8
B _w	Relative Humidity (%)	75.0	75.0	75.0	75.0	75.0
Results²						
Ethanol	(µg/m ³)	3.6	4.7	<3.0	3.2	3.4
Ethyl Acetate	(µg/m ³)	<1.3	<1.3	<1.4	<1.3	<1.3
Ethylbenzene	(µg/m ³)	<0.15	<0.15	<0.17	<0.15	<0.15
4-Ethyltoluene	(µg/m ³)	<0.17	<0.17	<0.20	<0.17	<0.17
Heptane	(µg/m ³)	0.21	0.21	0.24	0.23	0.16
Hexachlorobutadiene	(µg/m ³)	<0.37	<0.37	<0.43	<0.37	<0.37
Hexane	(µg/m ³)	<4.9	<4.9	<5.6	<4.9	<4.9
2-Hexanone (MBK)	(µg/m ³)	0.21	0.335	0.33	0.19	0.28
Isopropanol	(µg/m ³)	<3.4	<3.4	<3.9	<3.4	<3.4
Methyl tert-Butyl Ether (MTBE)	(µg/m ³)	<0.13	<0.13	<0.14	<0.13	<0.13
Methylene Chloride	(µg/m ³)	1.2	<1.2	<1.4	<1.2	<1.2
4-Methyl-2-pentanone (MIBK)	(µg/m ³)	<0.14	<0.14	0.2	<0.14	<0.14
Naphthalene	(µg/m ³)	33	8.5	0.41	1.5	<0.18
Propene	(µg/m ³)	2.6	<2.4	<2.8	<2.4	<2.4
Styrene	(µg/m ³)	1.1	<0.15	0.25	<0.15	<0.15
1,1,2,2-Tetrachloroethane	(µg/m ³)	<0.24	<0.24	<0.27	<0.24	<0.24
Tetrachloroethylene	(µg/m ³)	<0.24	<0.24	<0.27	<0.24	<0.24
Tetrahydrofuran	(µg/m ³)	<1.0	<1.0	<1.2	<1.0	<1.0
Toluene	(µg/m ³)	5.6	0.52	1.1	0.71	0.36
1,2,4-Trichlorobenzene	(µg/m ³)	<0.26	<0.26	<0.30	<0.26	<0.26
1,1,1-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.22	<0.19	<0.19
1,1,2-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.22	<0.19	<0.19
Trichloroethylene	(µg/m ³)	<0.19	<0.19	<0.21	<0.19	<0.19
Trichlorofluoromethane (Freon 11)	(µg/m ³)	1.1	1.35	1.1	1.4	1.2
1,1,2-Trichloro-1,2,2-trifluoroethane (F)	(µg/m ³)	<1.1	1.4	<1.2	<1.1	<1.1
1,2,4-Trimethylbenzene	(µg/m ³)	0.38	<0.17	<0.20	0.24	<0.17
1,3,5-Trimethylbenzene	(µg/m ³)	0.17	<0.17	<0.20	<0.17	<0.17
Vinyl Acetate	(µg/m ³)	<2.5	<2.5	<2.8	<2.5	<2.5
Vinyl Chloride	(µg/m ³)	<0.089	<0.089	<0.10	<0.089	<0.089
m&p-Xylene	(µg/m ³)	1.6	<0.30	0.4	0.4	<0.30
o-Xylene	(µg/m ³)	0.4	<0.15	<0.17	0.16	<0.15

¹ A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

² A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

Figure 2-15:
Meteorological Wind Rose Charts - TO-13A and TO-15 - 24-Hour Sampling Periods (Run 1 and Run 2)

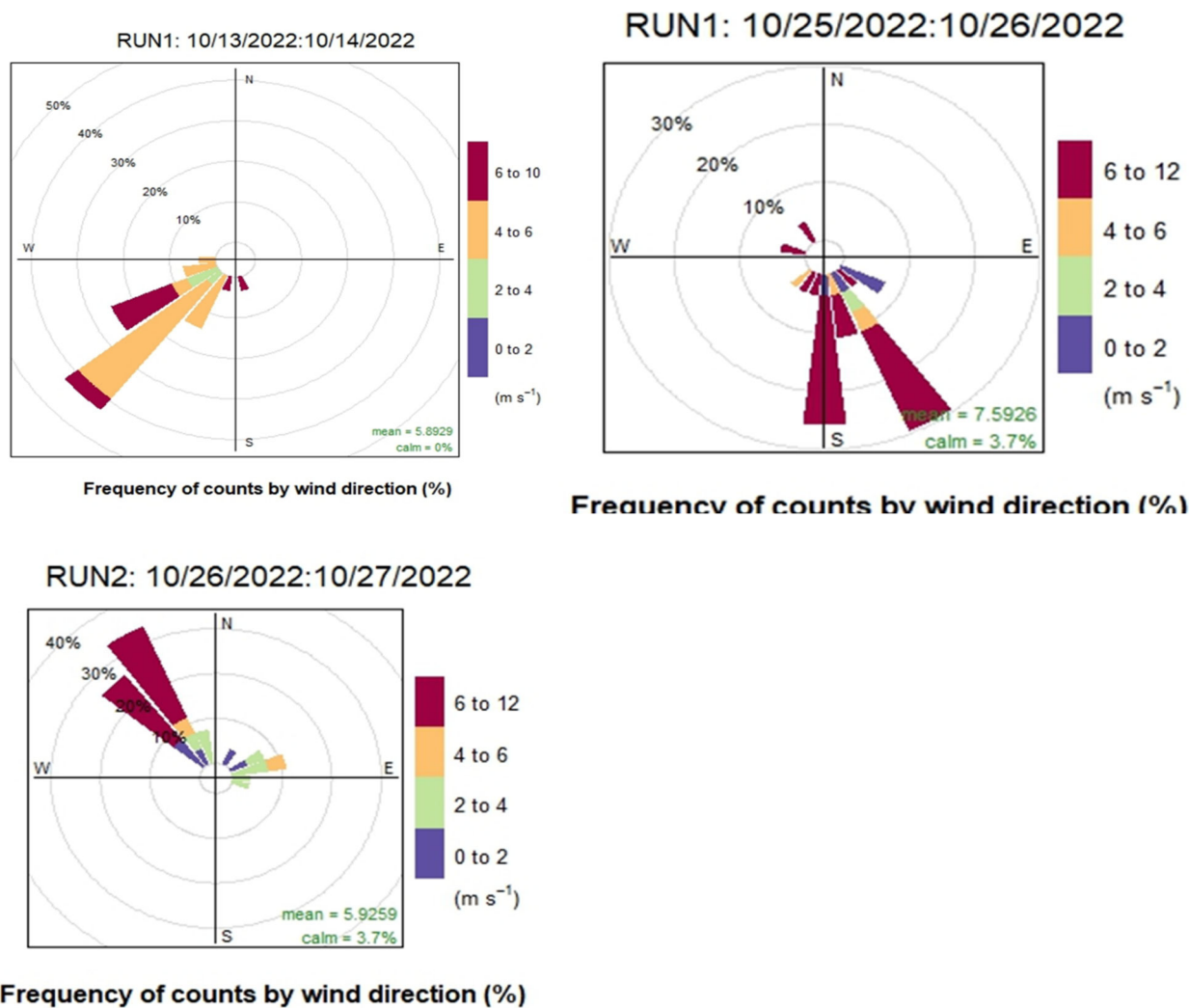
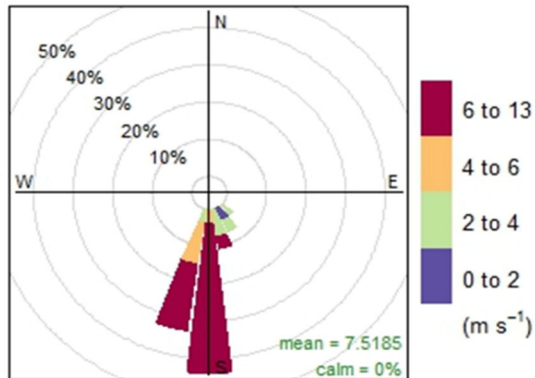


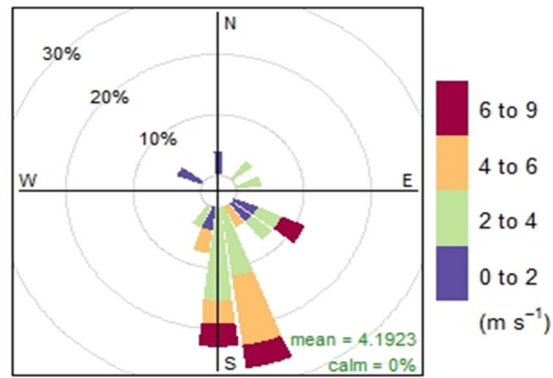
Figure 2-16:
Meteorological Wind Rose Charts - TO-13A and TO-15 - 24-Hour Sampling Periods (Runs 3 - 6)

RUN3: 11/09/2022:11/10/2022



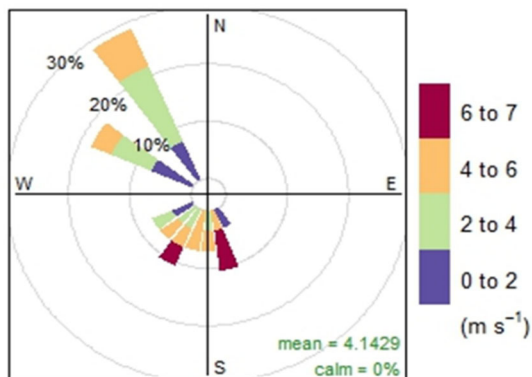
Frequency of counts by wind direction (%)

RUN4: 12/05/2022:12/06/2022



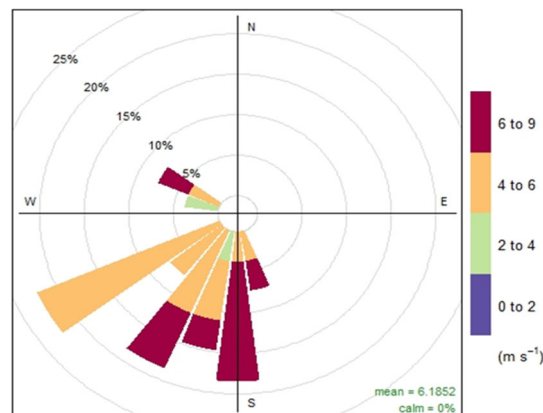
Frequency of counts by wind direction (%)

RUN5: 12/20/2022:12/21/2022



Frequency of counts by wind direction (%)

RUN6: 01/04/2023:01/05/2023



Frequency of counts by wind direction (%)

End of Section

3. *DESCRIPTION OF MONITORING SITES*

SITE OVERVIEW

Descriptions and pictures of select monitoring sites (sampler locations and fenceline and interior stations) are included in the approved QAPP.

BTEX fenceline monitoring sites were determined based on siting criteria included in the following references.

- 40 CFR Part 63, Appendix A: Method 325A Volatile Organic Compounds from Fugitive and Area Sources

In addition to EPA Method 325A, interior monitoring sites for TO-13A and TO-15 were chosen based on general ambient monitoring siting guidance, available test sites and proximity to the Coke Battery and Coke Byproducts process areas. These locations were designated as Interior Station 1 (IN1) and Interior Station 2 (IN2) for the Coke Byproducts and Coke Battery areas, respectively.

In addition to the interior process area monitoring, to qualify and quantify fenceline data, an upwind monitoring site (Upwind – UPW) and two downwind (Downwind Station 1 (DW1) and Downwind Station 2 (DW2)) locations were chosen.

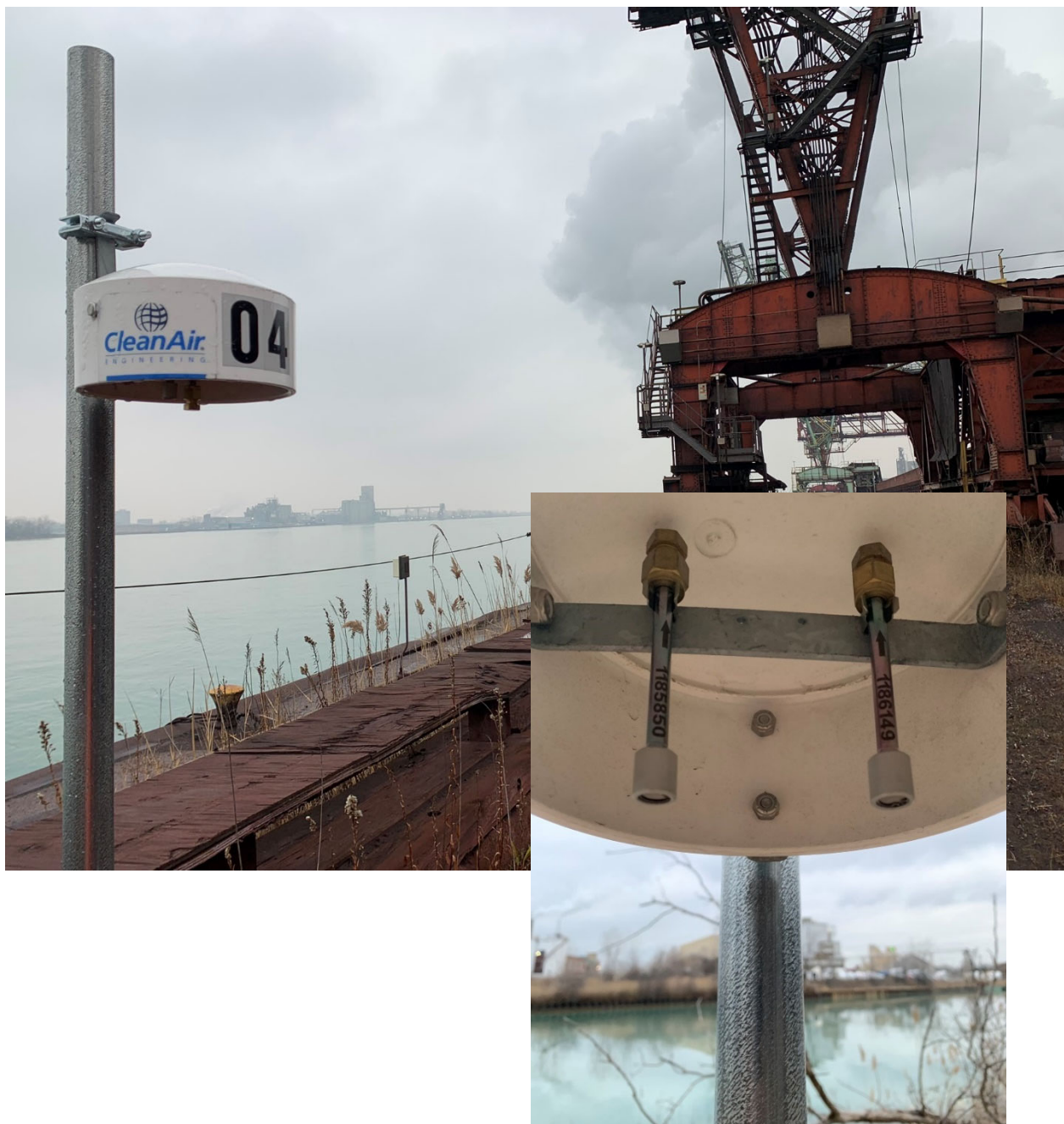
An example of the TO-13A and TO-15 equipment set up at the Upwind Station is shown in Figure 3-1. An example of the EPA Method 325A passive BTEX sampling equipment is shown in Figure 3-2.

Figure 3-1:
EES Coke River Rouge Facility – TO-13A and TO-15 Colocated Sampling Location – Upwind Station (Example)



Figure 3-2:

EES Coke River Rouge Facility– EPA Method 325B (BTEX) - Sampler 04 (Samplers 01-12 Similar)



End of Section

4. METHODOLOGY

PROCEDURES AND REGULATORY REFERENCES

The test program monitoring measurements followed sampling and analysis procedures outlined by the USEPA in the ICR Enclosure 2 and approved in the QAPP: CleanAir also followed procedures and best practices outlined in CleanAir's Ambient Air Monitoring Program.

TITLE 40 CFR PART 63, APPENDIX A

Method 325A "Volatile Organic Compounds from Fugitive and Area Sources: Sampler Deployment and VOC Sample Collection"

Method 325B Volatile Organic Compounds from Fugitive and Area Sources: Sampler Preparation and Analysis"

COMPENDIUM OF METHODS FOR THE DETERMINATION OF TOXIC ORGANIC COMPOUNDS IN AMBIENT AIR, SECOND EDITION

TO-13A "Determination of Polycyclic Aromatic Hydrocarbons (PAHs) in Ambient Air Using Gas Chromatography/Mass Spectrometry (GC/MS)"

TO-15 "Determination of Volatile Organic Compounds (VOCs) in Ambient Air Using Gas Chromatography/Mass Spectrometry (GC/MS)"

End of Section

5. *APPENDIX*

Appendix A: Sample Calcs

Appendix B: Field Data and Parameters

Appendix C: QA/QC Data

Appendix D: Laboratory Data

Appendix E: Meteorological Data

APPENDIX A: SAMPLE CALCS

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TO-13A

Sampling Flow Rate - High Volume Sampler (TE-1000)

$$Q = \frac{1}{m \left(\sqrt{G \left(\frac{P}{760} \right) \left(\frac{298}{T} \right)} - b \right)}$$

Where:

m	=	Slope	=	
G	=	Average Magnehelic Gauge Reading	=	inches
T	=	Average Sample Temperature	=	c
P	=	Average Sample Barometric Pressure	=	mmHG
b	=	Intercept	=	
Q	=	Flow Rate	=	scm/min

TO-15

Compound Concentration

$$C_x = \frac{A_x C_{is} DF}{A_{is} \overline{RRF}}$$

Where:

A _x	=	Area of the characteristic ion for the compound to be measured	=	counts
A _{is}	=	Area of the characteristic ion for the specific internal standard	=	counts
C _{is}	=	Concentration of the internal standard spiking mixture	=	ppbv
\overline{RRF}	=	Mean relative response factor from the initial calibration	=	
DF	=	Dilution factor calculated, if no dilution is performed DF=1	=	
C _x	=	Compound Concentration	=	ppbv

M325B

Relative Percent Difference

$$RPD = \frac{R_1 - R_2}{\left[\frac{(R_1 + R_2)}{2} \right]} * 100$$

Where:

R ₁ , R ₂	=	Values that are being compared	=	
RPD	=	Relative percent difference	=	%

Equivalent Concentrations of Compounds in Atmospheres

$$C_c = \frac{(m_{meas}) * 10^6}{U_{NTP} * \left[\frac{t_{ss}}{298.15} \right]^{\frac{1}{2}} * t}$$

Where:

m _{meas}	=	Mass of the compound as measured in the sorbent tube	=	µg
t	=	Exposure time	=	minutes
t _{ss}	=	Average temperature during the collection period at sampling site	=	K
U _{NTP}	=	Method defined diffusive uptake rate (sampling rate)	=	mL/min
C _c	=	Equivalent Concentrations of Compounds in Atmospheres	=	

End of Appendix Section

APPENDIX B: FIELD DATA AND PARAMETERS

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Run	Station	Sample ID	LAB ID	Compound	START	STOP	Run Time
1	S1	m325-1-1	2211016-01A	1,3 Butadiene	10/12/2022 11:43:00	10/26/2022 12:43:00	14 days 1 hrs 0 mins
1	S1	m325-1-1	2211016-01A	Benzene	10/12/2022 11:43:00	10/26/2022 12:43:00	14 days 1 hrs 0 mins
1	S1	m325-1-1	2211016-01A	Toluene	10/12/2022 11:43:00	10/26/2022 12:43:00	14 days 1 hrs 0 mins
1	S1	m325-1-1	2211016-01A	Ethylbenzene	10/12/2022 11:43:00	10/26/2022 12:43:00	14 days 1 hrs 0 mins
1	S1	m325-1-1	2211016-01A	m,p-Xylene	10/12/2022 11:43:00	10/26/2022 12:43:00	14 days 1 hrs 0 mins
1	S1	m325-1-1	2211016-01A	O-Xylene	10/12/2022 11:43:00	10/26/2022 12:43:00	14 days 1 hrs 0 mins
1	S2	m325-2-1	2211016-03A	1,3 Butadiene	10/12/2022 08:41:00	10/26/2022 10:40:00	14 days 1 hrs 59 mins
1	S2	m325-2-1	2211016-03A	Benzene	10/12/2022 08:41:00	10/26/2022 10:40:00	14 days 1 hrs 59 mins
1	S2	m325-2-1	2211016-03A	Toluene	10/12/2022 08:41:00	10/26/2022 10:40:00	14 days 1 hrs 59 mins
1	S2	m325-2-1	2211016-03A	Ethylbenzene	10/12/2022 08:41:00	10/26/2022 10:40:00	14 days 1 hrs 59 mins
1	S2	m325-2-1	2211016-03A	m,p-Xylene	10/12/2022 08:41:00	10/26/2022 10:40:00	14 days 1 hrs 59 mins
1	S2	m325-2-1	2211016-03A	O-Xylene	10/12/2022 08:41:00	10/26/2022 10:40:00	14 days 1 hrs 59 mins
1	S3	m325-3-1	2211016-05A	1,3 Butadiene	10/12/2022 10:30:00	10/26/2022 10:58:00	14 days 0 hrs 28 mins
1	S3	m325-3-1	2211016-05A	Benzene	10/12/2022 10:30:00	10/26/2022 10:58:00	14 days 0 hrs 28 mins
1	S3	m325-3-1	2211016-05A	Toluene	10/12/2022 10:30:00	10/26/2022 10:58:00	14 days 0 hrs 28 mins
1	S3	m325-3-1	2211016-05A	Ethylbenzene	10/12/2022 10:30:00	10/26/2022 10:58:00	14 days 0 hrs 28 mins
1	S3	m325-3-1	2211016-05A	m,p-Xylene	10/12/2022 10:30:00	10/26/2022 10:58:00	14 days 0 hrs 28 mins
1	S3	m325-3-1	2211016-05A	O-Xylene	10/12/2022 10:30:00	10/26/2022 10:58:00	14 days 0 hrs 28 mins
1	S4	m325-4-1	2211016-06A	1,3 Butadiene	10/12/2022 10:10:00	10/26/2022 11:10:00	14 days 1 hrs 0 mins
1	S4	m325-4-1	2211016-06A	Benzene	10/12/2022 10:10:00	10/26/2022 11:10:00	14 days 1 hrs 0 mins
1	S4	m325-4-1	2211016-06A	Toluene	10/12/2022 10:10:00	10/26/2022 11:10:00	14 days 1 hrs 0 mins
1	S4	m325-4-1	2211016-06A	Ethylbenzene	10/12/2022 10:10:00	10/26/2022 11:10:00	14 days 1 hrs 0 mins
1	S4	m325-4-1	2211016-06A	m,p-Xylene	10/12/2022 10:10:00	10/26/2022 11:10:00	14 days 1 hrs 0 mins
1	S4	m325-4-1	2211016-06A	O-Xylene	10/12/2022 10:10:00	10/26/2022 11:10:00	14 days 1 hrs 0 mins
1	S5	m325-5-1	2211016-07A	1,3 Butadiene	10/12/2022 09:46:00	10/26/2022 11:20:00	14 days 1 hrs 34 mins
1	S5	m325-5-1	2211016-07A	Benzene	10/12/2022 09:46:00	10/26/2022 11:20:00	14 days 1 hrs 34 mins
1	S5	m325-5-1	2211016-07A	Toluene	10/12/2022 09:46:00	10/26/2022 11:20:00	14 days 1 hrs 34 mins
1	S5	m325-5-1	2211016-07A	Ethylbenzene	10/12/2022 09:46:00	10/26/2022 11:20:00	14 days 1 hrs 34 mins
1	S5	m325-5-1	2211016-07A	m,p-Xylene	10/12/2022 09:46:00	10/26/2022 11:20:00	14 days 1 hrs 34 mins
1	S5	m325-5-1	2211016-07A	O-Xylene	10/12/2022 09:46:00	10/26/2022 11:20:00	14 days 1 hrs 34 mins
1	S6	m325-6-1	2211016-08A	1,3 Butadiene	10/12/2022 13:16:00	10/26/2022 13:30:00	14 days 0 hrs 14 mins
1	S6	m325-6-1	2211016-08A	Benzene	10/12/2022 13:16:00	10/26/2022 13:30:00	14 days 0 hrs 14 mins
1	S6	m325-6-1	2211016-08A	Toluene	10/12/2022 13:16:00	10/26/2022 13:30:00	14 days 0 hrs 14 mins
1	S6	m325-6-1	2211016-08A	Ethylbenzene	10/12/2022 13:16:00	10/26/2022 13:30:00	14 days 0 hrs 14 mins
1	S6	m325-6-1	2211016-08A	m,p-Xylene	10/12/2022 13:16:00	10/26/2022 13:30:00	14 days 0 hrs 14 mins
1	S6	m325-6-1	2211016-08A	O-Xylene	10/12/2022 13:16:00	10/26/2022 13:30:00	14 days 0 hrs 14 mins
1	S7	m325-7-1	2211016-09A	1,3 Butadiene	10/12/2022 13:27:00	10/26/2022 13:26:00	13 days 23 hrs 59 mins
1	S7	m325-7-1	2211016-09A	Benzene	10/12/2022 13:27:00	10/26/2022 13:26:00	13 days 23 hrs 59 mins
1	S7	m325-7-1	2211016-09A	Toluene	10/12/2022 13:27:00	10/26/2022 13:26:00	13 days 23 hrs 59 mins
1	S7	m325-7-1	2211016-09A	Ethylbenzene	10/12/2022 13:27:00	10/26/2022 13:26:00	13 days 23 hrs 59 mins
1	S7	m325-7-1	2211016-09A	m,p-Xylene	10/12/2022 13:27:00	10/26/2022 13:26:00	13 days 23 hrs 59 mins
1	S7	m325-7-1	2211016-09A	O-Xylene	10/12/2022 13:27:00	10/26/2022 13:26:00	13 days 23 hrs 59 mins

Run	Station	Sample ID	LAB ID	Compound	START	STOP	Run Time
1	S8	m325-8-1	2211016-11A	1,3 Butadiene	10/12/2022 12:48:00	10/26/2022 13:08:00	14 days 0 hrs 20 mins
1	S8	m325-8-1	2211016-11A	Benzene	10/12/2022 12:48:00	10/26/2022 13:08:00	14 days 0 hrs 20 mins
1	S8	m325-8-1	2211016-11A	Toluene	10/12/2022 12:48:00	10/26/2022 13:08:00	14 days 0 hrs 20 mins
1	S8	m325-8-1	2211016-11A	Ethylbenzene	10/12/2022 12:48:00	10/26/2022 13:08:00	14 days 0 hrs 20 mins
1	S8	m325-8-1	2211016-11A	m,p-Xylene	10/12/2022 12:48:00	10/26/2022 13:08:00	14 days 0 hrs 20 mins
1	S8	m325-8-1	2211016-11A	O-Xylene	10/12/2022 12:48:00	10/26/2022 13:08:00	14 days 0 hrs 20 mins
1	S9	m325-9-1	2211016-13A	1,3 Butadiene	10/12/2022 12:42:00	10/26/2022 12:55:00	14 days 0 hrs 13 mins
1	S9	m325-9-1	2211016-13A	Benzene	10/12/2022 12:42:00	10/26/2022 12:55:00	14 days 0 hrs 13 mins
1	S9	m325-9-1	2211016-13A	Toluene	10/12/2022 12:42:00	10/26/2022 12:55:00	14 days 0 hrs 13 mins
1	S9	m325-9-1	2211016-13A	Ethylbenzene	10/12/2022 12:42:00	10/26/2022 12:55:00	14 days 0 hrs 13 mins
1	S9	m325-9-1	2211016-13A	m,p-Xylene	10/12/2022 12:42:00	10/26/2022 12:55:00	14 days 0 hrs 13 mins
1	S9	m325-9-1	2211016-13A	O-Xylene	10/12/2022 12:42:00	10/26/2022 12:55:00	14 days 0 hrs 13 mins
1	S10	m325-10-1	2211016-14A	1,3 Butadiene	10/12/2022 12:24:00	10/26/2022 12:32:00	14 days 0 hrs 8 mins
1	S10	m325-10-1	2211016-14A	Benzene	10/12/2022 12:24:00	10/26/2022 12:32:00	14 days 0 hrs 8 mins
1	S10	m325-10-1	2211016-14A	Toluene	10/12/2022 12:24:00	10/26/2022 12:32:00	14 days 0 hrs 8 mins
1	S10	m325-10-1	2211016-14A	Ethylbenzene	10/12/2022 12:24:00	10/26/2022 12:32:00	14 days 0 hrs 8 mins
1	S10	m325-10-1	2211016-14A	m,p-Xylene	10/12/2022 12:24:00	10/26/2022 12:32:00	14 days 0 hrs 8 mins
1	S10	m325-10-1	2211016-14A	O-Xylene	10/12/2022 12:24:00	10/26/2022 12:32:00	14 days 0 hrs 8 mins
1	S11	m325-11-1	2211016-15A	1,3 Butadiene	10/12/2022 12:15:00	10/26/2022 12:20:00	14 days 0 hrs 5 mins
1	S11	m325-11-1	2211016-15A	Benzene	10/12/2022 12:15:00	10/26/2022 12:20:00	14 days 0 hrs 5 mins
1	S11	m325-11-1	2211016-15A	Toluene	10/12/2022 12:15:00	10/26/2022 12:20:00	14 days 0 hrs 5 mins
1	S11	m325-11-1	2211016-15A	Ethylbenzene	10/12/2022 12:15:00	10/26/2022 12:20:00	14 days 0 hrs 5 mins
1	S11	m325-11-1	2211016-15A	m,p-Xylene	10/12/2022 12:15:00	10/26/2022 12:20:00	14 days 0 hrs 5 mins
1	S11	m325-11-1	2211016-15A	O-Xylene	10/12/2022 12:15:00	10/26/2022 12:20:00	14 days 0 hrs 5 mins
1	S12	m325-12-1	2211016-16A	1,3 Butadiene	10/12/2022 11:28:00	10/26/2022 12:10:00	14 days 0 hrs 42 mins
1	S12	m325-12-1	2211016-16A	Benzene	10/12/2022 11:28:00	10/26/2022 12:10:00	14 days 0 hrs 42 mins
1	S12	m325-12-1	2211016-16A	Toluene	10/12/2022 11:28:00	10/26/2022 12:10:00	14 days 0 hrs 42 mins
1	S12	m325-12-1	2211016-16A	Ethylbenzene	10/12/2022 11:28:00	10/26/2022 12:10:00	14 days 0 hrs 42 mins
1	S12	m325-12-1	2211016-16A	m,p-Xylene	10/12/2022 11:28:00	10/26/2022 12:10:00	14 days 0 hrs 42 mins
1	S12	m325-12-1	2211016-16A	O-Xylene	10/12/2022 11:28:00	10/26/2022 12:10:00	14 days 0 hrs 42 mins
2	S1	1-1026-3	2211386-01A	1,3 Butadiene	10/26/2022 12:43:00	11/09/2022 12:43:00	14 days 0 hrs 0 mins
2	S1	1-1026-3	2211386-01A	Benzene	10/26/2022 12:43:00	11/09/2022 12:43:00	14 days 0 hrs 0 mins
2	S1	1-1026-3	2211386-01A	Toluene	10/26/2022 12:43:00	11/09/2022 12:43:00	14 days 0 hrs 0 mins
2	S1	1-1026-3	2211386-01A	Ethylbenzene	10/26/2022 12:43:00	11/09/2022 12:43:00	14 days 0 hrs 0 mins
2	S1	1-1026-3	2211386-01A	m,p-Xylene	10/26/2022 12:43:00	11/09/2022 12:43:00	14 days 0 hrs 0 mins
2	S1	1-1026-3	2211386-01A	O-Xylene	10/26/2022 12:43:00	11/09/2022 12:43:00	14 days 0 hrs 0 mins
2	S2	2-1026-3	2211386-02A	1,3 Butadiene	10/26/2022 10:40:00	11/09/2022 12:55:00	14 days 2 hrs 15 mins
2	S2	2-1026-3	2211386-02A	Benzene	10/26/2022 10:40:00	11/09/2022 12:55:00	14 days 2 hrs 15 mins
2	S2	2-1026-3	2211386-02A	Toluene	10/26/2022 10:40:00	11/09/2022 12:55:00	14 days 2 hrs 15 mins
2	S2	2-1026-3	2211386-02A	Ethylbenzene	10/26/2022 10:40:00	11/09/2022 12:55:00	14 days 2 hrs 15 mins
2	S2	2-1026-3	2211386-02A	m,p-Xylene	10/26/2022 10:40:00	11/09/2022 12:55:00	14 days 2 hrs 15 mins
2	S2	2-1026-3	2211386-02A	O-Xylene	10/26/2022 10:40:00	11/09/2022 12:55:00	14 days 2 hrs 15 mins

Run	Station	Sample ID	LAB ID	Compound	START	STOP	Run Time
2	S3	3-1026-3A	2211386-03A	1,3 Butadiene	10/26/2022 10:58:00	11/09/2022 10:30:00	13 days 23 hrs 32 mins
2	S3	3-1026-3A	2211386-03A	Benzene	10/26/2022 10:58:00	11/09/2022 10:30:00	13 days 23 hrs 32 mins
2	S3	3-1026-3A	2211386-03A	Toluene	10/26/2022 10:58:00	11/09/2022 10:30:00	13 days 23 hrs 32 mins
2	S3	3-1026-3A	2211386-03A	Ethylbenzene	10/26/2022 10:58:00	11/09/2022 10:30:00	13 days 23 hrs 32 mins
2	S3	3-1026-3A	2211386-03A	m,p-Xylene	10/26/2022 10:58:00	11/09/2022 10:30:00	13 days 23 hrs 32 mins
2	S3	3-1026-3A	2211386-03A	O-Xylene	10/26/2022 10:58:00	11/09/2022 10:30:00	13 days 23 hrs 32 mins
2	S4	4-1026-3A	2211386-05A	1,3 Butadiene	10/26/2022 11:10:00	11/09/2022 10:53:00	13 days 23 hrs 43 mins
2	S4	4-1026-3A	2211386-05A	Benzene	10/26/2022 11:10:00	11/09/2022 10:53:00	13 days 23 hrs 43 mins
2	S4	4-1026-3A	2211386-05A	Toluene	10/26/2022 11:10:00	11/09/2022 10:53:00	13 days 23 hrs 43 mins
2	S4	4-1026-3A	2211386-05A	Ethylbenzene	10/26/2022 11:10:00	11/09/2022 10:53:00	13 days 23 hrs 43 mins
2	S4	4-1026-3A	2211386-05A	m,p-Xylene	10/26/2022 11:10:00	11/09/2022 10:53:00	13 days 23 hrs 43 mins
2	S4	4-1026-3A	2211386-05A	O-Xylene	10/26/2022 11:10:00	11/09/2022 10:53:00	13 days 23 hrs 43 mins
2	S5	5-1026-3	2211386-07A	1,3 Butadiene	10/26/2022 11:20:00	11/09/2022 11:00:00	13 days 23 hrs 40 mins
2	S5	5-1026-3	2211386-07A	Benzene	10/26/2022 11:20:00	11/09/2022 11:00:00	13 days 23 hrs 40 mins
2	S5	5-1026-3	2211386-07A	Toluene	10/26/2022 11:20:00	11/09/2022 11:00:00	13 days 23 hrs 40 mins
2	S5	5-1026-3	2211386-07A	Ethylbenzene	10/26/2022 11:20:00	11/09/2022 11:00:00	13 days 23 hrs 40 mins
2	S5	5-1026-3	2211386-07A	m,p-Xylene	10/26/2022 11:20:00	11/09/2022 11:00:00	13 days 23 hrs 40 mins
2	S5	5-1026-3	2211386-07A	O-Xylene	10/26/2022 11:20:00	11/09/2022 11:00:00	13 days 23 hrs 40 mins
2	S6	6-1026-3	2211386-08A	1,3 Butadiene	10/26/2022 13:30:00	11/09/2022 11:21:00	13 days 21 hrs 51 mins
2	S6	6-1026-3	2211386-08A	Benzene	10/26/2022 13:30:00	11/09/2022 11:21:00	13 days 21 hrs 51 mins
2	S6	6-1026-3	2211386-08A	Toluene	10/26/2022 13:30:00	11/09/2022 11:21:00	13 days 21 hrs 51 mins
2	S6	6-1026-3	2211386-08A	Ethylbenzene	10/26/2022 13:30:00	11/09/2022 11:21:00	13 days 21 hrs 51 mins
2	S6	6-1026-3	2211386-08A	m,p-Xylene	10/26/2022 13:30:00	11/09/2022 11:21:00	13 days 21 hrs 51 mins
2	S6	6-1026-3	2211386-08A	O-Xylene	10/26/2022 13:30:00	11/09/2022 11:21:00	13 days 21 hrs 51 mins
2	S7	7-1026-3	2211386-09A	1,3 Butadiene	10/26/2022 13:26:00	11/09/2022 11:28:00	13 days 22 hrs 2 mins
2	S7	7-1026-3	2211386-09A	Benzene	10/26/2022 13:26:00	11/09/2022 11:28:00	13 days 22 hrs 2 mins
2	S7	7-1026-3	2211386-09A	Toluene	10/26/2022 13:26:00	11/09/2022 11:28:00	13 days 22 hrs 2 mins
2	S7	7-1026-3	2211386-09A	Ethylbenzene	10/26/2022 13:26:00	11/09/2022 11:28:00	13 days 22 hrs 2 mins
2	S7	7-1026-3	2211386-09A	m,p-Xylene	10/26/2022 13:26:00	11/09/2022 11:28:00	13 days 22 hrs 2 mins
2	S7	7-1026-3	2211386-09A	O-Xylene	10/26/2022 13:26:00	11/09/2022 11:28:00	13 days 22 hrs 2 mins
2	S8	8-1026-3A	2211386-10A	1,3 Butadiene	10/26/2022 13:08:00	11/09/2022 11:49:00	13 days 22 hrs 41 mins
2	S8	8-1026-3A	2211386-10A	Benzene	10/26/2022 13:08:00	11/09/2022 11:49:00	13 days 22 hrs 41 mins
2	S8	8-1026-3A	2211386-10A	Toluene	10/26/2022 13:08:00	11/09/2022 11:49:00	13 days 22 hrs 41 mins
2	S8	8-1026-3A	2211386-10A	Ethylbenzene	10/26/2022 13:08:00	11/09/2022 11:49:00	13 days 22 hrs 41 mins
2	S8	8-1026-3A	2211386-10A	m,p-Xylene	10/26/2022 13:08:00	11/09/2022 11:49:00	13 days 22 hrs 41 mins
2	S8	8-1026-3A	2211386-10A	O-Xylene	10/26/2022 13:08:00	11/09/2022 11:49:00	13 days 22 hrs 41 mins
2	S9	9-1026-3A	2211386-12A	1,3 Butadiene	10/26/2022 12:55:00	11/09/2022 11:39:00	13 days 22 hrs 44 mins
2	S9	9-1026-3A	2211386-12A	Benzene	10/26/2022 12:55:00	11/09/2022 11:39:00	13 days 22 hrs 44 mins
2	S9	9-1026-3A	2211386-12A	Toluene	10/26/2022 12:55:00	11/09/2022 11:39:00	13 days 22 hrs 44 mins
2	S9	9-1026-3A	2211386-12A	Ethylbenzene	10/26/2022 12:55:00	11/09/2022 11:39:00	13 days 22 hrs 44 mins
2	S9	9-1026-3A	2211386-12A	m,p-Xylene	10/26/2022 12:55:00	11/09/2022 11:39:00	13 days 22 hrs 44 mins
2	S9	9-1026-3A	2211386-12A	O-Xylene	10/26/2022 12:55:00	11/09/2022 11:39:00	13 days 22 hrs 44 mins

Run	Station	Sample ID	LAB ID	Compound	START	STOP	Run Time
2	S10	10-1026-3	2211386-14A	1,3 Butadiene	10/26/2022 12:32:00	11/09/2022 12:28:00	13 days 23 hrs 56 mins
2	S10	10-1026-3	2211386-14A	Benzene	10/26/2022 12:32:00	11/09/2022 12:28:00	13 days 23 hrs 56 mins
2	S10	10-1026-3	2211386-14A	Toluene	10/26/2022 12:32:00	11/09/2022 12:28:00	13 days 23 hrs 56 mins
2	S10	10-1026-3	2211386-14A	Ethylbenzene	10/26/2022 12:32:00	11/09/2022 12:28:00	13 days 23 hrs 56 mins
2	S10	10-1026-3	2211386-14A	m,p-Xylene	10/26/2022 12:32:00	11/09/2022 12:28:00	13 days 23 hrs 56 mins
2	S10	10-1026-3	2211386-14A	O-Xylene	10/26/2022 12:32:00	11/09/2022 12:28:00	13 days 23 hrs 56 mins
2	S11	11-1026-3	2211386-15A	1,3 Butadiene	10/26/2022 12:20:00	11/09/2022 12:14:00	13 days 23 hrs 54 mins
2	S11	11-1026-3	2211386-15A	Benzene	10/26/2022 12:20:00	11/09/2022 12:14:00	13 days 23 hrs 54 mins
2	S11	11-1026-3	2211386-15A	Toluene	10/26/2022 12:20:00	11/09/2022 12:14:00	13 days 23 hrs 54 mins
2	S11	11-1026-3	2211386-15A	Ethylbenzene	10/26/2022 12:20:00	11/09/2022 12:14:00	13 days 23 hrs 54 mins
2	S11	11-1026-3	2211386-15A	m,p-Xylene	10/26/2022 12:20:00	11/09/2022 12:14:00	13 days 23 hrs 54 mins
2	S11	11-1026-3	2211386-15A	O-Xylene	10/26/2022 12:20:00	11/09/2022 12:14:00	13 days 23 hrs 54 mins
2	S12	12-1026-3	2211386-16A	1,3 Butadiene	10/26/2022 12:10:00	11/09/2022 12:00:00	13 days 23 hrs 50 mins
2	S12	12-1026-3	2211386-16A	Benzene	10/26/2022 12:10:00	11/09/2022 12:00:00	13 days 23 hrs 50 mins
2	S12	12-1026-3	2211386-16A	Toluene	10/26/2022 12:10:00	11/09/2022 12:00:00	13 days 23 hrs 50 mins
2	S12	12-1026-3	2211386-16A	Ethylbenzene	10/26/2022 12:10:00	11/09/2022 12:00:00	13 days 23 hrs 50 mins
2	S12	12-1026-3	2211386-16A	m,p-Xylene	10/26/2022 12:10:00	11/09/2022 12:00:00	13 days 23 hrs 50 mins
2	S12	12-1026-3	2211386-16A	O-Xylene	10/26/2022 12:10:00	11/09/2022 12:00:00	13 days 23 hrs 50 mins
3	S1	1-1109-33-1	2211681-01A	1,3 Butadiene	11/09/2022 12:43:00	11/22/2022 13:50:00	13 days 1 hrs 7 mins
3	S1	1-1109-33-2	2211681-01A	Benzene	11/09/2022 12:43:00	11/22/2022 13:50:00	13 days 1 hrs 7 mins
3	S1	1-1109-33-3	2211681-01A	Toluene	11/09/2022 12:43:00	11/22/2022 13:50:00	13 days 1 hrs 7 mins
3	S1	1-1109-33-4	2211681-01A	Ethylbenzene	11/09/2022 12:43:00	11/22/2022 13:50:00	13 days 1 hrs 7 mins
3	S1	1-1109-33-5	2211681-01A	m,p-Xylene	11/09/2022 12:43:00	11/22/2022 13:50:00	13 days 1 hrs 7 mins
3	S1	1-1109-33-5	2211681-01A	O-Xylene	11/09/2022 12:43:00	11/22/2022 13:50:00	13 days 1 hrs 7 mins
3	S2	2-1109-33-2	2211681-02A	1,3 Butadiene	11/09/2022 12:55:00	11/22/2022 11:00:00	12 days 22 hrs 5 mins
3	S2	2-1109-33-2	2211681-02A	Benzene	11/09/2022 12:55:00	11/22/2022 11:00:00	12 days 22 hrs 5 mins
3	S2	2-1109-33-2	2211681-02A	Toluene	11/09/2022 12:55:00	11/22/2022 11:00:00	12 days 22 hrs 5 mins
3	S2	2-1109-33-2	2211681-02A	Ethylbenzene	11/09/2022 12:55:00	11/22/2022 11:00:00	12 days 22 hrs 5 mins
3	S2	2-1109-33-2	2211681-02A	m,p-Xylene	11/09/2022 12:55:00	11/22/2022 11:00:00	12 days 22 hrs 5 mins
3	S2	2-1109-33-2	2211681-02A	O-Xylene	11/09/2022 12:55:00	11/22/2022 11:00:00	12 days 22 hrs 5 mins
3	S3	3-1109-33-3	2211681-03A	1,3 Butadiene	11/09/2022 10:30:00	11/22/2022 11:22:00	13 days 0 hrs 52 mins
3	S3	3-1109-33-3	2211681-03A	Benzene	11/09/2022 10:30:00	11/22/2022 11:22:00	13 days 0 hrs 52 mins
3	S3	3-1109-33-3	2211681-03A	Toluene	11/09/2022 10:30:00	11/22/2022 11:22:00	13 days 0 hrs 52 mins
3	S3	3-1109-33-3	2211681-03A	Ethylbenzene	11/09/2022 10:30:00	11/22/2022 11:22:00	13 days 0 hrs 52 mins
3	S3	3-1109-33-3	2211681-03A	m,p-Xylene	11/09/2022 10:30:00	11/22/2022 11:22:00	13 days 0 hrs 52 mins
3	S3	3-1109-33-3	2211681-03A	O-Xylene	11/09/2022 10:30:00	11/22/2022 11:22:00	13 days 0 hrs 52 mins
3	S4	4-1109-33-4	2211681-04A	1,3 Butadiene	11/09/2022 10:56:00	11/22/2022 11:33:00	13 days 0 hrs 37 mins
3	S4	4-1109-33-4	2211681-04A	Benzene	11/09/2022 10:56:00	11/22/2022 11:33:00	13 days 0 hrs 37 mins
3	S4	4-1109-33-4	2211681-04A	Toluene	11/09/2022 10:56:00	11/22/2022 11:33:00	13 days 0 hrs 37 mins
3	S4	4-1109-33-4	2211681-04A	Ethylbenzene	11/09/2022 10:56:00	11/22/2022 11:33:00	13 days 0 hrs 37 mins
3	S4	4-1109-33-4	2211681-04A	m,p-Xylene	11/09/2022 10:56:00	11/22/2022 11:33:00	13 days 0 hrs 37 mins
3	S4	4-1109-33-4	2211681-04A	O-Xylene	11/09/2022 10:56:00	11/22/2022 11:33:00	13 days 0 hrs 37 mins

Run	Station	Sample ID	LAB ID	Compound	START	STOP	Run Time
3	S5	5-1109-33-5	2211681-05A	1,3 Butadiene	11/09/2022 11:04:00	11/22/2022 11:42:00	13 days 0 hrs 38 mins
3	S5	5-1109-33-5	2211681-05A	Benzene	11/09/2022 11:04:00	11/22/2022 11:42:00	13 days 0 hrs 38 mins
3	S5	5-1109-33-5	2211681-05A	Toluene	11/09/2022 11:04:00	11/22/2022 11:42:00	13 days 0 hrs 38 mins
3	S5	5-1109-33-5	2211681-05A	Ethylbenzene	11/09/2022 11:04:00	11/22/2022 11:42:00	13 days 0 hrs 38 mins
3	S5	5-1109-33-5	2211681-05A	m,p-Xylene	11/09/2022 11:04:00	11/22/2022 11:42:00	13 days 0 hrs 38 mins
3	S5	5-1109-33-5	2211681-05A	O-Xylene	11/09/2022 11:04:00	11/22/2022 11:42:00	13 days 0 hrs 38 mins
3	S6	6-1109-33-7D	2211681-07A	1,3 Butadiene	11/09/2022 11:24:00	11/22/2022 12:35:00	13 days 1 hrs 11 mins
3	S6	6-1109-33-7D	2211681-07A	Benzene	11/09/2022 11:24:00	11/22/2022 12:35:00	13 days 1 hrs 11 mins
3	S6	6-1109-33-7D	2211681-07A	Toluene	11/09/2022 11:24:00	11/22/2022 12:35:00	13 days 1 hrs 11 mins
3	S6	6-1109-33-7D	2211681-07A	Ethylbenzene	11/09/2022 11:24:00	11/22/2022 12:35:00	13 days 1 hrs 11 mins
3	S6	6-1109-33-7D	2211681-07A	m,p-Xylene	11/09/2022 11:24:00	11/22/2022 12:35:00	13 days 1 hrs 11 mins
3	S6	6-1109-33-7D	2211681-07A	O-Xylene	11/09/2022 11:24:00	11/22/2022 12:35:00	13 days 1 hrs 11 mins
3	S7	7-1109-33-7	2211681-09A	1,3 Butadiene	11/09/2022 11:29:00	11/22/2022 13:22:00	13 days 1 hrs 53 mins
3	S7	7-1109-33-7	2211681-09A	Benzene	11/09/2022 11:29:00	11/22/2022 13:22:00	13 days 1 hrs 53 mins
3	S7	7-1109-33-7	2211681-09A	Toluene	11/09/2022 11:29:00	11/22/2022 13:22:00	13 days 1 hrs 53 mins
3	S7	7-1109-33-7	2211681-09A	Ethylbenzene	11/09/2022 11:29:00	11/22/2022 13:22:00	13 days 1 hrs 53 mins
3	S7	7-1109-33-7	2211681-09A	m,p-Xylene	11/09/2022 11:29:00	11/22/2022 13:22:00	13 days 1 hrs 53 mins
3	S7	7-1109-33-7	2211681-09A	O-Xylene	11/09/2022 11:29:00	11/22/2022 13:22:00	13 days 1 hrs 53 mins
3	S8	8-1109-33-8	2211681-10A	1,3 Butadiene	11/09/2022 11:51:00	11/22/2022 13:23:00	13 days 1 hrs 32 mins
3	S8	8-1109-33-8	2211681-10A	Benzene	11/09/2022 11:51:00	11/22/2022 13:23:00	13 days 1 hrs 32 mins
3	S8	8-1109-33-8	2211681-10A	Toluene	11/09/2022 11:51:00	11/22/2022 13:23:00	13 days 1 hrs 32 mins
3	S8	8-1109-33-8	2211681-10A	Ethylbenzene	11/09/2022 11:51:00	11/22/2022 13:23:00	13 days 1 hrs 32 mins
3	S8	8-1109-33-8	2211681-10A	m,p-Xylene	11/09/2022 11:51:00	11/22/2022 13:23:00	13 days 1 hrs 32 mins
3	S8	8-1109-33-8	2211681-10A	O-Xylene	11/09/2022 11:51:00	11/22/2022 13:23:00	13 days 1 hrs 32 mins
3	S9	9-1109-33-9	2211681-11A	1,3 Butadiene	11/09/2022 11:43:00	11/22/2022 13:15:00	13 days 1 hrs 32 mins
3	S9	9-1109-33-9	2211681-11A	Benzene	11/09/2022 11:43:00	11/22/2022 13:15:00	13 days 1 hrs 32 mins
3	S9	9-1109-33-9	2211681-11A	Toluene	11/09/2022 11:43:00	11/22/2022 13:15:00	13 days 1 hrs 32 mins
3	S9	9-1109-33-9	2211681-11A	Ethylbenzene	11/09/2022 11:43:00	11/22/2022 13:15:00	13 days 1 hrs 32 mins
3	S9	9-1109-33-9	2211681-11A	m,p-Xylene	11/09/2022 11:43:00	11/22/2022 13:15:00	13 days 1 hrs 32 mins
3	S9	9-1109-33-9	2211681-11A	O-Xylene	11/09/2022 11:43:00	11/22/2022 13:15:00	13 days 1 hrs 32 mins
3	S10	10-1109-33-11	2211681-13A	1,3 Butadiene	11/09/2022 12:30:00	11/22/2022 14:42:00	13 days 2 hrs 12 mins
3	S10	10-1109-33-11	2211681-13A	Benzene	11/09/2022 12:30:00	11/22/2022 14:42:00	13 days 2 hrs 12 mins
3	S10	10-1109-33-11	2211681-13A	Toluene	11/09/2022 12:30:00	11/22/2022 14:42:00	13 days 2 hrs 12 mins
3	S10	10-1109-33-11	2211681-13A	Ethylbenzene	11/09/2022 12:30:00	11/22/2022 14:42:00	13 days 2 hrs 12 mins
3	S10	10-1109-33-11	2211681-13A	m,p-Xylene	11/09/2022 12:30:00	11/22/2022 14:42:00	13 days 2 hrs 12 mins
3	S10	10-1109-33-11	2211681-13A	O-Xylene	11/09/2022 12:30:00	11/22/2022 14:42:00	13 days 2 hrs 12 mins
3	S11	11-1109-33-10	2211681-14A	1,3 Butadiene	11/09/2022 12:16:00	11/22/2022 14:52:00	13 days 2 hrs 36 mins
3	S11	11-1109-33-10	2211681-14A	Benzene	11/09/2022 12:16:00	11/22/2022 14:52:00	13 days 2 hrs 36 mins
3	S11	11-1109-33-10	2211681-14A	Toluene	11/09/2022 12:16:00	11/22/2022 14:52:00	13 days 2 hrs 36 mins
3	S11	11-1109-33-10	2211681-14A	Ethylbenzene	11/09/2022 12:16:00	11/22/2022 14:52:00	13 days 2 hrs 36 mins
3	S11	11-1109-33-10	2211681-14A	m,p-Xylene	11/09/2022 12:16:00	11/22/2022 14:52:00	13 days 2 hrs 36 mins
3	S11	11-1109-33-10	2211681-14A	O-Xylene	11/09/2022 12:16:00	11/22/2022 14:52:00	13 days 2 hrs 36 mins

Run	Station	Sample ID	LAB ID	Compound	START	STOP	Run Time
3	S12	12-1109-33-12	2211681-15A	1,3 Butadiene	11/09/2022 12:01:00	11/22/2022 14:13:00	13 days 2 hrs 12 mins
3	S12	12-1109-33-12	2211681-15A	Benzene	11/09/2022 12:01:00	11/22/2022 14:13:00	13 days 2 hrs 12 mins
3	S12	12-1109-33-12	2211681-15A	Toluene	11/09/2022 12:01:00	11/22/2022 14:13:00	13 days 2 hrs 12 mins
3	S12	12-1109-33-12	2211681-15A	Ethylbenzene	11/09/2022 12:01:00	11/22/2022 14:13:00	13 days 2 hrs 12 mins
3	S12	12-1109-33-12	2211681-15A	m,p-Xylene	11/09/2022 12:01:00	11/22/2022 14:13:00	13 days 2 hrs 12 mins
3	S12	12-1109-33-12	2211681-15A	O-Xylene	11/09/2022 12:01:00	11/22/2022 14:13:00	13 days 2 hrs 12 mins
4	S1	1-1122-4-7B	2212198-11A	1,3 Butadiene	11/22/2022 13:55:00	12/06/2022 16:59:00	14 days 3 hrs 4 mins
4	S1	1-1122-4-7B	2212198-11A	Benzene	11/22/2022 13:55:00	12/06/2022 16:59:00	14 days 3 hrs 4 mins
4	S1	1-1122-4-7B	2212198-11A	Toluene	11/22/2022 13:55:00	12/06/2022 16:59:00	14 days 3 hrs 4 mins
4	S1	1-1122-4-7B	2212198-11A	Ethylbenzene	11/22/2022 13:55:00	12/06/2022 16:59:00	14 days 3 hrs 4 mins
4	S1	1-1122-4-7B	2212198-11A	m,p-Xylene	11/22/2022 13:55:00	12/06/2022 16:59:00	14 days 3 hrs 4 mins
4	S1	1-1122-4-7B	2212198-11A	O-Xylene	11/22/2022 13:55:00	12/06/2022 16:59:00	14 days 3 hrs 4 mins
4	S2	2-1122-4-9	2212198-01A	1,3 Butadiene	11/22/2022 11:14:00	12/07/2022 08:26:00	14 days 21 hrs 12 mins
4	S2	2-1122-4-9	2212198-01A	Benzene	11/22/2022 11:14:00	12/07/2022 08:26:00	14 days 21 hrs 12 mins
4	S2	2-1122-4-9	2212198-01A	Toluene	11/22/2022 11:14:00	12/07/2022 08:26:00	14 days 21 hrs 12 mins
4	S2	2-1122-4-9	2212198-01A	Ethylbenzene	11/22/2022 11:14:00	12/07/2022 08:26:00	14 days 21 hrs 12 mins
4	S2	2-1122-4-9	2212198-01A	m,p-Xylene	11/22/2022 11:14:00	12/07/2022 08:26:00	14 days 21 hrs 12 mins
4	S2	2-1122-4-9	2212198-01A	O-Xylene	11/22/2022 11:14:00	12/07/2022 08:26:00	14 days 21 hrs 12 mins
4	S3	3-1122-4-8	2212198-02A	1,3 Butadiene	11/22/2022 11:25:00	12/07/2022 08:36:00	14 days 21 hrs 11 mins
4	S3	3-1122-4-8	2212198-02A	Benzene	11/22/2022 11:25:00	12/07/2022 08:36:00	14 days 21 hrs 11 mins
4	S3	3-1122-4-8	2212198-02A	Toluene	11/22/2022 11:25:00	12/07/2022 08:36:00	14 days 21 hrs 11 mins
4	S3	3-1122-4-8	2212198-02A	Ethylbenzene	11/22/2022 11:25:00	12/07/2022 08:36:00	14 days 21 hrs 11 mins
4	S3	3-1122-4-8	2212198-02A	m,p-Xylene	11/22/2022 11:25:00	12/07/2022 08:36:00	14 days 21 hrs 11 mins
4	S3	3-1122-4-8	2212198-02A	O-Xylene	11/22/2022 11:25:00	12/07/2022 08:36:00	14 days 21 hrs 11 mins
4	S4	4-1122-4-5	2212198-03A	1,3 Butadiene	11/22/2022 11:38:00	12/07/2022 08:48:00	14 days 21 hrs 10 mins
4	S4	4-1122-4-5	2212198-03A	Benzene	11/22/2022 11:38:00	12/07/2022 08:48:00	14 days 21 hrs 10 mins
4	S4	4-1122-4-5	2212198-03A	Toluene	11/22/2022 11:38:00	12/07/2022 08:48:00	14 days 21 hrs 10 mins
4	S4	4-1122-4-5	2212198-03A	Ethylbenzene	11/22/2022 11:38:00	12/07/2022 08:48:00	14 days 21 hrs 10 mins
4	S4	4-1122-4-5	2212198-03A	m,p-Xylene	11/22/2022 11:38:00	12/07/2022 08:48:00	14 days 21 hrs 10 mins
4	S4	4-1122-4-5	2212198-03A	O-Xylene	11/22/2022 11:38:00	12/07/2022 08:48:00	14 days 21 hrs 10 mins
4	S5	5-1122-4-1B	2212198-04A	1,3 Butadiene	11/22/2022 11:45:00	12/07/2022 08:52:00	14 days 21 hrs 7 mins
4	S5	5-1122-4-1B	2212198-04A	Benzene	11/22/2022 11:45:00	12/07/2022 08:52:00	14 days 21 hrs 7 mins
4	S5	5-1122-4-1B	2212198-04A	Toluene	11/22/2022 11:45:00	12/07/2022 08:52:00	14 days 21 hrs 7 mins
4	S5	5-1122-4-1B	2212198-04A	Ethylbenzene	11/22/2022 11:45:00	12/07/2022 08:52:00	14 days 21 hrs 7 mins
4	S5	5-1122-4-1B	2212198-04A	m,p-Xylene	11/22/2022 11:45:00	12/07/2022 08:52:00	14 days 21 hrs 7 mins
4	S5	5-1122-4-1B	2212198-04A	O-Xylene	11/22/2022 11:45:00	12/07/2022 08:52:00	14 days 21 hrs 7 mins
4	S6	6-1122-4-4	2212198-07A	1,3 Butadiene	11/22/2022 12:38:00	12/07/2022 08:05:00	14 days 19 hrs 27 mins
4	S6	6-1122-4-4	2212198-07A	Benzene	11/22/2022 12:38:00	12/07/2022 08:05:00	14 days 19 hrs 27 mins
4	S6	6-1122-4-4	2212198-07A	Toluene	11/22/2022 12:38:00	12/07/2022 08:05:00	14 days 19 hrs 27 mins
4	S6	6-1122-4-4	2212198-07A	Ethylbenzene	11/22/2022 12:38:00	12/07/2022 08:05:00	14 days 19 hrs 27 mins
4	S6	6-1122-4-4	2212198-07A	m,p-Xylene	11/22/2022 12:38:00	12/07/2022 08:05:00	14 days 19 hrs 27 mins
4	S6	6-1122-4-4	2212198-07A	O-Xylene	11/22/2022 12:38:00	12/07/2022 08:05:00	14 days 19 hrs 27 mins

Run	Station	Sample ID	LAB ID	Compound	START	STOP	Run Time
4	S7	7-1122-4-6	2212198-05A	1,3 Butadiene	11/22/2022 12:26:00	12/07/2022 07:55:00	14 days 19 hrs 29 mins
4	S7	7-1122-4-6	2212198-05A	Benzene	11/22/2022 12:26:00	12/07/2022 07:55:00	14 days 19 hrs 29 mins
4	S7	7-1122-4-6	2212198-05A	Toluene	11/22/2022 12:26:00	12/07/2022 07:55:00	14 days 19 hrs 29 mins
4	S7	7-1122-4-6	2212198-05A	Ethylbenzene	11/22/2022 12:26:00	12/07/2022 07:55:00	14 days 19 hrs 29 mins
4	S7	7-1122-4-6	2212198-05A	m,p-Xylene	11/22/2022 12:26:00	12/07/2022 07:55:00	14 days 19 hrs 29 mins
4	S7	7-1122-4-6	2212198-05A	O-Xylene	11/22/2022 12:26:00	12/07/2022 07:55:00	14 days 19 hrs 29 mins
4	S8	8-1122-4-3	2212198-10A	1,3 Butadiene	11/22/2022 13:25:00	12/07/2022 07:35:00	14 days 18 hrs 10 mins
4	S8	8-1122-4-3	2212198-10A	Benzene	11/22/2022 13:25:00	12/07/2022 07:35:00	14 days 18 hrs 10 mins
4	S8	8-1122-4-3	2212198-10A	Toluene	11/22/2022 13:25:00	12/07/2022 07:35:00	14 days 18 hrs 10 mins
4	S8	8-1122-4-3	2212198-10A	Ethylbenzene	11/22/2022 13:25:00	12/07/2022 07:35:00	14 days 18 hrs 10 mins
4	S8	8-1122-4-3	2212198-10A	m,p-Xylene	11/22/2022 13:25:00	12/07/2022 07:35:00	14 days 18 hrs 10 mins
4	S8	8-1122-4-3	2212198-10A	O-Xylene	11/22/2022 13:25:00	12/07/2022 07:35:00	14 days 18 hrs 10 mins
4	S9	9-1122-4-10	2212198-09A	1,3 Butadiene	11/22/2022 13:18:00	12/07/2022 07:30:00	14 days 18 hrs 12 mins
4	S9	9-1122-4-10	2212198-09A	Benzene	11/22/2022 13:18:00	12/07/2022 07:30:00	14 days 18 hrs 12 mins
4	S9	9-1122-4-10	2212198-09A	Toluene	11/22/2022 13:18:00	12/07/2022 07:30:00	14 days 18 hrs 12 mins
4	S9	9-1122-4-10	2212198-09A	Ethylbenzene	11/22/2022 13:18:00	12/07/2022 07:30:00	14 days 18 hrs 12 mins
4	S9	9-1122-4-10	2212198-09A	m,p-Xylene	11/22/2022 13:18:00	12/07/2022 07:30:00	14 days 18 hrs 12 mins
4	S9	9-1122-4-10	2212198-09A	O-Xylene	11/22/2022 13:18:00	12/07/2022 07:30:00	14 days 18 hrs 12 mins
4	S10	10-1122-4-1	2212198-14A	1,3 Butadiene	11/22/2022 14:53:00	12/06/2022 16:25:00	14 days 1 hrs 32 mins
4	S10	10-1122-4-1	2212198-14A	Benzene	11/22/2022 14:53:00	12/06/2022 16:25:00	14 days 1 hrs 32 mins
4	S10	10-1122-4-1	2212198-14A	Toluene	11/22/2022 14:53:00	12/06/2022 16:25:00	14 days 1 hrs 32 mins
4	S10	10-1122-4-1	2212198-14A	Ethylbenzene	11/22/2022 14:53:00	12/06/2022 16:25:00	14 days 1 hrs 32 mins
4	S10	10-1122-4-1	2212198-14A	m,p-Xylene	11/22/2022 14:53:00	12/06/2022 16:25:00	14 days 1 hrs 32 mins
4	S10	10-1122-4-1	2212198-14A	O-Xylene	11/22/2022 14:53:00	12/06/2022 16:25:00	14 days 1 hrs 32 mins
4	S11	11-1122-4-12	2212198-15A	1,3 Butadiene	11/22/2022 14:54:00	12/06/2022 16:02:00	14 days 1 hrs 8 mins
4	S11	11-1122-4-12	2212198-15A	Benzene	11/22/2022 14:54:00	12/06/2022 16:02:00	14 days 1 hrs 8 mins
4	S11	11-1122-4-12	2212198-15A	Toluene	11/22/2022 14:54:00	12/06/2022 16:02:00	14 days 1 hrs 8 mins
4	S11	11-1122-4-12	2212198-15A	Ethylbenzene	11/22/2022 14:54:00	12/06/2022 16:02:00	14 days 1 hrs 8 mins
4	S11	11-1122-4-12	2212198-15A	m,p-Xylene	11/22/2022 14:54:00	12/06/2022 16:02:00	14 days 1 hrs 8 mins
4	S11	11-1122-4-12	2212198-15A	O-Xylene	11/22/2022 14:54:00	12/06/2022 16:02:00	14 days 1 hrs 8 mins
4	S12	12-1122-4-2	2212198-12A	1,3 Butadiene	11/22/2022 14:15:00	12/06/2022 16:49:00	14 days 2 hrs 34 mins
4	S12	12-1122-4-2	2212198-12A	Benzene	11/22/2022 14:15:00	12/06/2022 16:49:00	14 days 2 hrs 34 mins
4	S12	12-1122-4-2	2212198-12A	Toluene	11/22/2022 14:15:00	12/06/2022 16:49:00	14 days 2 hrs 34 mins
4	S12	12-1122-4-2	2212198-12A	Ethylbenzene	11/22/2022 14:15:00	12/06/2022 16:49:00	14 days 2 hrs 34 mins
4	S12	12-1122-4-2	2212198-12A	m,p-Xylene	11/22/2022 14:15:00	12/06/2022 16:49:00	14 days 2 hrs 34 mins
4	S12	12-1122-4-2	2212198-12A	O-Xylene	11/22/2022 14:15:00	12/06/2022 16:49:00	14 days 2 hrs 34 mins
5	S1	1-1206-5	2212599-01A	1,3 Butadiene	12/06/2022 16:59:00	12/21/2022 15:55:00	14 days 22 hrs 56 mins
5	S1	1-1206-5	2212599-01A	Benzene	12/06/2022 16:59:00	12/21/2022 15:55:00	14 days 22 hrs 56 mins
5	S1	1-1206-5	2212599-01A	Toluene	12/06/2022 16:59:00	12/21/2022 15:55:00	14 days 22 hrs 56 mins
5	S1	1-1206-5	2212599-01A	Ethylbenzene	12/06/2022 16:59:00	12/21/2022 15:55:00	14 days 22 hrs 56 mins
5	S1	1-1206-5	2212599-01A	m,p-Xylene	12/06/2022 16:59:00	12/21/2022 15:55:00	14 days 22 hrs 56 mins
5	S1	1-1206-5	2212599-01A	O-Xylene	12/06/2022 16:59:00	12/21/2022 15:55:00	14 days 22 hrs 56 mins

Run	Station	Sample ID	LAB ID	Compound	START	STOP	Run Time
5	S2	2-1207-5	2212599-02A	1,3 Butadiene	12/07/2022 08:28:00	12/21/2022 14:45:00	14 days 6 hrs 17 mins
5	S2	2-1207-5	2212599-02A	Benzene	12/07/2022 08:28:00	12/21/2022 14:45:00	14 days 6 hrs 17 mins
5	S2	2-1207-5	2212599-02A	Toluene	12/07/2022 08:28:00	12/21/2022 14:45:00	14 days 6 hrs 17 mins
5	S2	2-1207-5	2212599-02A	Ethylbenzene	12/07/2022 08:28:00	12/21/2022 14:45:00	14 days 6 hrs 17 mins
5	S2	2-1207-5	2212599-02A	m,p-Xylene	12/07/2022 08:28:00	12/21/2022 14:45:00	14 days 6 hrs 17 mins
5	S2	2-1207-5	2212599-02A	O-Xylene	12/07/2022 08:28:00	12/21/2022 14:45:00	14 days 6 hrs 17 mins
5	S3	3-1207-5B	2212599-04A	1,3 Butadiene	12/07/2022 08:38:00	12/21/2022 14:52:00	14 days 6 hrs 14 mins
5	S3	3-1207-5B	2212599-04A	Benzene	12/07/2022 08:38:00	12/21/2022 14:52:00	14 days 6 hrs 14 mins
5	S3	3-1207-5B	2212599-04A	Toluene	12/07/2022 08:38:00	12/21/2022 14:52:00	14 days 6 hrs 14 mins
5	S3	3-1207-5B	2212599-04A	Ethylbenzene	12/07/2022 08:38:00	12/21/2022 14:52:00	14 days 6 hrs 14 mins
5	S3	3-1207-5B	2212599-04A	m,p-Xylene	12/07/2022 08:38:00	12/21/2022 14:52:00	14 days 6 hrs 14 mins
5	S3	3-1207-5B	2212599-04A	O-Xylene	12/07/2022 08:38:00	12/21/2022 14:52:00	14 days 6 hrs 14 mins
5	S4	4-1207-5A	2212599-05A	1,3 Butadiene	12/07/2022 08:52:00	12/21/2022 15:02:00	14 days 6 hrs 10 mins
5	S4	4-1207-5A	2212599-05A	Benzene	12/07/2022 08:52:00	12/21/2022 15:02:00	14 days 6 hrs 10 mins
5	S4	4-1207-5A	2212599-05A	Toluene	12/07/2022 08:52:00	12/21/2022 15:02:00	14 days 6 hrs 10 mins
5	S4	4-1207-5A	2212599-05A	Ethylbenzene	12/07/2022 08:52:00	12/21/2022 15:02:00	14 days 6 hrs 10 mins
5	S4	4-1207-5A	2212599-05A	m,p-Xylene	12/07/2022 08:52:00	12/21/2022 15:02:00	14 days 6 hrs 10 mins
5	S4	4-1207-5A	2212599-05A	O-Xylene	12/07/2022 08:52:00	12/21/2022 15:02:00	14 days 6 hrs 10 mins
5	S5	5-1207-5	2212599-07A	1,3 Butadiene	12/07/2022 08:53:00	12/21/2022 15:12:00	14 days 6 hrs 19 mins
5	S5	5-1207-5	2212599-07A	Benzene	12/07/2022 08:53:00	12/21/2022 15:12:00	14 days 6 hrs 19 mins
5	S5	5-1207-5	2212599-07A	Toluene	12/07/2022 08:53:00	12/21/2022 15:12:00	14 days 6 hrs 19 mins
5	S5	5-1207-5	2212599-07A	Ethylbenzene	12/07/2022 08:53:00	12/21/2022 15:12:00	14 days 6 hrs 19 mins
5	S5	5-1207-5	2212599-07A	m,p-Xylene	12/07/2022 08:53:00	12/21/2022 15:12:00	14 days 6 hrs 19 mins
5	S5	5-1207-5	2212599-07A	O-Xylene	12/07/2022 08:53:00	12/21/2022 15:12:00	14 days 6 hrs 19 mins
5	S6	6-1207-5	2212599-08A	1,3 Butadiene	12/07/2022 08:07:00	12/21/2022 14:32:00	14 days 6 hrs 25 mins
5	S6	6-1207-5	2212599-08A	Benzene	12/07/2022 08:07:00	12/21/2022 14:32:00	14 days 6 hrs 25 mins
5	S6	6-1207-5	2212599-08A	Toluene	12/07/2022 08:07:00	12/21/2022 14:32:00	14 days 6 hrs 25 mins
5	S6	6-1207-5	2212599-08A	Ethylbenzene	12/07/2022 08:07:00	12/21/2022 14:32:00	14 days 6 hrs 25 mins
5	S6	6-1207-5	2212599-08A	m,p-Xylene	12/07/2022 08:07:00	12/21/2022 14:32:00	14 days 6 hrs 25 mins
5	S6	6-1207-5	2212599-08A	O-Xylene	12/07/2022 08:07:00	12/21/2022 14:32:00	14 days 6 hrs 25 mins
5	S7	7-1207-5	2212599-09A	1,3 Butadiene	12/07/2022 07:59:00	12/21/2022 14:24:00	14 days 6 hrs 25 mins
5	S7	7-1207-5	2212599-09A	Benzene	12/07/2022 07:59:00	12/21/2022 14:24:00	14 days 6 hrs 25 mins
5	S7	7-1207-5	2212599-09A	Toluene	12/07/2022 07:59:00	12/21/2022 14:24:00	14 days 6 hrs 25 mins
5	S7	7-1207-5	2212599-09A	Ethylbenzene	12/07/2022 07:59:00	12/21/2022 14:24:00	14 days 6 hrs 25 mins
5	S7	7-1207-5	2212599-09A	m,p-Xylene	12/07/2022 07:59:00	12/21/2022 14:24:00	14 days 6 hrs 25 mins
5	S7	7-1207-5	2212599-09A	O-Xylene	12/07/2022 07:59:00	12/21/2022 14:24:00	14 days 6 hrs 25 mins
5	S8	8-1207-5	2212599-10A	1,3 Butadiene	12/07/2022 07:35:00	12/21/2022 15:45:00	14 days 8 hrs 10 mins
5	S8	8-1207-5	2212599-10A	Benzene	12/07/2022 07:35:00	12/21/2022 15:45:00	14 days 8 hrs 10 mins
5	S8	8-1207-5	2212599-10A	Toluene	12/07/2022 07:35:00	12/21/2022 15:45:00	14 days 8 hrs 10 mins
5	S8	8-1207-5	2212599-10A	Ethylbenzene	12/07/2022 07:35:00	12/21/2022 15:45:00	14 days 8 hrs 10 mins
5	S8	8-1207-5	2212599-10A	m,p-Xylene	12/07/2022 07:35:00	12/21/2022 15:45:00	14 days 8 hrs 10 mins
5	S8	8-1207-5	2212599-10A	O-Xylene	12/07/2022 07:35:00	12/21/2022 15:45:00	14 days 8 hrs 10 mins

Run	Station	Sample ID	LAB ID	Compound	START	STOP	Run Time
5	S9	9-1207-5	2212599-11A	1,3 Butadiene	12/07/2022 07:30:00	12/21/2022 15:35:00	14 days 8 hrs 5 mins
5	S9	9-1207-5	2212599-11A	Benzene	12/07/2022 07:30:00	12/21/2022 15:35:00	14 days 8 hrs 5 mins
5	S9	9-1207-5	2212599-11A	Toluene	12/07/2022 07:30:00	12/21/2022 15:35:00	14 days 8 hrs 5 mins
5	S9	9-1207-5	2212599-11A	Ethylbenzene	12/07/2022 07:30:00	12/21/2022 15:35:00	14 days 8 hrs 5 mins
5	S9	9-1207-5	2212599-11A	m,p-Xylene	12/07/2022 07:30:00	12/21/2022 15:35:00	14 days 8 hrs 5 mins
5	S9	9-1207-5	2212599-11A	O-Xylene	12/07/2022 07:30:00	12/21/2022 15:35:00	14 days 8 hrs 5 mins
5	S10	10-1206-5A	2212599-12A	1,3 Butadiene	12/06/2022 16:25:00	12/21/2022 12:50:00	14 days 20 hrs 25 mins
5	S10	10-1206-5A	2212599-12A	Benzene	12/06/2022 16:25:00	12/21/2022 12:50:00	14 days 20 hrs 25 mins
5	S10	10-1206-5A	2212599-12A	Toluene	12/06/2022 16:25:00	12/21/2022 12:50:00	14 days 20 hrs 25 mins
5	S10	10-1206-5A	2212599-12A	Ethylbenzene	12/06/2022 16:25:00	12/21/2022 12:50:00	14 days 20 hrs 25 mins
5	S10	10-1206-5A	2212599-12A	m,p-Xylene	12/06/2022 16:25:00	12/21/2022 12:50:00	14 days 20 hrs 25 mins
5	S10	10-1206-5A	2212599-12A	O-Xylene	12/06/2022 16:25:00	12/21/2022 12:50:00	14 days 20 hrs 25 mins
5	S11	11-1206-5A	2212599-14A	1,3 Butadiene	12/06/2022 16:15:00	12/21/2022 12:40:00	14 days 20 hrs 25 mins
5	S11	11-1206-5A	2212599-14A	Benzene	12/06/2022 16:15:00	12/21/2022 12:40:00	14 days 20 hrs 25 mins
5	S11	11-1206-5A	2212599-14A	Toluene	12/06/2022 16:15:00	12/21/2022 12:40:00	14 days 20 hrs 25 mins
5	S11	11-1206-5A	2212599-14A	Ethylbenzene	12/06/2022 16:15:00	12/21/2022 12:40:00	14 days 20 hrs 25 mins
5	S11	11-1206-5A	2212599-14A	m,p-Xylene	12/06/2022 16:15:00	12/21/2022 12:40:00	14 days 20 hrs 25 mins
5	S11	11-1206-5A	2212599-14A	O-Xylene	12/06/2022 16:15:00	12/21/2022 12:40:00	14 days 20 hrs 25 mins
5	S12	12-1206-5	2212599-16A	1,3 Butadiene	12/06/2022 16:51:00	12/21/2022 14:00:00	14 days 21 hrs 9 mins
5	S12	12-1206-5	2212599-16A	Benzene	12/06/2022 16:51:00	12/21/2022 14:00:00	14 days 21 hrs 9 mins
5	S12	12-1206-5	2212599-16A	Toluene	12/06/2022 16:51:00	12/21/2022 14:00:00	14 days 21 hrs 9 mins
5	S12	12-1206-5	2212599-16A	Ethylbenzene	12/06/2022 16:51:00	12/21/2022 14:00:00	14 days 21 hrs 9 mins
5	S12	12-1206-5	2212599-16A	m,p-Xylene	12/06/2022 16:51:00	12/21/2022 14:00:00	14 days 21 hrs 9 mins
5	S12	12-1206-5	2212599-16A	O-Xylene	12/06/2022 16:51:00	12/21/2022 14:00:00	14 days 21 hrs 9 mins
6	S1	1-1221-6A	2301128-01A	1,3 Butadiene	12/21/2022 15:56:00	01/05/2023 18:24:00	15 days 2 hrs 28 mins
6	S1	1-1221-6A	2301128-01A	Benzene	12/21/2022 15:56:00	01/05/2023 18:24:00	15 days 2 hrs 28 mins
6	S1	1-1221-6A	2301128-01A	Toluene	12/21/2022 15:56:00	01/05/2023 18:24:00	15 days 2 hrs 28 mins
6	S1	1-1221-6A	2301128-01A	Ethylbenzene	12/21/2022 15:56:00	01/05/2023 18:24:00	15 days 2 hrs 28 mins
6	S1	1-1221-6A	2301128-01A	m,p-Xylene	12/21/2022 15:56:00	01/05/2023 18:24:00	15 days 2 hrs 28 mins
6	S1	1-1221-6A	2301128-01A	O-Xylene	12/21/2022 15:56:00	01/05/2023 18:24:00	15 days 2 hrs 28 mins
6	S2	2-1221-6	2301128-03A	1,3 Butadiene	12/21/2022 14:47:00	01/05/2023 18:05:00	15 days 3 hrs 18 mins
6	S2	2-1221-6	2301128-03A	Benzene	12/21/2022 14:47:00	01/05/2023 18:05:00	15 days 3 hrs 18 mins
6	S2	2-1221-6	2301128-03A	Toluene	12/21/2022 14:47:00	01/05/2023 18:05:00	15 days 3 hrs 18 mins
6	S2	2-1221-6	2301128-03A	Ethylbenzene	12/21/2022 14:47:00	01/05/2023 18:05:00	15 days 3 hrs 18 mins
6	S2	2-1221-6	2301128-03A	m,p-Xylene	12/21/2022 14:47:00	01/05/2023 18:05:00	15 days 3 hrs 18 mins
6	S2	2-1221-6	2301128-03A	O-Xylene	12/21/2022 14:47:00	01/05/2023 18:05:00	15 days 3 hrs 18 mins
6	S3	3-1221-6	2301128-04A	1,3 Butadiene	12/21/2022 14:55:00	01/05/2023 18:09:00	15 days 3 hrs 14 mins
6	S3	3-1221-6	2301128-04A	Benzene	12/21/2022 14:55:00	01/05/2023 18:09:00	15 days 3 hrs 14 mins
6	S3	3-1221-6	2301128-04A	Toluene	12/21/2022 14:55:00	01/05/2023 18:09:00	15 days 3 hrs 14 mins
6	S3	3-1221-6	2301128-04A	Ethylbenzene	12/21/2022 14:55:00	01/05/2023 18:09:00	15 days 3 hrs 14 mins
6	S3	3-1221-6	2301128-04A	m,p-Xylene	12/21/2022 14:55:00	01/05/2023 18:09:00	15 days 3 hrs 14 mins
6	S3	3-1221-6	2301128-04A	O-Xylene	12/21/2022 14:55:00	01/05/2023 18:09:00	15 days 3 hrs 14 mins

Run	Station	Sample ID	LAB ID	Compound	START	STOP	Run Time
6	S4	4-1221-6	2301128-05A	1,3 Butadiene	12/21/2022 15:05:00	01/05/2023 18:09:00	15 days 3 hrs 4 mins
6	S4	4-1221-6	2301128-05A	Benzene	12/21/2022 15:05:00	01/05/2023 18:09:00	15 days 3 hrs 4 mins
6	S4	4-1221-6	2301128-05A	Toluene	12/21/2022 15:05:00	01/05/2023 18:09:00	15 days 3 hrs 4 mins
6	S4	4-1221-6	2301128-05A	Ethylbenzene	12/21/2022 15:05:00	01/05/2023 18:09:00	15 days 3 hrs 4 mins
6	S4	4-1221-6	2301128-05A	m,p-Xylene	12/21/2022 15:05:00	01/05/2023 18:09:00	15 days 3 hrs 4 mins
6	S4	4-1221-6	2301128-05A	O-Xylene	12/21/2022 15:05:00	01/05/2023 18:09:00	15 days 3 hrs 4 mins
6	S5	5-1221-6	2301128-06A	1,3 Butadiene	12/21/2022 15:15:00	01/05/2023 17:45:00	15 days 2 hrs 30 mins
6	S5	5-1221-6	2301128-06A	Benzene	12/21/2022 15:15:00	01/05/2023 17:45:00	15 days 2 hrs 30 mins
6	S5	5-1221-6	2301128-06A	Toluene	12/21/2022 15:15:00	01/05/2023 17:45:00	15 days 2 hrs 30 mins
6	S5	5-1221-6	2301128-06A	Ethylbenzene	12/21/2022 15:15:00	01/05/2023 17:45:00	15 days 2 hrs 30 mins
6	S5	5-1221-6	2301128-06A	m,p-Xylene	12/21/2022 15:15:00	01/05/2023 17:45:00	15 days 2 hrs 30 mins
6	S5	5-1221-6	2301128-06A	O-Xylene	12/21/2022 15:15:00	01/05/2023 17:45:00	15 days 2 hrs 30 mins
6	S6	6-1221-6A	2301128-07A	1,3 Butadiene	12/21/2022 14:34:00	01/05/2023 17:40:00	15 days 3 hrs 6 mins
6	S6	6-1221-6A	2301128-07A	Benzene	12/21/2022 14:34:00	01/05/2023 17:40:00	15 days 3 hrs 6 mins
6	S6	6-1221-6A	2301128-07A	Toluene	12/21/2022 14:34:00	01/05/2023 17:40:00	15 days 3 hrs 6 mins
6	S6	6-1221-6A	2301128-07A	Ethylbenzene	12/21/2022 14:34:00	01/05/2023 17:40:00	15 days 3 hrs 6 mins
6	S6	6-1221-6A	2301128-07A	m,p-Xylene	12/21/2022 14:34:00	01/05/2023 17:40:00	15 days 3 hrs 6 mins
6	S6	6-1221-6A	2301128-07A	O-Xylene	12/21/2022 14:34:00	01/05/2023 17:40:00	15 days 3 hrs 6 mins
6	S7	7-1221-6A	2301128-09A	1,3 Butadiene	12/21/2022 14:26:00	01/05/2023 17:00:00	15 days 2 hrs 34 mins
6	S7	7-1221-6A	2301128-09A	Benzene	12/21/2022 14:26:00	01/05/2023 17:00:00	15 days 2 hrs 34 mins
6	S7	7-1221-6A	2301128-09A	Toluene	12/21/2022 14:26:00	01/05/2023 17:00:00	15 days 2 hrs 34 mins
6	S7	7-1221-6A	2301128-09A	Ethylbenzene	12/21/2022 14:26:00	01/05/2023 17:00:00	15 days 2 hrs 34 mins
6	S7	7-1221-6A	2301128-09A	m,p-Xylene	12/21/2022 14:26:00	01/05/2023 17:00:00	15 days 2 hrs 34 mins
6	S7	7-1221-6A	2301128-09A	O-Xylene	12/21/2022 14:26:00	01/05/2023 17:00:00	15 days 2 hrs 34 mins
6	S8	8-1221-6	2301128-11A	1,3 Butadiene	12/21/2022 15:46:00	01/05/2023 17:35:00	15 days 1 hrs 49 mins
6	S8	8-1221-6	2301128-11A	Benzene	12/21/2022 15:46:00	01/05/2023 17:35:00	15 days 1 hrs 49 mins
6	S8	8-1221-6	2301128-11A	Toluene	12/21/2022 15:46:00	01/05/2023 17:35:00	15 days 1 hrs 49 mins
6	S8	8-1221-6	2301128-11A	Ethylbenzene	12/21/2022 15:46:00	01/05/2023 17:35:00	15 days 1 hrs 49 mins
6	S8	8-1221-6	2301128-11A	m,p-Xylene	12/21/2022 15:46:00	01/05/2023 17:35:00	15 days 1 hrs 49 mins
6	S8	8-1221-6	2301128-11A	O-Xylene	12/21/2022 15:46:00	01/05/2023 17:35:00	15 days 1 hrs 49 mins
6	S9	9-1221-6	2301128-12A	1,3 Butadiene	12/21/2022 15:38:00	01/05/2023 17:25:00	15 days 1 hrs 47 mins
6	S9	9-1221-6	2301128-12A	Benzene	12/21/2022 15:38:00	01/05/2023 17:25:00	15 days 1 hrs 47 mins
6	S9	9-1221-6	2301128-12A	Toluene	12/21/2022 15:38:00	01/05/2023 17:25:00	15 days 1 hrs 47 mins
6	S9	9-1221-6	2301128-12A	Ethylbenzene	12/21/2022 15:38:00	01/05/2023 17:25:00	15 days 1 hrs 47 mins
6	S9	9-1221-6	2301128-12A	m,p-Xylene	12/21/2022 15:38:00	01/05/2023 17:25:00	15 days 1 hrs 47 mins
6	S9	9-1221-6	2301128-12A	O-Xylene	12/21/2022 15:38:00	01/05/2023 17:25:00	15 days 1 hrs 47 mins
6	S10	10-1221-6	2301128-13A	1,3 Butadiene	12/21/2022 12:55:00	01/05/2023 16:58:00	15 days 4 hrs 3 mins
6	S10	10-1221-6	2301128-13A	Benzene	12/21/2022 12:55:00	01/05/2023 16:58:00	15 days 4 hrs 3 mins
6	S10	10-1221-6	2301128-13A	Toluene	12/21/2022 12:55:00	01/05/2023 16:58:00	15 days 4 hrs 3 mins
6	S10	10-1221-6	2301128-13A	Ethylbenzene	12/21/2022 12:55:00	01/05/2023 16:58:00	15 days 4 hrs 3 mins
6	S10	10-1221-6	2301128-13A	m,p-Xylene	12/21/2022 12:55:00	01/05/2023 16:58:00	15 days 4 hrs 3 mins
6	S10	10-1221-6	2301128-13A	O-Xylene	12/21/2022 12:55:00	01/05/2023 16:58:00	15 days 4 hrs 3 mins

Run	Station	Sample ID	LAB ID	Compound	START	STOP	Run Time
6	S11	11-1221-6	2301128-14A	1,3 Butadiene	12/21/2022 12:45:00	01/05/2023 16:55:00	15 days 4 hrs 10 mins
6	S11	11-1221-6	2301128-14A	Benzene	12/21/2022 12:45:00	01/05/2023 16:55:00	15 days 4 hrs 10 mins
6	S11	11-1221-6	2301128-14A	Toluene	12/21/2022 12:45:00	01/05/2023 16:55:00	15 days 4 hrs 10 mins
6	S11	11-1221-6	2301128-14A	Ethylbenzene	12/21/2022 12:45:00	01/05/2023 16:55:00	15 days 4 hrs 10 mins
6	S11	11-1221-6	2301128-14A	m,p-Xylene	12/21/2022 12:45:00	01/05/2023 16:55:00	15 days 4 hrs 10 mins
6	S11	11-1221-6	2301128-14A	O-Xylene	12/21/2022 12:45:00	01/05/2023 16:55:00	15 days 4 hrs 10 mins
6	S12	12-1221-6A	2301128-15A	1,3 Butadiene	12/21/2022 14:05:00	01/05/2023 18:15:00	15 days 4 hrs 10 mins
6	S12	12-1221-6A	2301128-15A	Benzene	12/21/2022 14:05:00	01/05/2023 18:15:00	15 days 4 hrs 10 mins
6	S12	12-1221-6A	2301128-15A	Toluene	12/21/2022 14:05:00	01/05/2023 18:15:00	15 days 4 hrs 10 mins
6	S12	12-1221-6A	2301128-15A	Ethylbenzene	12/21/2022 14:05:00	01/05/2023 18:15:00	15 days 4 hrs 10 mins
6	S12	12-1221-6A	2301128-15A	m,p-Xylene	12/21/2022 14:05:00	01/05/2023 18:15:00	15 days 4 hrs 10 mins
6	S12	12-1221-6A	2301128-15A	O-Xylene	12/21/2022 14:05:00	01/05/2023 18:15:00	15 days 4 hrs 10 mins
7	S1	M325-1-7	2301427-01A	1,3 Butadiene	01/05/2023 18:25:00	01/19/2023 17:26:00	13 days 23 hrs 1 mins
7	S1	M325-1-7	2301427-01A	Benzene	01/05/2023 18:25:00	01/19/2023 17:26:00	13 days 23 hrs 1 mins
7	S1	M325-1-7	2301427-01A	Toluene	01/05/2023 18:25:00	01/19/2023 17:26:00	13 days 23 hrs 1 mins
7	S1	M325-1-7	2301427-01A	Ethylbenzene	01/05/2023 18:25:00	01/19/2023 17:26:00	13 days 23 hrs 1 mins
7	S1	M325-1-7	2301427-01A	m,p-Xylene	01/05/2023 18:25:00	01/19/2023 17:26:00	13 days 23 hrs 1 mins
7	S1	M325-1-7	2301427-01A	O-Xylene	01/05/2023 18:25:00	01/19/2023 17:26:00	13 days 23 hrs 1 mins
7	S2	M325-2-7	2301427-03A	1,3 Butadiene	01/05/2023 18:06:00	01/19/2023 15:42:00	13 days 21 hrs 36 mins
7	S2	M325-2-7	2301427-03A	Benzene	01/05/2023 18:06:00	01/19/2023 15:42:00	13 days 21 hrs 36 mins
7	S2	M325-2-7	2301427-03A	Toluene	01/05/2023 18:06:00	01/19/2023 15:42:00	13 days 21 hrs 36 mins
7	S2	M325-2-7	2301427-03A	Ethylbenzene	01/05/2023 18:06:00	01/19/2023 15:42:00	13 days 21 hrs 36 mins
7	S2	M325-2-7	2301427-03A	m,p-Xylene	01/05/2023 18:06:00	01/19/2023 15:42:00	13 days 21 hrs 36 mins
7	S2	M325-2-7	2301427-03A	O-Xylene	01/05/2023 18:06:00	01/19/2023 15:42:00	13 days 21 hrs 36 mins
7	S3	M325-3-7	2301427-05A	1,3 Butadiene	01/05/2023 18:10:00	01/19/2023 15:47:00	13 days 21 hrs 37 mins
7	S3	M325-3-7	2301427-05A	Benzene	01/05/2023 18:10:00	01/19/2023 15:47:00	13 days 21 hrs 37 mins
7	S3	M325-3-7	2301427-05A	Toluene	01/05/2023 18:10:00	01/19/2023 15:47:00	13 days 21 hrs 37 mins
7	S3	M325-3-7	2301427-05A	Ethylbenzene	01/05/2023 18:10:00	01/19/2023 15:47:00	13 days 21 hrs 37 mins
7	S3	M325-3-7	2301427-05A	m,p-Xylene	01/05/2023 18:10:00	01/19/2023 15:47:00	13 days 21 hrs 37 mins
7	S3	M325-3-7	2301427-05A	O-Xylene	01/05/2023 18:10:00	01/19/2023 15:47:00	13 days 21 hrs 37 mins
7	S4	M325-4-7	2301427-06A	1,3 Butadiene	01/05/2023 17:45:00	01/19/2023 15:55:00	13 days 22 hrs 10 mins
7	S4	M325-4-7	2301427-06A	Benzene	01/05/2023 17:45:00	01/19/2023 15:55:00	13 days 22 hrs 10 mins
7	S4	M325-4-7	2301427-06A	Toluene	01/05/2023 17:45:00	01/19/2023 15:55:00	13 days 22 hrs 10 mins
7	S4	M325-4-7	2301427-06A	Ethylbenzene	01/05/2023 17:45:00	01/19/2023 15:55:00	13 days 22 hrs 10 mins
7	S4	M325-4-7	2301427-06A	m,p-Xylene	01/05/2023 17:45:00	01/19/2023 15:55:00	13 days 22 hrs 10 mins
7	S4	M325-4-7	2301427-06A	O-Xylene	01/05/2023 17:45:00	01/19/2023 15:55:00	13 days 22 hrs 10 mins
7	S5	M325-5-7	2301427-07A	1,3 Butadiene	01/05/2023 17:40:00	01/19/2023 16:00:00	13 days 22 hrs 20 mins
7	S5	M325-5-7	2301427-07A	Benzene	01/05/2023 17:40:00	01/19/2023 16:00:00	13 days 22 hrs 20 mins
7	S5	M325-5-7	2301427-07A	Toluene	01/05/2023 17:40:00	01/19/2023 16:00:00	13 days 22 hrs 20 mins
7	S5	M325-5-7	2301427-07A	Ethylbenzene	01/05/2023 17:40:00	01/19/2023 16:00:00	13 days 22 hrs 20 mins

Run	Station	Sample ID	LAB ID	Compound	START	STOP	Run Time
7	S5	M325-5-7	2301427-07A	m,p-Xylene	01/05/2023 17:40:00	01/19/2023 16:00:00	13 days 22 hrs 20 mins
7	S5	M325-5-7	2301427-07A	O-Xylene	01/05/2023 17:40:00	01/19/2023 16:00:00	13 days 22 hrs 20 mins
7	S6	M325-6-7	2301427-08A	1,3 Butadiene	01/05/2023 17:15:00	01/19/2023 16:38:00	13 days 23 hrs 23 mins
7	S6	M325-6-7	2301427-08A	Benzene	01/05/2023 17:15:00	01/19/2023 16:38:00	13 days 23 hrs 23 mins
7	S6	M325-6-7	2301427-08A	Toluene	01/05/2023 17:15:00	01/19/2023 16:38:00	13 days 23 hrs 23 mins
7	S6	M325-6-7	2301427-08A	Ethylbenzene	01/05/2023 17:15:00	01/19/2023 16:38:00	13 days 23 hrs 23 mins
7	S6	M325-6-7	2301427-08A	m,p-Xylene	01/05/2023 17:15:00	01/19/2023 16:38:00	13 days 23 hrs 23 mins
7	S6	M325-6-7	2301427-08A	O-Xylene	01/05/2023 17:15:00	01/19/2023 16:38:00	13 days 23 hrs 23 mins
7	S7	M325-7-7	2301427-09A	1,3 Butadiene	01/05/2023 17:10:00	01/19/2023 16:31:00	13 days 23 hrs 21 mins
7	S7	M325-7-7	2301427-09A	Benzene	01/05/2023 17:10:00	01/19/2023 16:31:00	13 days 23 hrs 21 mins
7	S7	M325-7-7	2301427-09A	Toluene	01/05/2023 17:10:00	01/19/2023 16:31:00	13 days 23 hrs 21 mins
7	S7	M325-7-7	2301427-09A	Ethylbenzene	01/05/2023 17:10:00	01/19/2023 16:31:00	13 days 23 hrs 21 mins
7	S7	M325-7-7	2301427-09A	m,p-Xylene	01/05/2023 17:10:00	01/19/2023 16:31:00	13 days 23 hrs 21 mins
7	S7	M325-7-7	2301427-09A	O-Xylene	01/05/2023 17:10:00	01/19/2023 16:31:00	13 days 23 hrs 21 mins
7	S8	M325-8-7	2301427-11A	1,3 Butadiene	01/05/2023 17:35:00	01/19/2023 16:23:00	13 days 22 hrs 48 mins
7	S8	M325-8-7	2301427-11A	Benzene	01/05/2023 17:35:00	01/19/2023 16:23:00	13 days 22 hrs 48 mins
7	S8	M325-8-7	2301427-11A	Toluene	01/05/2023 17:35:00	01/19/2023 16:23:00	13 days 22 hrs 48 mins
7	S8	M325-8-7	2301427-11A	Ethylbenzene	01/05/2023 17:35:00	01/19/2023 16:23:00	13 days 22 hrs 48 mins
7	S8	M325-8-7	2301427-11A	m,p-Xylene	01/05/2023 17:35:00	01/19/2023 16:23:00	13 days 22 hrs 48 mins
7	S8	M325-8-7	2301427-11A	O-Xylene	01/05/2023 17:35:00	01/19/2023 16:23:00	13 days 22 hrs 48 mins
7	S9	M325-9-7	2301427-12A	1,3 Butadiene	01/05/2023 17:28:00	01/19/2023 16:17:00	13 days 22 hrs 49 mins
7	S9	M325-9-7	2301427-12A	Benzene	01/05/2023 17:28:00	01/19/2023 16:17:00	13 days 22 hrs 49 mins
7	S9	M325-9-7	2301427-12A	Toluene	01/05/2023 17:28:00	01/19/2023 16:17:00	13 days 22 hrs 49 mins
7	S9	M325-9-7	2301427-12A	Ethylbenzene	01/05/2023 17:28:00	01/19/2023 16:17:00	13 days 22 hrs 49 mins
7	S9	M325-9-7	2301427-12A	m,p-Xylene	01/05/2023 17:28:00	01/19/2023 16:17:00	13 days 22 hrs 49 mins
7	S9	M325-9-7	2301427-12A	O-Xylene	01/05/2023 17:28:00	01/19/2023 16:17:00	13 days 22 hrs 49 mins
7	S10	M325-10-7	2301427-13A	1,3 Butadiene	01/05/2023 16:59:00	01/19/2023 17:08:00	14 days 0 hrs 9 mins
7	S10	M325-10-7	2301427-13A	Benzene	01/05/2023 16:59:00	01/19/2023 17:08:00	14 days 0 hrs 9 mins
7	S10	M325-10-7	2301427-13A	Toluene	01/05/2023 16:59:00	01/19/2023 17:08:00	14 days 0 hrs 9 mins
7	S10	M325-10-7	2301427-13A	Ethylbenzene	01/05/2023 16:59:00	01/19/2023 17:08:00	14 days 0 hrs 9 mins
7	S10	M325-10-7	2301427-13A	m,p-Xylene	01/05/2023 16:59:00	01/19/2023 17:08:00	14 days 0 hrs 9 mins
7	S10	M325-10-7	2301427-13A	O-Xylene	01/05/2023 16:59:00	01/19/2023 17:08:00	14 days 0 hrs 9 mins
7	S11	M325-11-7	2301427-14A	1,3 Butadiene	01/05/2023 16:57:00	01/19/2023 17:02:00	14 days 0 hrs 5 mins
7	S11	M325-11-7	2301427-14A	Benzene	01/05/2023 16:57:00	01/19/2023 17:02:00	14 days 0 hrs 5 mins
7	S11	M325-11-7	2301427-14A	Toluene	01/05/2023 16:57:00	01/19/2023 17:02:00	14 days 0 hrs 5 mins
7	S11	M325-11-7	2301427-14A	Ethylbenzene	01/05/2023 16:57:00	01/19/2023 17:02:00	14 days 0 hrs 5 mins
7	S11	M325-11-7	2301427-14A	m,p-Xylene	01/05/2023 16:57:00	01/19/2023 17:02:00	14 days 0 hrs 5 mins
7	S11	M325-11-7	2301427-14A	O-Xylene	01/05/2023 16:57:00	01/19/2023 17:02:00	14 days 0 hrs 5 mins
7	S12	M325-12-7	2301427-16A	1,3 Butadiene	01/05/2023 18:17:00	01/19/2023 17:20:00	13 days 23 hrs 3 mins
7	S12	M325-12-7	2301427-16A	Benzene	01/05/2023 18:17:00	01/19/2023 17:20:00	13 days 23 hrs 3 mins
7	S12	M325-12-7	2301427-16A	Toluene	01/05/2023 18:17:00	01/19/2023 17:20:00	13 days 23 hrs 3 mins
7	S12	M325-12-7	2301427-16A	Ethylbenzene	01/05/2023 18:17:00	01/19/2023 17:20:00	13 days 23 hrs 3 mins

Run	Station	Sample ID	LAB ID	Compound	START	STOP	Run Time
7	S12	M325-12-7	2301427-16A	m,p-Xylene	01/05/2023 18:17:00	01/19/2023 17:20:00	13 days 23 hrs 3 mins
7	S12	M325-12-7	2301427-16A	O-Xylene	01/05/2023 18:17:00	01/19/2023 17:20:00	13 days 23 hrs 3 mins

Run	Station	Sample ID	LAB ID	Compound	Concentration (µg/m3)	Data Flags	Sample Type	Rpt.Limit(µg/m3)	Detection Mark	Concentration Mod. Data Flag (µg/m3)
1	S1	m325-1-1	2211016-01A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
1	S1	m325-1-1	2211016-01A	Benzene	2.4		R	0.38	NO	2.4
1	S1	m325-1-1	2211016-01A	Toluene	1.1		R	0.49	NO	1.1
1	S1	m325-1-1	2211016-01A	Ethylbenzene	0.28	U	R	0.55	YES	0.14
1	S1	m325-1-1	2211016-01A	m,p-Xylene	0.54	JPC	R	0.55	NO	0.55
1	S1	m325-1-1	2211016-01A	O-Xylene	0.28	U	R	0.55	YES	0.14
1	S2	m325-2-1	2211016-03A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
1	S2	m325-2-1	2211016-03A	Benzene	0.98		R	0.38	NO	0.98
1	S2	m325-2-1	2211016-03A	Toluene	0.69		R	0.49	NO	0.69
1	S2	m325-2-1	2211016-03A	Ethylbenzene	0.28	U	R	0.55	YES	0.14
1	S2	m325-2-1	2211016-03A	m,p-Xylene	0.39	JPC	R	0.55	NO	0.55
1	S2	m325-2-1	2211016-03A	O-Xylene	0.28	U	R	0.55	YES	0.14
1	S3	m325-3-1	2211016-05A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
1	S3	m325-3-1	2211016-05A	Benzene	1.8		R	0.38	NO	1.8
1	S3	m325-3-1	2211016-05A	Toluene	0.81		R	0.49	NO	0.81
1	S3	m325-3-1	2211016-05A	Ethylbenzene	0.28	U	R	0.55	YES	0.14
1	S3	m325-3-1	2211016-05A	m,p-Xylene	0.38	JPC	R	0.55	NO	0.55
1	S3	m325-3-1	2211016-05A	O-Xylene	0.28	U	R	0.55	YES	0.14
1	S4	m325-4-1	2211016-06A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
1	S4	m325-4-1	2211016-06A	Benzene	4		R	0.38	NO	4
1	S4	m325-4-1	2211016-06A	Toluene	1.5		R	0.49	NO	1.5
1	S4	m325-4-1	2211016-06A	Ethylbenzene	0.28	U	R	0.55	YES	0.14
1	S4	m325-4-1	2211016-06A	m,p-Xylene	0.73	PC	R	0.55	NO	0.73
1	S4	m325-4-1	2211016-06A	O-Xylene	0.28	U	R	0.55	YES	0.14
1	S5	m325-5-1	2211016-07A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
1	S5	m325-5-1	2211016-07A	Benzene	1.8		R	0.38	NO	1.8
1	S5	m325-5-1	2211016-07A	Toluene	1.1		R	0.49	NO	1.1
1	S5	m325-5-1	2211016-07A	Ethylbenzene	0.28	U	R	0.55	YES	0.14
1	S5	m325-5-1	2211016-07A	m,p-Xylene	0.55	JPC	R	0.55	NO	0.55
1	S5	m325-5-1	2211016-07A	O-Xylene	0.28	U	R	0.55	YES	0.14
1	S6	m325-6-1	2211016-08A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
1	S6	m325-6-1	2211016-08A	Benzene	0.42		R	0.38	NO	0.42
1	S6	m325-6-1	2211016-08A	Toluene	0.56		R	0.49	NO	0.56
1	S6	m325-6-1	2211016-08A	Ethylbenzene	0.28	U	R	0.55	YES	0.14
1	S6	m325-6-1	2211016-08A	m,p-Xylene	0.33	JPC	R	0.55	NO	0.55
1	S6	m325-6-1	2211016-08A	O-Xylene	0.28	U	R	0.55	YES	0.14
1	S7	m325-7-1	2211016-09A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
1	S7	m325-7-1	2211016-09A	Benzene	0.46		R	0.38	NO	0.46
1	S7	m325-7-1	2211016-09A	Toluene	0.58		R	0.49	NO	0.58
1	S7	m325-7-1	2211016-09A	Ethylbenzene	0.28	U	R	0.55	YES	0.14
1	S7	m325-7-1	2211016-09A	m,p-Xylene	0.32	JPC	R	0.55	NO	0.55
1	S7	m325-7-1	2211016-09A	O-Xylene	0.28	U	R	0.55	YES	0.14

Run	Station	Sample ID	LAB ID	Compound	Concentration (µg/m3)	Data Flags	Sample Type	Rpt.Limit(µg/m3)	Detection Mark	Concentration Mod. Data Flag (µg/m3)
1	S8	m325-8-1	2211016-11A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
1	S8	m325-8-1	2211016-11A	Benzene	0.44		R	0.38	NO	0.44
1	S8	m325-8-1	2211016-11A	Toluene	0.57		R	0.49	NO	0.57
1	S8	m325-8-1	2211016-11A	Ethylbenzene	0.28	U	R	0.55	YES	0.14
1	S8	m325-8-1	2211016-11A	m,p-Xylene	0.32	JPC	R	0.55	NO	0.55
1	S8	m325-8-1	2211016-11A	O-Xylene	0.28	U	R	0.55	YES	0.14
1	S9	m325-9-1	2211016-13A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
1	S9	m325-9-1	2211016-13A	Benzene	0.5		R	0.38	NO	0.5
1	S9	m325-9-1	2211016-13A	Toluene	0.56		R	0.49	NO	0.56
1	S9	m325-9-1	2211016-13A	Ethylbenzene	0.28	U	R	0.55	YES	0.14
1	S9	m325-9-1	2211016-13A	m,p-Xylene	0.29	JPC	R	0.55	NO	0.55
1	S9	m325-9-1	2211016-13A	O-Xylene	0.28	U	R	0.55	YES	0.14
1	S10	m325-10-1	2211016-14A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
1	S10	m325-10-1	2211016-14A	Benzene	0.48		R	0.38	NO	0.48
1	S10	m325-10-1	2211016-14A	Toluene	0.6		R	0.49	NO	0.6
1	S10	m325-10-1	2211016-14A	Ethylbenzene	0.28	U	R	0.55	YES	0.14
1	S10	m325-10-1	2211016-14A	m,p-Xylene	0.28	JPC	R	0.55	NO	0.55
1	S10	m325-10-1	2211016-14A	O-Xylene	0.28	U	R	0.55	YES	0.14
1	S11	m325-11-1	2211016-15A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
1	S11	m325-11-1	2211016-15A	Benzene	0.46		R	0.38	NO	0.46
1	S11	m325-11-1	2211016-15A	Toluene	0.54		R	0.49	NO	0.54
1	S11	m325-11-1	2211016-15A	Ethylbenzene	0.28	U	R	0.55	YES	0.14
1	S11	m325-11-1	2211016-15A	m,p-Xylene	0.28	UPC	R	0.55	NO	0.28
1	S11	m325-11-1	2211016-15A	O-Xylene	0.28	U	R	0.55	YES	0.14
1	S12	m325-12-1	2211016-16A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
1	S12	m325-12-1	2211016-16A	Benzene	0.7		R	0.38	NO	0.7
1	S12	m325-12-1	2211016-16A	Toluene	0.6		R	0.49	NO	0.6
1	S12	m325-12-1	2211016-16A	Ethylbenzene	0.28	U	R	0.55	YES	0.14
1	S12	m325-12-1	2211016-16A	m,p-Xylene	0.3	JPC	R	0.55	NO	0.55
1	S12	m325-12-1	2211016-16A	O-Xylene	0.28	U	R	0.55	YES	0.14
2	S1	1-1026-3	2211386-01A	1,3 Butadiene	0.14	U	R	0.28	YES	0.07
2	S1	1-1026-3	2211386-01A	Benzene	2.4		R	0.38	NO	2.4
2	S1	1-1026-3	2211386-01A	Toluene	2.1		R	0.49	NO	2.1
2	S1	1-1026-3	2211386-01A	Ethylbenzene	0.29	J	R	0.55	NO	0.55
2	S1	1-1026-3	2211386-01A	m,p-Xylene	1		R	0.55	NO	1
2	S1	1-1026-3	2211386-01A	O-Xylene	0.41	J	R	0.55	NO	0.55
2	S2	2-1026-3	2211386-02A	1,3 Butadiene	0.14	U	R	0.28	YES	0.07
2	S2	2-1026-3	2211386-02A	Benzene	0.91		R	0.38	NO	0.91
2	S2	2-1026-3	2211386-02A	Toluene	1.6		R	0.49	NO	1.6
2	S2	2-1026-3	2211386-02A	Ethylbenzene	0.28	U	R	0.55	YES	0.14
2	S2	2-1026-3	2211386-02A	m,p-Xylene	0.85		R	0.55	NO	0.85
2	S2	2-1026-3	2211386-02A	O-Xylene	0.31	J	R	0.55	NO	0.55

Run	Station	Sample ID	LAB ID	Compound	Concentration (µg/m3)	Data Flags	Sample Type	Rpt.Limit(µg/m3)	Detection Mark	Concentration Mod. Data Flag (µg/m3)
2	S3	3-1026-3A	2211386-03A	1,3 Butadiene	0.14	U	R	0.28	YES	0.07
2	S3	3-1026-3A	2211386-03A	Benzene	1.2		R	0.38	NO	1.2
2	S3	3-1026-3A	2211386-03A	Toluene	1.6		R	0.49	NO	1.6
2	S3	3-1026-3A	2211386-03A	Ethylbenzene	0.28	U	R	0.55	YES	0.14
2	S3	3-1026-3A	2211386-03A	m,p-Xylene	0.83		R	0.55	NO	0.83
2	S3	3-1026-3A	2211386-03A	O-Xylene	0.32	J	R	0.55	NO	0.55
2	S4	4-1026-3A	2211386-05A	1,3 Butadiene	0.14	U	R	0.28	YES	0.07
2	S4	4-1026-3A	2211386-05A	Benzene	2		R	0.38	NO	2
2	S4	4-1026-3A	2211386-05A	Toluene	1.8		R	0.49	NO	1.8
2	S4	4-1026-3A	2211386-05A	Ethylbenzene	0.28	J	R	0.55	NO	0.55
2	S4	4-1026-3A	2211386-05A	m,p-Xylene	0.98		R	0.55	NO	0.98
2	S4	4-1026-3A	2211386-05A	O-Xylene	0.35	J	R	0.55	NO	0.55
2	S5	5-1026-3	2211386-07A	1,3 Butadiene	0.14	U	R	0.28	YES	0.07
2	S5	5-1026-3	2211386-07A	Benzene	1.9		R	0.38	NO	1.9
2	S5	5-1026-3	2211386-07A	Toluene	1.8		R	0.49	NO	1.8
2	S5	5-1026-3	2211386-07A	Ethylbenzene	0.29	J	R	0.55	NO	0.55
2	S5	5-1026-3	2211386-07A	m,p-Xylene	0.88		R	0.55	NO	0.88
2	S5	5-1026-3	2211386-07A	O-Xylene	0.35	J	R	0.55	NO	0.55
2	S6	6-1026-3	2211386-08A	1,3 Butadiene	0.14	U	R	0.28	YES	0.07
2	S6	6-1026-3	2211386-08A	Benzene	1.2		R	0.38	NO	1.2
2	S6	6-1026-3	2211386-08A	Toluene	1.4		R	0.49	NO	1.4
2	S6	6-1026-3	2211386-08A	Ethylbenzene	0.28	U	R	0.55	YES	0.14
2	S6	6-1026-3	2211386-08A	m,p-Xylene	0.73		R	0.55	NO	0.73
2	S6	6-1026-3	2211386-08A	O-Xylene	0.28	U	R	0.55	YES	0.14
2	S7	7-1026-3	2211386-09A	1,3 Butadiene	0.14	U	R	0.28	YES	0.07
2	S7	7-1026-3	2211386-09A	Benzene	1		R	0.38	NO	1
2	S7	7-1026-3	2211386-09A	Toluene	1.4		R	0.49	NO	1.4
2	S7	7-1026-3	2211386-09A	Ethylbenzene	0.28	U	R	0.55	YES	0.14
2	S7	7-1026-3	2211386-09A	m,p-Xylene	0.64		R	0.55	NO	0.64
2	S7	7-1026-3	2211386-09A	O-Xylene	0.28	U	R	0.55	YES	0.14
2	S8	8-1026-3A	2211386-10A	1,3 Butadiene	0.14	U	R	0.28	YES	0.07
2	S8	8-1026-3A	2211386-10A	Benzene	1		R	0.38	NO	1
2	S8	8-1026-3A	2211386-10A	Toluene	1.3		R	0.49	NO	1.3
2	S8	8-1026-3A	2211386-10A	Ethylbenzene	0.28	U	R	0.55	YES	0.14
2	S8	8-1026-3A	2211386-10A	m,p-Xylene	0.58		R	0.55	NO	0.58
2	S8	8-1026-3A	2211386-10A	O-Xylene	0.28	U	R	0.55	YES	0.14
2	S9	9-1026-3A	2211386-12A	1,3 Butadiene	0.14	U	R	0.28	YES	0.07
2	S9	9-1026-3A	2211386-12A	Benzene	1.2		R	0.38	NO	1.2
2	S9	9-1026-3A	2211386-12A	Toluene	1.4		R	0.49	NO	1.4
2	S9	9-1026-3A	2211386-12A	Ethylbenzene	0.28	U	R	0.55	YES	0.14
2	S9	9-1026-3A	2211386-12A	m,p-Xylene	0.75		R	0.55	NO	0.75
2	S9	9-1026-3A	2211386-12A	O-Xylene	0.28	U	R	0.55	YES	0.14

Run	Station	Sample ID	LAB ID	Compound	Concentration (µg/m3)	Data Flags	Sample Type	Rpt.Limit(µg/m3)	Detection Mark	Concentration Mod. Data Flag (µg/m3)
2	S10	10-1026-3	2211386-14A	1,3 Butadiene	0.14	U	R	0.28	YES	0.07
2	S10	10-1026-3	2211386-14A	Benzene	1.1		R	0.38	NO	1.1
2	S10	10-1026-3	2211386-14A	Toluene	1.7		R	0.49	NO	1.7
2	S10	10-1026-3	2211386-14A	Ethylbenzene	0.28	U	R	0.55	YES	0.14
2	S10	10-1026-3	2211386-14A	m,p-Xylene	0.81		R	0.55	NO	0.81
2	S10	10-1026-3	2211386-14A	O-Xylene	0.28	J	R	0.55	NO	0.55
2	S11	11-1026-3	2211386-15A	1,3 Butadiene	0.14	U	R	0.28	YES	0.07
2	S11	11-1026-3	2211386-15A	Benzene	0.96		R	0.38	NO	0.96
2	S11	11-1026-3	2211386-15A	Toluene	1.6		R	0.49	NO	1.6
2	S11	11-1026-3	2211386-15A	Ethylbenzene	0.28	U	R	0.55	YES	0.14
2	S11	11-1026-3	2211386-15A	m,p-Xylene	0.76		R	0.55	NO	0.76
2	S11	11-1026-3	2211386-15A	O-Xylene	0.29	J	R	0.55	NO	0.55
2	S12	12-1026-3	2211386-16A	1,3 Butadiene	0.14	U	R	0.28	YES	0.07
2	S12	12-1026-3	2211386-16A	Benzene	0.9		R	0.38	NO	0.9
2	S12	12-1026-3	2211386-16A	Toluene	1.8		R	0.49	NO	1.8
2	S12	12-1026-3	2211386-16A	Ethylbenzene	0.29	J	R	0.55	NO	0.55
2	S12	12-1026-3	2211386-16A	m,p-Xylene	0.93		R	0.55	NO	0.93
2	S12	12-1026-3	2211386-16A	O-Xylene	0.35	J	R	0.55	NO	0.55
3	S1	1-1109-33-1	2211681-01A	1,3 Butadiene	0.15	U	R	0.31	YES	0.075
3	S1	1-1109-33-2	2211681-01A	Benzene	1.2		R	0.42	NO	1.2
3	S1	1-1109-33-3	2211681-01A	Toluene	0.92		R	0.53	NO	0.92
3	S1	1-1109-33-4	2211681-01A	Ethylbenzene	0.3	U	R	0.6	YES	0.15
3	S1	1-1109-33-5	2211681-01A	m,p-Xylene	0.39	J	R	0.6	NO	0.6
3	S1	1-1109-33-5	2211681-01A	O-Xylene	0.3	U	R	0.6	YES	0.15
3	S2	2-1109-33-2	2211681-02A	1,3 Butadiene	0.15	U	R	0.31	YES	0.075
3	S2	2-1109-33-2	2211681-02A	Benzene	1.4		R	0.42	NO	1.4
3	S2	2-1109-33-2	2211681-02A	Toluene	0.86		R	0.53	NO	0.86
3	S2	2-1109-33-2	2211681-02A	Ethylbenzene	0.3	U	R	0.6	YES	0.15
3	S2	2-1109-33-2	2211681-02A	m,p-Xylene	0.33	J	R	0.6	NO	0.6
3	S2	2-1109-33-2	2211681-02A	O-Xylene	0.3	U	R	0.6	YES	0.15
3	S3	3-1109-33-3	2211681-03A	1,3 Butadiene	0.15	U	R	0.31	YES	0.075
3	S3	3-1109-33-3	2211681-03A	Benzene	1.8		R	0.42	NO	1.8
3	S3	3-1109-33-3	2211681-03A	Toluene	0.98		R	0.53	NO	0.98
3	S3	3-1109-33-3	2211681-03A	Ethylbenzene	0.3	U	R	0.6	YES	0.15
3	S3	3-1109-33-3	2211681-03A	m,p-Xylene	0.42	J	R	0.6	NO	0.6
3	S3	3-1109-33-3	2211681-03A	O-Xylene	0.3	U	R	0.6	YES	0.15
3	S4	4-1109-33-4	2211681-04A	1,3 Butadiene	0.15	U	R	0.31	YES	0.075
3	S4	4-1109-33-4	2211681-04A	Benzene	4.1		R	0.42	NO	4.1
3	S4	4-1109-33-4	2211681-04A	Toluene	1.6		R	0.53	NO	1.6
3	S4	4-1109-33-4	2211681-04A	Ethylbenzene	0.3	U	R	0.6	YES	0.15
3	S4	4-1109-33-4	2211681-04A	m,p-Xylene	0.78		R	0.6	NO	0.78
3	S4	4-1109-33-4	2211681-04A	O-Xylene	0.3	U	R	0.6	YES	0.15

Run	Station	Sample ID	LAB ID	Compound	Concentration (µg/m3)	Data Flags	Sample Type	Rpt.Limit(µg/m3)	Detection Mark	Concentration Mod. Data Flag (µg/m3)
3	S5	5-1109-33-5	2211681-05A	1,3 Butadiene	0.15	U	R	0.31	YES	0.075
3	S5	5-1109-33-5	2211681-05A	Benzene	2.1		R	0.42	NO	2.1
3	S5	5-1109-33-5	2211681-05A	Toluene	1.1		R	0.53	NO	1.1
3	S5	5-1109-33-5	2211681-05A	Ethylbenzene	0.3	U	R	0.6	YES	0.15
3	S5	5-1109-33-5	2211681-05A	m,p-Xylene	0.48	J	R	0.6	NO	0.6
3	S5	5-1109-33-5	2211681-05A	O-Xylene	0.3	U	R	0.6	YES	0.15
3	S6	6-1109-33-7D	2211681-07A	1,3 Butadiene	0.15	U	R	0.31	YES	0.075
3	S6	6-1109-33-7D	2211681-07A	Benzene	0.63		R	0.42	NO	0.63
3	S6	6-1109-33-7D	2211681-07A	Toluene	0.7		R	0.53	NO	0.7
3	S6	6-1109-33-7D	2211681-07A	Ethylbenzene	0.3	U	R	0.6	YES	0.15
3	S6	6-1109-33-7D	2211681-07A	m,p-Xylene	0.32	J	R	0.6	NO	0.6
3	S6	6-1109-33-7D	2211681-07A	O-Xylene	0.3	U	R	0.6	YES	0.15
3	S7	7-1109-33-7	2211681-09A	1,3 Butadiene	0.15	U	R	0.31	YES	0.075
3	S7	7-1109-33-7	2211681-09A	Benzene	0.55		R	0.42	NO	0.55
3	S7	7-1109-33-7	2211681-09A	Toluene	0.8		R	0.53	NO	0.8
3	S7	7-1109-33-7	2211681-09A	Ethylbenzene	0.3	U	R	0.6	YES	0.15
3	S7	7-1109-33-7	2211681-09A	m,p-Xylene	0.46	J	R	0.6	NO	0.6
3	S7	7-1109-33-7	2211681-09A	O-Xylene	0.3	U	R	0.6	YES	0.15
3	S8	8-1109-33-8	2211681-10A	1,3 Butadiene	0.15	U	R	0.31	YES	0.075
3	S8	8-1109-33-8	2211681-10A	Benzene	0.92		R	0.42	NO	0.92
3	S8	8-1109-33-8	2211681-10A	Toluene	0.84		R	0.53	NO	0.84
3	S8	8-1109-33-8	2211681-10A	Ethylbenzene	0.3	U	R	0.6	YES	0.15
3	S8	8-1109-33-8	2211681-10A	m,p-Xylene	0.32	J	R	0.6	NO	0.6
3	S8	8-1109-33-8	2211681-10A	O-Xylene	0.3	U	R	0.6	YES	0.15
3	S9	9-1109-33-9	2211681-11A	1,3 Butadiene	0.15	U	R	0.31	YES	0.075
3	S9	9-1109-33-9	2211681-11A	Benzene	0.95		R	0.42	NO	0.95
3	S9	9-1109-33-9	2211681-11A	Toluene	0.92		R	0.53	NO	0.92
3	S9	9-1109-33-9	2211681-11A	Ethylbenzene	0.3	U	R	0.6	YES	0.15
3	S9	9-1109-33-9	2211681-11A	m,p-Xylene	0.39	J	R	0.6	NO	0.6
3	S9	9-1109-33-9	2211681-11A	O-Xylene	0.3	U	R	0.6	YES	0.15
3	S10	10-1109-33-11	2211681-13A	1,3 Butadiene	0.15	U	R	0.31	YES	0.075
3	S10	10-1109-33-11	2211681-13A	Benzene	0.43		R	0.42	NO	0.43
3	S10	10-1109-33-11	2211681-13A	Toluene	0.62		R	0.53	NO	0.62
3	S10	10-1109-33-11	2211681-13A	Ethylbenzene	0.3	U	R	0.6	YES	0.15
3	S10	10-1109-33-11	2211681-13A	m,p-Xylene	0.3	U	R	0.6	YES	0.15
3	S10	10-1109-33-11	2211681-13A	O-Xylene	0.3	U	R	0.6	YES	0.15
3	S11	11-1109-33-10	2211681-14A	1,3 Butadiene	0.15	U	R	0.31	YES	0.075
3	S11	11-1109-33-10	2211681-14A	Benzene	0.5		R	0.42	NO	0.5
3	S11	11-1109-33-10	2211681-14A	Toluene	0.67		R	0.53	NO	0.67
3	S11	11-1109-33-10	2211681-14A	Ethylbenzene	0.3	U	R	0.6	YES	0.15
3	S11	11-1109-33-10	2211681-14A	m,p-Xylene	0.32	J	R	0.6	NO	0.6
3	S11	11-1109-33-10	2211681-14A	O-Xylene	0.3	U	R	0.6	YES	0.15

Run	Station	Sample ID	LAB ID	Compound	Concentration (µg/m3)	Data Flags	Sample Type	Rpt.Limit(µg/m3)	Detection Mark	Concentration Mod. Data Flag (µg/m3)
3	S12	12-1109-33-12	2211681-15A	1,3 Butadiene	0.15	U	R	0.31	YES	0.075
3	S12	12-1109-33-12	2211681-15A	Benzene	0.59		R	0.42	NO	0.59
3	S12	12-1109-33-12	2211681-15A	Toluene	1		R	0.53	NO	1
3	S12	12-1109-33-12	2211681-15A	Ethylbenzene	0.3	U	R	0.6	YES	0.15
3	S12	12-1109-33-12	2211681-15A	m,p-Xylene	0.55	J	R	0.6	NO	0.6
3	S12	12-1109-33-12	2211681-15A	O-Xylene	0.3	U	R	0.6	YES	0.15
4	S1	1-1122-4-7B	2212198-11A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
4	S1	1-1122-4-7B	2212198-11A	Benzene	1.6		R	0.38	NO	1.6
4	S1	1-1122-4-7B	2212198-11A	Toluene	1		R	0.5	NO	1
4	S1	1-1122-4-7B	2212198-11A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
4	S1	1-1122-4-7B	2212198-11A	m,p-Xylene	0.43	J	R	0.56	NO	0.56
4	S1	1-1122-4-7B	2212198-11A	O-Xylene	0.28	U	R	0.56	YES	0.14
4	S2	2-1122-4-9	2212198-01A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
4	S2	2-1122-4-9	2212198-01A	Benzene	1.1		R	0.36	NO	1.1
4	S2	2-1122-4-9	2212198-01A	Toluene	0.75		R	0.46	NO	0.75
4	S2	2-1122-4-9	2212198-01A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
4	S2	2-1122-4-9	2212198-01A	m,p-Xylene	0.34	J	R	0.52	NO	0.52
4	S2	2-1122-4-9	2212198-01A	O-Xylene	0.26	U	R	0.52	YES	0.13
4	S3	3-1122-4-8	2212198-02A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
4	S3	3-1122-4-8	2212198-02A	Benzene	1.8		R	0.36	NO	1.8
4	S3	3-1122-4-8	2212198-02A	Toluene	0.99		R	0.46	NO	0.99
4	S3	3-1122-4-8	2212198-02A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
4	S3	3-1122-4-8	2212198-02A	m,p-Xylene	0.39	J	R	0.52	NO	0.52
4	S3	3-1122-4-8	2212198-02A	O-Xylene	0.26	U	R	0.52	YES	0.13
4	S4	4-1122-4-5	2212198-03A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
4	S4	4-1122-4-5	2212198-03A	Benzene	3		R	0.36	NO	3
4	S4	4-1122-4-5	2212198-03A	Toluene	1.2		R	0.46	NO	1.2
4	S4	4-1122-4-5	2212198-03A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
4	S4	4-1122-4-5	2212198-03A	m,p-Xylene	0.44	J	R	0.52	NO	0.52
4	S4	4-1122-4-5	2212198-03A	O-Xylene	0.26	U	R	0.52	YES	0.13
4	S5	5-1122-4-1B	2212198-04A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
4	S5	5-1122-4-1B	2212198-04A	Benzene	1.6		R	0.36	NO	1.6
4	S5	5-1122-4-1B	2212198-04A	Toluene	0.83		R	0.46	NO	0.83
4	S5	5-1122-4-1B	2212198-04A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
4	S5	5-1122-4-1B	2212198-04A	m,p-Xylene	0.32	J	R	0.52	NO	0.52
4	S5	5-1122-4-1B	2212198-04A	O-Xylene	0.26	U	R	0.52	YES	0.13
4	S6	6-1122-4-4	2212198-07A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
4	S6	6-1122-4-4	2212198-07A	Benzene	0.9		R	0.36	NO	0.9
4	S6	6-1122-4-4	2212198-07A	Toluene	0.73		R	0.46	NO	0.73
4	S6	6-1122-4-4	2212198-07A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
4	S6	6-1122-4-4	2212198-07A	m,p-Xylene	0.26	U	R	0.52	YES	0.13
4	S6	6-1122-4-4	2212198-07A	O-Xylene	0.26	U	R	0.52	YES	0.13

Run	Station	Sample ID	LAB ID	Compound	Concentration (µg/m3)	Data Flags	Sample Type	Rpt.Limit(µg/m3)	Detection Mark	Concentration Mod. Data Flag (µg/m3)
4	S7	7-1122-4-6	2212198-05A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
4	S7	7-1122-4-6	2212198-05A	Benzene	0.68		R	0.36	NO	0.68
4	S7	7-1122-4-6	2212198-05A	Toluene	0.7		R	0.46	NO	0.7
4	S7	7-1122-4-6	2212198-05A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
4	S7	7-1122-4-6	2212198-05A	m,p-Xylene	0.27	J	R	0.52	NO	0.52
4	S7	7-1122-4-6	2212198-05A	O-Xylene	0.26	U	R	0.52	YES	0.13
4	S8	8-1122-4-3	2212198-10A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
4	S8	8-1122-4-3	2212198-10A	Benzene	0.69		R	0.36	NO	0.69
4	S8	8-1122-4-3	2212198-10A	Toluene	0.62		R	0.46	NO	0.62
4	S8	8-1122-4-3	2212198-10A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
4	S8	8-1122-4-3	2212198-10A	m,p-Xylene	0.26	U	R	0.52	YES	0.13
4	S8	8-1122-4-3	2212198-10A	O-Xylene	0.26	U	R	0.52	YES	0.13
4	S9	9-1122-4-10	2212198-09A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
4	S9	9-1122-4-10	2212198-09A	Benzene	0.84		R	0.36	NO	0.84
4	S9	9-1122-4-10	2212198-09A	Toluene	0.66		R	0.46	NO	0.66
4	S9	9-1122-4-10	2212198-09A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
4	S9	9-1122-4-10	2212198-09A	m,p-Xylene	0.27	J	R	0.52	NO	0.52
4	S9	9-1122-4-10	2212198-09A	O-Xylene	0.26	U	R	0.52	YES	0.13
4	S10	10-1122-4-1	2212198-14A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
4	S10	10-1122-4-1	2212198-14A	Benzene	0.57		R	0.38	NO	0.57
4	S10	10-1122-4-1	2212198-14A	Toluene	0.79		R	0.5	NO	0.79
4	S10	10-1122-4-1	2212198-14A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
4	S10	10-1122-4-1	2212198-14A	m,p-Xylene	0.31	J	R	0.56	NO	0.56
4	S10	10-1122-4-1	2212198-14A	O-Xylene	0.28	U	R	0.56	YES	0.14
4	S11	11-1122-4-12	2212198-15A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
4	S11	11-1122-4-12	2212198-15A	Benzene	0.83		R	0.38	NO	0.83
4	S11	11-1122-4-12	2212198-15A	Toluene	0.92		R	0.5	NO	0.92
4	S11	11-1122-4-12	2212198-15A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
4	S11	11-1122-4-12	2212198-15A	m,p-Xylene	0.42	J	R	0.56	NO	0.56
4	S11	11-1122-4-12	2212198-15A	O-Xylene	0.28	U	R	0.56	YES	0.14
4	S12	12-1122-4-2	2212198-12A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
4	S12	12-1122-4-2	2212198-12A	Benzene	0.65		R	0.38	NO	0.65
4	S12	12-1122-4-2	2212198-12A	Toluene	1.1		R	0.5	NO	1.1
4	S12	12-1122-4-2	2212198-12A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
4	S12	12-1122-4-2	2212198-12A	m,p-Xylene	0.35	J	R	0.56	NO	0.56
4	S12	12-1122-4-2	2212198-12A	O-Xylene	0.28	U	R	0.56	YES	0.14
5	S1	1-1206-5	2212599-01A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
5	S1	1-1206-5	2212599-01A	Benzene	0.63		R	0.36	NO	0.63
5	S1	1-1206-5	2212599-01A	Toluene	0.88		R	0.47	NO	0.88
5	S1	1-1206-5	2212599-01A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
5	S1	1-1206-5	2212599-01A	m,p-Xylene	0.39	J	R	0.52	NO	0.52
5	S1	1-1206-5	2212599-01A	O-Xylene	0.26	U	R	0.52	YES	0.13

Run	Station	Sample ID	LAB ID	Compound	Concentration (µg/m3)	Data Flags	Sample Type	Rpt.Limit(µg/m3)	Detection Mark	Concentration Mod. Data Flag (µg/m3)
5	S2	2-1207-5	2212599-02A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
5	S2	2-1207-5	2212599-02A	Benzene	0.81		R	0.38	NO	0.81
5	S2	2-1207-5	2212599-02A	Toluene	0.77		R	0.5	NO	0.77
5	S2	2-1207-5	2212599-02A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
5	S2	2-1207-5	2212599-02A	m,p-Xylene	0.35	J	R	0.56	NO	0.56
5	S2	2-1207-5	2212599-02A	O-Xylene	0.28	U	R	0.56	YES	0.14
5	S3	3-1207-5B	2212599-04A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
5	S3	3-1207-5B	2212599-04A	Benzene	1.7		R	0.38	NO	1.7
5	S3	3-1207-5B	2212599-04A	Toluene	1.1		R	0.5	NO	1.1
5	S3	3-1207-5B	2212599-04A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
5	S3	3-1207-5B	2212599-04A	m,p-Xylene	0.52	J	R	0.56	NO	0.56
5	S3	3-1207-5B	2212599-04A	O-Xylene	0.28	U	R	0.56	YES	0.14
5	S4	4-1207-5A	2212599-05A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
5	S4	4-1207-5A	2212599-05A	Benzene	1.9		R	0.38	NO	1.9
5	S4	4-1207-5A	2212599-05A	Toluene	1.1		R	0.5	NO	1.1
5	S4	4-1207-5A	2212599-05A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
5	S4	4-1207-5A	2212599-05A	m,p-Xylene	0.46	J	R	0.56	NO	0.56
5	S4	4-1207-5A	2212599-05A	O-Xylene	0.28	U	R	0.56	YES	0.14
5	S5	5-1207-5	2212599-07A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
5	S5	5-1207-5	2212599-07A	Benzene	1.6		R	0.38	NO	1.6
5	S5	5-1207-5	2212599-07A	Toluene	0.99		R	0.5	NO	0.99
5	S5	5-1207-5	2212599-07A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
5	S5	5-1207-5	2212599-07A	m,p-Xylene	0.5	J	R	0.56	NO	0.56
5	S5	5-1207-5	2212599-07A	O-Xylene	0.28	U	R	0.56	YES	0.14
5	S6	6-1207-5	2212599-08A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
5	S6	6-1207-5	2212599-08A	Benzene	1.1		R	0.38	NO	1.1
5	S6	6-1207-5	2212599-08A	Toluene	0.96		R	0.5	NO	0.96
5	S6	6-1207-5	2212599-08A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
5	S6	6-1207-5	2212599-08A	m,p-Xylene	0.42	J	R	0.56	NO	0.56
5	S6	6-1207-5	2212599-08A	O-Xylene	0.28	U	R	0.56	YES	0.14
5	S7	7-1207-5	2212599-09A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
5	S7	7-1207-5	2212599-09A	Benzene	0.99		R	0.38	NO	0.99
5	S7	7-1207-5	2212599-09A	Toluene	0.87		R	0.5	NO	0.87
5	S7	7-1207-5	2212599-09A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
5	S7	7-1207-5	2212599-09A	m,p-Xylene	0.44	J	R	0.56	NO	0.56
5	S7	7-1207-5	2212599-09A	O-Xylene	0.28	U	R	0.56	YES	0.14
5	S8	8-1207-5	2212599-10A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
5	S8	8-1207-5	2212599-10A	Benzene	1.8		R	0.38	NO	1.8
5	S8	8-1207-5	2212599-10A	Toluene	1.1		R	0.5	NO	1.1
5	S8	8-1207-5	2212599-10A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
5	S8	8-1207-5	2212599-10A	m,p-Xylene	0.49	J	R	0.56	NO	0.56
5	S8	8-1207-5	2212599-10A	O-Xylene	0.28	U	R	0.56	YES	0.14

Run	Station	Sample ID	LAB ID	Compound	Concentration (µg/m3)	Data Flags	Sample Type	Rpt.Limit(µg/m3)	Detection Mark	Concentration Mod. Data Flag (µg/m3)
5	S9	9-1207-5	2212599-11A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
5	S9	9-1207-5	2212599-11A	Benzene	2		R	0.38	NO	2
5	S9	9-1207-5	2212599-11A	Toluene	1.3		R	0.5	NO	1.3
5	S9	9-1207-5	2212599-11A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
5	S9	9-1207-5	2212599-11A	m,p-Xylene	0.76		R	0.56	NO	0.76
5	S9	9-1207-5	2212599-11A	O-Xylene	0.28	U	R	0.56	YES	0.14
5	S10	10-1206-5A	2212599-12A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
5	S10	10-1206-5A	2212599-12A	Benzene	0.86		R	0.36	NO	0.86
5	S10	10-1206-5A	2212599-12A	Toluene	0.88		R	0.47	NO	0.88
5	S10	10-1206-5A	2212599-12A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
5	S10	10-1206-5A	2212599-12A	m,p-Xylene	0.4	J	R	0.52	NO	0.52
5	S10	10-1206-5A	2212599-12A	O-Xylene	0.26	U	R	0.52	YES	0.13
5	S11	11-1206-5A	2212599-14A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
5	S11	11-1206-5A	2212599-14A	Benzene	0.78		R	0.36	NO	0.78
5	S11	11-1206-5A	2212599-14A	Toluene	0.86		R	0.47	NO	0.86
5	S11	11-1206-5A	2212599-14A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
5	S11	11-1206-5A	2212599-14A	m,p-Xylene	0.38	J	R	0.52	NO	0.52
5	S11	11-1206-5A	2212599-14A	O-Xylene	0.26	U	R	0.52	YES	0.13
5	S12	12-1206-5	2212599-16A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
5	S12	12-1206-5	2212599-16A	Benzene	0.6		R	0.36	NO	0.6
5	S12	12-1206-5	2212599-16A	Toluene	0.87		R	0.47	NO	0.87
5	S12	12-1206-5	2212599-16A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
5	S12	12-1206-5	2212599-16A	m,p-Xylene	0.46	J	R	0.52	NO	0.52
5	S12	12-1206-5	2212599-16A	O-Xylene	0.26	U	R	0.52	YES	0.13
6	S1	1-1221-6A	2301128-01A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
6	S1	1-1221-6A	2301128-01A	Benzene	2.2		R	0.36	NO	2.2
6	S1	1-1221-6A	2301128-01A	Toluene	1		R	0.47	NO	1
6	S1	1-1221-6A	2301128-01A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
6	S1	1-1221-6A	2301128-01A	m,p-Xylene	0.32	J	R	0.52	NO	0.52
6	S1	1-1221-6A	2301128-01A	O-Xylene	0.26	U	R	0.52	YES	0.13
6	S2	2-1221-6	2301128-03A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
6	S2	2-1221-6	2301128-03A	Benzene	1.2		R	0.36	NO	1.2
6	S2	2-1221-6	2301128-03A	Toluene	0.65		R	0.47	NO	0.65
6	S2	2-1221-6	2301128-03A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
6	S2	2-1221-6	2301128-03A	m,p-Xylene	0.26	U	R	0.52	YES	0.13
6	S2	2-1221-6	2301128-03A	O-Xylene	0.26	U	R	0.52	YES	0.13
6	S3	3-1221-6	2301128-04A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
6	S3	3-1221-6	2301128-04A	Benzene	2.6		R	0.36	NO	2.6
6	S3	3-1221-6	2301128-04A	Toluene	0.99		R	0.47	NO	0.99
6	S3	3-1221-6	2301128-04A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
6	S3	3-1221-6	2301128-04A	m,p-Xylene	0.4	J	R	0.52	NO	0.52
6	S3	3-1221-6	2301128-04A	O-Xylene	0.26	U	R	0.52	YES	0.13

Run	Station	Sample ID	LAB ID	Compound	Concentration (µg/m3)	Data Flags	Sample Type	Rpt.Limit(µg/m3)	Detection Mark	Concentration Mod. Data Flag (µg/m3)
6	S4	4-1221-6	2301128-05A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
6	S4	4-1221-6	2301128-05A	Benzene	2		R	0.36	NO	2
6	S4	4-1221-6	2301128-05A	Toluene	0.77		R	0.47	NO	0.77
6	S4	4-1221-6	2301128-05A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
6	S4	4-1221-6	2301128-05A	m,p-Xylene	0.26	U	R	0.52	YES	0.13
6	S4	4-1221-6	2301128-05A	O-Xylene	0.26	U	R	0.52	YES	0.13
6	S5	5-1221-6	2301128-06A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
6	S5	5-1221-6	2301128-06A	Benzene	1.2		R	0.36	NO	1.2
6	S5	5-1221-6	2301128-06A	Toluene	0.59		R	0.47	NO	0.59
6	S5	5-1221-6	2301128-06A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
6	S5	5-1221-6	2301128-06A	m,p-Xylene	0.26	U	R	0.52	YES	0.13
6	S5	5-1221-6	2301128-06A	O-Xylene	0.26	U	R	0.52	YES	0.13
6	S6	6-1221-6A	2301128-07A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
6	S6	6-1221-6A	2301128-07A	Benzene	1.1		R	0.36	NO	1.1
6	S6	6-1221-6A	2301128-07A	Toluene	0.57		R	0.47	NO	0.57
6	S6	6-1221-6A	2301128-07A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
6	S6	6-1221-6A	2301128-07A	m,p-Xylene	0.26	U	R	0.52	YES	0.13
6	S6	6-1221-6A	2301128-07A	O-Xylene	0.26	U	R	0.52	YES	0.13
6	S7	7-1221-6A	2301128-09A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
6	S7	7-1221-6A	2301128-09A	Benzene	0.82		R	0.36	NO	0.82
6	S7	7-1221-6A	2301128-09A	Toluene	0.57		R	0.47	NO	0.57
6	S7	7-1221-6A	2301128-09A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
6	S7	7-1221-6A	2301128-09A	m,p-Xylene	0.26	U	R	0.52	YES	0.13
6	S7	7-1221-6A	2301128-09A	O-Xylene	0.26	U	R	0.52	YES	0.13
6	S8	8-1221-6	2301128-11A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
6	S8	8-1221-6	2301128-11A	Benzene	1.3		R	0.36	NO	1.3
6	S8	8-1221-6	2301128-11A	Toluene	0.62		R	0.47	NO	0.62
6	S8	8-1221-6	2301128-11A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
6	S8	8-1221-6	2301128-11A	m,p-Xylene	0.26	U	R	0.52	YES	0.13
6	S8	8-1221-6	2301128-11A	O-Xylene	0.26	U	R	0.52	YES	0.13
6	S9	9-1221-6	2301128-12A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
6	S9	9-1221-6	2301128-12A	Benzene	1.3		R	0.36	NO	1.3
6	S9	9-1221-6	2301128-12A	Toluene	0.71		R	0.47	NO	0.71
6	S9	9-1221-6	2301128-12A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
6	S9	9-1221-6	2301128-12A	m,p-Xylene	0.26	U	R	0.52	YES	0.13
6	S9	9-1221-6	2301128-12A	O-Xylene	0.26	U	R	0.52	YES	0.13
6	S10	10-1221-6	2301128-13A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
6	S10	10-1221-6	2301128-13A	Benzene	0.89		R	0.36	NO	0.89
6	S10	10-1221-6	2301128-13A	Toluene	0.63		R	0.47	NO	0.63
6	S10	10-1221-6	2301128-13A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
6	S10	10-1221-6	2301128-13A	m,p-Xylene	0.26	U	R	0.52	YES	0.13
6	S10	10-1221-6	2301128-13A	O-Xylene	0.26	U	R	0.52	YES	0.13

Run	Station	Sample ID	LAB ID	Compound	Concentration (µg/m3)	Data Flags	Sample Type	Rpt.Limit(µg/m3)	Detection Mark	Concentration Mod. Data Flag (µg/m3)
6	S11	11-1221-6	2301128-14A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
6	S11	11-1221-6	2301128-14A	Benzene	0.84		R	0.36	NO	0.84
6	S11	11-1221-6	2301128-14A	Toluene	0.74		R	0.47	NO	0.74
6	S11	11-1221-6	2301128-14A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
6	S11	11-1221-6	2301128-14A	m,p-Xylene	0.26	U	R	0.52	YES	0.13
6	S11	11-1221-6	2301128-14A	O-Xylene	0.26	U	R	0.52	YES	0.13
6	S12	12-1221-6A	2301128-15A	1,3 Butadiene	0.13	U	R	0.27	YES	0.065
6	S12	12-1221-6A	2301128-15A	Benzene	0.91		R	0.36	NO	0.91
6	S12	12-1221-6A	2301128-15A	Toluene	0.68		R	0.47	NO	0.68
6	S12	12-1221-6A	2301128-15A	Ethylbenzene	0.26	U	R	0.52	YES	0.13
6	S12	12-1221-6A	2301128-15A	m,p-Xylene	0.26	U	R	0.52	YES	0.13
6	S12	12-1221-6A	2301128-15A	O-Xylene	0.26	U	R	0.52	YES	0.13
7	S1	M325-1-7	2301427-01A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
7	S1	M325-1-7	2301427-01A	Benzene	1.3		R	0.38	NO	1.3
7	S1	M325-1-7	2301427-01A	Toluene	0.97		R	0.5	NO	0.97
7	S1	M325-1-7	2301427-01A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
7	S1	M325-1-7	2301427-01A	m,p-Xylene	0.4	J	R	0.56	NO	0.56
7	S1	M325-1-7	2301427-01A	O-Xylene	0.28	U	R	0.56	YES	0.14
7	S2	M325-2-7	2301427-03A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
7	S2	M325-2-7	2301427-03A	Benzene	0.87		R	0.38	NO	0.87
7	S2	M325-2-7	2301427-03A	Toluene	0.77		R	0.5	NO	0.77
7	S2	M325-2-7	2301427-03A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
7	S2	M325-2-7	2301427-03A	m,p-Xylene	0.33	J	R	0.56	NO	0.56
7	S2	M325-2-7	2301427-03A	O-Xylene	0.28	U	R	0.56	YES	0.14
7	S3	M325-3-7	2301427-05A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
7	S3	M325-3-7	2301427-05A	Benzene	2.2		R	0.38	NO	2.2
7	S3	M325-3-7	2301427-05A	Toluene	1.6		R	0.5	NO	1.6
7	S3	M325-3-7	2301427-05A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
7	S3	M325-3-7	2301427-05A	m,p-Xylene	0.46	J	R	0.56	NO	0.56
7	S3	M325-3-7	2301427-05A	O-Xylene	0.28	U	R	0.56	YES	0.14
7	S4	M325-4-7	2301427-06A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
7	S4	M325-4-7	2301427-06A	Benzene	3		R	0.38	NO	3
7	S4	M325-4-7	2301427-06A	Toluene	1.8		R	0.5	NO	1.8
7	S4	M325-4-7	2301427-06A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
7	S4	M325-4-7	2301427-06A	m,p-Xylene	0.41	J	R	0.56	NO	0.56
7	S4	M325-4-7	2301427-06A	O-Xylene	0.28	U	R	0.56	YES	0.14
7	S5	M325-5-7	2301427-07A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
7	S5	M325-5-7	2301427-07A	Benzene	2.4		R	0.38	NO	2.4
7	S5	M325-5-7	2301427-07A	Toluene	1.8		R	0.5	NO	1.8
7	S5	M325-5-7	2301427-07A	Ethylbenzene	0.28	U	R	0.56	YES	0.14

Run	Station	Sample ID	LAB ID	Compound	Concentration (µg/m3)	Data Flags	Sample Type	Rpt.Limit(µg/m3)	Detection Mark	Concentration Mod. Data Flag (µg/m3)
7	S5	M325-5-7	2301427-07A	m,p-Xylene	0.45	J	R	0.56	NO	0.56
7	S5	M325-5-7	2301427-07A	O-Xylene	0.28	U	R	0.56	YES	0.14
7	S6	M325-6-7	2301427-08A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
7	S6	M325-6-7	2301427-08A	Benzene	3.6		R	0.38	NO	3.6
7	S6	M325-6-7	2301427-08A	Toluene	1.2		R	0.5	NO	1.2
7	S6	M325-6-7	2301427-08A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
7	S6	M325-6-7	2301427-08A	m,p-Xylene	0.46	J	R	0.56	NO	0.56
7	S6	M325-6-7	2301427-08A	O-Xylene	0.28	U	R	0.56	YES	0.14
7	S7	M325-7-7	2301427-09A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
7	S7	M325-7-7	2301427-09A	Benzene	1.6		R	0.38	NO	1.6
7	S7	M325-7-7	2301427-09A	Toluene	0.89		R	0.5	NO	0.89
7	S7	M325-7-7	2301427-09A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
7	S7	M325-7-7	2301427-09A	m,p-Xylene	0.38	J	R	0.56	NO	0.56
7	S7	M325-7-7	2301427-09A	O-Xylene	0.28	U	R	0.56	YES	0.14
7	S8	M325-8-7	2301427-11A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
7	S8	M325-8-7	2301427-11A	Benzene	0.74		R	0.38	NO	0.74
7	S8	M325-8-7	2301427-11A	Toluene	0.74		R	0.5	NO	0.74
7	S8	M325-8-7	2301427-11A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
7	S8	M325-8-7	2301427-11A	m,p-Xylene	0.28	J	R	0.56	NO	0.56
7	S8	M325-8-7	2301427-11A	O-Xylene	0.28	U	R	0.56	YES	0.14
7	S9	M325-9-7	2301427-12A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
7	S9	M325-9-7	2301427-12A	Benzene	0.75		R	0.38	NO	0.75
7	S9	M325-9-7	2301427-12A	Toluene	0.88		R	0.5	NO	0.88
7	S9	M325-9-7	2301427-12A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
7	S9	M325-9-7	2301427-12A	m,p-Xylene	0.33	J	R	0.56	NO	0.56
7	S9	M325-9-7	2301427-12A	O-Xylene	0.28	U	R	0.56	YES	0.14
7	S10	M325-10-7	2301427-13A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
7	S10	M325-10-7	2301427-13A	Benzene	2.4		R	0.38	NO	2.4
7	S10	M325-10-7	2301427-13A	Toluene	0.96		R	0.5	NO	0.96
7	S10	M325-10-7	2301427-13A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
7	S10	M325-10-7	2301427-13A	m,p-Xylene	0.39	J	R	0.56	NO	0.56
7	S10	M325-10-7	2301427-13A	O-Xylene	0.28	U	R	0.56	YES	0.14
7	S11	M325-11-7	2301427-14A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
7	S11	M325-11-7	2301427-14A	Benzene	1.7		R	0.38	NO	1.7
7	S11	M325-11-7	2301427-14A	Toluene	0.94		R	0.5	NO	0.94
7	S11	M325-11-7	2301427-14A	Ethylbenzene	0.28	U	R	0.56	YES	0.14
7	S11	M325-11-7	2301427-14A	m,p-Xylene	0.39	J	R	0.56	NO	0.56
7	S11	M325-11-7	2301427-14A	O-Xylene	0.28	U	R	0.56	YES	0.14
7	S12	M325-12-7	2301427-16A	1,3 Butadiene	0.14	U	R	0.29	YES	0.07
7	S12	M325-12-7	2301427-16A	Benzene	0.87		R	0.38	NO	0.87
7	S12	M325-12-7	2301427-16A	Toluene	0.89		R	0.5	NO	0.89
7	S12	M325-12-7	2301427-16A	Ethylbenzene	0.28	U	R	0.56	YES	0.14

Run	Station	Sample ID	LAB ID	Compound	Concentration (µg/m3)	Data Flags	Sample Type	Rpt.Limit(µg/m3)	Detection Mark	Concentration Mod. Data Flag (µg/m3)
7	S12	M325-12-7	2301427-16A	m,p-Xylene	0.36	J	R	0.56	NO	0.56
7	S12	M325-12-7	2301427-16A	O-Xylene	0.28	U	R	0.56	YES	0.14

Run	Station	LAB ID	Sample ID	Compound	START	STOP	Run Time	Concentration-DUP- (µg/m3)	Data Flags	Sample Type	Rpt.Limit (µg/m3)	Sample Concentration (µg/m3)	NO	Difference %
1	S2	2211016-04A	m325-2D-1	1,3Butadiene	10/12/2022 08:41:00	10/26/2022 10:40:00	14 days 1 hrs 59 mins	0.14	U	D	0.29	0.14	1_S2_1,3Butadiene	
1	S2	2211016-04A	m325-2D-1	Benzene	10/12/2022 08:41:00	10/26/2022 10:40:00	14 days 1 hrs 59 mins	0.81		D	0.38	0.98	1_S2_Benzene	17.35
1	S2	2211016-04A	m325-2D-1	Toluene	10/12/2022 08:41:00	10/26/2022 10:40:00	14 days 1 hrs 59 mins	0.54		D	0.49	0.69	1_S2_Toluene	21.74
1	S2	2211016-04A	m325-2D-1	Ethylbenzene	10/12/2022 08:41:00	10/26/2022 10:40:00	14 days 1 hrs 59 mins	0.28	U	D	0.55	0.28	1_S2_Ethylbenzene	
1	S2	2211016-04A	m325-2D-1	m,p-Xylene	10/12/2022 08:41:00	10/26/2022 10:40:00	14 days 1 hrs 59 mins	0.28	UPC	D	0.55	0.39	1_S2_m,p-Xylene	28.21
1	S2	2211016-04A	m325-2D-1	O-Xylene	10/12/2022 08:41:00	10/26/2022 10:40:00	14 days 1 hrs 59 mins	0.28	U	D	0.55	0.28	1_S2_O-Xylene	
1	S8	2211016-12A	m325-8D-1	1,3Butadiene	10/12/2022 12:48:00	10/26/2022 13:08:00	14 days 0 hrs 20 mins	0.14	U	D	0.29	0.14	1_S8_1,3Butadiene	
1	S8	2211016-12A	m325-8D-1	Benzene	10/12/2022 12:48:00	10/26/2022 13:08:00	14 days 0 hrs 20 mins	0.51		D	0.38	0.44	1_S8_Benzene	15.91
1	S8	2211016-12A	m325-8D-1	Toluene	10/12/2022 12:48:00	10/26/2022 13:08:00	14 days 0 hrs 20 mins	0.55		D	0.49	0.57	1_S8_Toluene	3.51
1	S8	2211016-12A	m325-8D-1	Ethylbenzene	10/12/2022 12:48:00	10/26/2022 13:08:00	14 days 0 hrs 20 mins	0.28	U	D	0.55	0.28	1_S8_Ethylbenzene	
1	S8	2211016-12A	m325-8D-1	m,p-Xylene	10/12/2022 12:48:00	10/26/2022 13:08:00	14 days 0 hrs 20 mins	0.28	UPC	D	0.55	0.32	1_S8_m,p-Xylene	12.50
1	S8	2211016-12A	m325-8D-1	O-Xylene	10/12/2022 12:48:00	10/26/2022 13:08:00	14 days 0 hrs 20 mins	0.28	U	D	0.55	0.28	1_S8_O-Xylene	
2	S3	2211386-04A	3-1026-3B	1,3Butadiene	10/26/2022 10:58:00	11/09/2022 10:30:00	13 days 23 hrs 32 mins	0.14	U	D	0.28	0.14	2_S3_1,3Butadiene	
2	S3	2211386-04A	3-1026-3B	Benzene	10/26/2022 10:58:00	11/09/2022 10:30:00	13 days 23 hrs 32 mins	1		D	0.38	1.2	2_S3_Benzene	16.67
2	S3	2211386-04A	3-1026-3B	Toluene	10/26/2022 10:58:00	11/09/2022 10:30:00	13 days 23 hrs 32 mins	1.5		D	0.49	1.6	2_S3_Toluene	6.25
2	S3	2211386-04A	3-1026-3B	Ethylbenzene	10/26/2022 10:58:00	11/09/2022 10:30:00	13 days 23 hrs 32 mins	0.28	U	D	0.55	0.28	2_S3_Ethylbenzene	
2	S3	2211386-04A	3-1026-3B	m,p-Xylene	10/26/2022 10:58:00	11/09/2022 10:30:00	13 days 23 hrs 32 mins	0.78		D	0.55	0.83	2_S3_m,p-Xylene	6.02
2	S3	2211386-04A	3-1026-3B	O-Xylene	10/26/2022 10:58:00	11/09/2022 10:30:00	13 days 23 hrs 32 mins	0.29	J	D	0.55	0.32	2_S3_O-Xylene	9.38
2	S8	2211386-11A	8-1026-3B	1,3Butadiene	10/26/2022 13:08:00	11/09/2022 11:49:00	13 days 22 hrs 41 mins	0.14	U	D	0.28	0.14	2_S8_1,3Butadiene	
2	S8	2211386-11A	8-1026-3B	Benzene	10/26/2022 13:08:00	11/09/2022 11:49:00	13 days 22 hrs 41 mins	1.1		D	0.38	1	2_S8_Benzene	10.00
2	S8	2211386-11A	8-1026-3B	Toluene	10/26/2022 13:08:00	11/09/2022 11:49:00	13 days 22 hrs 41 mins	1.4		D	0.49	1.3	2_S8_Toluene	7.69
2	S8	2211386-11A	8-1026-3B	Ethylbenzene	10/26/2022 13:08:00	11/09/2022 11:49:00	13 days 22 hrs 41 mins	0.28	U	D	0.55	0.28	2_S8_Ethylbenzene	
2	S8	2211386-11A	8-1026-3B	m,p-Xylene	10/26/2022 13:08:00	11/09/2022 11:49:00	13 days 22 hrs 41 mins	0.62		D	0.55	0.58	2_S8_m,p-Xylene	6.90
2	S8	2211386-11A	8-1026-3B	O-Xylene	10/26/2022 13:08:00	11/09/2022 11:49:00	13 days 22 hrs 41 mins	0.28	U	D	0.55	0.28	2_S8_O-Xylene	
3	S5	2211681-06A	5-1109-33-7B	1,3Butadiene	11/09/2022 11:04:00	11/22/2022 11:44:00	13 days 0 hrs 40 mins	0.15	U	D	0.31	0.15	3_S5_1,3Butadiene	
3	S5	2211681-06A	5-1109-33-7B	Benzene	11/09/2022 11:04:00	11/22/2022 11:44:00	13 days 0 hrs 40 mins	2		D	0.42	2.1	3_S5_Benzene	4.76
3	S5	2211681-06A	5-1109-33-7B	Toluene	11/09/2022 11:04:00	11/22/2022 11:44:00	13 days 0 hrs 40 mins	1.1		D	0.53	1.1	3_S5_Toluene	
3	S5	2211681-06A	5-1109-33-7B	Ethylbenzene	11/09/2022 11:04:00	11/22/2022 11:44:00	13 days 0 hrs 40 mins	0.3	U	D	0.6	0.3	3_S5_Ethylbenzene	
3	S5	2211681-06A	5-1109-33-7B	m,p-Xylene	11/09/2022 11:04:00	11/22/2022 11:44:00	13 days 0 hrs 40 mins	0.51	J	D	0.6	0.48	3_S5_m,p-Xylene	6.25
3	S5	2211681-06A	5-1109-33-7B	O-Xylene	11/09/2022 11:04:00	11/22/2022 11:44:00	13 days 0 hrs 40 mins	0.3		D	0.6	0.3	3_S5_O-Xylene	
3	S9	2211681-12A	9-1109-33-1D	1,3Butadiene	11/09/2022 11:43:00	11/22/2022 13:16:00	13 days 1 hrs 33 mins	0.15	U	D	0.31	0.15	3_S9_1,3Butadiene	
3	S9	2211681-12A	9-1109-33-1D	Benzene	11/09/2022 11:43:00	11/22/2022 13:16:00	13 days 1 hrs 33 mins	0.89		D	0.42	0.95	3_S9_Benzene	6.32
3	S9	2211681-12A	9-1109-33-1D	Toluene	11/09/2022 11:43:00	11/22/2022 13:16:00	13 days 1 hrs 33 mins	0.89		D	0.53	0.92	3_S9_Toluene	3.26
3	S9	2211681-12A	9-1109-33-1D	Ethylbenzene	11/09/2022 11:43:00	11/22/2022 13:16:00	13 days 1 hrs 33 mins	0.3	U	D	0.6	0.3	3_S9_Ethylbenzene	
3	S9	2211681-12A	9-1109-33-1D	m,p-Xylene	11/09/2022 11:43:00	11/22/2022 13:16:00	13 days 1 hrs 33 mins	0.38	J	D	0.6	0.39	3_S9_m,p-Xylene	2.56
3	S9	2211681-12A	9-1109-33-1D	O-Xylene	11/09/2022 11:43:00	11/22/2022 13:16:00	13 days 1 hrs 33 mins	0.3	U	D	0.6	0.3	3_S9_O-Xylene	
4	S6	2212198-08A	6-1122-4-7	1,3Butadiene	11/22/2022 12:40:00	12/07/2022 08:05:00	14 days 19 hrs 25 mins	0.13	U	D	0.27	0.13	4_S6_1,3Butadiene	
4	S6	2212198-08A	6-1122-4-7	Benzene	11/22/2022 12:40:00	12/07/2022 08:05:00	14 days 19 hrs 25 mins	0.9		D	0.36	0.9	4_S6_Benzene	
4	S6	2212198-08A	6-1122-4-7	Toluene	11/22/2022 12:40:00	12/07/2022 08:05:00	14 days 19 hrs 25 mins	0.76		D	0.46	0.73	4_S6_Toluene	4.11
4	S6	2212198-08A	6-1122-4-7	Ethylbenzene	11/22/2022 12:40:00	12/07/2022 08:05:00	14 days 19 hrs 25 mins	0.26	U	D	0.52	0.26	4_S6_Ethylbenzene	
4	S6	2212198-08A	6-1122-4-7	m,p-Xylene	11/22/2022 12:40:00	12/07/2022 08:05:00	14 days 19 hrs 25 mins	0.29	J	D	0.52	0.26	4_S6_m,p-Xylene	11.54
4	S6	2212198-08A	6-1122-4-7	O-Xylene	11/22/2022 12:40:00	12/07/2022 08:05:00	14 days 19 hrs 25 mins	0.26	U	D	0.52	0.26	4_S6_O-Xylene	
4	S11	2212198-16A	11-1122-4-11	1,3Butadiene	11/22/2022 14:55:00	12/06/2022 16:02:00	14 days 1 hrs 7 mins	0.14	U	D	0.29	0.14	4_S11_1,3Butadiene	
4	S11	2212198-16A	11-1122-4-11	Benzene	11/22/2022 14:55:00	12/06/2022 16:02:00	14 days 1 hrs 7 mins	0.82		D	0.38	0.83	4_S11_Benzene	1.20
4	S11	2212198-16A	11-1122-4-11	Toluene	11/22/2022 14:55:00	12/06/2022 16:02:00	14 days 1 hrs 7 mins	0.91		D	0.5	0.92	4_S11_Toluene	1.09
4	S11	2212198-16A	11-1122-4-11	Ethylbenzene	11/22/2022 14:55:00	12/06/2022 16:02:00	14 days 1 hrs 7 mins	0.28	U	D	0.56	0.28	4_S11_Ethylbenzene	
4	S11	2212198-16A	11-1122-4-11	m,p-Xylene	11/22/2022 14:55:00	12/06/2022 16:02:00	14 days 1 hrs 7 mins	0.4	J	D	0.56	0.42	4_S11_m,p-Xylene	4.76
4	S11	2212198-16A	11-1122-4-11	O-Xylene	11/22/2022 14:55:00	12/06/2022 16:02:00	14 days 1 hrs 7 mins	0.28	U	D	0.56	0.28	4_S11_O-Xylene	
5	S3	2212599-03A	3-1207-5A	1,3Butadiene	12/07/2022 08:38:00	12/21/2022 14:52:00	14 days 6 hrs 14 mins	0.14	U	D	0.29	0.14	5_S3_1,3Butadiene	
5	S3	2212599-03A	3-1207-5A	Benzene	12/07/2022 08:38:00	12/21/2022 14:52:00	14 days 6 hrs 14 mins	1.5		D	0.38	1.7	5_S3_Benzene	11.76
5	S3	2212599-03A	3-1207-5A	Toluene	12/07/2022 08:38:00	12/21/2022 14:52:00	14 days 6 hrs 14 mins	0.99		D	0.5	1.1	5_S3_Toluene	10.00

Run	Station	LAB ID	Sample ID	Compound	START	STOP	Run Time	Concentration-DUP- (µg/m3)	Data Flags	Sample Type	Rpt.Limit (µg/m3)	Sample Concentration (µg/m3)	NO	Difference %
5	S3	2212599-03A	3-1207-5A	Ethylbenzene	12/07/2022 08:38:00	12/21/2022 14:52:00	14 days 6 hrs 14 mins	0.28	U	D	0.56	0.28	5_S3_Ethylbenzene	
5	S3	2212599-03A	3-1207-5A	m,p-Xylene	12/07/2022 08:38:00	12/21/2022 14:52:00	14 days 6 hrs 14 mins	0.49	J	D	0.56	0.52	5_S3_m,p-Xylene	5.77
5	S3	2212599-03A	3-1207-5A	O-Xylene	12/07/2022 08:38:00	12/21/2022 14:52:00	14 days 6 hrs 14 mins	0.28	U	D	0.56	0.28	5_S3_O-Xylene	
5	S10	2212599-13A	10-1206-5B	1,3Butadiene	12/06/2022 16:25:00	12/21/2022 12:50:00	14 days 20 hrs 25 mins	0.13	U	D	0.27	0.13	5_S10_1,3Butadiene	
5	S10	2212599-13A	10-1206-5B	Benzene	12/06/2022 16:25:00	12/21/2022 12:50:00	14 days 20 hrs 25 mins	0.84		D	0.36	0.86	5_S10_Benzene	2.33
5	S10	2212599-13A	10-1206-5B	Toluene	12/06/2022 16:25:00	12/21/2022 12:50:00	14 days 20 hrs 25 mins	0.86		D	0.47	0.88	5_S10_Toluene	2.27
5	S10	2212599-13A	10-1206-5B	Ethylbenzene	12/06/2022 16:25:00	12/21/2022 12:50:00	14 days 20 hrs 25 mins	0.26	U	D	0.52	0.26	5_S10_Ethylbenzene	
5	S10	2212599-13A	10-1206-5B	m,p-Xylene	12/06/2022 16:25:00	12/21/2022 12:50:00	14 days 20 hrs 25 mins	0.34	J	D	0.52	0.4	5_S10_m,p-Xylene	15.00
5	S10	2212599-13A	10-1206-5B	O-Xylene	12/06/2022 16:25:00	12/21/2022 12:50:00	14 days 20 hrs 25 mins	0.26	U	D	0.52	0.26	5_S10_O-Xylene	
6	S7	2301128-10A	7-1221-6B	1,3-Butadiene	12/21/2022 14:26:00	01/05/2023 17:00:00	15 days 2 hrs 34 mins	0.13	U	D	0.27	0.13	6_S7_1,3-Butadiene	
6	S7	2301128-10A	7-1221-6B	Benzene	12/21/2022 14:26:00	01/05/2023 17:00:00	15 days 2 hrs 34 mins	0.8		D	0.36	0.82	6_S7_Benzene	2.44
6	S7	2301128-10A	7-1221-6B	Toluene	12/21/2022 14:26:00	01/05/2023 17:00:00	15 days 2 hrs 34 mins	0.61		D	0.47	0.57	6_S7_Toluene	7.02
6	S7	2301128-10A	7-1221-6B	Ethyl Benzene	12/21/2022 14:26:00	01/05/2023 17:00:00	15 days 2 hrs 34 mins	0.26	U	D	0.52	0.26	6_S7_Ethyl Benzene	
6	S7	2301128-10A	7-1221-6B	m,p-Xylene	12/21/2022 14:26:00	01/05/2023 17:00:00	15 days 2 hrs 34 mins	0.26	U	D	0.52	0.26	6_S7_m,p-Xylene	
6	S7	2301128-10A	7-1221-6B	o-Xylene	12/21/2022 14:26:00	01/05/2023 17:00:00	15 days 2 hrs 34 mins	0.26	U	D	0.52	0.26	6_S7_o-Xylene	
6	S12	2301128-16A	12-1221-6B	1,3-Butadiene	12/21/2022 14:05:00	01/05/2023 18:15:00	15 days 4 hrs 10 mins	0.13	U	D	0.27	0.13	5_S12_1,3-Butadiene	
6	S12	2301128-16A	12-1221-6B	Benzene	12/21/2022 14:05:00	01/05/2023 18:15:00	15 days 4 hrs 10 mins	0.84		D	0.36	0.91	6_S12_Benzene	7.69
6	S12	2301128-16A	12-1221-6B	Toluene	12/21/2022 14:05:00	01/05/2023 18:15:00	15 days 4 hrs 10 mins	0.74		D	0.47	0.68	6_S12_Toluene	8.82
6	S12	2301128-16A	12-1221-6B	Ethyl Benzene	12/21/2022 14:05:00	01/05/2023 18:15:00	15 days 4 hrs 10 mins	0.26	U	D	0.52	0.26	5_S12_Ethyl Benzene	
6	S12	2301128-16A	12-1221-6B	m,p-Xylene	12/21/2022 14:05:00	01/05/2023 18:15:00	15 days 4 hrs 10 mins	0.3	J	D	0.52	0.26	6_S12_m,p-Xylene	15.38
6	S12	2301128-16A	12-1221-6B	o-Xylene	12/21/2022 14:05:00	01/05/2023 18:15:00	15 days 4 hrs 10 mins	0.26	U	D	0.52	0.26	6_S12_o-Xylene	
7	S1	M325-1D-7	2301427-02A	1,3Butadiene	01/05/2023 18:25:00	01/19/2023 17:26:00	13 days 23 hrs 1 mins	0.14	U	D	0.29	0.14	7_S1_1,3Butadiene	
7	S1	M325-1D-7	2301427-02A	Benzene	01/05/2023 18:25:00	01/19/2023 17:26:00	13 days 23 hrs 1 mins	1.3		D	0.38	1.3	7_S1_Benzene	
7	S1	M325-1D-7	2301427-02A	Toluene	01/05/2023 18:25:00	01/19/2023 17:26:00	13 days 23 hrs 1 mins	0.98		D	0.5	0.97	7_S1_Toluene	1.03
7	S1	M325-1D-7	2301427-02A	Ethylbenzene	01/05/2023 18:25:00	01/19/2023 17:26:00	13 days 23 hrs 1 mins	0.28	U	D	0.56	0.28	7_S1_Ethylbenzene	
7	S1	M325-1D-7	2301427-02A	m,p-Xylene	01/05/2023 18:25:00	01/19/2023 17:26:00	13 days 23 hrs 1 mins	0.40	J	D	0.56	0.4	7_S1_m,p-Xylene	
7	S1	M325-1D-7	2301427-02A	O-Xylene	01/05/2023 18:25:00	01/19/2023 17:26:00	13 days 23 hrs 1 mins	0.28	U	D	0.56	0.28	7_S1_O-Xylene	
7	S11	M325-11D-7	2301427-15A	1,3Butadiene	01/05/2023 16:57:00	01/19/2023 17:02:00	14 days 0 hrs 5 mins	0.14	U	D	0.29	0.14	7_S11_1,3Butadiene	
7	S11	M325-11D-7	2301427-15A	Benzene	01/05/2023 16:57:00	01/19/2023 17:02:00	14 days 0 hrs 5 mins	1.7		D	0.38	1.7	7_S11_Benzene	
7	S11	M325-11D-7	2301427-15A	Toluene	01/05/2023 16:57:00	01/19/2023 17:02:00	14 days 0 hrs 5 mins	0.94		D	0.5	0.94	7_S11_Toluene	
7	S11	M325-11D-7	2301427-15A	Ethylbenzene	01/05/2023 16:57:00	01/19/2023 17:02:00	14 days 0 hrs 5 mins	0.28	U	D	0.56	0.28	7_S11_Ethylbenzene	
7	S11	M325-11D-7	2301427-15A	m,p-Xylene	01/05/2023 16:57:00	01/19/2023 17:02:00	14 days 0 hrs 5 mins	0.30	J	D	0.56	0.39	7_S11_m,p-Xylene	23.08
7	S11	M325-11D-7	2301427-15A	O-Xylene	01/05/2023 16:57:00	01/19/2023 17:02:00	14 days 0 hrs 5 mins	0.28	U	D	0.56	0.28	7_S11_O-Xylene	

¹ Data flag definitions:

U-Compound analyzed for but not detected above the MDL value,

J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.

PC- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

Run	Station	LAB ID	Sample ID	Compound	START	STOP	Run Time	Concentration (µg/m3)	Data Flags	Sample Type
1	S1	2211016-02A	m325-1B-1	1,3Butadiene	10/12/2022 11:43:00	10/25/2022 12:43:00	13 days 1 hrs 0 mins	0.14	U	B
1	S1	2211016-02A	m325-1B-1	Benzene	10/12/2022 11:43:00	10/25/2022 12:43:00	13 days 1 hrs 0 mins	0.19	U	B
1	S1	2211016-02A	m325-1B-1	Toluene	10/12/2022 11:43:00	10/25/2022 12:43:00	13 days 1 hrs 0 mins	0.24	U	B
1	S1	2211016-02A	m325-1B-1	Ethylbenzene	10/12/2022 11:43:00	10/25/2022 12:43:00	13 days 1 hrs 0 mins	0.28	U	B
1	S1	2211016-02A	m325-1B-1	m,p-Xylene	10/12/2022 11:43:00	10/25/2022 12:43:00	13 days 1 hrs 0 mins	0.28	UPC	B
1	S1	2211016-02A	m325-1B-1	O-Xylene	10/12/2022 11:43:00	10/25/2022 12:43:00	13 days 1 hrs 0 mins	0.28	U	B
1	S7	2211016-10A	m325-7B-1	1,3Butadiene	10/12/2022 13:27:00	10/25/2022 13:26:00	12 days 23 hrs 59 mins	0.14	U	B
1	S7	2211016-10A	m325-7B-1	Benzene	10/12/2022 13:27:00	10/25/2022 13:26:00	12 days 23 hrs 59 mins	0.19	U	B
1	S7	2211016-10A	m325-7B-1	Toluene	10/12/2022 13:27:00	10/25/2022 13:26:00	12 days 23 hrs 59 mins	0.24	U	B
1	S7	2211016-10A	m325-7B-1	Ethylbenzene	10/12/2022 13:27:00	10/25/2022 13:26:00	12 days 23 hrs 59 mins	0.28	U	B
1	S7	2211016-10A	m325-7B-1	m,p-Xylene	10/12/2022 13:27:00	10/25/2022 13:26:00	12 days 23 hrs 59 mins	0.28	JPC	B
1	S7	2211016-10A	m325-7B-1	O-Xylene	10/12/2022 13:27:00	10/25/2022 13:26:00	12 days 23 hrs 59 mins	0.28	U	B
2	S4	2211386-06A	4-1026-3B	1,3Butadiene	10/26/2022 11:10:00	11/08/2022 10:53:00	12 days 23 hrs 43 mins	0.14	U	B
2	S4	2211386-06A	4-1026-3B	Benzene	10/26/2022 11:10:00	11/08/2022 10:53:00	12 days 23 hrs 43 mins	0.19	U	B
2	S4	2211386-06A	4-1026-3B	Toluene	10/26/2022 11:10:00	11/08/2022 10:53:00	12 days 23 hrs 43 mins	0.24	U	B
2	S4	2211386-06A	4-1026-3B	Ethylbenzene	10/26/2022 11:10:00	11/08/2022 10:53:00	12 days 23 hrs 43 mins	0.28	U	B
2	S4	2211386-06A	4-1026-3B	m,p-Xylene	10/26/2022 11:10:00	11/08/2022 10:53:00	12 days 23 hrs 43 mins	0.28	U	B
2	S4	2211386-06A	4-1026-3B	O-Xylene	10/26/2022 11:10:00	11/08/2022 10:53:00	12 days 23 hrs 43 mins	0.28	U	B
2	S9	2211386-13A	9-1026-3B	1,3Butadiene	10/26/2022 12:55:00	11/08/2022 11:39:00	12 days 22 hrs 44 mins	0.14	U	B
2	S9	2211386-13A	9-1026-3B	Benzene	10/26/2022 12:55:00	11/08/2022 11:39:00	12 days 22 hrs 44 mins	0.19	U	B
2	S9	2211386-13A	9-1026-3B	Toluene	10/26/2022 12:55:00	11/08/2022 11:39:00	12 days 22 hrs 44 mins	0.24	U	B
2	S9	2211386-13A	9-1026-3B	Ethylbenzene	10/26/2022 12:55:00	11/08/2022 11:39:00	12 days 22 hrs 44 mins	0.28	U	B
2	S9	2211386-13A	9-1026-3B	m,p-Xylene	10/26/2022 12:55:00	11/08/2022 11:39:00	12 days 22 hrs 44 mins	0.28	U	B
2	S9	2211386-13A	9-1026-3B	O-Xylene	10/26/2022 12:55:00	11/08/2022 11:39:00	12 days 22 hrs 44 mins	0.28	U	B
3	S6	2211681-08A	6-1109-33-6	1,3Butadiene	11/09/2022 11:24:00	11/22/2022 12:36:00	13 days 1 hrs 12 mins	0.15	U	B
3	S6	2211681-08A	6-1109-33-6	Benzene	11/09/2022 11:24:00	11/22/2022 12:36:00	13 days 1 hrs 12 mins	0.21	U	B
3	S6	2211681-08A	6-1109-33-6	Toluene	11/09/2022 11:24:00	11/22/2022 12:36:00	13 days 1 hrs 12 mins	0.27	U	B
3	S6	2211681-08A	6-1109-33-6	Ethylbenzene	11/09/2022 11:24:00	11/22/2022 12:36:00	13 days 1 hrs 12 mins	0.3	U	B
3	S6	2211681-08A	6-1109-33-6	m,p-Xylene	11/09/2022 11:24:00	11/22/2022 12:36:00	13 days 1 hrs 12 mins	0.3	U	B
3	S6	2211681-08A	6-1109-33-6	O-Xylene	11/09/2022 11:24:00	11/22/2022 12:36:00	13 days 1 hrs 12 mins	0.3	U	B
3	S10	2211681-16A	10-1109-33-1B	1,3Butadiene	11/09/2022 12:30:00	11/22/2022 14:43:00	13 days 2 hrs 13 mins	0.15	U	B
3	S10	2211681-16A	10-1109-33-1B	Benzene	11/09/2022 12:30:00	11/22/2022 14:43:00	13 days 2 hrs 13 mins	0.21	U	B
3	S10	2211681-16A	10-1109-33-1B	Toluene	11/09/2022 12:30:00	11/22/2022 14:43:00	13 days 2 hrs 13 mins	0.27	U	B
3	S10	2211681-16A	10-1109-33-1B	Ethylbenzene	11/09/2022 12:30:00	11/22/2022 14:43:00	13 days 2 hrs 13 mins	0.3	U	B

¹ Data flag definitions:

U-Compound analyzed for but not detected above the MDL value,

J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.

PC- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

Run	Station	LAB ID	Sample ID	Compound	START	STOP	Run Time	Concentration (µg/m3)	Data Flags	Sample Type
3	S10	2211681-16A	10-1109-33-1B	m,p-Xylene	11/09/2022 12:30:00	11/22/2022 14:43:00	13 days 2 hrs 13 mins	0.3	U	B
3	S10	2211681-16A	10-1109-33-1B	O-Xylene	11/09/2022 12:30:00	11/22/2022 14:43:00	13 days 2 hrs 13 mins	0.3	U	B
4	S7	2212198-06A	7-1122-4-7D	1,3Butadiene	11/22/2022 12:27:00	12/07/2022 07:55:00	14 days 19 hrs 28 mins	0.13	U	B
4	S7	2212198-06A	7-1122-4-7D	Benzene	11/22/2022 12:27:00	12/07/2022 07:55:00	14 days 19 hrs 28 mins	0.18	U	B
4	S7	2212198-06A	7-1122-4-7D	Toluene	11/22/2022 12:27:00	12/07/2022 07:55:00	14 days 19 hrs 28 mins	0.23	U	B
4	S7	2212198-06A	7-1122-4-7D	Ethylbenzene	11/22/2022 12:27:00	12/07/2022 07:55:00	14 days 19 hrs 28 mins	0.26	U	B
4	S7	2212198-06A	7-1122-4-7D	m,p-Xylene	11/22/2022 12:27:00	12/07/2022 07:55:00	14 days 19 hrs 28 mins	0.26	U	B
4	S7	2212198-06A	7-1122-4-7D	O-Xylene	11/22/2022 12:27:00	12/07/2022 07:55:00	14 days 19 hrs 28 mins	0.26	U	B
4	S10	2212198-13A	10-1122-4-1D	1,3Butadiene	11/22/2022 14:47:00	12/06/2022 16:25:00	14 days 1 hrs 38 mins	0.14	U	B
4	S10	2212198-13A	10-1122-4-1D	Benzene	11/22/2022 14:47:00	12/06/2022 16:25:00	14 days 1 hrs 38 mins	0.19	U	B
4	S10	2212198-13A	10-1122-4-1D	Toluene	11/22/2022 14:47:00	12/06/2022 16:25:00	14 days 1 hrs 38 mins	0.25	U	B
4	S10	2212198-13A	10-1122-4-1D	Ethylbenzene	11/22/2022 14:47:00	12/06/2022 16:25:00	14 days 1 hrs 38 mins	0.28	U	B
4	S10	2212198-13A	10-1122-4-1D	m,p-Xylene	11/22/2022 14:47:00	12/06/2022 16:25:00	14 days 1 hrs 38 mins	0.28	U	B
4	S10	2212198-13A	10-1122-4-1D	O-Xylene	11/22/2022 14:47:00	12/06/2022 16:25:00	14 days 1 hrs 38 mins	0.28	U	B
5	S4	2212599-06A	4-1207-5B	1,3Butadiene	12/07/2022 08:52:00	12/21/2022 15:02:00	14 days 6 hrs 10 mins	0.14	U	B
5	S4	2212599-06A	4-1207-5B	Benzene	12/07/2022 08:52:00	12/21/2022 15:02:00	14 days 6 hrs 10 mins	1.9	U	B
5	S4	2212599-06A	4-1207-5B	Toluene	12/07/2022 08:52:00	12/21/2022 15:02:00	14 days 6 hrs 10 mins	0.25	U	B
5	S4	2212599-06A	4-1207-5B	Ethylbenzene	12/07/2022 08:52:00	12/21/2022 15:02:00	14 days 6 hrs 10 mins	0.28	U	B
5	S4	2212599-06A	4-1207-5B	m,p-Xylene	12/07/2022 08:52:00	12/21/2022 15:02:00	14 days 6 hrs 10 mins	0.28	U	B
5	S4	2212599-06A	4-1207-5B	O-Xylene	12/07/2022 08:52:00	12/21/2022 15:02:00	14 days 6 hrs 10 mins	0.28	U	B
5	S11	2212599-15A	11-1206-5B	1,3Butadiene	12/06/2022 16:15:00	12/21/2022 12:40:00	14 days 20 hrs 25 mins	0.13	U	B
5	S11	2212599-15A	11-1206-5B	Benzene	12/06/2022 16:15:00	12/21/2022 12:40:00	14 days 20 hrs 25 mins	0.18	U	B
5	S11	2212599-15A	11-1206-5B	Toluene	12/06/2022 16:15:00	12/21/2022 12:40:00	14 days 20 hrs 25 mins	0.23	U	B
5	S11	2212599-15A	11-1206-5B	Ethylbenzene	12/06/2022 16:15:00	12/21/2022 12:40:00	14 days 20 hrs 25 mins	0.26	U	B
5	S11	2212599-15A	11-1206-5B	m,p-Xylene	12/06/2022 16:15:00	12/21/2022 12:40:00	14 days 20 hrs 25 mins	0.26	U	B
5	S11	2212599-15A	11-1206-5B	O-Xylene	12/06/2022 16:15:00	12/21/2022 12:40:00	14 days 20 hrs 25 mins	0.26	U	B
6	S1	2301128-02A	1-1221-6B	1,3-Butadiene	12/21/2022 15:56:00	01/05/2023 18:24:00	15 days 2 hrs 28 mins	0.13	U	B
6	S1	2301128-02A	1-1221-6B	Benzene	12/21/2022 15:56:00	01/05/2023 18:24:00	15 days 2 hrs 28 mins	0.23	J	B
6	S1	2301128-02A	1-1221-6B	Toluene	12/21/2022 15:56:00	01/05/2023 18:24:00	15 days 2 hrs 28 mins	0.23	U	B
6	S1	2301128-02A	1-1221-6B	Ethyl Benzene	12/21/2022 15:56:00	01/05/2023 18:24:00	15 days 2 hrs 28 mins	0.26	U	B
6	S1	2301128-02A	1-1221-6B	m,p-Xylene	12/21/2022 15:56:00	01/05/2023 18:24:00	15 days 2 hrs 28 mins	0.26	U	B
6	S1	2301128-02A	1-1221-6B	o-Xylene	12/21/2022 15:56:00	01/05/2023 18:24:00	15 days 2 hrs 28 mins	0.26	U	B
6	S6	2301128-08A	6-1221-6B	1,3-Butadiene	12/21/2022 14:34:00	01/05/2023 17:13:00	15 days 2 hrs 39 mins	0.13	U	B
6	S6	2301128-08A	6-1221-6B	Benzene	12/21/2022 14:34:00	01/05/2023 17:13:00	15 days 2 hrs 39 mins	0.23	J	B

¹ Data flag definitions:

U-Compound analyzed for but not detected above the MDL value,

J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.

PC- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

Run	Station	LAB ID	Sample ID	Compound	START	STOP	Run Time	Concentration (µg/m3)	Data Flags	Sample Type
6	S6	2301128-08A	6-1221-6B	Toluene	12/21/2022 14:34:00	01/05/2023 17:13:00	15 days 2 hrs 39 mins	0.23	U	B
6	S6	2301128-08A	6-1221-6B	Ethyl Benzene	12/21/2022 14:34:00	01/05/2023 17:13:00	15 days 2 hrs 39 mins	0.26	U	B
6	S6	2301128-08A	6-1221-6B	m,p-Xylene	12/21/2022 14:34:00	01/05/2023 17:13:00	15 days 2 hrs 39 mins	0.26	U	B
6	S6	2301128-08A	6-1221-6B	o-Xylene	12/21/2022 14:34:00	01/05/2023 17:13:00	15 days 2 hrs 39 mins	0.26	U	B
7	S2	M325-2B-7	2301427-04A	1,3Butadiene	01/05/2023 18:06:00	01/19/2023 15:42:00	13 days 21 hrs 36 mins	0.14	U	B
7	S2	M325-2B-7	2301427-04A	Benzene	01/05/2023 18:06:00	01/19/2023 15:42:00	13 days 21 hrs 36 mins	0.19	U	B
7	S2	M325-2B-7	2301427-04A	Toluene	01/05/2023 18:06:00	01/19/2023 15:42:00	13 days 21 hrs 36 mins	0.25	U	B
7	S2	M325-2B-7	2301427-04A	Ethylbenzene	01/05/2023 18:06:00	01/19/2023 15:42:00	13 days 21 hrs 36 mins	0.28	U	B
7	S2	M325-2B-7	2301427-04A	m,p-Xylene	01/05/2023 18:06:00	01/19/2023 15:42:00	13 days 21 hrs 36 mins	0.28	U	B
7	S2	M325-2B-7	2301427-04A	O-Xylene	01/05/2023 18:06:00	01/19/2023 15:42:00	13 days 21 hrs 36 mins	0.28	U	B
7	S7	M325-7B-7	2301427-10A	1,3Butadiene	01/05/2023 17:10:00	01/19/2023 16:31:00	13 days 23 hrs 21 mins	0.14	U	B
7	S7	M325-7B-7	2301427-10A	Benzene	01/05/2023 17:10:00	01/19/2023 16:31:00	13 days 23 hrs 21 mins	0.19	U	B
7	S7	M325-7B-7	2301427-10A	Toluene	01/05/2023 17:10:00	01/19/2023 16:31:00	13 days 23 hrs 21 mins	0.25	U	B
7	S7	M325-7B-7	2301427-10A	Ethylbenzene	01/05/2023 17:10:00	01/19/2023 16:31:00	13 days 23 hrs 21 mins	0.28	U	B
7	S7	M325-7B-7	2301427-10A	m,p-Xylene	01/05/2023 17:10:00	01/19/2023 16:31:00	13 days 23 hrs 21 mins	0.28	U	B
7	S7	M325-7B-7	2301427-10A	O-Xylene	01/05/2023 17:10:00	01/19/2023 16:31:00	13 days 23 hrs 21 mins	0.28	U	B

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Parameters**

Run No.		1	1	1	1	1
Sampling Location		IN1	IN2	DW1	DW2	UPW
Index	Analyte Name	Gross Weight (µg)	Gross Weight (µg)	Gross Weight (µg)	Gross Weight (µg)	Gross Weight (µg)
1	Acenaphthene	11.0000	6.6000	4.6000	5.9000	2.8000
2	Acenaphthylene	320.0000	160.0000	14.0000	38.0000	0.2500
3	Anthracene	35.0000	9.2000	8.2000	16.0000	0.2300
4	Benzo(a) anthracene	11.0000	0.8100	13.0000	5.8000	0.3100
5	Benzo(a)pyrene	2.5000	0.5300	8.7000	3.0000	0.3300
6	Benzo(b)fluoranthene	7.7000	1.0000	15.0000	6.1000	0.5400
7	Benzo(e)pyrene	3.0000	0.5400	7.4000	3.1000	0.3200
8	Benzo(g,h,i)perylene	1.5000	0.4700	5.9000	2.3000	0.3200
9	Benzo(k)fluoranthene	2.9000	0.3500	5.4000	2.1000	
10	Chrysene	13.0000	0.9100	12.0000	6.0000	0.3700
11	Dibenzo(a,h)anthracene			1.9000		
12	Fluoranthene	54.0000	5.5000	27.0000	31.0000	0.8400
13	Fluorene	110.0000	45.0000	12.0000	26.0000	1.6000
14	Indeno(1,2,3-cd)pyrene	1.8000	0.5100	6.9000	2.7000	0.3000
15	1-Methylnaphthalene	150.0000	62.0000	14.0000	27.0000	4.3000
16	2-Methylnaphthalene	430.0000	160.0000	31.0000	60.0000	8.4000
17	Naphthalene	7000.0000	1700.0000	340.0000	840.0000	13.0000
18	Perylene	0.6700		2.2000	0.8200	
19	Phenanthrene	160.0000	40.0000	31.0000	64.0000	2.3000
20	Pyrene	31.0000	2.9000	18.0000	18.0000	0.5200

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EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.		1		
Sampling Location		IN1		
Index Analyte Name	Reporting Limit (µg)	Lab Result (µg)	Final Result (µg)	Data Flag(s)
1 Acenaphthene	0.20	11.0000	11.0000	RL-08
2 Acenaphthylene	0.20	320.0000	320.0000	RL-08
3 Anthracene	0.20	35.0000	35.0000	RL-08
4 Benzo(a) anthracene	0.20	11.0000	11.0000	RL-08
5 Benzo(a)pyrene	0.20	2.5000	2.5000	RL-08
6 Benzo(b)fluoranthene	0.20	7.7000	7.7000	RL-08
7 Benzo(e)pyrene	0.20	3.0000	3.0000	RL-08
8 Benzo(g,h,i)perylene	0.20	1.5000	1.5000	RL-08
9 Benzo(k)fluoranthene	0.20	2.9000	2.9000	RL-08
10 Chrysene	0.20	13.0000	13.0000	RL-08
11 Dibenzo(a,h)anthracene	0.20	0.0000	<0.2000	RL-08
12 Fluoranthene	0.20	54.0000	54.0000	RL-08
13 Fluorene	0.20	110.0000	110.0000	RL-08
14 Indeno(1,2,3-cd)pyrene	0.20	1.8000	1.8000	RL-08
15 1-Methylnaphthalene	0.20	150.0000	150.0000	RL-08
16 2-Methylnaphthalene	0.20	430.0000	430.0000	RL-08
17 Naphthalene	0.50	7000.0000	7000.0000	RL-08
18 Perylene	0.20	0.6700	0.6700	RL-08
19 Phenanthrene	0.20	160.0000	160.0000	RL-08
20 Pyrene	0.20	31.0000	31.0000	RL-08
21 Total PAH's			8345.0700	

RL-08 Elevated reporting limit due to sample matrix interference.
* Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.	1			
Sampling Location	IN2			
	Reporting Limit	Lab Result	Final Result	Data Flag(s)
Index Analyte Name	(µg)	(µg)	(µg)	
1 Acenaphthene	0.20	6.6000	6.6000	
2 Acenaphthylene	0.20	160.0000	160.0000	
3 Anthracene	0.20	9.2000	9.2000	
4 Benzo(a) anthracene	0.20	0.8100	0.8100	
5 Benzo(a)pyrene	0.20	0.5300	0.5300	
6 Benzo(b)fluoranthene	0.20	1.0000	1.0000	
7 Benzo(e)pyrene	0.20	0.5400	0.5400	
8 Benzo(g,h,i)perylene	0.20	0.4700	0.4700	
9 Benzo(k)fluoranthene	0.20	0.3500	0.3500	
10 Chrysene	0.20	0.9100	0.9100	
11 Dibenzo(a,h)anthracene	0.20	0.0000	<0.2000	
12 Fluoranthene	0.20	5.5000	5.5000	
13 Fluorene	0.20	45.0000	45.0000	
14 Indeno(1,2,3-cd)pyrene	0.20	0.5100	0.5100	
15 1-Methylnaphthalene	0.20	62.0000	62.0000	
16 2-Methylnaphthalene	0.20	160.0000	160.0000	
17 Naphthalene	0.50	1700.0000	1700.0000	
18 Perylene	0.20	0.0000	<0.2000	
19 Phenanthrene	0.20	40.0000	40.0000	
20 Pyrene	0.20	2.9000	2.9000	
21 Total PAH's			2196.3200	

* Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.		1		
Sampling Location		DW1		
Index Analyte Name	Reporting Limit (µg)	Lab Result (µg)	Final Result (µg)	Data Flag(s)
1 Acenaphthene	0.20	4.6000	4.6000	RL-08
2 Acenaphthylene	0.20	14.0000	14.0000	RL-08
3 Anthracene	0.20	8.2000	8.2000	RL-08
4 Benzo(a) anthracene	0.20	13.0000	13.0000	RL-08
5 Benzo(a)pyrene	0.20	8.7000	8.7000	RL-08
6 Benzo(b)fluoranthene	0.20	15.0000	15.0000	RL-08
7 Benzo(e)pyrene	0.20	7.4000	7.4000	RL-08
8 Benzo(g,h,i)perylene	0.20	5.9000	5.9000	RL-08
9 Benzo(k)fluoranthene	0.20	5.4000	5.4000	RL-08
10 Chrysene	0.20	12.0000	12.0000	RL-08
11 Dibenzo(a,h)anthracene	0.20	1.9000	1.9000	RL-08
12 Fluoranthene	0.20	27.0000	27.0000	RL-08
13 Fluorene	0.20	12.0000	12.0000	RL-08
14 Indeno(1,2,3-cd)pyrene	0.20	6.9000	6.9000	RL-08
15 1-Methylnaphthalene	0.20	14.0000	14.0000	RL-08
16 2-Methylnaphthalene	0.20	31.0000	31.0000	RL-08
17 Naphthalene	0.50	340.0000	340.0000	RL-08
18 Perylene	0.20	2.2000	2.2000	RL-08
19 Phenanthrene	0.20	31.0000	31.0000	RL-08
20 Pyrene	0.20	18.0000	18.0000	RL-08
21 Total PAH's			578.2000	

RL-08 Elevated reporting limit due to sample matrix interference.
* Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.		1		
Sampling Location		DW2		
Index Analyte Name	Reporting Limit (µg)	Lab Result (µg)	Final Result (µg)	Data Flag(s)
1 Acenaphthene	0.20	5.9000	5.9000	
2 Acenaphthylene	0.20	38.0000	38.0000	
3 Anthracene	0.20	16.0000	16.0000	
4 Benzo(a) anthracene	0.20	5.8000	5.8000	
5 Benzo(a)pyrene	0.20	3.0000	3.0000	
6 Benzo(b)fluoranthene	0.20	6.1000	6.1000	
7 Benzo(e)pyrene	0.20	3.1000	3.1000	
8 Benzo(g,h,i)perylene	0.20	2.3000	2.3000	
9 Benzo(k)fluoranthene	0.20	2.1000	2.1000	
10 Chrysene	0.20	6.0000	6.0000	
11 Dibenzo(a,h)anthracene	0.20	0.0000	<0.2000	
12 Fluoranthene	0.20	31.0000	31.0000	
13 Fluorene	0.20	26.0000	26.0000	
14 Indeno(1,2,3-cd)pyrene	0.20	2.7000	2.7000	
15 1-Methylnaphthalene	0.20	27.0000	27.0000	
16 2-Methylnaphthalene	0.20	60.0000	60.0000	
17 Naphthalene	0.50	840.0000	840.0000	
18 Perylene	0.20	0.8200	0.8200	
19 Phenanthrene	0.20	64.0000	64.0000	
20 Pyrene	0.20	18.0000	18.0000	
21 Total PAH's			2196.3200	

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* Total PAHs are calculated using zero for results below the detection limit	010000 000000

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.	1				
Sampling Location	UPW				
	Reporting Limit	Lab Result	Final Result	Data Flag(s)	
Index	Analyte Name	(µg)	(µg)	(µg)	
1	Acenaphthene	0.20	2.8000	2.8000	
2	Acenaphthylene	0.20	0.2500	0.2500	
3	Anthracene	0.20	0.2300	0.2300	
4	Benzo(a) anthracene	0.20	0.3100	0.3100	
5	Benzo(a)pyrene	0.20	0.3300	0.3300	
6	Benzo(b)fluoranthene	0.20	0.5400	0.5400	
7	Benzo(e)pyrene	0.20	0.3200	0.3200	
8	Benzo(g,h,i)perylene	0.20	0.3200	0.3200	
9	Benzo(k)fluoranthene	0.20	0.0000	<0.2000	
10	Chrysene	0.20	0.3700	0.3700	
11	Dibenzo(a,h)anthracene	0.20	0.0000	<0.2000	
12	Fluoranthene	0.20	0.8400	0.8400	
13	Fluorene	0.20	1.6000	1.6000	
14	Indeno(1,2,3-cd)pyrene	0.20	0.3000	0.3000	
15	1-Methylnaphthalene	0.20	4.3000	4.3000	
16	2-Methylnaphthalene	0.20	8.4000	8.4000	
17	Naphthalene	0.50	13.0000	13.0000	L-05
18	Perylene	0.20	0.0000	<0.2000	
19	Phenanthrene	0.20	2.3000	2.3000	
20	Pyrene	0.20	0.5200	0.5200	
21	Total PAH's			36.7300	

Laboratory fortified blank/laboratory control sample recovery is outside of control limits.

L-05 Reported value for this compound is likely to be biased on the high side.

* Total PAHs are calculated using zero for results below the detection limit

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EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.		1			
Sampling Location		Field Blank			
		Reporting Limit			Data Flag(s) ¹
Index	Analyte Name	(µg)	Lab Result (µg)	Final Result (µg)	
1	Acenaphthene	0.20	ND	0.2	L-05
2	Acenaphthylene	0.20	ND	0.2	
3	Anthracene	0.20	ND	0.2	
4	Benzo(a) anthracene	0.20	ND	0.2	
5	Benzo(a)pyrene	0.20	ND	0.2	
6	Benzo(b)fluoranthene	0.20	ND	0.2	
7	Benzo(e)pyrene	0.20	ND	0.2	
8	Benzo(g,h,i)perylene	0.20	ND	0.2	
9	Benzo(k)fluoranthene	0.20	ND	0.2	
10	Chrysene	0.20	ND	0.2	
11	Dibenzo(a,h)anthracene	0.20	ND	0.2	
12	Fluoranthene	0.20	ND	0.2	
13	Fluorene	0.20	ND	0.2	
14	Indeno(1,2,3-cd)pyrene	0.20	ND	0.2	
15	1-Methylnaphthalene	0.20	ND	0.2	
16	2-Methylnaphthalene	0.20	ND	0.2	
17	Naphthalene	0.50	0.9	0.9	
18	Perylene	0.20	ND	0.2	
19	Phenanthrene	0.20	ND	0.2	
20	Pyrene	0.20	ND	0.2	

Notes

¹ Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) Run Data and Parameters

Run No.		1	1	1	1	1
Sampling Location		IN1	IN2	DW1	DW2	UPW
Start Date (2022)		Oct 13	Oct 13	Oct 13	Oct 13	Oct 13
Start Time (approx.)		09:56	09:34	10:23	10:45	11:17
Stop Date (2022)		Oct 14	Oct 14	Oct 14	Oct 14	Oct 14
Stop Time (approx.)		08:00	08:21	10:23	10:40	11:02
TE-1000 Sampler Calibration Data						
R _p	Slope	36.98759	31.72149	30.00345	30.43603	34.02213
P ₁	Intercept	-2.55612	-.62864	-.30959	-.41605	-1.22610
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	737.7	737.7	738.0	738.0	738.1
T _s	Temperature (°K)	283.9	283.9	283.4	283.4	283.4
B _w	Relative Humidity (%)	75.0	75.0	75.0	75.0	75.0
TE-1000 Sampler Run Data						
Q _a	Magnehelic Gauge Reading (initial)	36	40	40	40	40
Q _s	Magnehelic Gauge Reading (final)	36	40	40	40	40
Sampling Parameters						
M _{avg}	Magnehelic Gauge Reading (average)	36	40	40	40	40
θ	Total sampling time (min)	1,324	1,367	1,440	1,435	1,425
Q _s	Sample flow rate, standard (m ³ /min)	0.2329	0.2211	0.2233	0.2237	0.2239
V _{mstd}	Volume metered, standard (dscm)	308.30	302.21	321.60	320.95	319.06
Acenaphthene						
m _n	Net Weight (µg)	11.0	6.6	4.6	5.9	2.8
C _{sd}	Concentration (µg/dscm)	0.0357	0.0218	0.0143	0.0184	0.0088
Acenaphthylene						
m _n	Net Weight (ng)	320.0	160.0	14.0	38.0	0.3
C _{sd}	Concentration (ng/dscm)	1.0380	0.5294	0.0435	0.1184	0.0008
Anthracene						
m _n	Net Weight (ng)	35.0	9.2	8.2	16.0	0.2
C _{sd}	Concentration (ng/dscm)	0.1135	0.0304	0.0255	0.0499	0.0007
Benzo(a) anthracene						
m _n	Net Weight (ng)	11.0	0.8	13.0	5.8	0.3
C _{sd}	Concentration (ng/dscm)	0.0357	0.0027	0.0404	0.0181	0.0010
Benzo(a)pyrene						
m _n	Net Weight (ng)	2.5	0.5	8.7	3.0	0.3
C _{sd}	Concentration (ng/dscm)	0.0081	0.0018	0.0271	0.0093	0.0010
Benzo(b)fluoranthene						
m _n	Net Weight (ng)	7.7	1.0	15.0	6.1	0.5
C _{sd}	Concentration (ng/dscm)	0.0250	0.0033	0.0466	0.0190	0.0017
Benzo(e)pyrene						
m _n	Net Weight (ng)	3.0	0.5	7.4	3.1	0.3
C _{sd}	Concentration (ng/dscm)	0.0097	0.0018	0.0230	0.0097	0.0010
Benzo(g,h,i)perylene						
m _n	Net Weight (ng)	1.5	0.5	5.9	2.3	0.3
C _{sd}	Concentration (ng/dscm)	0.0049	0.0016	0.0183	0.0072	0.0010
Benzo(k)fluoranthene						
m _n	Net Weight (ng)	2.9	0.4	5.4	2.1	<0.2
C _{sd}	Concentration (ng/dscm)	0.0094	0.0012	0.0168	0.0065	<0.0006
Chrysene						
m _n	Net Weight (ng)	13.0	0.9	12.0	6.0	0.4
C _{sd}	Concentration (ng/dscm)	0.0422	0.0030	0.0373	0.0187	0.0012

TO-13A (PAH) Run Data and Parameters

Run No.		1	1	1	1	1
Sampling Location		IN1	IN2	DW1	DW2	UPW
Start Date (2022)		Oct 13	Oct 13	Oct 13	Oct 13	Oct 13
Start Time (approx.)		09:56	09:34	10:23	10:45	11:17
Stop Date (2022)		Oct 14	Oct 14	Oct 14	Oct 14	Oct 14
Stop Time (approx.)		08:00	08:21	10:23	10:40	11:02
TE-1000 Sampler Calibration Data						
R _p	Slope	36.98759	31.72149	30.00345	30.43603	34.02213
P ₁	Intercept	-2.55612	-.62864	-.30959	-.41605	-1.22610
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	737.7	737.7	738.0	738.0	738.1
T _s	Temperature (°K)	283.9	283.9	283.4	283.4	283.4
B _w	Relative Humidity (%)	75.0	75.0	75.0	75.0	75.0
TE-1000 Sampler Run Data						
Q _a	Magnehelic Gauge Reading (initial)	36	40	40	40	40
Q _s	Magnehelic Gauge Reading (final)	36	40	40	40	40
Sampling Parameters						
M _{avg}	Magnehelic Gauge Reading (average)	36	40	40	40	40
θ	Total sampling time (min)	1,324	1,367	1,440	1,435	1,425
Q _s	Sample flow rate, standard (m ³ /min)	0.2329	0.2211	0.2233	0.2237	0.2239
Dibenzo(a,h)anthracene						
m _n	Net Weight (ng)	<0.2	<0.2	1.9	<0.2	<0.2
C _{sd}	Concentration (ng/dscm)	<0.0006	<0.0007	0.0059	<0.0006	<0.0006
Fluoranthene						
m _n	Net Weight (ng)	54.0	5.5	27.0	31.0	0.8
C _{sd}	Concentration (ng/dscm)	0.1752	0.0182	0.0840	0.0966	0.0026
Fluorene						
m _n	Net Weight (ng)	110.0	45.0	12.0	26.0	1.6
C _{sd}	Concentration (ng/dscm)	0.3568	0.1489	0.0373	0.0810	0.0050
Indeno(1,2,3-cd)pyrene						
m _n	Net Weight (ng)	1.8	0.5	6.9	2.7	0.3
C _{sd}	Concentration (ng/dscm)	0.0058	0.0017	0.0215	0.0084	0.0009
1-Methylnaphthalene						
m _n	Net Weight (ng)	150.0	62.0	14.0	27.0	4.3
C _{sd}	Concentration (ng/dscm)	0.4865	0.2052	0.0435	0.0841	0.0135
2-Methylnaphthalene						
m _n	Net Weight (ng)	430.0	160.0	31.0	60.0	8.4
C _{sd}	Concentration (ng/dscm)	1.3948	0.5294	0.0964	0.1869	0.0263
Naphthalene						
m _n	Net Weight (ng)	7000.0	1700.0	340.0	840.0	13.0
C _{sd}	Concentration (ng/dscm)	22.7054	5.6253	1.0572	2.6172	0.0407
Perylene						
m _n	Net Weight (ng)	0.7	<0.2	2.2	0.8	<0.2
C _{sd}	Concentration (ng/dscm)	0.0022	<0.0007	0.0068	0.0026	<0.0006
Phenanthrene						
m _n	Net Weight (ng)	160.0	40.0	31.0	64.0	2.3
C _{sd}	Concentration (ng/dscm)	0.5190	0.1324	0.0964	0.1994	0.0072
Pyrene						
m _n	Net Weight (ng)	31.0	2.9	18.0	18.0	0.5
C _{sd}	Concentration (ng/dscm)	0.1006	0.0096	0.0560	0.0561	0.0016

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) Run Data and Parameters

Run No.	1	1	1	1	1
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Oct 13	Oct 13	Oct 13	Oct 13	Oct 13
Start Time (approx.)	09:56	09:34	10:23	10:45	11:17
Stop Date (2022)	Oct 14	Oct 14	Oct 14	Oct 14	Oct 14
Stop Time (approx.)	08:00	08:21	10:23	10:40	11:02
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	737.7	737.7	738.0	738.0	738.1
T _s Temperature (°K)	283.9	283.9	283.4	283.4	283.4
B _w Relative Humidity (%)	75.0	75.0	75.0	75.0	75.0
Sampling Parameters					
θ Total sampling time (min)	1,324	1,367	1,440	1,435	1,425
Q _s Sample flow rate, standard (m ³ /min)	0.2329	0.2211	0.2233	0.2237	0.2239
V _{mstd} Volume metered, standard (scm)	308.30	302.21	321.60	320.95	319.06

PAHs

Acenaphthene (µg/scm)	0.0357	0.0218	0.0143	0.0184	0.0088
Acenaphthylene (µg/dscm) (µg/scm)	1.0380	0.5294	0.0435	0.1184	0.0008
Anthracene (µg/dscm) (µg/scm)	0.1135	0.0304	0.0255	0.0499	0.0007
Benzo(a) anthracene (µg/dscm) (µg/scm)	0.0357	0.0027	0.0404	0.0181	0.0010
Benzo(a)pyrene (µg/dscm) (µg/scm)	0.0081	0.0018	0.0271	0.0093	0.0010
Benzo(b)fluoranthene (µg/dscm) (µg/scm)	0.0250	0.0033	0.0466	0.0190	0.0017
Benzo(e)pyrene (µg/dscm) (µg/scm)	0.0097	0.0018	0.0230	0.0097	0.0010
Benzo(g,h,i)perylene (µg/dscm) (µg/scm)	0.0049	0.0016	0.0183	0.0072	0.0010
Benzo(k)fluoranthene (µg/scm)	0.0094	0.0012	0.0168	0.0065	<0.0006
Chrysene (µg/dscm) (µg/scm)	0.0422	0.0030	0.0373	0.0187	0.0012
Dibenzo(a,h)anthracene (µg/scm)	<0.0006	<0.0007	0.0059	<0.0006	<0.0006
Fluoranthene (µg/dscm) (µg/scm)	0.1752	0.0182	0.0840	0.0966	0.0026
Fluorene (µg/dscm) (µg/scm)	0.3568	0.1489	0.0373	0.0810	0.0050
Indeno(1,2,3-cd)pyrene (µg/dscm) (µg/scm)	0.0058	0.0017	0.0215	0.0084	0.0009
1-Methylnaphthalene (µg/dscm) (µg/scm)	0.4865	0.2052	0.0435	0.0841	0.0135
2-Methylnaphthalene (µg/dscm) (µg/scm)	1.3948	0.5294	0.0964	0.1869	0.0263
Naphthalene (µg/dscm) (µg/scm)	22.7054	5.6253	1.0572	2.6172	0.0407
Perylene (µg/dscm) (µg/scm)	0.0022	<0.0007	0.0068	0.0026	<0.0006
Phenanthrene (µg/dscm) (µg/scm)	0.5190	0.1324	0.0964	0.1994	0.0072
Pyrene (µg/dscm) (µg/scm)	0.1006	0.0096	0.0560	0.0561	0.0016

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Parameters**

Run No.		2	2	2	2	2
Sampling Location		IN1	IN2	DW1	DW2	UPW
Index	Analyte Name	Gross Weight (µg)	Gross Weight (µg)	Gross Weight (µg)	Gross Weight (µg)	Gross Weight (µg)
1	Acenaphthene	3.0000	11.0000	1.9000	2.6000	1.1000
2	Acenaphthylene	29.0000	270.0000	0.3400	0.2100	
3	Anthracene	5.1000	51.0000			
4	Benzo(a) anthracene	0.7100	21.0000			
5	Benzo(a)pyrene	0.5700	14.0000			
6	Benzo(b)fluoranthene	1.3000	21.0000		0.2300	
7	Benzo(e)pyrene	0.6600	10.0000			
8	Benzo(g,h,i)perylene	0.5200	8.3000			
9	Benzo(k)fluoranthene	0.4300	7.8000			
10	Chrysene	1.1000	20.0000			
11	Dibenzo(a,h)anthracene		2.8000			
12	Fluoranthene	11.0000	65.0000	0.4300	0.4800	0.3500
13	Fluorene	23.0000	130.0000	1.5000	1.9000	1.0000
14	Indeno(1,2,3-cd)pyrene	0.6000	9.9000			
15	1-Methylnaphthalene	20.0000	80.0000	2.2000	2.4000	1.8000
16	2-Methylnaphthalene	50.0000	230.0000	4.8000	4.7000	3.9000
17	Naphthalene	570.0000	2300.0000	7.6000	5.3000	4.4000
18	Perylene		3.3000			
19	Phenanthrene	40.0000	180.0000	2.1000	1.9000	1.4000
20	Pyrene	5.8000	51.0000	0.3000	0.3400	0.2400

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EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.		2		
Sampling Location		IN1		
Index Analyte Name	Reporting Limit (µg)	Lab Result (µg)	Final Result (µg)	Data Flag(s)
1 Acenaphthene	0.20	3.0000	3.0000	
2 Acenaphthylene	0.20	29.0000	29.0000	
3 Anthracene	0.20	5.1000	5.1000	
4 Benzo(a) anthracene	0.20	0.7100	0.7100	
5 Benzo(a)pyrene	0.20	0.5700	0.5700	
6 Benzo(b)fluoranthene	0.20	1.3000	1.3000	
7 Benzo(e)pyrene	0.20	0.6600	0.6600	
8 Benzo(g,h,i)perylene	0.20	0.5200	0.5200	
9 Benzo(k)fluoranthene	0.20	0.4300	0.4300	
10 Chrysene	0.20	1.1000	1.1000	
11 Dibenzo(a,h)anthracene	0.20	0.0000	<0.2000	
12 Fluoranthene	0.20	11.0000	11.0000	
13 Fluorene	0.20	23.0000	23.0000	
14 Indeno(1,2,3-cd)pyrene	0.20	0.6000	0.6000	
15 1-Methylnaphthalene	0.20	20.0000	20.0000	
16 2-Methylnaphthalene	0.20	50.0000	50.0000	
17 Naphthalene	0.50	570.0000	570.0000	
18 Perylene	0.20	0.0000	<0.2000	
19 Phenanthrene	0.20	40.0000	40.0000	
20 Pyrene	0.20	5.8000	5.8000	
21 Total PAH's			762.7900	

* Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.		2		
Sampling Location		IN2		
Index Analyte Name	Reporting Limit (µg)	Lab Result (µg)	Final Result (µg)	Data Flag(s)
1 Acenaphthene	0.20	11.0000	11.0000	
2 Acenaphthylene	0.20	270.0000	270.0000	
3 Anthracene	0.20	51.0000	51.0000	
4 Benzo(a) anthracene	0.20	21.0000	21.0000	
5 Benzo(a)pyrene	0.20	14.0000	14.0000	
6 Benzo(b)fluoranthene	0.20	21.0000	21.0000	
7 Benzo(e)pyrene	0.20	10.0000	10.0000	
8 Benzo(g,h,i)perylene	0.20	8.3000	8.3000	
9 Benzo(k)fluoranthene	0.20	7.8000	7.8000	
10 Chrysene	0.20	20.0000	20.0000	
11 Dibenzo(a,h)anthracene	0.20	2.8000	2.8000	
12 Fluoranthene	0.20	65.0000	65.0000	
13 Fluorene	0.20	130.0000	130.0000	
14 Indeno(1,2,3-cd)pyrene	0.20	9.9000	9.9000	
15 1-Methylnaphthalene	0.20	80.0000	80.0000	
16 2-Methylnaphthalene	0.20	230.0000	230.0000	
17 Naphthalene	0.50	2300.0000	2300.0000	
18 Perylene	0.20	3.3000	3.3000	
19 Phenanthrene	0.20	180.0000	180.0000	
20 Pyrene	0.20	51.0000	51.0000	
21 Total PAH's			3486.1000	

* Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.		2		
Sampling Location		DW1		
Index Analyte Name	Reporting Limit (µg)	Lab Result (µg)	Final Result (µg)	Data Flag(s)
1 Acenaphthene	0.20	1.9000	1.9000	
2 Acenaphthylene	0.20	0.3400	0.3400	
3 Anthracene	0.20	0.0000	<0.2000	
4 Benzo(a) anthracene	0.20	0.0000	<0.2000	
5 Benzo(a)pyrene	0.20	0.0000	<0.2000	
6 Benzo(b)fluoranthene	0.20	0.0000	<0.2000	
7 Benzo(e)pyrene	0.20	0.0000	<0.2000	
8 Benzo(g,h,i)perylene	0.20	0.0000	<0.2000	
9 Benzo(k)fluoranthene	0.20	0.0000	<0.2000	
10 Chrysene	0.20	0.0000	<0.2000	
11 Dibenzo(a,h)anthracene	0.20	0.0000	<0.2000	
12 Fluoranthene	0.20	0.4300	0.4300	
13 Fluorene	0.20	1.5000	1.5000	
14 Indeno(1,2,3-cd)pyrene	0.20	0.0000	<0.2000	
15 1-Methylnaphthalene	0.20	2.2000	2.2000	
16 2-Methylnaphthalene	0.20	4.8000	4.8000	
17 Naphthalene	0.50	7.6000	7.6000	
18 Perylene	0.20	0.0000	<0.2000	
19 Phenanthrene	0.20	2.1000	2.1000	
20 Pyrene	0.20	0.3000	0.3000	
21 Total PAH's			21.1700	

* Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) PAH Laboratory Calculations

Run No.	2			
Sampling Location	DW2			
	Reporting Limit	Lab Result	Final Result	Data Flag(s)
Index Analyte Name	(µg)	(µg)	(µg)	
1 Acenaphthene	0.20	2.6000	2.6000	
2 Acenaphthylene	0.20	0.2100	0.2100	
3 Anthracene	0.20	0.0000	<0.2000	
4 Benzo(a) anthracene	0.20	0.0000	<0.2000	
5 Benzo(a)pyrene	0.20	0.0000	<0.2000	
6 Benzo(b)fluoranthene	0.20	0.2300	0.2300	
7 Benzo(e)pyrene	0.20	0.0000	<0.2000	
8 Benzo(g,h,i)perylene	0.20	0.0000	<0.2000	
9 Benzo(k)fluoranthene	0.20	0.0000	<0.2000	
10 Chrysene	0.20	0.0000	<0.2000	
11 Dibenzo(a,h)anthracene	0.20	0.0000	<0.2000	
12 Fluoranthene	0.20	0.4800	0.4800	
13 Fluorene	0.20	1.9000	1.9000	
14 Indeno(1,2,3-cd)pyrene	0.20	0.0000	<0.2000	
15 1-Methylnaphthalene	0.20	2.4000	2.4000	
16 2-Methylnaphthalene	0.20	4.7000	4.7000	
17 Naphthalene	0.50	5.3000	5.3000	
18 Perylene	0.20	0.0000	<0.2000	
19 Phenanthrene	0.20	1.9000	1.9000	
20 Pyrene	0.20	0.3400	0.3400	
21 Total PAH's			3486.1000	

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Total PAHs are calculated using zero for results below the detection limit 010000 000000

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.

2

Sampling Location

UPW

Index	Analyte Name	Reporting	Lab Result	Final Result	Data Flag(s)
		Limit (µg)			
1	Acenaphthene	0.20	1.1000	1.1000	
2	Acenaphthylene	0.20	0.0000	<0.2000	
3	Anthracene	0.20	0.0000	<0.2000	
4	Benzo(a) anthracene	0.20	0.0000	<0.2000	
5	Benzo(a)pyrene	0.20	0.0000	<0.2000	
6	Benzo(b)fluoranthene	0.20	0.0000	<0.2000	
7	Benzo(e)pyrene	0.20	0.0000	<0.2000	
8	Benzo(g,h,i)perylene	0.20	0.0000	<0.2000	
9	Benzo(k)fluoranthene	0.20	0.0000	<0.2000	
10	Chrysene	0.20	0.0000	<0.2000	
11	Dibenzo(a,h)anthracene	0.20	0.0000	<0.2000	
12	Fluoranthene	0.20	0.3500	0.3500	
13	Fluorene	0.20	1.0000	1.0000	
14	Indeno(1,2,3-cd)pyrene	0.20	0.0000	<0.2000	
15	1-Methylnaphthalene	0.20	1.8000	1.8000	
16	2-Methylnaphthalene	0.20	3.9000	3.9000	
17	Naphthalene	0.50	4.4000	4.4000	
18	Perylene	0.20	0.0000	<0.2000	
19	Phenanthrene	0.20	1.4000	1.4000	
20	Pyrene	0.20	0.2400	0.2400	
21	Total PAH's			14.1900	

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* Total PAHs are calculated using zero for results below the detection limit

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EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) PAH Laboratory Calculations

Run No.		2		Data Flag(s) ¹	
Sampling Location		Field Blank			
Index	Analyte Name	Reporting Limit (µg)	Lab Result (µg)		Final Result (µg)
1	Acenaphthene	0.20	ND	0.2	
2	Acenaphthylene	0.20	ND	0.2	
3	Anthracene	0.20	ND	0.2	
4	Benzo(a) anthracene	0.20	ND	0.2	
5	Benzo(a)pyrene	0.20	ND	0.2	
6	Benzo(b)fluoranthene	0.20	ND	0.2	
7	Benzo(e)pyrene	0.20	ND	0.2	
8	Benzo(g,h,i)perylene	0.20	ND	0.2	
9	Benzo(k)fluoranthene	0.20	ND	0.2	
10	Chrysene	0.20	ND	0.2	
11	Dibenzo(a,h)anthracene	0.20	ND	0.2	
12	Fluoranthene	0.20	ND	0.2	
13	Fluorene	0.20	ND	0.2	
14	Indeno(1,2,3-cd)pyrene	0.20	ND	0.2	
15	1-Methylnaphthalene	0.20	ND	0.2	
16	2-Methylnaphthalene	0.20	ND	0.2	
17	Naphthalene	0.50	0.53	0.53	
18	Perylene	0.20	ND	0.2	
19	Phenanthrene	0.20	ND	0.2	
20	Pyrene	0.20	ND	0.2	

Notes

¹ Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) Run Data and Parameters

Run No.	2	2	2	2	2
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Oct 26	Oct 26	Oct 26	Oct 26	Oct 26
Start Time (approx.)	16:25	17:05	15:49	15:40	17:45
Stop Date (2022)	Oct 27	Oct 27	Oct 27	Oct 27	Oct 27
Stop Time (approx.)	14:51	15:24	14:20	13:50	16:12
TE-1000 Sampler Calibration Data					
R _p Slope	36.98759	31.72149	30.00345	30.43603	34.02213
P ₁ Intercept	-2.55612	-6.2864	-3.0959	-4.1605	-1.22610
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	750.6	751.5	750.6	750.4	751.6
T _s Temperature (°K)	280.4	280.3	280.4	280.3	280.4
B _w Relative Humidity (%)	84.9	84.9	84.9	84.9	84.9
TE-1000 Sampler Run Data					
Q _a Magnehelic Gauge Reading (initial)	34	42	40	40	40
Q _s Magnehelic Gauge Reading (final)	34	42	40	40	40
Sampling Parameters					
M _{avg} Magnehelic Gauge Reading (average)	34	42	40	40	40
θ Total sampling time (min)	1,346	1,339	1,351	1,330	1,347
Q _s Sample flow rate, standard (m ³ /min)	0.2306	0.2293	0.2263	0.2266	0.2266
V _{mstd} Volume metered, standard (dscm)	310.42	307.03	305.72	301.36	305.24
Acenaphthene					
m _n Net Weight (µg)	3.0	11.0	1.9	2.6	1.1
C _{sd} Concentration (µg/dscm)	0.0097	0.0358	0.0062	0.0086	0.0036
Acenaphthylene					
m _n Net Weight (ng)	29.0	270.0	0.3	0.2	<0.2
C _{sd} Concentration (ng/dscm)	0.0934	0.8794	0.0011	0.0007	<0.0007
Anthracene					
m _n Net Weight (ng)	5.1	51.0	<0.2	<0.2	<0.2
C _{sd} Concentration (ng/dscm)	0.0164	0.1661	<0.0007	<0.0007	<0.0007
Benzo(a) anthracene					
m _n Net Weight (ng)	0.7	21.0	<0.2	<0.2	<0.2
C _{sd} Concentration (ng/dscm)	0.0023	0.0684	<0.0007	<0.0007	<0.0007
Benzo(a)pyrene					
m _n Net Weight (ng)	0.6	14.0	<0.2	<0.2	<0.2
C _{sd} Concentration (ng/dscm)	0.0018	0.0456	<0.0007	<0.0007	<0.0007
Benzo(b)fluoranthene					
m _n Net Weight (ng)	1.3	21.0	<0.2	0.2	<0.2
C _{sd} Concentration (ng/dscm)	0.0042	0.0684	<0.0007	0.0008	<0.0007
Benzo(e)pyrene					
m _n Net Weight (ng)	0.7	10.0	<0.2	<0.2	<0.2
C _{sd} Concentration (ng/dscm)	0.0021	0.0326	<0.0007	<0.0007	<0.0007
Benzo(g,h,i)perylene					
m _n Net Weight (ng)	0.5	8.3	<0.2	<0.2	<0.2
C _{sd} Concentration (ng/dscm)	0.0017	0.0270	<0.0007	<0.0007	<0.0007
Benzo(k)fluoranthene					
m _n Net Weight (ng)	0.4	7.8	<0.2	<0.2	<0.2
C _{sd} Concentration (ng/dscm)	0.0014	0.0254	<0.0007	<0.0007	<0.0007

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) Run Data and Parameters

Run No.		2	2	2	2	2
Sampling Location		IN1	IN2	DW1	DW2	UPW
Start Date (2022)		Oct 26	Oct 26	Oct 26	Oct 26	Oct 26
Start Time (approx.)		16:25	17:05	15:49	15:40	17:45
Stop Date (2022)		Oct 27	Oct 27	Oct 27	Oct 27	Oct 27
Stop Time (approx.)		14:51	15:24	14:20	13:50	16:12
TE-1000 Sampler Calibration Data						
R _p	Slope	36.98759	31.72149	30.00345	30.43603	34.02213
P ₁	Intercept	-2.55612	-62864	-30959	-41605	-1.22610
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	750.6	751.5	750.6	750.4	751.6
T _s	Temperature (°K)	280.4	280.3	280.4	280.3	280.4
B _w	Relative Humidity (%)	84.9	84.9	84.9	84.9	84.9
TE-1000 Sampler Run Data						
Q _a	Magnehelic Gauge Reading (initial)	34	42	40	40	40
Q _s	Magnehelic Gauge Reading (final)	34	42	40	40	40
Sampling Parameters						
M _{avg}	Magnehelic Gauge Reading (average)	34	42	40	40	40
θ	Total sampling time (min)	1,346	1,339	1,351	1,330	1,347
Q _s	Sample flow rate, standard (m ³ /min)	0.2306	0.2293	0.2263	0.2266	0.2266
Chrysene						
m _n	Net Weight (ng)	1.1	20.0	<0.2	<0.2	<0.2
C _{sd}	Concentration (ng/dscm)	0.0035	0.0651	<0.0007	<0.0007	<0.0007
Dibenzo(a,h)anthracene						
m _n	Net Weight (ng)	<0.2	2.8	<0.2	<0.2	<0.2
C _{sd}	Concentration (ng/dscm)	<0.0006	0.0091	<0.0007	<0.0007	<0.0007
Fluoranthene						
m _n	Net Weight (ng)	11.0	65.0	0.4	0.5	0.4
C _{sd}	Concentration (ng/dscm)	0.0354	0.2117	0.0014	0.0016	0.0011
Fluorene						
m _n	Net Weight (ng)	23.0	130.0	1.5	1.9	1.0
C _{sd}	Concentration (ng/dscm)	0.0741	0.4234	0.0049	0.0063	0.0033
Indeno(1,2,3-cd)pyrene						
m _n	Net Weight (ng)	0.6	9.9	<0.2	<0.2	<0.2
C _{sd}	Concentration (ng/dscm)	0.0019	0.0322	<0.0007	<0.0007	<0.0007
1-Methylnaphthalene						
m _n	Net Weight (ng)	20.0	80.0	2.2	2.4	1.8
C _{sd}	Concentration (ng/dscm)	0.0644	0.2606	0.0072	0.0080	0.0059
2-Methylnaphthalene						
m _n	Net Weight (ng)	50.0	230.0	4.8	4.7	3.9
C _{sd}	Concentration (ng/dscm)	0.1611	0.7491	0.0157	0.0156	0.0128
Naphthalene						
m _n	Net Weight (ng)	570.0	2300.0	7.6	5.3	4.4
C _{sd}	Concentration (ng/dscm)	1.8362	7.4912	0.0249	0.0176	0.0144
Perylene						
m _n	Net Weight (ng)	<0.2	3.3	<0.2	<0.2	<0.2
C _{sd}	Concentration (ng/dscm)	<0.0006	0.0107	<0.0007	<0.0007	<0.0007
Phenanthrene						
m _n	Net Weight (ng)	40.0	180.0	2.1	1.9	1.4
C _{sd}	Concentration (ng/dscm)	0.1289	0.5863	0.0069	0.0063	0.0046
Pyrene						
m _n	Net Weight (ng)	5.8	51.0	0.3	0.3	0.2
C _{sd}	Concentration (ng/dscm)	0.0187	0.1661	0.0010	0.0011	0.0008

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH)
Run Data and Parameters

Run No.		2	2	2	2	2
Sampling Location		IN1	IN2	DW1	DW2	UPW
Start Date (2022)		Oct 26	Oct 26	Oct 26	Oct 26	Oct 26
Start Time (approx.)		16:25	17:05	15:49	15:40	17:45
Stop Date (2022)		Oct 27	Oct 27	Oct 27	Oct 27	Oct 27
Stop Time (approx.)		14:51	15:24	14:20	13:50	16:12
TE-1000 Sampler Calibration Data						
R _p	Slope	36.98759	31.72149	30.00345	30.43603	34.02213
P ₁	Intercept	-2.55612	-62864	-30959	-41605	-1.22610
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	750.6	751.5	750.6	750.4	751.6
T _s	Temperature (°K)	280.4	280.3	280.4	280.3	280.4
B _w	Relative Humidity (%)	84.9	84.9	84.9	84.9	84.9
TE-1000 Sampler Run Data						
Q _a	Magnehelic Gauge Reading (initial)	34	42	40	40	40
Q _s	Magnehelic Gauge Reading (final)	34	42	40	40	40
Sampling Parameters						
M _{avg}	Magnehelic Gauge Reading (average)	34	42	40	40	40
θ	Total sampling time (min)	1,346	1,339	1,351	1,330	1,347
Q _s	Sample flow rate, standard (m ³ /min)	0.2306	0.2293	0.2263	0.2266	0.2266

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) Run Data and Parameters

Run No.	2	2	2	2	2
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Oct 26	Oct 26	Oct 26	Oct 26	Oct 26
Start Time (approx.)	16:25	17:05	15:49	15:40	17:45
Stop Date (2022)	Oct 27	Oct 27	Oct 27	Oct 27	Oct 27
Stop Time (approx.)	14:51	15:24	14:20	13:50	16:12
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	750.6	751.5	750.6	750.4	751.6
T _s Temperature (°K)	280.4	280.3	280.4	280.3	280.4
B _w Relative Humidity (%)	84.9	84.9	84.9	84.9	84.9
Sampling Parameters					
θ Total sampling time (min)	1,346	1,339	1,351	1,330	1,347
Q _s Sample flow rate, standard (m ³ /min)	0.2306	0.2293	0.2263	0.2266	0.2266
V _{mstd} Volume metered, standard (scm)	310.42	307.03	305.72	301.36	305.24

PAHs

Acenaphthene (µg/scm)	0.0097	0.0358	0.0062	0.0086	0.0036
Acenaphthylene (µg/dscm) (µg/scm)	0.0934	0.8794	0.0011	0.0007	<0.0007
Anthracene (µg/dscm) (µg/scm)	0.0164	0.1661	<0.0007	<0.0007	<0.0007
Benzo(a) anthracene (µg/dscm) (µg/scm)	0.0023	0.0684	<0.0007	<0.0007	<0.0007
Benzo(a)pyrene (µg/dscm) (µg/scm)	0.0018	0.0456	<0.0007	<0.0007	<0.0007
Benzo(b)fluoranthene (µg/dscm) (µg/scm)	0.0042	0.0684	<0.0007	0.0008	<0.0007
Benzo(e)pyrene (µg/dscm) (µg/scm)	0.0021	0.0326	<0.0007	<0.0007	<0.0007
Benzo(g,h,i)perylene (µg/dscm) (µg/scm)	0.0017	0.0270	<0.0007	<0.0007	<0.0007
Benzo(k)fluoranthene (µg/dscm) (µg/scm)	0.0014	0.0254	<0.0007	<0.0007	<0.0007
Chrysene (µg/dscm) (µg/scm)	0.0035	0.0651	<0.0007	<0.0007	<0.0007
Dibenzo(a,h)anthracene (µg/dscm) (µg/scm)	<0.0006	0.0091	<0.0007	<0.0007	<0.0007
Fluoranthene (µg/dscm) (µg/scm)	0.0354	0.2117	0.0014	0.0016	0.0011
Fluorene (µg/dscm) (µg/scm)	0.0741	0.4234	0.0049	0.0063	0.0033
Indeno(1,2,3-cd)pyrene (µg/dscm) (µg/scm)	0.0019	0.0322	<0.0007	<0.0007	<0.0007
1-Methylnaphthalene (µg/dscm) (µg/scm)	0.0644	0.2606	0.0072	0.0080	0.0059
2-Methylnaphthalene (µg/dscm) (µg/scm)	0.1611	0.7491	0.0157	0.0156	0.0128
Naphthalene (µg/dscm) (µg/scm)	1.8362	7.4912	0.0249	0.0176	0.0144
Perylene (µg/dscm) (µg/scm)	<0.0006	0.0107	<0.0007	<0.0007	<0.0007
Phenanthrene (µg/dscm) (µg/scm)	0.1289	0.5863	0.0069	0.0063	0.0046
Pyrene (µg/dscm) (µg/scm)	0.0187	0.1661	0.0010	0.0011	0.0008

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Parameters**

Run No.		3	3	3	3	3
Sampling Location		IN1	IN2	DW1	DW2	UPW
Index	Analyte Name	Gross Weight (µg)	Gross Weight (µg)	Gross Weight (µg)	Gross Weight (µg)	Gross Weight (µg)
1	Acenaphthene	10.0000	3.0000	0.9800	1.7000	3.3000
2	Acenaphthylene	110.0000	33.0000			
3	Anthracene	29.0000	3.2000			
4	Benzo(a) anthracene	20.0000				
5	Benzo(a)pyrene	15.0000				
6	Benzo(b)fluoranthene	24.0000	1.2000			
7	Benzo(e)pyrene	12.0000				
8	Benzo(g,h,i)perylene	10.0000				
9	Benzo(k)fluoranthene	7.9000				
10	Chrysene	19.0000	1.1000			
11	Dibenzo(a,h)anthracene	2.9000				
12	Fluoranthene	67.0000	5.4000		0.2300	1.9000
13	Fluorene	71.0000	17.0000	1.0000	1.3000	3.9000
14	Indeno(1,2,3-cd)pyrene	12.0000				
15	1-Methylnaphthalene	64.0000	18.0000	0.9400	1.1000	3.2000
16	2-Methylnaphthalene	160.0000	45.0000	1.7000	1.9000	6.4000
17	Naphthalene	2100.0000	470.0000	3.5000	2.9000	11.0000
18	Perylene	3.9000				
19	Phenanthrene	140.0000	21.0000	1.1000	1.0000	6.4000
20	Pyrene	45.0000	2.9000			1.1000

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EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.		3		
Sampling Location		IN1		
Index Analyte Name	Reporting Limit (µg)	Lab Result (µg)	Final Result (µg)	Data Flag(s)
1 Acenaphthene	0.20	10.0000	10.0000	
2 Acenaphthylene	0.20	110.0000	110.0000	
3 Anthracene	0.20	29.0000	29.0000	
4 Benzo(a) anthracene	0.20	20.0000	20.0000	
5 Benzo(a)pyrene	0.20	15.0000	15.0000	
6 Benzo(b)fluoranthene	0.20	24.0000	24.0000	
7 Benzo(e)pyrene	0.20	12.0000	12.0000	
8 Benzo(g,h,i)perylene	0.20	10.0000	10.0000	
9 Benzo(k)fluoranthene	0.20	7.9000	7.9000	
10 Chrysene	0.20	19.0000	19.0000	
11 Dibenzo(a,h)anthracene	0.20	2.9000	2.9000	
12 Fluoranthene	0.20	67.0000	67.0000	
13 Fluorene	0.20	71.0000	71.0000	
14 Indeno(1,2,3-cd)pyrene	0.20	12.0000	12.0000	
15 1-Methylnaphthalene	0.20	64.0000	64.0000	
16 2-Methylnaphthalene	0.20	160.0000	160.0000	
17 Naphthalene	0.50	2100.0000	2100.0000	
18 Perylene	0.20	3.9000	3.9000	
19 Phenanthrene	0.20	140.0000	140.0000	
20 Pyrene	0.20	45.0000	45.0000	
21 Total PAH's			2922.7000	

* Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) PAH Laboratory Calculations

Run No.		3			
Sampling Location		IN2			
		Reporting			Data
Index	Analyte Name	Limit (µg)	Lab Result (µg)	Final Result (µg)	Flag(s)
1	Acenaphthene	1.00	3.0000	3.0000	
2	Acenaphthylene	1.00	33.0000	33.0000	
3	Anthracene	1.00	3.2000	3.2000	
4	Benzo(a) anthracene	1.00	0.0000	<1.0000	
5	Benzo(a)pyrene	1.00	0.0000	<1.0000	
6	Benzo(b)fluoranthene	1.00	1.2000	1.2000	
7	Benzo(e)pyrene	1.00	0.0000	<1.0000	
8	Benzo(g,h,i)perylene	1.00	0.0000	<1.0000	
9	Benzo(k)fluoranthene	1.00	0.0000	<1.0000	
10	Chrysene	1.00	1.1000	1.1000	
11	Dibenzo(a,h)anthracene	1.00	0.0000	<1.0000	
12	Fluoranthene	1.00	5.4000	5.4000	
13	Fluorene	1.00	17.0000	17.0000	
14	Indeno(1,2,3-cd)pyrene	1.00	0.0000	<1.0000	
15	1-Methylnaphthalene	1.00	18.0000	18.0000	
16	2-Methylnaphthalene	1.00	45.0000	45.0000	
17	Naphthalene	1.00	470.0000	470.0000	
18	Perylene	1.00	0.0000	<1.0000	
19	Phenanthrene	1.00	21.0000	21.0000	
20	Pyrene	0.20	2.9000	2.9000	
21	Total PAH's			620.8000	

* Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) PAH Laboratory Calculations

Run No.	3				
Sampling Location	DW1				
	Reporting Limit	Lab Result	Final Result	Data Flag(s)	
Index	Analyte Name	(µg)	(µg)	(µg)	
1	Acenaphthene	0.40	0.9800	0.9800	
2	Acenaphthylene	0.40	0.0000	<0.4000	
3	Anthracene	0.40	0.0000	<0.4000	
4	Benzo(a) anthracene	0.40	0.0000	<0.4000	
5	Benzo(a)pyrene	0.40	0.0000	<0.4000	
6	Benzo(b)fluoranthene	0.40	0.0000	<0.4000	
7	Benzo(e)pyrene	0.40	0.0000	<0.4000	
8	Benzo(g,h,i)perylene	0.40	0.0000	<0.4000	
9	Benzo(k)fluoranthene	0.40	0.0000	<0.4000	
10	Chrysene	0.40	0.0000	<0.4000	
11	Dibenzo(a,h)anthracene	0.40	0.0000	<0.4000	
12	Fluoranthene	0.40	0.0000	<0.4000	
13	Fluorene	0.40	1.0000	1.0000	
14	Indeno(1,2,3-cd)pyrene	0.40	0.0000	<0.4000	
15	1-Methylnaphthalene	0.40	0.9400	0.9400	
16	2-Methylnaphthalene	0.40	1.7000	1.7000	
17	Naphthalene	0.40	3.5000	3.5000	
18	Perylene	0.40	0.0000	<0.4000	
19	Phenanthrene	0.40	1.1000	1.1000	
20	Pyrene	0.40	0.0000	<0.4000	
21	Total PAH's			9.2200	

* Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.		3		
Sampling Location		DW2		
Index Analyte Name	Reporting Limit (µg)	Lab Result (µg)	Final Result (µg)	Data Flag(s)
1 Acenaphthene	0.20	1.7000	1.7000	
2 Acenaphthylene	0.20	0.0000	<0.2000	
3 Anthracene	0.20	0.0000	<0.2000	
4 Benzo(a) anthracene	0.20	0.0000	<0.2000	
5 Benzo(a)pyrene	0.20	0.0000	<0.2000	
6 Benzo(b)fluoranthene	0.20	0.0000	<0.2000	
7 Benzo(e)pyrene	0.20	0.0000	<0.2000	
8 Benzo(g,h,i)perylene	0.20	0.0000	<0.2000	
9 Benzo(k)fluoranthene	0.20	0.0000	<0.2000	
10 Chrysene	0.20	0.0000	<0.2000	
11 Dibenzo(a,h)anthracene	0.20	0.0000	<0.2000	
12 Fluoranthene	0.20	0.2300	0.2300	
13 Fluorene	0.20	1.3000	1.3000	
14 Indeno(1,2,3-cd)pyrene	0.20	0.0000	<0.2000	
15 1-Methylnaphthalene	0.20	1.1000	1.1000	
16 2-Methylnaphthalene	0.20	1.9000	1.9000	
17 Naphthalene	0.50	2.9000	2.9000	
18 Perylene	0.20	0.0000	<0.2000	
19 Phenanthrene	0.20	1.0000	1.0000	
20 Pyrene	0.20	0.0000	<0.2000	
21 Total PAH's			620.8000	

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* Total PAHs are calculated using zero for results below the detection limit	010000 000000

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.		3		
Sampling Location		UPW		
Index	Analyte Name	Reporting Limit (µg)	Lab Result (µg)	Final Result (µg)
1	Acenaphthene	1.00	3.3000	3.3000
2	Acenaphthylene	1.00	0.0000	<1.0000
3	Anthracene	1.00	0.0000	<1.0000
4	Benzo(a) anthracene	1.00	0.0000	<1.0000
5	Benzo(a)pyrene	1.00	0.0000	<1.0000
6	Benzo(b)fluoranthene	1.00	0.0000	<1.0000
7	Benzo(e)pyrene	1.00	0.0000	<1.0000
8	Benzo(g,h,i)perylene	1.00	0.0000	<1.0000
9	Benzo(k)fluoranthene	1.00	0.0000	<1.0000
10	Chrysene	1.00	0.0000	<1.0000
11	Dibenzo(a,h)anthracene	1.00	0.0000	<1.0000
12	Fluoranthene	1.00	1.9000	1.9000
13	Fluorene	1.00	3.9000	3.9000
14	Indeno(1,2,3-cd)pyrene	1.00	0.0000	<1.0000
15	1-Methylnaphthalene	1.00	3.2000	3.2000
16	2-Methylnaphthalene	1.00	6.4000	6.4000
17	Naphthalene	1.00	11.0000	11.0000
18	Perylene	1.00	0.0000	<1.0000
19	Phenanthrene	1.00	6.4000	6.4000
20	Pyrene	1.00	1.1000	1.1000
21	Total PAH's			37.2000

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* Total PAHs are calculated using zero for results below the detection limit L

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.		3			
Sampling Location		Field Blank			
		Reporting Limit		Data Flag(s) ¹	
Index	Analyte Name	Limit (µg)	Lab Result (µg)	Final Result (µg)	
1	Acenaphthene	0.20	ND	0.2	
2	Acenaphthylene	0.20	ND	0.2	
3	Anthracene	0.20	ND	0.2	
4	Benzo(a) anthracene	0.20	ND	0.2	
5	Benzo(a)pyrene	0.20	ND	0.2	
6	Benzo(b)fluoranthene	0.20	ND	0.2	
7	Benzo(e)pyrene	0.20	ND	0.2	
8	Benzo(g,h,i)perylene	0.20	ND	0.2	
9	Benzo(k)fluoranthene	0.20	ND	0.2	
10	Chrysene	0.20	ND	0.2	
11	Dibenzo(a,h)anthracene	0.20	ND	0.2	
12	Fluoranthene	0.20	ND	0.2	
13	Fluorene	0.20	ND	0.2	
14	Indeno(1,2,3-cd)pyrene	0.20	ND	0.2	
15	1-Methylnaphthalene	0.20	ND	0.2	
16	2-Methylnaphthalene	0.20	ND	0.2	
17	Naphthalene	0.50	ND	0.5	
18	Perylene	0.20	ND	0.2	
19	Phenanthrene	0.20	ND	0.2	
20	Pyrene	0.20	ND	0.2	

Notes

¹ Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) Run Data and Parameters

Run No.		3	3	3	3	3
Sampling Location		IN1	IN2	DW1	DW2	UPW
Start Date (2022)		Nov 9	Nov 9	Nov 9	Nov 9	Nov 9
Start Time (approx.)		14:30	15:13	13:44	13:30	15:50
Stop Date (2022)		Nov 10	Nov 10	Nov 10	Nov 10	Nov 10
Stop Time (approx.)		12:50	13:40	12:00	11:33	14:10
TE-1000 Sampler Calibration Data						
R _p	Slope	36.98759	31.72149	30.00345	30.43603	34.02213
P ₁	Intercept	-2.55612	-6.2864	-3.0959	-4.1605	-1.22610
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	754.6	754.6	754.6	754.6	754.6
T _s	Temperature (°K)	288.6	288.6	288.6	288.6	288.6
B _w	Relative Humidity (%)	45.0	45.0	45.0	45.0	45.0
TE-1000 Sampler Run Data						
Q _a	Magnehelic Gauge Reading (initial)	32	40	36	40	42
Q _s	Magnehelic Gauge Reading (final)	32	40	36	40	40
Sampling Parameters						
M _{avg}	Magnehelic Gauge Reading (average)	32	40	36	40	41
θ	Total sampling time (min)	1,340	1,347	1,336	1,323	1,340
Q _s	Sample flow rate, standard (m ³ /min)	0.2240	0.2217	0.2128	0.2241	0.2266
V _{mstd}	Volume metered, standard (dscm)	300.11	298.62	284.30	296.45	303.65
Acenaphthene						
m _n	Net Weight (µg)	10.0	3.0	1.0	1.7	3.3
C _{sd}	Concentration (µg/dscm)	0.0333	0.0100	0.0034	0.0057	0.0109
Acenaphthylene						
m _n	Net Weight (ng)	110.0	33.0	<0.2	<0.2	<0.2
C _{sd}	Concentration (ng/dscm)	0.3665	0.1105	<0.0007	<0.0007	<0.0007
Anthracene						
m _n	Net Weight (ng)	29.0	3.2	<0.2	<0.2	<0.2
C _{sd}	Concentration (ng/dscm)	0.0966	0.0107	<0.0007	<0.0007	<0.0007
Benzo(a) anthracene						
m _n	Net Weight (ng)	20.0	<0.2	<0.2	<0.2	<0.2
C _{sd}	Concentration (ng/dscm)	0.0666	<0.0007	<0.0007	<0.0007	<0.0007
Benzo(a)pyrene						
m _n	Net Weight (ng)	15.0	<0.2	<0.2	<0.2	<0.2
C _{sd}	Concentration (ng/dscm)	0.0500	<0.0007	<0.0007	<0.0007	<0.0007
Benzo(b)fluoranthene						
m _n	Net Weight (ng)	24.0	1.2	<0.2	<0.2	<0.2
C _{sd}	Concentration (ng/dscm)	0.0800	0.0040	<0.0007	<0.0007	<0.0007
Benzo(e)pyrene						
m _n	Net Weight (ng)	12.0	<0.2	<0.2	<0.2	<0.2
C _{sd}	Concentration (ng/dscm)	0.0400	<0.0007	<0.0007	<0.0007	<0.0007
Benzo(g,h,i)perylene						
m _n	Net Weight (ng)	10.0	<0.2	<0.2	<0.2	<0.2
C _{sd}	Concentration (ng/dscm)	0.0333	<0.0007	<0.0007	<0.0007	<0.0007
Benzo(k)fluoranthene						
m _n	Net Weight (ng)	7.9	<0.2	<0.2	<0.2	<0.2
C _{sd}	Concentration (ng/dscm)	0.0263	<0.0007	<0.0007	<0.0007	<0.0007

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) Run Data and Parameters

Run No.		3	3	3	3	3
Sampling Location		IN1	IN2	DW1	DW2	UPW
Start Date (2022)		Nov 9	Nov 9	Nov 9	Nov 9	Nov 9
Start Time (approx.)		14:30	15:13	13:44	13:30	15:50
Stop Date (2022)		Nov 10	Nov 10	Nov 10	Nov 10	Nov 10
Stop Time (approx.)		12:50	13:40	12:00	11:33	14:10
TE-1000 Sampler Calibration Data						
R _p	Slope	36.98759	31.72149	30.00345	30.43603	34.02213
P ₁	Intercept	-2.55612	-62864	-30959	-41605	-1.22610
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	754.6	754.6	754.6	754.6	754.6
T _s	Temperature (°K)	288.6	288.6	288.6	288.6	288.6
B _w	Relative Humidity (%)	45.0	45.0	45.0	45.0	45.0
TE-1000 Sampler Run Data						
Q _a	Magnehelic Gauge Reading (initial)	32	40	36	40	42
Q _s	Magnehelic Gauge Reading (final)	32	40	36	40	40
Sampling Parameters						
M _{avg}	Magnehelic Gauge Reading (average)	32	40	36	40	41
θ	Total sampling time (min)	1,340	1,347	1,336	1,323	1,340
Q _s	Sample flow rate, standard (m ³ /min)	0.2240	0.2217	0.2128	0.2241	0.2266
Chrysene						
m _n	Net Weight (ng)	19.0	1.1	<0.2	<0.2	<0.2
C _{sd}	Concentration (ng/dscm)	0.0633	0.0037	<0.0007	<0.0007	<0.0007
Dibenzo(a,h)anthracene						
m _n	Net Weight (ng)	2.9	<0.2	<0.2	<0.2	<0.2
C _{sd}	Concentration (ng/dscm)	0.0097	<0.0007	<0.0007	<0.0007	<0.0007
Fluoranthene						
m _n	Net Weight (ng)	67.0	5.4	<0.2	0.2	1.9
C _{sd}	Concentration (ng/dscm)	0.2232	0.0181	<0.0007	0.0008	0.0063
Fluorene						
m _n	Net Weight (ng)	71.0	17.0	1.0	1.3	3.9
C _{sd}	Concentration (ng/dscm)	0.2366	0.0569	0.0035	0.0044	0.0128
Indeno(1,2,3-cd)pyrene						
m _n	Net Weight (ng)	12.0	<0.2	<0.2	<0.2	<0.2
C _{sd}	Concentration (ng/dscm)	0.0400	<0.0007	<0.0007	<0.0007	<0.0007
1-Methylnaphthalene						
m _n	Net Weight (ng)	64.0	18.0	0.9	1.1	3.2
C _{sd}	Concentration (ng/dscm)	0.2133	0.0603	0.0033	0.0037	0.0105
2-Methylnaphthalene						
m _n	Net Weight (ng)	160.0	45.0	1.7	1.9	6.4
C _{sd}	Concentration (ng/dscm)	0.5331	0.1507	0.0060	0.0064	0.0211
Naphthalene						
m _n	Net Weight (ng)	2100.0	470.0	3.5	2.9	11.0
C _{sd}	Concentration (ng/dscm)	6.9974	1.5739	0.0123	0.0098	0.0362
Perylene						
m _n	Net Weight (ng)	3.9	<0.2	<0.2	<0.2	<0.2
C _{sd}	Concentration (ng/dscm)	0.0130	<0.0007	<0.0007	<0.0007	<0.0007
Phenanthrene						
m _n	Net Weight (ng)	140.0	21.0	1.1	1.0	6.4
C _{sd}	Concentration (ng/dscm)	0.4665	0.0703	0.0039	0.0034	0.0211
Pyrene						
m _n	Net Weight (ng)	45.0	2.9	<0.2	<0.2	1.1
C _{sd}	Concentration (ng/dscm)	0.1499	0.0097	<0.0007	<0.0007	0.0036

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH)
Run Data and Parameters

Run No.		3	3	3	3	3
Sampling Location		IN1	IN2	DW1	DW2	UPW
Start Date (2022)		Nov 9	Nov 9	Nov 9	Nov 9	Nov 9
Start Time (approx.)		14:30	15:13	13:44	13:30	15:50
Stop Date (2022)		Nov 10	Nov 10	Nov 10	Nov 10	Nov 10
Stop Time (approx.)		12:50	13:40	12:00	11:33	14:10
TE-1000 Sampler Calibration Data						
R _p	Slope	36.98759	31.72149	30.00345	30.43603	34.02213
P ₁	Intercept	-2.55612	-6.2864	-3.0959	-4.1605	-1.22610
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	754.6	754.6	754.6	754.6	754.6
T _s	Temperature (°K)	288.6	288.6	288.6	288.6	288.6
B _w	Relative Humidity (%)	45.0	45.0	45.0	45.0	45.0
TE-1000 Sampler Run Data						
Q _a	Magnehelic Gauge Reading (initial)	32	40	36	40	42
Q _s	Magnehelic Gauge Reading (final)	32	40	36	40	40
Sampling Parameters						
M _{avg}	Magnehelic Gauge Reading (average)	32	40	36	40	41
θ	Total sampling time (min)	1,340	1,347	1,336	1,323	1,340
Q _s	Sample flow rate, standard (m ³ /min)	0.2240	0.2217	0.2128	0.2241	0.2266

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) Run Data and Parameters

Run No.	3	3	3	3	3
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Nov 9	Nov 9	Nov 9	Nov 9	Nov 9
Start Time (approx.)	14:30	15:13	13:44	13:30	15:50
Stop Date (2022)	Nov 10	Nov 10	Nov 10	Nov 10	Nov 10
Stop Time (approx.)	12:50	13:40	12:00	11:33	14:10
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	754.6	754.6	754.6	754.6	754.6
T _s Temperature (°K)	288.6	288.6	288.6	288.6	288.6
B _w Relative Humidity (%)	45.0	45.0	45.0	45.0	45.0
Sampling Parameters					
θ Total sampling time (min)	1,340	1,347	1,336	1,323	1,340
Q _s Sample flow rate, standard (m ³ /min)	0.2240	0.2217	0.2128	0.2241	0.2266
V _{mstd} Volume metered, standard (scm)	300.11	298.62	284.30	296.45	303.65

PAHs

Acenaphthene (µg/scm)	0.0333	0.0100	0.0034	0.0057	0.0109
Acenaphthylene (µg/dscm)	0.3665	0.1105	<0.0007	<0.0007	<0.0007
Anthracene (µg/dscm)	0.0966	0.0107	<0.0007	<0.0007	<0.0007
Benzo(a) anthracene (µg/dscm)	0.0666	<0.0007	<0.0007	<0.0007	<0.0007
Benzo(a)pyrene (µg/dscm)	0.0500	<0.0007	<0.0007	<0.0007	<0.0007
Benzo(b)fluoranthene (µg/dscm)	0.0800	0.0040	<0.0007	<0.0007	<0.0007
Benzo(e)pyrene (µg/dscm)	0.0400	<0.0007	<0.0007	<0.0007	<0.0007
Benzo(g,h,i)perylene (µg/dscm)	0.0333	<0.0007	<0.0007	<0.0007	<0.0007
Benzo(k)fluoranthene (µg/dscm)	0.0263	<0.0007	<0.0007	<0.0007	<0.0007
Chrysene (µg/dscm)	0.0633	0.0037	<0.0007	<0.0007	<0.0007
Dibenzo(a,h)anthracene (µg/dscm)	0.0097	<0.0007	<0.0007	<0.0007	<0.0007
Fluoranthene (µg/dscm)	0.2232	0.0181	<0.0007	0.0008	0.0063
Fluorene (µg/dscm)	0.2366	0.0569	0.0035	0.0044	0.0128
Indeno(1,2,3-cd)pyrene (µg/dscm)	0.0400	<0.0007	<0.0007	<0.0007	<0.0007
1-Methylnaphthalene (µg/dscm)	0.2133	0.0603	0.0033	0.0037	0.0105
2-Methylnaphthalene (µg/dscm)	0.5331	0.1507	0.0060	0.0064	0.0211
Naphthalene (µg/dscm)	6.9974	1.5739	0.0123	0.0098	0.0362
Perylene (µg/dscm)	0.0130	<0.0007	<0.0007	<0.0007	<0.0007
Phenanthrene (µg/dscm)	0.4665	0.0703	0.0039	0.0034	0.0211
Pyrene (µg/dscm)	0.1499	0.0097	<0.0007	<0.0007	0.0036

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Parameters**

Run No.		4	4	4	4	4
Sampling Location		IN1	IN2	DW1	DW2	UPW
Index	Analyte Name	Gross Weight (µg)	Gross Weight (µg)	Gross Weight (µg)	Gross Weight (µg)	Gross Weight (µg)
1	Acenaphthene	6.1000	5.9000	1.6000	1.5000	2.0000
2	Acenaphthylene	100.0000	110.0000	1.2000	0.4800	0.6500
3	Anthracene	11.0000	15.0000	0.4800	3.7000	2.8000
4	Benzo(a) anthracene	3.9000	8.0000			
5	Benzo(a)pyrene	2.7000	5.4000			
6	Benzo(b)fluoranthene	4.9000	7.0000	0.2400		
7	Benzo(e)pyrene	2.3000	3.3000			
8	Benzo(g,h,i)perylene	1.8000	2.9000			
9	Benzo(k)fluoranthene	1.8000	2.8000			
10	Chrysene	4.3000	6.6000	0.2400		
11	Dibenzo(a,h)anthracene					
12	Fluoranthene	21.0000	23.0000	1.7000	2.0000	0.7700
13	Fluorene	44.0000	42.0000	2.7000	1.8000	2.0000
14	Indeno(1,2,3-cd)pyrene	2.1000	3.3000			
15	1-Methylnaphthalene	47.0000	38.0000	1.8000	1.4000	2.5000
16	2-Methylnaphthalene	120.0000	82.0000	3.5000	2.7000	4.7000
17	Naphthalene	1200.0000	730.0000	18.0000	7.7000	7.5000
18	Perylene		1.3000			
19	Phenanthrene	62.0000	52.0000	5.8000	3.3000	2.5000
20	Pyrene	13.0000	13.0000	0.8500	1.1000	0.4500

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EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) PAH Laboratory Calculations

Run No.	4				
Sampling Location	IN1				
	Reporting Limit	Lab Result	Final Result	Data Flag(s)	
Index	Analyte Name	(µg)	(µg)	(µg)	
1	Acenaphthene	1.00	6.1000	6.1000	
2	Acenaphthylene	1.00	100.0000	100.0000	
3	Anthracene	1.00	11.0000	11.0000	
4	Benzo(a) anthracene	1.00	3.9000	3.9000	
5	Benzo(a)pyrene	1.00	2.7000	2.7000	
6	Benzo(b)fluoranthene	1.00	4.9000	4.9000	
7	Benzo(e)pyrene	1.00	2.3000	2.3000	
8	Benzo(g,h,i)perylene	1.00	1.8000	1.8000	
9	Benzo(k)fluoranthene	1.00	1.8000	1.8000	
10	Chrysene	1.00	4.3000	4.3000	
11	Dibenzo(a,h)anthracene	1.00	0.0000	<1.0000	
12	Fluoranthene	1.00	21.0000	21.0000	
13	Fluorene	1.00	44.0000	44.0000	
14	Indeno(1,2,3-cd)pyrene	1.00	2.1000	2.1000	
15	1-Methylnaphthalene	1.00	47.0000	47.0000	
16	2-Methylnaphthalene	1.00	120.0000	120.0000	
17	Naphthalene	2.50	1200.0000	1200.0000	L-05
18	Perylene	1.00	0.0000	<1.0000	
19	Phenanthrene	1.00	62.0000	62.0000	
20	Pyrene	1.00	13.0000	13.0000	
21	Total PAH's [*]	1		1647.9000	

< Denotes that the analyte was not detectable above the stated value. The stated value was used to calculate the results.

* Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.		4		
Sampling Location		IN2		
Index Analyte Name	Reporting Limit (µg)	Lab Result (µg)	Final Result (µg)	Data Flag(s)
1 Acenaphthene	1.00	5.9000	5.9000	
2 Acenaphthylene	1.00	110.0000	110.0000	
3 Anthracene	1.00	15.0000	15.0000	
4 Benzo(a) anthracene	1.00	8.0000	8.0000	
5 Benzo(a)pyrene	1.00	5.4000	5.4000	
6 Benzo(b)fluoranthene	1.00	7.0000	7.0000	
7 Benzo(e)pyrene	1.00	3.3000	3.3000	
8 Benzo(g,h,i)perylene	1.00	2.9000	2.9000	
9 Benzo(k)fluoranthene	1.00	2.8000	2.8000	
10 Chrysene	1.00	6.6000	6.6000	
11 Dibenzo(a,h)anthracene	1.00	0.0000	<1.0000	
12 Fluoranthene	1.00	23.0000	23.0000	
13 Fluorene	1.00	42.0000	42.0000	
14 Indeno(1,2,3-cd)pyrene	1.00	3.3000	3.3000	
15 1-Methylnaphthalene	1.00	38.0000	38.0000	
16 2-Methylnaphthalene	1.00	82.0000	82.0000	
17 Naphthalene	2.50	730.0000	730.0000	L-05
18 Perylene	1.00	1.3000	1.3000	
19 Phenanthrene	1.00	52.0000	52.0000	
20 Pyrene	1.00	13.0000	13.0000	
21 Total PAH's [*]	1		1151.5000	

< Denotes that the analyte was not detectable above the stated value. The stated value was used to calculate the results.

* Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.	4			
Sampling Location	DW1			
	Reporting Limit	Lab Result	Final Result	Data Flag(s)
Index Analyte Name	(µg)	(µg)	(µg)	
1 Acenaphthene	0.20	1.6000	1.6000	
2 Acenaphthylene	0.20	1.2000	1.2000	
3 Anthracene	0.20	0.4800	0.4800	
4 Benzo(a) anthracene	0.20	0.0000	<0.2000	
5 Benzo(a)pyrene	0.20	0.0000	<0.2000	
6 Benzo(b)fluoranthene	0.20	0.2400	0.2400	
7 Benzo(e)pyrene	0.20	0.0000	<0.2000	
8 Benzo(g,h,i)perylene	0.20	0.0000	<0.2000	
9 Benzo(k)fluoranthene	0.20	0.0000	<0.2000	
10 Chrysene	0.20	0.2400	0.2400	
11 Dibenzo(a,h)anthracene	0.20	0.0000	<0.2000	
12 Fluoranthene	0.20	1.7000	1.7000	
13 Fluorene	0.20	2.7000	2.7000	
14 Indeno(1,2,3-cd)pyrene	0.20	0.0000	<0.2000	
15 1-Methylnaphthalene	0.20	1.8000	1.8000	
16 2-Methylnaphthalene	0.20	3.5000	3.5000	
17 Naphthalene	0.50	18.0000	18.0000	L-05
18 Perylene	0.20	0.0000	<0.2000	
19 Phenanthrene	0.20	5.8000	5.8000	
20 Pyrene	0.20	0.8500	0.8500	
21 Total PAH's [*]	1		38.1100	

< Denotes that the analyte was not detectable above the stated value. The stated value was used to calculate the results.

* Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) PAH Laboratory Calculations

Run No.	4				
Sampling Location	DW2				
	Reporting Limit	Lab Result	Final Result	Data Flag(s)	
Index	Analyte Name	(µg)	(µg)	(µg)	
1	Acenaphthene	0.20	1.5000	1.5000	
2	Acenaphthylene	0.20	0.4800	0.4800	
3	Anthracene	0.20	3.7000	3.7000	
4	Benzo(a) anthracene	0.20	0.0000	<0.2000	
5	Benzo(a)pyrene	0.20	0.0000	<0.2000	
6	Benzo(b)fluoranthene	0.20	0.0000	<0.2000	
7	Benzo(e)pyrene	0.20	0.0000	<0.2000	
8	Benzo(g,h,i)perylene	0.20	0.0000	<0.2000	
9	Benzo(k)fluoranthene	0.20	0.0000	<0.2000	
10	Chrysene	0.20	0.0000	<0.2000	
11	Dibenzo(a,h)anthracene	0.20	0.0000	<0.2000	
12	Fluoranthene	0.20	2.0000	2.0000	
13	Fluorene	0.20	1.8000	1.8000	
14	Indeno(1,2,3-cd)pyrene	0.20	0.0000	<0.2000	
15	1-Methylnaphthalene	0.20	1.4000	1.4000	
16	2-Methylnaphthalene	0.20	2.7000	2.7000	
17	Naphthalene	0.50	7.7000	7.7000	
18	Perylene	0.20	0.0000	<0.2000	
19	Phenanthrene	0.20	3.3000	3.3000	
20	Pyrene	0.20	1.1000	1.1000	
21	Total PAH's	1		1151.5000	L-05

< Denotes that the analyte was not detectable above the stated value. The stated value was used to calculate the results.

* Total PAHs are calculated using zero for results below the detection limit 010000 000000

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.

4

Sampling Location

UPW

Index	Analyte Name	Reporting	Lab Result	Final Result	Data Flag(s)
		Limit (µg)			
1	Acenaphthene	0.20	2.0000	2.0000	
2	Acenaphthylene	0.20	0.6500	0.6500	
3	Anthracene	0.20	2.8000	2.8000	
4	Benzo(a) anthracene	0.20	0.0000	<0.2000	
5	Benzo(a)pyrene	0.20	0.0000	<0.2000	
6	Benzo(b)fluoranthene	0.20	0.0000	<0.2000	
7	Benzo(e)pyrene	0.20	0.0000	<0.2000	
8	Benzo(g,h,i)perylene	0.20	0.0000	<0.2000	
9	Benzo(k)fluoranthene	0.20	0.0000	<0.2000	
10	Chrysene	0.20	0.0000	<0.2000	
11	Dibenzo(a,h)anthracene	0.20	0.0000	<0.2000	
12	Fluoranthene	0.20	0.7700	0.7700	
13	Fluorene	0.20	2.0000	2.0000	
14	Indeno(1,2,3-cd)pyrene	0.20	0.0000	<0.2000	
15	1-Methylnaphthalene	0.20	2.5000	2.5000	
16	2-Methylnaphthalene	0.20	4.7000	4.7000	
17	Naphthalene	0.50	7.5000	7.5000	L-05
18	Perylene	0.20	0.0000	<0.2000	
19	Phenanthrene	0.20	2.5000	2.5000	
20	Pyrene	0.20	0.4500	0.4500	
21	Total PAH's ¹			25.8700	

< Denotes that the analyte was not detectable above the stated value. The stated value was used to calculate the results.

¹ Total PAHs are calculated using zero for results below the detection limit

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EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) PAH Laboratory Calculations

Run No.		4			
Sampling Location		Field Blank			
		Reporting Limit (µg)	Lab Result (µg)	Final Result (µg)	Data Flag(s) ¹
Index	Analyte Name				
1	Acenaphthene	0.20	ND	0.2	
2	Acenaphthylene	0.20	ND	0.2	
3	Anthracene	0.20	ND	0.2	
4	Benzo(a) anthracene	0.20	ND	0.2	
5	Benzo(a)pyrene	0.20	ND	0.2	
6	Benzo(b)fluoranthene	0.20	ND	0.2	
7	Benzo(e)pyrene	0.20	ND	0.2	
8	Benzo(g,h,i)perylene	0.20	ND	0.2	
9	Benzo(k)fluoranthene	0.20	ND	0.2	
10	Chrysene	0.20	ND	0.2	
11	Dibenzo(a,h)anthracene	0.20	ND	0.2	
12	Fluoranthene	0.20	ND	0.2	
13	Fluorene	0.20	ND	0.2	
14	Indeno(1,2,3-cd)pyrene	0.20	ND	0.2	
15	1-Methylnaphthalene	0.20	ND	0.2	
16	2-Methylnaphthalene	0.20	ND	0.2	
17	Naphthalene	0.50	ND	0.5	
18	Perylene	0.20	ND	0.2	
19	Phenanthrene	0.20	ND	0.2	
20	Pyrene	0.20	ND	0.2	

Notes

¹ Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) Run Data and Parameters

Run No.		4	4	4	4	4
Sampling Location		IN1	IN2	DW1	DW2	UPW
Start Date (2022)		Dec 5	Dec 5	Dec 5	Dec 5	Dec 5
Start Time (approx.)		16:14	16:39	15:45	15:15	17:35
Stop Date (2022)		Dec 6	Dec 6	Dec 6	Dec 6	Dec 6
Stop Time (approx.)		14:40	15:05	14:15	13:55	15:38
TE-1000 Sampler Calibration Data						
R _p	Slope	36.98759	31.72149	30.00345	30.43603	34.02213
P ₁	Intercept	-2.55612	-6.2864	-3.0959	-4.1605	-1.22610
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	748.3	748.3	748.3	748.3	748.3
T _s	Temperature (°K)	279.5	279.5	279.5	279.5	279.5
B _w	Relative Humidity (%)	60.0	60.0	60.0	60.0	60.0
TE-1000 Sampler Run Data						
Q _a	Magnehelic Gauge Reading (initial)	38	40	40	40	42
Q _s	Magnehelic Gauge Reading (final)	38	40	40	40	42
Sampling Parameters						
M _{avg}	Magnehelic Gauge Reading (average)	38	40	40	40	42
θ	Total sampling time (min)	1,346	1,346	1,350	1,360	1,323
Q _s	Sample flow rate, standard (m ³ /min)	0.2399	0.2241	0.2263	0.2266	0.2312
V _{mstd}	Volume metered, standard (dscm)	322.86	301.63	305.50	308.14	305.89
Acenaphthene						
m _n	Net Weight (µg)	6.1	5.9	1.6	1.5	2.0
C _{sd}	Concentration (µg/dscm)	0.0189	0.0196	0.0052	0.0049	0.0065
Acenaphthylene						
m _n	Net Weight (ng)	100.0	110.0	1.2	<1.0	<1.0
C _{sd}	Concentration (ng/dscm)	0.3097	0.3647	0.0039	<0.0032	<0.0033
Anthracene						
m _n	Net Weight (ng)	11.0	15.0	<1.0	3.7	2.8
C _{sd}	Concentration (ng/dscm)	0.0341	0.0497	<0.0033	0.0120	0.0092
Benzo(a) anthracene						
m _n	Net Weight (ng)	3.9	8.0	<1.0	<1.0	<1.0
C _{sd}	Concentration (ng/dscm)	0.0121	0.0265	<0.0033	<0.0032	<0.0033
Benzo(a)pyrene						
m _n	Net Weight (ng)	2.7	5.4	<1.0	<1.0	<1.0
C _{sd}	Concentration (ng/dscm)	0.0084	0.0179	<0.0033	<0.0032	<0.0033
Benzo(b)fluoranthene						
m _n	Net Weight (ng)	4.9	7.0	<1.0	<1.0	<1.0
C _{sd}	Concentration (ng/dscm)	0.0152	0.0232	<0.0033	<0.0032	<0.0033
Benzo(e)pyrene						
m _n	Net Weight (ng)	2.3	3.3	<1.0	<1.0	<1.0
C _{sd}	Concentration (ng/dscm)	0.0071	0.0109	<0.0033	<0.0032	<0.0033
Benzo(g,h,i)perylene						
m _n	Net Weight (ng)	1.8	2.9	<1.0	<1.0	<1.0
C _{sd}	Concentration (ng/dscm)	0.0056	0.0096	<0.0033	<0.0032	<0.0033
Benzo(k)fluoranthene						
m _n	Net Weight (ng)	1.8	2.8	<1.0	<1.0	<1.0
C _{sd}	Concentration (ng/dscm)	0.0056	0.0093	<0.0033	<0.0032	<0.0033

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) Run Data and Parameters

Run No.		4	4	4	4	4
Sampling Location		IN1	IN2	DW1	DW2	UPW
Start Date (2022)		Dec 5	Dec 5	Dec 5	Dec 5	Dec 5
Start Time (approx.)		16:14	16:39	15:45	15:15	17:35
Stop Date (2022)		Dec 6	Dec 6	Dec 6	Dec 6	Dec 6
Stop Time (approx.)		14:40	15:05	14:15	13:55	15:38
TE-1000 Sampler Calibration Data						
R _p	Slope	36.98759	31.72149	30.00345	30.43603	34.02213
P ₁	Intercept	-2.55612	-62864	-30959	-41605	-1.22610
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	748.3	748.3	748.3	748.3	748.3
T _s	Temperature (°K)	279.5	279.5	279.5	279.5	279.5
B _w	Relative Humidity (%)	60.0	60.0	60.0	60.0	60.0
TE-1000 Sampler Run Data						
Q _a	Magnehelic Gauge Reading (initial)	38	40	40	40	42
Q _s	Magnehelic Gauge Reading (final)	38	40	40	40	42
Sampling Parameters						
M _{avg}	Magnehelic Gauge Reading (average)	38	40	40	40	42
θ	Total sampling time (min)	1,346	1,346	1,350	1,360	1,323
Q _s	Sample flow rate, standard (m ³ /min)	0.2399	0.2241	0.2263	0.2266	0.2312
Chrysene						
m _n	Net Weight (ng)	4.3	6.6	<1.0	<1.0	<1.0
C _{sd}	Concentration (ng/dscm)	0.0133	0.0219	<0.0033	<0.0032	<0.0033
Dibenzo(a,h)anthracene						
m _n	Net Weight (ng)	<1.0	<1.0	<1.0	<1.0	<1.0
C _{sd}	Concentration (ng/dscm)	<0.0031	<0.0033	<0.0033	<0.0032	<0.0033
Fluoranthene						
m _n	Net Weight (ng)	21.0	23.0	1.7	2.0	<1.0
C _{sd}	Concentration (ng/dscm)	0.0650	0.0763	0.0056	0.0065	<0.0033
Fluorene						
m _n	Net Weight (ng)	44.0	42.0	2.7	1.8	2.0
C _{sd}	Concentration (ng/dscm)	0.1363	0.1392	0.0088	0.0058	0.0065
Indeno(1,2,3-cd)pyrene						
m _n	Net Weight (ng)	2.1	3.3	<1.0	<1.0	<1.0
C _{sd}	Concentration (ng/dscm)	0.0065	0.0109	<0.0033	<0.0032	<0.0033
1-Methylnaphthalene						
m _n	Net Weight (ng)	47.0	38.0	1.8	1.4	2.5
C _{sd}	Concentration (ng/dscm)	0.1456	0.1260	0.0059	0.0045	0.0082
2-Methylnaphthalene						
m _n	Net Weight (ng)	120.0	82.0	3.5	2.7	4.7
C _{sd}	Concentration (ng/dscm)	0.3717	0.2719	0.0115	0.0088	0.0154
Naphthalene						
m _n	Net Weight (ng)	1200.0	730.0	18.0	7.7	7.5
C _{sd}	Concentration (ng/dscm)	3.7168	2.4201	0.0589	0.0250	0.0245
Perylene						
m _n	Net Weight (ng)	<1.0	1.3	<1.0	<1.0	<1.0
C _{sd}	Concentration (ng/dscm)	<0.0031	0.0043	<0.0033	<0.0032	<0.0033
Phenanthrene						
m _n	Net Weight (ng)	62.0	52.0	5.8	3.3	2.5
C _{sd}	Concentration (ng/dscm)	0.1920	0.1724	0.0190	0.0107	0.0082
Pyrene						
m _n	Net Weight (ng)	13.0	13.0	<1.0	1.1	<1.0
C _{sd}	Concentration (ng/dscm)	0.0403	0.0431	<0.0033	0.0036	<0.0033

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH)
Run Data and Parameters

Run No.		4	4	4	4	4
Sampling Location		IN1	IN2	DW1	DW2	UPW
Start Date (2022)		Dec 5	Dec 5	Dec 5	Dec 5	Dec 5
Start Time (approx.)		16:14	16:39	15:45	15:15	17:35
Stop Date (2022)		Dec 6	Dec 6	Dec 6	Dec 6	Dec 6
Stop Time (approx.)		14:40	15:05	14:15	13:55	15:38
TE-1000 Sampler Calibration Data						
R _p	Slope	36.98759	31.72149	30.00345	30.43603	34.02213
P ₁	Intercept	-2.55612	-62864	-30959	-41605	-1.22610
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	748.3	748.3	748.3	748.3	748.3
T _s	Temperature (°K)	279.5	279.5	279.5	279.5	279.5
B _w	Relative Humidity (%)	60.0	60.0	60.0	60.0	60.0
TE-1000 Sampler Run Data						
Q _a	Magnehelic Gauge Reading (initial)	38	40	40	40	42
Q _s	Magnehelic Gauge Reading (final)	38	40	40	40	42
Sampling Parameters						
M _{avg}	Magnehelic Gauge Reading (average)	38	40	40	40	42
θ	Total sampling time (min)	1,346	1,346	1,350	1,360	1,323
Q _s	Sample flow rate, standard (m ³ /min)	0.2399	0.2241	0.2263	0.2266	0.2312

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) Run Data and Parameters

Run No.		4	4	4	4	4
Sampling Location		IN1	IN2	DW1	DW2	UPW
Start Date (2022)		Dec 5	Dec 5	Dec 5	Dec 5	Dec 5
Start Time (approx.)		16:14	16:39	15:45	15:15	17:35
Stop Date (2022)		Dec 6	Dec 6	Dec 6	Dec 6	Dec 6
Stop Time (approx.)		14:40	15:05	14:15	13:55	15:38
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	748.3	748.3	748.3	748.3	748.3
T _s	Temperature (°K)	279.5	279.5	279.5	279.5	279.5
B _w	Relative Humidity (%)	60.0	60.0	60.0	60.0	60.0
Sampling Parameters						
θ	Total sampling time (min)	1,346	1,346	1,350	1,360	1,323
Q _s	Sample flow rate, standard (m ³ /min)	0.2399	0.2241	0.2263	0.2266	0.2312
V _{mstd}	Volume metered, standard (scm)	322.86	301.63	305.50	308.14	305.89

PAHs

Acenaphthene	(µg/scm)	0.0189	0.0196	0.0052	0.0049	0.0065
Acenaphthylene (µg/dscm)	(µg/scm)	0.3097	0.3647	0.0039	<0.0032	<0.0033
Anthracene (µg/dscm)	(µg/scm)	0.0341	0.0497	<0.0033	0.0120	0.0092
Benzo(a) anthracene (µg/dscm)	(µg/scm)	0.0121	0.0265	<0.0033	<0.0032	<0.0033
Benzo(a)pyrene (µg/dscm)	(µg/scm)	0.0084	0.0179	<0.0033	<0.0032	<0.0033
Benzo(b)fluoranthene (µg/dscm)	(µg/scm)	0.0152	0.0232	<0.0033	<0.0032	<0.0033
Benzo(e)pyrene (µg/dscm)	(µg/scm)	0.0071	0.0109	<0.0033	<0.0032	<0.0033
Benzo(g,h,i)perylene (µg/dscm)	(µg/scm)	0.0056	0.0096	<0.0033	<0.0032	<0.0033
Benzo(k)fluoranthene	(µg/scm)	0.0056	0.0093	<0.0033	<0.0032	<0.0033
Chrysene (µg/dscm)	(µg/scm)	0.0133	0.0219	<0.0033	<0.0032	<0.0033
Dibenzo(a,h)anthracene	(µg/scm)	<0.0031	<0.0033	<0.0033	<0.0032	<0.0033
Fluoranthene (µg/dscm)	(µg/scm)	0.0650	0.0763	0.0056	0.0065	<0.0033
Fluorene (µg/dscm)	(µg/scm)	0.1363	0.1392	0.0088	0.0058	0.0065
Indeno(1,2,3-cd)pyrene (µg/dscm)	(µg/scm)	0.0065	0.0109	<0.0033	<0.0032	<0.0033
1-Methylnaphthalene (µg/dscm)	(µg/scm)	0.1456	0.1260	0.0059	0.0045	0.0082
2-Methylnaphthalene (µg/dscm)	(µg/scm)	0.3717	0.2719	0.0115	0.0088	0.0154
Naphthalene (µg/dscm)	(µg/scm)	3.7168	2.4201	0.0589	0.0250	0.0245
Perylene (µg/dscm)	(µg/scm)	<0.0031	0.0043	<0.0033	<0.0032	<0.0033
Phenanthrene (µg/dscm)	(µg/scm)	0.1920	0.1724	0.0190	0.0107	0.0082
Pyrene (µg/dscm)	(µg/scm)	0.0403	0.0431	<0.0033	0.0036	<0.0033

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Parameters**

Run No.		5	5	5	5	5
Sampling Location		IN1	IN2	DW1	DW2	UPW
Index	Analyte Name	Gross Weight (µg)	Gross Weight (µg)	Gross Weight (µg)	Gross Weight (µg)	Gross Weight (µg)
1	Acenaphthene	14.0000	4.8000	1.3000	1.7000	1.1000
2	Acenaphthylene	610.0000	210.0000	5.9000	7.9000	0.8500
3	Anthracene	31.0000	9.5000	2.4000	2.2000	
4	Benzo(a) anthracene	2.9000	0.5000	1.5000	1.4000	
5	Benzo(a)pyrene	1.4000	0.3400	1.0000	0.8900	
6	Benzo(b)fluoranthene	2.2000	0.5200	1.6000	1.5000	0.2200
7	Benzo(e)pyrene	1.1000	0.2800	0.7700	0.7400	
8	Benzo(g,h,i)perylene	0.8800	0.2700	0.6700	0.6300	
9	Benzo(k)fluoranthene	0.8500		0.5800	0.5300	
10	Chrysene	2.7000	0.5700	1.5000	1.4000	
11	Dibenzo(a,h)anthracene					
12	Fluoranthene	26.0000	5.7000	5.2000	4.9000	0.5600
13	Fluorene	140.0000	45.0000	3.5000	4.0000	1.0000
14	Indeno(1,2,3-cd)pyrene	1.0000	0.2800	0.7800	0.7300	
15	1-Methylnaphthalene	250.0000	62.0000	5.8000	6.8000	4.5000
16	2-Methylnaphthalene	640.0000	150.0000	10.0000	14.0000	7.7000
17	Naphthalene	16000.0000	2600.0000	79.0000	150.0000	24.0000
18	Perylene	0.4100		0.2800	0.2400	
19	Phenanthrene	120.0000	44.0000	10.0000	10.0000	1.9000
20	Pyrene	16.0000	3.4000	3.5000	3.3000	0.4300

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EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.		5		
Sampling Location		IN1		
Index Analyte Name	Reporting Limit (µg)	Lab Result (µg)	Final Result (µg)	Data Flag(s)
1 Acenaphthene	0.40	14.0000	14.0000	
2 Acenaphthylene	0.40	610.0000	610.0000	
3 Anthracene	0.40	31.0000	31.0000	
4 Benzo(a) anthracene	0.40	2.9000	2.9000	
5 Benzo(a)pyrene	0.40	1.4000	1.4000	
6 Benzo(b)fluoranthene	0.40	2.2000	2.2000	
7 Benzo(e)pyrene	0.40	1.1000	1.1000	
8 Benzo(g,h,i)perylene	0.40	0.8800	0.8800	
9 Benzo(k)fluoranthene	0.40	0.8500	0.8500	
10 Chrysene	0.40	2.7000	2.7000	
11 Dibenzo(a,h)anthracene	0.40	0.0000	<0.4000	
12 Fluoranthene	0.40	26.0000	26.0000	
13 Fluorene	0.40	140.0000	140.0000	
14 Indeno(1,2,3-cd)pyrene	0.40	1.0000	1.0000	
15 1-Methylnaphthalene	0.40	250.0000	250.0000	
16 2-Methylnaphthalene	0.40	640.0000	640.0000	
17 Naphthalene	1.00	16000.0000	16000.0000	L-05
18 Perylene	0.40	0.4100	0.4100	
19 Phenanthrene	0.40	120.0000	120.0000	
20 Pyrene	0.40	16.0000	16.0000	
21 Total PAH's [*]	¹		17860.4400	

< Denotes that the analyte was not detectable above the stated value. The stated value was used to calculate the results.

* Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) PAH Laboratory Calculations

Run No.	5				
Sampling Location	IN2				
	Reporting Limit	Lab Result	Final Result	Data Flag(s)	
Index	Analyte Name	(µg)	(µg)	(µg)	
1	Acenaphthene	0.20	4.8000	4.8000	
2	Acenaphthylene	0.20	210.0000	210.0000	
3	Anthracene	0.20	9.5000	9.5000	
4	Benzo(a) anthracene	0.20	0.5000	0.5000	
5	Benzo(a)pyrene	0.20	0.3400	0.3400	
6	Benzo(b)fluoranthene	0.20	0.5200	0.5200	
7	Benzo(e)pyrene	0.20	0.2800	0.2800	
8	Benzo(g,h,i)perylene	0.20	0.2700	0.2700	
9	Benzo(k)fluoranthene	0.20	0.0000	<0.2000	
10	Chrysene	0.20	0.5700	0.5700	
11	Dibenzo(a,h)anthracene	0.20	0.0000	<0.2000	
12	Fluoranthene	0.20	5.7000	5.7000	
13	Fluorene	0.20	45.0000	45.0000	
14	Indeno(1,2,3-cd)pyrene	0.20	0.2800	0.2800	
15	1-Methylnaphthalene	0.20	62.0000	62.0000	
16	2-Methylnaphthalene	0.20	150.0000	150.0000	
17	Naphthalene	0.50	2600.0000	2600.0000	L-05
18	Perylene	0.20	0.0000	<0.2000	
19	Phenanthrene	0.20	44.0000	44.0000	
20	Pyrene	0.20	3.4000	3.4000	
21	Total PAH's [*]	1		3137.1600	

< Denotes that the analyte was not detectable above the stated value. The stated value was used to calculate the results.

* Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.		5		
Sampling Location		DW1		
Index Analyte Name	Reporting Limit (µg)	Lab Result (µg)	Final Result (µg)	Data Flag(s)
1 Acenaphthene	0.20	1.3000	1.3000	
2 Acenaphthylene	0.20	5.9000	5.9000	
3 Anthracene	0.20	2.4000	2.4000	
4 Benzo(a) anthracene	0.20	1.5000	1.5000	
5 Benzo(a)pyrene	0.20	1.0000	1.0000	
6 Benzo(b)fluoranthene	0.20	1.6000	1.6000	
7 Benzo(e)pyrene	0.20	0.7700	0.7700	
8 Benzo(g,h,i)perylene	0.20	0.6700	0.6700	
9 Benzo(k)fluoranthene	0.20	0.5800	0.5800	
10 Chrysene	0.20	1.5000	1.5000	
11 Dibenzo(a,h)anthracene	0.20	0.0000	<0.2000	
12 Fluoranthene	0.20	5.2000	5.2000	
13 Fluorene	0.20	3.5000	3.5000	
14 Indeno(1,2,3-cd)pyrene	0.20	0.7800	0.7800	
15 1-Methylnaphthalene	0.20	5.8000	5.8000	
16 2-Methylnaphthalene	0.20	10.0000	10.0000	
17 Naphthalene	0.50	79.0000	79.0000	L-05
18 Perylene	0.20	0.2800	0.2800	
19 Phenanthrene	0.20	10.0000	10.0000	
20 Pyrene	0.20	3.5000	3.5000	
21 Total PAH's [*]	¹		135.2800	

< Denotes that the analyte was not detectable above the stated value. The stated value was used to calculate the results.

* Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) PAH Laboratory Calculations

Run No.	5				
Sampling Location	DW2				
	Reporting Limit	Lab Result	Final Result	Data Flag(s)	
Index	Analyte Name	(µg)	(µg)	(µg)	
1	Acenaphthene	0.20	1.7000	1.7000	
2	Acenaphthylene	0.20	7.9000	7.9000	
3	Anthracene	0.20	2.2000	2.2000	
4	Benzo(a) anthracene	0.20	1.4000	1.4000	
5	Benzo(a)pyrene	0.20	0.8900	0.8900	
6	Benzo(b)fluoranthene	0.20	1.5000	1.5000	
7	Benzo(e)pyrene	0.20	0.7400	0.7400	
8	Benzo(g,h,i)perylene	0.20	0.6300	0.6300	
9	Benzo(k)fluoranthene	0.20	0.5300	0.5300	
10	Chrysene	0.20	1.4000	1.4000	
11	Dibenzo(a,h)anthracene	0.20	0.0000	<0.2000	
12	Fluoranthene	0.20	4.9000	4.9000	
13	Fluorene	0.20	4.0000	4.0000	
14	Indeno(1,2,3-cd)pyrene	0.20	0.7300	0.7300	
15	1-Methylnaphthalene	0.20	6.8000	6.8000	
16	2-Methylnaphthalene	0.20	14.0000	14.0000	
17	Naphthalene	0.50	150.0000	150.0000	L-05
18	Perylene	0.20	0.2400	0.2400	
19	Phenanthrene	0.20	10.0000	10.0000	
20	Pyrene	0.20	3.3000	3.3000	
21	Total PAH's [*]	1		3137.1600	

< Denotes that the analyte was not detectable above the stated value. The stated value was used to calculate the results.

* Total PAHs are calculated using zero for results below the detection limit 010000 000000

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.	5				
Sampling Location	UPW				
	Reporting Limit	Lab Result	Final Result	Data Flag(s)	
Index	Analyte Name	(µg)	(µg)	(µg)	
1	Acenaphthene	0.20	1.1000	1.1000	
2	Acenaphthylene	0.20	0.8500	0.8500	
3	Anthracene	0.20	0.0000	<0.2000	
4	Benzo(a) anthracene	0.20	0.0000	<0.2000	
5	Benzo(a)pyrene	0.20	0.0000	<0.2000	
6	Benzo(b)fluoranthene	0.20	0.2200	0.2200	
7	Benzo(e)pyrene	0.20	0.0000	<0.2000	
8	Benzo(g,h,i)perylene	0.20	0.0000	<0.2000	
9	Benzo(k)fluoranthene	0.20	0.0000	<0.2000	
10	Chrysene	0.20	0.0000	<0.2000	
11	Dibenzo(a,h)anthracene	0.20	0.0000	<0.2000	
12	Fluoranthene	0.20	0.5600	0.5600	
13	Fluorene	0.20	1.0000	1.0000	
14	Indeno(1,2,3-cd)pyrene	0.20	0.0000	<0.2000	
15	1-Methylnaphthalene	0.20	4.5000	4.5000	
16	2-Methylnaphthalene	0.20	7.7000	7.7000	
17	Naphthalene	0.50	24.0000	24.0000	
18	Perylene	0.20	0.0000	<0.2000	
19	Phenanthrene	0.20	1.9000	1.9000	
20	Pyrene	0.20	0.4300	0.4300	
21	Total PAH's [*]	1		42.2600	L-05

< Denotes that the analyte was not detectable above the stated value. The stated value was used to calculate the results.

* Total PAHs are calculated using zero for results below the detection limit L

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) PAH Laboratory Calculations

Run No.		5			
Sampling Location		Field Blank			
		Reporting Limit		Data	
Index	Analyte Name	(µg)	Lab Result (µg)	Final Result (µg)	Flag(s) ¹
1	Acenaphthene	0.20	ND	0.2	
2	Acenaphthylene	0.20	ND	0.2	
3	Anthracene	0.20	ND	0.2	
4	Benzo(a) anthracene	0.20	ND	0.2	
5	Benzo(a)pyrene	0.20	ND	0.2	
6	Benzo(b)fluoranthene	0.20	ND	0.2	
7	Benzo(e)pyrene	0.20	ND	0.2	
8	Benzo(g,h,i)perylene	0.20	ND	0.2	
9	Benzo(k)fluoranthene	0.20	ND	0.2	
10	Chrysene	0.20	ND	0.2	
11	Dibenzo(a,h)anthracene	0.20	ND	0.2	
12	Fluoranthene	0.20	ND	0.2	
13	Fluorene	0.20	ND	0.2	
14	Indeno(1,2,3-cd)pyrene	0.20	ND	0.2	
15	1-Methylnaphthalene	0.20	ND	0.2	
16	2-Methylnaphthalene	0.20	ND	0.2	
17	Naphthalene	0.50	1.8	1.8	
18	Perylene	0.20	ND	0.2	
19	Phenanthrene	0.20	ND	0.2	
20	Pyrene	0.20	ND	0.2	

Notes

¹ Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) Run Data and Parameters

Run No.	5	5	5	5	5
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Dec 20	Dec 20	Dec 20	Dec 20	Dec 20
Start Time (approx.)	12:22	13:05	11:40	10:52	14:00
Stop Date (2022)	Dec 21	Dec 21	Dec 21	Dec 21	Dec 21
Stop Time (approx.)	10:58	11:15	10:30	10:05	12:10
TE-1000 Sampler Calibration Data					
R _p Slope	36.98759	31.72149	30.00345	30.43603	34.02213
P ₁ Intercept	-2.55612	-6.2864	-3.0959	-4.1605	-1.22610
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	755.7	755.7	755.7	755.7	755.7
T _s Temperature (°K)	271.8	271.8	271.8	271.8	271.8
B _w Relative Humidity (%)	72.0	72.0	72.0	72.0	72.0
TE-1000 Sampler Run Data					
Q _a Magnehelic Gauge Reading (initial)	40	38	38	38	38
Q _s Magnehelic Gauge Reading (final)	40	37	37	36	38
Sampling Parameters					
M _{avg} Magnehelic Gauge Reading (average)	40	38	38	37	38
θ Total sampling time (min) ¹	1,356	1,330	1,370	1,393	1,330
Q _s Sample flow rate, standard (m ³ /min)	0.2476	0.2214	0.2234	0.2223	0.2252
V _{mstd} Volume metered, standard (dscm)	335.80	294.44	306.09	309.72	299.54
Acenaphthene					
m _n Net Weight (µg)	14.0	4.8	1.3	1.7	1.1
C _{sd} Concentration (µg/dscm)	0.0417	0.0163	0.0042	0.0055	0.0037
Acenaphthylene					
m _n Net Weight (ng)	610.0	210.0	5.9	7.9	0.9
C _{sd} Concentration (ng/dscm)	1.8165	0.7132	0.0193	0.0255	0.0028
Anthracene					
m _n Net Weight (ng)	31.0	9.5	2.4	2.2	<0.4
C _{sd} Concentration (ng/dscm)	0.0923	0.0323	0.0078	0.0071	<0.0013
Benzo(a) anthracene					
m _n Net Weight (ng)	2.9	0.5	1.5	1.4	<0.4
C _{sd} Concentration (ng/dscm)	0.0086	0.0017	0.0049	0.0045	<0.0013
Benzo(a)pyrene					
m _n Net Weight (ng)	1.4	<0.4	1.0	0.9	<0.4
C _{sd} Concentration (ng/dscm)	0.0042	<0.0014	0.0033	0.0029	<0.0013
Benzo(b)fluoranthene					
m _n Net Weight (ng)	2.2	0.5	1.6	1.5	<0.4
C _{sd} Concentration (ng/dscm)	0.0066	0.0018	0.0052	0.0048	<0.0013
Benzo(e)pyrene					
m _n Net Weight (ng)	1.1	<0.4	0.8	0.7	<0.4
C _{sd} Concentration (ng/dscm)	0.0033	<0.0014	0.0025	0.0024	<0.0013
Benzo(g,h,i)perylene					
m _n Net Weight (ng)	0.9	<0.4	0.7	0.6	<0.4
C _{sd} Concentration (ng/dscm)	0.0026	<0.0014	0.0022	0.0020	<0.0013
Benzo(k)fluoranthene					
m _n Net Weight (ng)	0.9	<0.4	0.6	0.5	<0.4
C _{sd} Concentration (ng/dscm)	0.0025	<0.0014	0.0019	0.0017	<0.0013

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) Run Data and Parameters

Run No.	5	5	5	5	5
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Dec 20	Dec 20	Dec 20	Dec 20	Dec 20
Start Time (approx.)	12:22	13:05	11:40	10:52	14:00
Stop Date (2022)	Dec 21	Dec 21	Dec 21	Dec 21	Dec 21
Stop Time (approx.)	10:58	11:15	10:30	10:05	12:10
TE-1000 Sampler Calibration Data					
R _p Slope	36.98759	31.72149	30.00345	30.43603	34.02213
P ₁ Intercept	-2.55612	-62864	-30959	-41605	-1.22610
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	755.7	755.7	755.7	755.7	755.7
T _s Temperature (°K)	271.8	271.8	271.8	271.8	271.8
B _w Relative Humidity (%)	72.0	72.0	72.0	72.0	72.0
TE-1000 Sampler Run Data					
Q _a Magnehelic Gauge Reading (initial)	40	38	38	38	38
Q _s Magnehelic Gauge Reading (final)	40	37	37	36	38
Sampling Parameters					
M _{avg} Magnehelic Gauge Reading (average)	40	38	38	37	38
θ Total sampling time (min) ¹	1,356	1,330	1,370	1,393	1,330
Q _s Sample flow rate, standard (m ³ /min)	0.2476	0.2214	0.2234	0.2223	0.2252
Chrysene					
m _n Net Weight (ng)	2.7	0.6	1.5	1.4	<0.4
C _{sd} Concentration (ng/dscm)	0.0080	0.0019	0.0049	0.0045	<0.0013
Dibenzo(a,h)anthracene					
m _n Net Weight (ng)	<0.4	<0.4	<0.4	<0.4	<0.4
C _{sd} Concentration (ng/dscm)	<0.0012	<0.0014	<0.0013	<0.0013	<0.0013
Fluoranthene					
m _n Net Weight (ng)	26.0	5.7	5.2	4.9	0.6
C _{sd} Concentration (ng/dscm)	0.0774	0.0194	0.0170	0.0158	0.0019
Fluorene					
m _n Net Weight (ng)	140.0	45.0	3.5	4.0	1.0
C _{sd} Concentration (ng/dscm)	0.4169	0.1528	0.0114	0.0129	0.0033
Indeno(1,2,3-cd)pyrene					
m _n Net Weight (ng)	1.0	<0.4	0.8	0.7	<0.4
C _{sd} Concentration (ng/dscm)	0.0030	<0.0014	0.0025	0.0024	<0.0013
1-Methylnaphthalene					
m _n Net Weight (ng)	250.0	62.0	5.8	6.8	4.5
C _{sd} Concentration (ng/dscm)	0.7445	0.2106	0.0189	0.0220	0.0150
2-Methylnaphthalene					
m _n Net Weight (ng)	640.0	150.0	10.0	14.0	7.7
C _{sd} Concentration (ng/dscm)	1.9059	0.5094	0.0327	0.0452	0.0257
Naphthalene					
m _n Net Weight (ng)	16000.0	2600.0	79.0	150.0	24.0
C _{sd} Concentration (ng/dscm)	47.6468	8.8304	0.2581	0.4843	0.0801
Perylene					
m _n Net Weight (ng)	0.4	<0.4	<0.4	<0.4	<0.4
C _{sd} Concentration (ng/dscm)	0.0012	<0.0014	<0.0013	<0.0013	<0.0013
Phenanthrene					
m _n Net Weight (ng)	120.0	44.0	10.0	10.0	1.9
C _{sd} Concentration (ng/dscm)	0.3574	0.1494	0.0327	0.0323	0.0063
Pyrene					
m _n Net Weight (ng)	16.0	3.4	3.5	3.3	0.4
C _{sd} Concentration (ng/dscm)	0.0476	0.0115	0.0114	0.0107	0.0014

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH)
Run Data and Parameters

Run No.	5	5	5	5	5
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Dec 20	Dec 20	Dec 20	Dec 20	Dec 20
Start Time (approx.)	12:22	13:05	11:40	10:52	14:00
Stop Date (2022)	Dec 21	Dec 21	Dec 21	Dec 21	Dec 21
Stop Time (approx.)	10:58	11:15	10:30	10:05	12:10
TE-1000 Sampler Calibration Data					
R _p Slope	36.98759	31.72149	30.00345	30.43603	34.02213
P ₁ Intercept	-2.55612	-62864	-30959	-41605	-1.22610
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	755.7	755.7	755.7	755.7	755.7
T _s Temperature (°K)	271.8	271.8	271.8	271.8	271.8
B _w Relative Humidity (%)	72.0	72.0	72.0	72.0	72.0
TE-1000 Sampler Run Data					
Q _a Magnehelic Gauge Reading (initial)	40	38	38	38	38
Q _s Magnehelic Gauge Reading (final)	40	37	37	36	38
Sampling Parameters					
M _{avg} Magnehelic Gauge Reading (average)	40	38	38	37	38
θ Total sampling time (min) ¹	1,356	1,330	1,370	1,393	1,330
Q _s Sample flow rate, standard (m ³ /min)	0.2476	0.2214	0.2234	0.2223	0.2252

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) Run Data and Parameters

Run No.	5	5	5	5	5
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Dec 20	Dec 20	Dec 20	Dec 20	Dec 20
Start Time (approx.)	12:22	13:05	11:40	10:52	14:00
Stop Date (2022)	Dec 21	Dec 21	Dec 21	Dec 21	Dec 21
Stop Time (approx.)	10:58	11:15	10:30	10:05	12:10
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	755.7	755.7	755.7	755.7	755.7
T _s Temperature (°K)	271.8	271.8	271.8	271.8	271.8
B _w Relative Humidity (%)	72.0	72.0	72.0	72.0	72.0
Sampling Parameters					
θ Total sampling time (min)	1,356	1,330	1,370	1,393	1,330
Q _s Sample flow rate, standard (m ³ /min)	0.2476	0.2214	0.2234	0.2223	0.2252
V _{mstd} Volume metered, standard (scm)	335.80	294.44	306.09	309.72	299.54

PAHs

Acenaphthene (µg/scm)	0.0417	0.0163	0.0042	0.0055	0.0037
Acenaphthylene (µg/dscm) (µg/scm)	1.8165	0.7132	0.0193	0.0255	0.0028
Anthracene (µg/dscm) (µg/scm)	0.0923	0.0323	0.0078	0.0071	<0.0013
Benzo(a) anthracene (µg/dscm) (µg/scm)	0.0086	0.0017	0.0049	0.0045	<0.0013
Benzo(a)pyrene (µg/dscm) (µg/scm)	0.0042	<0.0014	0.0033	0.0029	<0.0013
Benzo(b)fluoranthene (µg/dscm) (µg/scm)	0.0066	0.0018	0.0052	0.0048	<0.0013
Benzo(e)pyrene (µg/dscm) (µg/scm)	0.0033	<0.0014	0.0025	0.0024	<0.0013
Benzo(g,h,i)perylene (µg/dscm) (µg/scm)	0.0026	<0.0014	0.0022	0.0020	<0.0013
Benzo(k)fluoranthene (µg/dscm) (µg/scm)	0.0025	<0.0014	0.0019	0.0017	<0.0013
Chrysene (µg/dscm) (µg/scm)	0.0080	0.0019	0.0049	0.0045	<0.0013
Dibenzo(a,h)anthracene (µg/dscm) (µg/scm)	<0.0012	<0.0014	<0.0013	<0.0013	<0.0013
Fluoranthene (µg/dscm) (µg/scm)	0.0774	0.0194	0.0170	0.0158	0.0019
Fluorene (µg/dscm) (µg/scm)	0.4169	0.1528	0.0114	0.0129	0.0033
Indeno(1,2,3-cd)pyrene (µg/dscm) (µg/scm)	0.0030	<0.0014	0.0025	0.0024	<0.0013
1-Methylnaphthalene (µg/dscm) (µg/scm)	0.7445	0.2106	0.0189	0.0220	0.0150
2-Methylnaphthalene (µg/dscm) (µg/scm)	1.9059	0.5094	0.0327	0.0452	0.0257
Naphthalene (µg/dscm) (µg/scm)	47.6468	8.8304	0.2581	0.4843	0.0801
Perylene (µg/dscm) (µg/scm)	0.0012	<0.0014	<0.0013	<0.0013	<0.0013
Phenanthrene (µg/dscm) (µg/scm)	0.3574	0.1494	0.0327	0.0323	0.0063
Pyrene (µg/dscm) (µg/scm)	0.0476	0.0115	0.0114	0.0107	0.0014

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Parameters**

Run No.		6	6	6	6	6
Sampling Location		IN1	IN2	DW1	DW2	UPW
Index	Analyte Name	Gross Weight (µg)	Gross Weight (µg)	Gross Weight (µg)	Gross Weight (µg)	Gross Weight (µg)
1	Acenaphthene	3.9000	4.1000	2.8000	2.0000	1.2000
2	Acenaphthylene	82.0000	60.0000	16.0000	7.6000	
3	Anthracene	7.5000	8.2000	12.0000	5.5000	
4	Benzo(a) anthracene			7.6000	3.7000	
5	Benzo(a)pyrene			5.2000	2.6000	
6	Benzo(b)fluoranthene			9.0000	4.1000	
7	Benzo(e)pyrene			4.3000		
8	Benzo(g,h,i)perylene			3.5000		
9	Benzo(k)fluoranthene			3.2000		
10	Chrysene			8.0000	3.7000	
11	Dibenzo(a,h)anthracene					
12	Fluoranthene	8.3000	5.6000	28.0000	12.0000	1.1000
13	Fluorene	41.0000	46.0000	19.0000	8.7000	1.5000
14	Indeno(1,2,3-cd)pyrene			3.9000		
15	1-Methylnaphthalene	38.0000	34.0000	11.0000	7.5000	1.7000
16	2-Methylnaphthalene	96.0000	70.0000	25.0000	16.0000	3.2000
17	Naphthalene	1200.0000	700.0000	190.0000	180.0000	17.0000
18	Perylene					
19	Phenanthrene	44.0000	43.0000	47.0000	21.0000	3.6000
20	Pyrene	5.2000	3.3000	18.0000	8.1000	

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EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.	6				
Sampling Location	IN1				
	Reporting			Data	
Index	Analyte Name	Limit (µg)	Lab Result (µg)	Final Result (µg)	Flag(s)
1	Acenaphthene	2.00	3.9000	3.9000	L-05
2	Acenaphthylene	2.00	82.0000	82.0000	
3	Anthracene	2.00	7.5000	7.5000	
4	Benzo(a) anthracene	2.00	0.0000	<2.0000	
5	Benzo(a)pyrene	2.00	0.0000	<2.0000	
6	Benzo(b)fluoranthene	2.00	0.0000	<2.0000	
7	Benzo(e)pyrene	2.00	0.0000	<2.0000	
8	Benzo(g,h,i)perylene	2.00	0.0000	<2.0000	
9	Benzo(k)fluoranthene	2.00	0.0000	<2.0000	
10	Chrysene	2.00	0.0000	<2.0000	
11	Dibenzo(a,h)anthracene	2.00	0.0000	<2.0000	
12	Fluoranthene	2.00	8.3000	8.3000	
13	Fluorene	2.00	41.0000	41.0000	
14	Indeno(1,2,3-cd)pyrene	2.00	0.0000	<2.0000	
15	1-Methylnaphthalene	2.00	38.0000	38.0000	
16	2-Methylnaphthalene	2.00	96.0000	96.0000	
17	Naphthalene	5.00	1200.0000	1200.0000	
18	Perylene	2.00	0.0000	<2.0000	
19	Phenanthrene	2.00	44.0000	44.0000	
20	Pyrene	2.00	5.2000	5.2000	
21	Total PAH's [*]	1		1525.9000	

< Denotes that the analyte was not detectable above the stated value. The stated value was used to calculate the results.

* Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.	6				
Sampling Location	IN2				
	Reporting Limit	Lab Result	Final Result	Data Flag(s)	
Index	Analyte Name	(µg)	(µg)	(µg)	
1	Acenaphthene	1.00	4.1000	4.1000	
2	Acenaphthylene	1.00	60.0000	60.0000	
3	Anthracene	1.00	8.2000	8.2000	
4	Benzo(a) anthracene	1.00	0.0000	<1.0000	
5	Benzo(a)pyrene	1.00	0.0000	<1.0000	
6	Benzo(b)fluoranthene	1.00	0.0000	<1.0000	
7	Benzo(e)pyrene	1.00	0.0000	<1.0000	
8	Benzo(g,h,i)perylene	1.00	0.0000	<1.0000	
9	Benzo(k)fluoranthene	1.00	0.0000	<1.0000	
10	Chrysene	1.00	0.0000	<1.0000	
11	Dibenzo(a,h)anthracene	1.00	0.0000	<1.0000	
12	Fluoranthene	1.00	5.6000	5.6000	
13	Fluorene	1.00	46.0000	46.0000	
14	Indeno(1,2,3-cd)pyrene	1.00	0.0000	<1.0000	
15	1-Methylnaphthalene	1.00	34.0000	34.0000	
16	2-Methylnaphthalene	1.00	70.0000	70.0000	
17	Naphthalene	2.50	700.0000	700.0000	L-05
18	Perylene	1.00	0.0000	<1.0000	
19	Phenanthrene	1.00	43.0000	43.0000	
20	Pyrene	1.00	3.3000	3.3000	
21	Total PAH's [*]	1		974.2000	

< Denotes that the analyte was not detectable above the stated value. The stated value was used to calculate the results.

* Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.		6		
Sampling Location		DW1		
Index Analyte Name	Reporting Limit (µg)	Lab Result (µg)	Final Result (µg)	Data Flag(s)
1 Acenaphthene	2.00	2.8000	2.8000	
2 Acenaphthylene	2.00	16.0000	16.0000	
3 Anthracene	2.00	12.0000	12.0000	
4 Benzo(a) anthracene	2.00	7.6000	7.6000	
5 Benzo(a)pyrene	2.00	5.2000	5.2000	
6 Benzo(b)fluoranthene	2.00	9.0000	9.0000	
7 Benzo(e)pyrene	2.00	4.3000	4.3000	
8 Benzo(g,h,i)perylene	2.00	3.5000	3.5000	
9 Benzo(k)fluoranthene	2.00	3.2000	3.2000	
10 Chrysene	2.00	8.0000	8.0000	
11 Dibenzo(a,h)anthracene	2.00	0.0000	<2.0000	
12 Fluoranthene	2.00	28.0000	28.0000	
13 Fluorene	2.00	19.0000	19.0000	
14 Indeno(1,2,3-cd)pyrene	2.00	3.9000	3.9000	
15 1-Methylnaphthalene	2.00	11.0000	11.0000	
16 2-Methylnaphthalene	2.00	25.0000	25.0000	
17 Naphthalene	5.00	190.0000	190.0000	L-05
18 Perylene	2.00	0.0000	<2.0000	
19 Phenanthrene	2.00	47.0000	47.0000	
20 Pyrene	2.00	18.0000	18.0000	
21 Total PAH's [*]	1		413.5000	

< Denotes that the analyte was not detectable above the stated value. The stated value was used to calculate the results.

* Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.		6		
Sampling Location		DW2		
Index Analyte Name	Reporting Limit (µg)	Lab Result (µg)	Final Result (µg)	Data Flag(s)
1 Acenaphthene	2.00	2.0000	2.0000	
2 Acenaphthylene	2.00	7.6000	7.6000	
3 Anthracene	2.00	5.5000	5.5000	
4 Benzo(a) anthracene	2.00	3.7000	3.7000	
5 Benzo(a)pyrene	2.00	2.6000	2.6000	
6 Benzo(b)fluoranthene	2.00	4.1000	4.1000	
7 Benzo(e)pyrene	2.00	0.0000	<2.0000	
8 Benzo(g,h,i)perylene	2.00	0.0000	<2.0000	
9 Benzo(k)fluoranthene	2.00	0.0000	<2.0000	
10 Chrysene	2.00	3.7000	3.7000	
11 Dibenzo(a,h)anthracene	2.00	0.0000	<2.0000	
12 Fluoranthene	2.00	12.0000	12.0000	
13 Fluorene	2.00	8.7000	8.7000	
14 Indeno(1,2,3-cd)pyrene	2.00	0.0000	<2.0000	
15 1-Methylnaphthalene	2.00	7.5000	7.5000	
16 2-Methylnaphthalene	2.00	16.0000	16.0000	
17 Naphthalene	5.00	180.0000	180.0000	L-05
18 Perylene	2.00	0.0000	<2.0000	
19 Phenanthrene	2.00	21.0000	21.0000	
20 Pyrene	2.00	8.1000	8.1000	
21 Total PAH's [*]	1		974.2000	

< Denotes that the analyte was not detectable above the stated value. The stated value was used to calculate the results.

* Total PAHs are calculated using zero for results below the detection limit 010000 000000

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.

6

Sampling Location

UPW

Index	Analyte Name	Reporting Limit (µg)	Lab Result (µg)	Final Result (µg)	Data Flag(s)
1	Acenaphthene	1.00	1.2000	1.2000	
2	Acenaphthylene	1.00	0.0000	<1.0000	
3	Anthracene	1.00	0.0000	<1.0000	
4	Benzo(a) anthracene	1.00	0.0000	<1.0000	
5	Benzo(a)pyrene	1.00	0.0000	<1.0000	
6	Benzo(b)fluoranthene	1.00	0.0000	<1.0000	
7	Benzo(e)pyrene	1.00	0.0000	<1.0000	
8	Benzo(g,h,i)perylene	1.00	0.0000	<1.0000	
9	Benzo(k)fluoranthene	1.00	0.0000	<1.0000	
10	Chrysene	1.00	0.0000	<1.0000	
11	Dibenzo(a,h)anthracene	1.00	0.0000	<1.0000	
12	Fluoranthene	1.00	1.1000	1.1000	
13	Fluorene	1.00	1.5000	1.5000	
14	Indeno(1,2,3-cd)pyrene	1.00	0.0000	<1.0000	
15	1-Methylnaphthalene	1.00	1.7000	1.7000	
16	2-Methylnaphthalene	1.00	3.2000	3.2000	
17	Naphthalene	2.50	17.0000	17.0000	L-05
18	Perylene	1.00	0.0000	<1.0000	
19	Phenanthrene	1.00	3.6000	3.6000	
20	Pyrene	1.00	0.0000	<1.0000	
21	Total PAH's [*]	1		29.3000	

< Denotes that the analyte was not detectable above the stated value. The stated value was used to calculate the results.

* Total PAHs are calculated using zero for results below the detection limit

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EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) **PAH Laboratory Calculations**

Run No.		6		Data Flag(s) ¹	
Sampling Location		Field Blank			
Index	Analyte Name	Reporting Limit (µg)	Lab Result (µg)		Final Result (µg)
1	Acenaphthene	0.20	ND	0.2	
2	Acenaphthylene	0.20	ND	0.2	
3	Anthracene	0.20	ND	0.2	
4	Benzo(a) anthracene	0.20	ND	0.2	
5	Benzo(a)pyrene	0.20	ND	0.2	
6	Benzo(b)fluoranthene	0.20	ND	0.2	
7	Benzo(e)pyrene	0.20	ND	0.2	
8	Benzo(g,h,i)perylene	0.20	ND	0.2	
9	Benzo(k)fluoranthene	0.20	ND	0.2	
10	Chrysene	0.20	ND	0.2	
11	Dibenzo(a,h)anthracene	0.20	ND	0.2	
12	Fluoranthene	0.20	ND	0.2	
13	Fluorene	0.20	ND	0.2	
14	Indeno(1,2,3-cd)pyrene	0.20	ND	0.2	
15	1-Methylnaphthalene	0.20	ND	0.2	
16	2-Methylnaphthalene	0.20	ND	0.2	
17	Naphthalene	0.50	0.51	0.51	
18	Perylene	0.20	ND	0.2	
19	Phenanthrene	0.20	ND	0.2	
20	Pyrene	0.20	ND	0.2	

* Total PAHs are calculated using zero for results below the detection limit.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) Run Data and Parameters

Run No.	6	6	6	6	6
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2023)	Jan 4	Jan 4	Jan 4	Jan 4	Jan 4
Start Time (approx.)	17:40	18:00	17:05	15:51	18:35
Stop Date (2023)	Jan 5	Jan 5	Jan 5	Jan 5	Jan 5
Stop Time (approx.)	15:46	16:17	15:10	14:18	16:55
TE-1000 Sampler Calibration Data					
R _p Slope	31.0699	31.7215	30.0035	30.4360	34.0221
P ₁ Intercept	-0.82985	-0.62864	-0.30959	-0.41605	-1.22610
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	740.6	740.6	740.6	740.6	740.6
T _s Temperature (°K)	278.8	278.8	278.8	278.8	278.8
B _w Relative Humidity (%)	75.0	75.0	75.0	75.0	75.0
TE-1000 Sampler Run Data					
Q _a Magnehelic Gauge Reading (initial)	40	40	40	40	40
Q _s Magnehelic Gauge Reading (final)	40	40	40	40	40
Sampling Parameters					
M _{avg} Magnehelic Gauge Reading (average)	40	40	40	40	40
θ Total sampling time (min)	1,326	1,337	1,068	1,347	1,340
Q _s Sample flow rate, standard (m ³ /min)	0.2345	0.2233	0.2255	0.2257	0.2258
V _{mstd} Volume metered, standard (dscm)	310.89	298.55	240.78	304.08	302.52
Acenaphthene					
m _n Net Weight (µg)	3.9	4.1	2.8	2.0	<2.0
C _{sd} Concentration (µg/dscm)	0.0125	0.0137	0.0116	0.0066	<0.0066
Acenaphthylene					
m _n Net Weight (ng)	82.0	60.0	16.0	7.6	<2.0
C _{sd} Concentration (ng/dscm)	0.2638	0.2010	0.0665	0.0250	<0.0066
Anthracene					
m _n Net Weight (ng)	7.5	8.2	12.0	5.5	<2.0
C _{sd} Concentration (ng/dscm)	0.0241	0.0275	0.0498	0.0181	<0.0066
Benzo(a) anthracene					
m _n Net Weight (ng)	<2.0	<2.0	7.6	3.7	<2.0
C _{sd} Concentration (ng/dscm)	<0.0064	<0.0067	0.0316	0.0122	<0.0066
Benzo(a)pyrene					
m _n Net Weight (ng)	<2.0	<2.0	5.2	2.6	<2.0
C _{sd} Concentration (ng/dscm)	<0.0064	<0.0067	0.0216	0.0086	<0.0066
Benzo(b)fluoranthene					
m _n Net Weight (ng)	<2.0	<2.0	9.0	4.1	<2.0
C _{sd} Concentration (ng/dscm)	<0.0064	<0.0067	0.0374	0.0135	<0.0066
Benzo(e)pyrene					
m _n Net Weight (ng)	<2.0	<2.0	4.3	<2.0	<2.0
C _{sd} Concentration (ng/dscm)	<0.0064	<0.0067	0.0179	<0.0066	<0.0066
Benzo(g,h,i)perylene					
m _n Net Weight (ng)	<2.0	<2.0	3.5	<2.0	<2.0
C _{sd} Concentration (ng/dscm)	<0.0064	<0.0067	0.0145	<0.0066	<0.0066
Benzo(k)fluoranthene					
m _n Net Weight (ng)	<2.0	<2.0	3.2	<2.0	<2.0
C _{sd} Concentration (ng/dscm)	<0.0064	<0.0067	0.0133	<0.0066	<0.0066

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) Run Data and Parameters

Run No.	6	6	6	6	6
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2023)	Jan 4	Jan 4	Jan 4	Jan 4	Jan 4
Start Time (approx.)	17:40	18:00	17:05	15:51	18:35
Stop Date (2023)	Jan 5	Jan 5	Jan 5	Jan 5	Jan 5
Stop Time (approx.)	15:46	16:17	15:10	14:18	16:55
TE-1000 Sampler Calibration Data					
R _p Slope	31.0699	31.7215	30.0035	30.4360	34.0221
P ₁ Intercept	-0.82985	-0.62864	-0.30959	-0.41605	-1.22610
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	740.6	740.6	740.6	740.6	740.6
T _s Temperature (°K)	278.8	278.8	278.8	278.8	278.8
B _w Relative Humidity (%)	75.0	75.0	75.0	75.0	75.0
TE-1000 Sampler Run Data					
Q _a Magnehelic Gauge Reading (initial)	40	40	40	40	40
Q _s Magnehelic Gauge Reading (final)	40	40	40	40	40
Sampling Parameters					
M _{avg} Magnehelic Gauge Reading (average)	40	40	40	40	40
θ Total sampling time (min)	1,326	1,337	1,068	1,347	1,340
Q _s Sample flow rate, standard (m ³ /min)	0.2345	0.2233	0.2255	0.2257	0.2258
Chrysene					
m _n Net Weight (ng)	<2.0	<2.0	8.0	3.7	<2.0
C _{sd} Concentration (ng/dscm)	<0.0064	<0.0067	0.0332	0.0122	<0.0066
Dibenzo(a,h)anthracene					
m _n Net Weight (ng)	<2.0	<2.0	<2.0	<2.0	<2.0
C _{sd} Concentration (ng/dscm)	<0.0064	<0.0067	<0.0083	<0.0066	<0.0066
Fluoranthene					
m _n Net Weight (ng)	8.3	5.6	28.0	12.0	<2.0
C _{sd} Concentration (ng/dscm)	0.0267	0.0188	0.1163	0.0395	<0.0066
Fluorene					
m _n Net Weight (ng)	41.0	46.0	19.0	8.7	<2.0
C _{sd} Concentration (ng/dscm)	0.1319	0.1541	0.0789	0.0286	<0.0066
Indeno(1,2,3-cd)pyrene					
m _n Net Weight (ng)	<2.0	<2.0	3.9	<2.0	<2.0
C _{sd} Concentration (ng/dscm)	<0.0064	<0.0067	0.0162	<0.0066	<0.0066
1-Methylnaphthalene					
m _n Net Weight (ng)	38.0	34.0	11.0	7.5	<2.0
C _{sd} Concentration (ng/dscm)	0.1222	0.1139	0.0457	0.0247	<0.0066
2-Methylnaphthalene					
m _n Net Weight (ng)	96.0	70.0	25.0	16.0	3.2
C _{sd} Concentration (ng/dscm)	0.3088	0.2345	0.1038	0.0526	0.0106
Naphthalene					
m _n Net Weight (ng)	1200.0	700.0	190.0	180.0	17.0
C _{sd} Concentration (ng/dscm)	3.8599	2.3447	0.7891	0.5920	0.0562
Perylene					
m _n Net Weight (ng)	<2.0	<2.0	<2.0	<2.0	<2.0
C _{sd} Concentration (ng/dscm)	<0.0064	<0.0067	<0.0083	<0.0066	<0.0066
Phenanthrene					
m _n Net Weight (ng)	44.0	43.0	47.0	21.0	3.6
C _{sd} Concentration (ng/dscm)	0.1415	0.1440	0.1952	0.0691	0.0119
Pyrene					
m _n Net Weight (ng)	5.2	3.3	18.0	8.1	<2.0
C _{sd} Concentration (ng/dscm)	0.0167	0.0111	0.0748	0.0266	<0.0066

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH)
Run Data and Parameters

Run No.	6	6	6	6	6
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2023)	Jan 4	Jan 4	Jan 4	Jan 4	Jan 4
Start Time (approx.)	17:40	18:00	17:05	15:51	18:35
Stop Date (2023)	Jan 5	Jan 5	Jan 5	Jan 5	Jan 5
Stop Time (approx.)	15:46	16:17	15:10	14:18	16:55
TE-1000 Sampler Calibration Data					
R _p Slope	31.0699	31.7215	30.0035	30.4360	34.0221
P ₁ Intercept	-0.82985	-0.62864	-0.30959	-0.41605	-1.22610
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	740.6	740.6	740.6	740.6	740.6
T _s Temperature (°K)	278.8	278.8	278.8	278.8	278.8
B _w Relative Humidity (%)	75.0	75.0	75.0	75.0	75.0
TE-1000 Sampler Run Data					
Q _a Magnehelic Gauge Reading (initial)	40	40	40	40	40
Q _s Magnehelic Gauge Reading (final)	40	40	40	40	40
Sampling Parameters					
M _{avg} Magnehelic Gauge Reading (average)	40	40	40	40	40
θ Total sampling time (min)	1,326	1,337	1,068	1,347	1,340
Q _s Sample flow rate, standard (m ³ /min)	0.2345	0.2233	0.2255	0.2257	0.2258

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-13A (PAH) Run Data and Parameters

Run No.	6	6	6	6	6
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2023)	Jan 4	Jan 4	Jan 4	Jan 4	Jan 4
Start Time (approx.)	17:40	18:00	17:05	15:51	18:35
Stop Date (2023)	Jan 5	Jan 5	Jan 5	Jan 5	Jan 5
Stop Time (approx.)	15:46	16:17	15:10	14:18	16:55
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	740.6	740.6	740.6	740.6	740.6
T _s Temperature (°K)	278.8	278.8	278.8	278.8	278.8
B _w Relative Humidity (%)	75.0	75.0	75.0	75.0	75.0
Sampling Parameters					
θ Total sampling time (min) ¹	1,326	1,337	1,068	1,347	1,340
Q _s Sample flow rate, standard (m ³ /min)	0.2345	0.2233	0.2255	0.2257	0.2258
V _{mstd} Volume metered, standard (scm)	310.89	298.55	240.78	304.08	302.52

PAHs

Acenaphthene (µg/scm)	0.0125	0.0137	0.0116	0.0066	<0.0066
Acenaphthylene (µg/dscm) (µg/scm)	0.2638	0.2010	0.0665	0.0250	<0.0066
Anthracene (µg/dscm) (µg/scm)	0.0241	0.0275	0.0498	0.0181	<0.0066
Benzo(a) anthracene (µg/dscm) (µg/scm)	<0.0064	<0.0067	0.0316	0.0122	<0.0066
Benzo(a)pyrene (µg/dscm) (µg/scm)	<0.0064	<0.0067	0.0216	0.0086	<0.0066
Benzo(b)fluoranthene (µg/dscm) (µg/scm)	<0.0064	<0.0067	0.0374	0.0135	<0.0066
Benzo(e)pyrene (µg/dscm) (µg/scm)	<0.0064	<0.0067	0.0179	<0.0066	<0.0066
Benzo(g,h,i)perylene (µg/dscm) (µg/scm)	<0.0064	<0.0067	0.0145	<0.0066	<0.0066
Benzo(k)fluoranthene (µg/dscm) (µg/scm)	<0.0064	<0.0067	0.0133	<0.0066	<0.0066
Chrysene (µg/dscm) (µg/scm)	<0.0064	<0.0067	0.0332	0.0122	<0.0066
Dibenzo(a,h)anthracene (µg/dscm) (µg/scm)	<0.0064	<0.0067	<0.0083	<0.0066	<0.0066
Fluoranthene (µg/dscm) (µg/scm)	0.0267	0.0188	0.1163	0.0395	<0.0066
Fluorene (µg/dscm) (µg/scm)	0.1319	0.1541	0.0789	0.0286	<0.0066
Indeno(1,2,3-cd)pyrene (µg/dscm) (µg/scm)	<0.0064	<0.0067	0.0162	<0.0066	<0.0066
1-Methylnaphthalene (µg/dscm) (µg/scm)	0.1222	0.1139	0.0457	0.0247	<0.0066
2-Methylnaphthalene (µg/dscm) (µg/scm)	0.3088	0.2345	0.1038	0.0526	0.0106
Naphthalene (µg/dscm) - Flag (L-05) ² (µg/scm)	3.8599	2.3447	0.7891	0.5920	0.0562
Perylene (µg/dscm) (µg/scm)	<0.0064	<0.0067	<0.0083	<0.0066	<0.0066
Phenanthrene (µg/dscm) (µg/scm)	0.1415	0.1440	0.1952	0.0691	0.0119
Pyrene (µg/dscm) (µg/scm)	0.0167	0.0111	0.0748	0.0266	<0.0066

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	1	1	1	1	1
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Oct 25	Oct 25	Oct 25	Oct 25	Oct 25
Start Time (approx.)	12:22	12:45	11:45	11:09	13:45
Stop Date (2022)	Oct 26	Oct 26	Oct 26	Oct 26	Oct 26
Stop Time (approx.)	11:40	11:51	11:00	10:35	13:00
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	737.7	737.7	738.0	738.0	738.1
T _s Temperature (°K)	283.9	283.9	283.4	283.4	283.4
B _w Relative Humidity (%)	75.0	75.0	75.0	75.0	75.0
Sampling Parameters					
SC# Summa Can No.	1700	1649	1691	1999	1876
FC# Flow Controller No.	3193	3472	3172	3517	3690
Dup Duplicate Sample (Y/N)			Y		
θ Total sampling time (min)	1,398	1,386	1,395	1,406	1,395
VAC _{IN} Initial Vacuum (in Hg)	28.0	28.5	28.0	29.0	28.5
VAC _{FINAL} Final Vacuum (in Hg)	6.0	8.0	4.0	8.0	9.0
VAC _{LAB} Receipt Vacuum (in Hg)					

Results

Acetone	(µg/m ³)	12	9.5	12	17	15
Benzene	(µg/m ³)	45	1.7	0.49	0.69	1.4
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.18	<0.18	<0.18
Bromodichloromethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Bromoform	(µg/m ³)	<0.36	<0.36	<0.36	<0.36	<0.36
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,3-Butadiene	(µg/m ³)	0.6	<0.078	<0.078	<0.078	<0.078
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.1	<4.1	<4.1
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
Carbon Tetrachloride	(µg/m ³)	0.46	0.47	0.43	0.43	0.44
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
Chloroethane	(µg/m ³)	<0.093	<0.093	<0.093	<0.093	<0.093
Chloroform	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Chloromethane	(µg/m ³)	0.94	0.85	0.89	0.9	0.95
Cyclohexane	(µg/m ³)	0.24	0.14	<0.12	<0.12	0.14
Dibromochloromethane	(µg/m ³)	<0.30	<0.30	<0.30	<0.30	<0.30
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.27	<0.27	<0.27
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	1	1	1.2	1.2	0.98
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
1,2-Dichloro-1,1,2,2-tetrafluoroethane	(µg/m ³)	<0.25	<0.25	<0.25	<0.25	<0.25
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	1	1	1	1	1
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Oct 25	Oct 25	Oct 25	Oct 25	Oct 25
Start Time (approx.)	12:22	12:45	11:45	11:09	13:45
Stop Date (2022)	Oct 26	Oct 26	Oct 26	Oct 26	Oct 26
Stop Time (approx.)	11:40	11:51	11:00	10:35	13:00
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	737.7	737.7	738.0	738.0	738.1
T _s Temperature (°K)	283.9	283.9	283.4	283.4	283.4
B _w Relative Humidity (%)	75.0	75.0	75.0	75.0	75.0
Sampling Parameters					
SC# Summa Can No.	1700	1649	1691	1999	1876
FC# Flow Controller No.	3193	3472	3172	3517	3690
Dup Duplicate Sample (Y/N)			Y		
θ Total sampling time (min)	1,398	1,386	1,395	1,406	1,395
VAC _{IN} Initial Vacuum (in Hg)	28.0	28.5	28.0	29.0	28.5
VAC _{FINAL} Final Vacuum (in Hg)	6.0	8.0	4.0	8.0	9.0
VAC _{LAB} Receipt Vacuum (in Hg)					

Results

Ethanol	(µg/m ³)	7.7	8	6.8	9.2	6.9
Ethyl Acetate	(µg/m ³)	4.2	<1.3	<1.3	1.4	<1.3
Ethylbenzene	(µg/m ³)	0.23	<0.15	<0.15	<0.15	0.16
4-Ethyltoluene	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Heptane	(µg/m ³)	0.33	0.23	0.15	0.16	0.31
Hexachlorobutadiene	(µg/m ³)	<0.37	<0.37	<0.37	<0.37	<0.37
Hexane	(µg/m ³)	7.1	9.5	6	<4.9	6.6
2-Hexanone (MBK)	(µg/m ³)	0.27	<0.14	0.22	0.23	0.28
Isopropanol	(µg/m ³)	<3.4	<3.4	<3.4	<3.4	<3.4
Methyl tert-Butyl Ether (MTBE)	(µg/m ³)	<0.13	<0.13	<0.13	<0.13	<0.13
Methylene Chloride	(µg/m ³)	<1.2	<1.2	<1.2	<1.2	<1.2
4-Methyl-2-pentanone (MIBK)	(µg/m ³)	0.19	<0.14	<0.14	<0.14	<0.14
Naphthalene	(µg/m ³)	52	9.6	<0.18	<0.18	0.43
Propene	(µg/m ³)	5.3	<2.4	<2.4	<2.4	<2.4
Styrene	(µg/m ³)	1.8	<0.15	<0.15	<0.15	<0.15
1,1,2,2-Tetrachloroethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrachloroethylene	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrahydrofuran	(µg/m ³)	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	(µg/m ³)	11	0.81	0.42	0.71	0.76
1,2,4-Trichlorobenzene	(µg/m ³)	<0.26	<0.26	<0.26	<0.26	<0.26
1,1,1-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
1,1,2-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichloroethylene	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichlorofluoromethane (Freon 11)	(µg/m ³)	1.1	1.1	1.2	1.2	1.1
1,1,2-Trichloro-1,2,2-trifluoroethane (Fr	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
1,2,4-Trimethylbenzene	(µg/m ³)	0.71	<0.17	<0.17	<0.17	0.21
1,3,5-Trimethylbenzene	(µg/m ³)	0.34	<0.17	<0.17	<0.17	<0.17
Vinyl Acetate	(µg/m ³)	<2.5	<2.5	<2.5	<2.5	<2.5
Vinyl Chloride	(µg/m ³)	<0.090	<0.090	<0.090	<0.090	<0.090
m&p-Xylene	(µg/m ³)	3.5	<0.30	<0.30	0.49	0.51
o-Xylene	(µg/m ³)	0.86	<0.15	<0.15	0.16	0.2

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	1	
Sampling Location	DW1	REPLICATE
Start Date (2022)	Oct 25	Oct 25
Start Time (approx.)	11:45	11:45
Stop Date (2022)	Oct 26	Oct 26
Stop Time (approx.)	11:00	11:00
Meteorological Conditions		
P _{bar} Barometric pressure (mm Hg)	738.0	738.0
T _s Temperature (°K)	283.4	283.4
B _w Relative Humidity (%)	75.0	75.0
Sampling Parameters		
SC# Summa Can No.	1691	1837
FC# Flow Controller No.	3172	3681
Rep Replicate Sample (Y/N)	Y	
θ Total sampling time (min)	1,395	1,395
VAC _{IN} Initial Vacuum (in Hg)	28.0	28.0
VAC _{FINAL} Final Vacuum (in Hg)	4.0	4.0
VAC _{LAB} Receipt Vacuum (in Hg)		

Results			Average	Precision (%)
Acetone	(µg/m ³)	12	12	0.0
Benzene	(µg/m ³)	0.49	0.43	13.0
Benzyl chloride	(µg/m ³)	<0.18	<0.18	NA
Bromodichloromethane	(µg/m ³)	<0.24	<0.23	NA
Bromoform	(µg/m ³)	<0.36	<0.36	NA
Bromomethane	(µg/m ³)	<0.14	<0.14	NA
1,3-Butadiene	(µg/m ³)	<0.078	<0.077	NA
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	NA
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	NA
Carbon Tetrachloride	(µg/m ³)	0.43	0.46	6.7
Chlorobenzene	(µg/m ³)	<0.16	<0.16	NA
Chloroethane	(µg/m ³)	<0.093	<0.092	NA
Chloroform	(µg/m ³)	<0.17	<0.17	NA
Chloromethane	(µg/m ³)	0.89	1	11.6
Cyclohexane	(µg/m ³)	<0.12	0.32	NA
Dibromochloromethane	(µg/m ³)	<0.30	<0.30	NA
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	NA
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	NA
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	NA
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	NA
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	1.2	1.1	8.7
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	NA
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	NA
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	NA
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	NA
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	NA
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	NA
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	NA
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	NA
1,2-Dichloro-1,1,2,2-tetrafluoroethane	(µg/m ³)	<0.25	<0.24	NA
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	NA

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	1	
Sampling Location	DW1	REPLICATE
Start Date (2022)	Oct 25	Oct 25
Start Time (approx.)	11:45	11:45
Stop Date (2022)	Oct 26	Oct 26
Stop Time (approx.)	11:00	11:00
Meteorological Conditions		
P _{bar} Barometric pressure (mm Hg)	738.0	738.0
T _s Temperature (°K)	283.4	283.4
B _w Relative Humidity (%)	75.0	75.0
Sampling Parameters		
SC# Summa Can No.	1691	1837
FC# Flow Controller No.	3172	3681
Rep Replicate Sample (Y/N)	Y	
θ Total sampling time (min)	1,395	1,395
VAC _{IN} Initial Vacuum (in Hg)	28.0	28.0
VAC _{FINAL} Final Vacuum (in Hg)	4.0	4.0
VAC _{LAB} Receipt Vacuum (in Hg)		

Results				Average	Precision (%)
Ethanol	(µg/m ³)	6.8	6.5	6.65	4.5
Ethyl Acetate	(µg/m ³)	<1.3	<1.3	<1.3	NA
Ethylbenzene	(µg/m ³)	<0.15	<0.15	<0.15	NA
4-Ethyltoluene	(µg/m ³)	<0.17	<0.17	<0.17	NA
Heptane	(µg/m ³)	0.15	0.16	0.155	6.5
Hexachlorobutadiene	(µg/m ³)	<0.37	<0.37	<0.37	NA
Hexane	(µg/m ³)	6	5.9	5.95	1.7
2-Hexanone (MBK)	(µg/m ³)	0.22	0.18	0.2	20.0
Isopropanol	(µg/m ³)	<3.4	<3.4	<3.4	NA
Methyl tert-Butyl Ether (MTBE)	(µg/m ³)	<0.13	<0.13	<0.13	NA
Methylene Chloride	(µg/m ³)	<1.2	<1.2	<1.2	NA
4-Methyl-2-pentanone (MIBK)	(µg/m ³)	<0.14	<0.14	<0.14	NA
Naphthalene	(µg/m ³)	<0.18	<0.18	<0.18	NA
Propene	(µg/m ³)	<2.4	<2.4	<2.4	NA
Styrene	(µg/m ³)	<0.15	<0.15	<0.15	NA
1,1,2,2-Tetrachloroethane	(µg/m ³)	<0.24	<0.24	<0.24	NA
Tetrachloroethylene	(µg/m ³)	<0.24	<0.24	<0.24	NA
Tetrahydrofuran	(µg/m ³)	<1.0	<1.0	<1.0	NA
Toluene	(µg/m ³)	0.42	0.42	0.42	0.0
1,2,4-Trichlorobenzene	(µg/m ³)	<0.26	<0.26	<0.26	NA
1,1,1-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	NA
1,1,2-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	NA
Trichloroethylene	(µg/m ³)	<0.19	<0.19	<0.19	NA
Trichlorofluoromethane (Freon 11)	(µg/m ³)	1.2	1.1	1.15	8.7
1,1,2-Trichloro-1,2,2-trifluoroethane (Fr	(µg/m ³)	<1.1	<1.1	<1.1	NA
1,2,4-Trimethylbenzene	(µg/m ³)	<0.17	<0.17	<0.17	NA
1,3,5-Trimethylbenzene	(µg/m ³)	<0.17	<0.17	<0.17	NA
Vinyl Acetate	(µg/m ³)	<2.5	<2.5	<2.5	NA
Vinyl Chloride	(µg/m ³)	<0.090	<0.089	<0.090	NA
m&p-Xylene	(µg/m ³)	<0.30	<0.30	<0.30	NA
o-Xylene	(µg/m ³)	<0.15	<0.15	<0.15	NA

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	1	1	1	1	1
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Oct 25	Oct 25	Oct 25	Oct 25	Oct 25
Start Time (approx.)	12:22	12:45	11:45	11:09	13:45
Stop Date (2022)	Oct 26	Oct 26	Oct 26	Oct 26	Oct 26
Stop Time (approx.)	11:40	11:51	11:00	10:35	13:00
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	737.7	737.7	738.0	738.0	738.1
T _s Temperature (°K)	283.9	283.9	283.4	283.4	283.4
B _w Relative Humidity (%)	75.0	75.0	75.0	75.0	75.0
Sampling Parameters					
SC# Summa Can No.	1700	1649	1691/1837	1999	1876
FC# Flow Controller No.	3193	3472	3172/3681	3517	3690
Rep Replicate Sample (Y/N) ¹			Y		
θ Total sampling time (min)	1,398	1,386	1,395	1,406	1,395
VAC _{IN} Initial Vacuum (in Hg)	28.0	28.5	28.0	29.0	28.5
VAC _{FINA} Final Vacuum (in Hg)	6.0	8.0	4.0	8.0	9.0
VAC _{LAB} Receipt Vacuum (in Hg)					

Results²

Acetone	(µg/m ³)	12	9.5	12	17	15
Benzene	(µg/m ³)	45	1.7	0.46	0.69	1.4
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.18	<0.18	<0.18
Bromodichloromethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Bromoform	(µg/m ³)	<0.36	<0.36	<0.36	<0.36	<0.36
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,3-Butadiene	(µg/m ³)	0.6	<0.078	<0.078	<0.078	<0.078
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.1	<4.1	<4.1
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
Carbon Tetrachloride	(µg/m ³)	0.46	0.47	0.445	0.43	0.44
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
Chloroethane	(µg/m ³)	<0.093	<0.093	<0.093	<0.093	<0.093
Chloroform	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Chloromethane	(µg/m ³)	0.94	0.85	0.945	0.9	0.95
Cyclohexane	(µg/m ³)	0.24	0.14	0.32	<0.12	0.14
Dibromochloromethane	(µg/m ³)	<0.30	<0.30	<0.30	<0.30	<0.30
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.27	<0.27	<0.27
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	1	1	1.15	1.2	0.98
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
1,2-Dichloro-1,1,2,2-tetrafluoroethane (	(µg/m ³)	<0.25	<0.25	<0.25	<0.25	<0.25
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3

1 A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

2 A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	1	1	1	1	1
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Oct 25	Oct 25	Oct 25	Oct 25	Oct 25
Start Time (approx.)	12:22	12:45	11:45	11:09	13:45
Stop Date (2022)	Oct 26	Oct 26	Oct 26	Oct 26	Oct 26
Stop Time (approx.)	11:40	11:51	11:00	10:35	13:00
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	737.7	737.7	738.0	738.0	738.1
T _s Temperature (°K)	283.9	283.9	283.4	283.4	283.4
B _w Relative Humidity (%)	75.0	75.0	75.0	75.0	75.0
Sampling Parameters					
SC# Summa Can No.	1700	1649	1691/1837	1999	1876
FC# Flow Controller No.	3193	3472	3172/3681	3517	3690
Rep Replicate Sample (Y/N) ¹			Y		
θ Total sampling time (min)	1,398	1,386	1,395	1,406	1,395
VAC _{IN} Initial Vacuum (in Hg)	28.0	28.5	28.0	29.0	28.5
VAC _{FINA} Final Vacuum (in Hg)	6.0	8.0	4.0	8.0	9.0
VAC _{LAB} Receipt Vacuum (in Hg)					

Results²

Ethanol	(µg/m ³)	7.7	8	6.65	9.2	6.9
Ethyl Acetate	(µg/m ³)	4.2	<1.3	<1.3	1.4	<1.3
Ethylbenzene	(µg/m ³)	0.23	<0.15	<0.15	<0.15	0.16
4-Ethyltoluene	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Heptane	(µg/m ³)	0.33	0.23	0.155	0.16	0.31
Hexachlorobutadiene	(µg/m ³)	<0.37	<0.37	<0.37	<0.37	<0.37
Hexane	(µg/m ³)	7.1	9.5	5.95	<4.9	6.6
2-Hexanone (MBK)	(µg/m ³)	0.27	<0.14	0.2	0.23	0.28
Isopropanol	(µg/m ³)	<3.4	<3.4	<3.4	<3.4	<3.4
Methyl tert-Butyl Ether (MTBE)	(µg/m ³)	<0.13	<0.13	<0.13	<0.13	<0.13
Methylene Chloride	(µg/m ³)	<1.2	<1.2	<1.2	<1.2	<1.2
4-Methyl-2-pentanone (MIBK)	(µg/m ³)	0.19	<0.14	<0.14	<0.14	<0.14
Naphthalene	(µg/m ³)	52	9.6	<0.18	<0.18	0.43
Propene	(µg/m ³)	5.3	<2.4	<2.4	<2.4	<2.4
Styrene	(µg/m ³)	1.8	<0.15	<0.15	<0.15	<0.15
1,1,2,2-Tetrachloroethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrachloroethylene	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrahydrofuran	(µg/m ³)	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	(µg/m ³)	11	0.81	0.42	0.71	0.76
1,2,4-Trichlorobenzene	(µg/m ³)	<0.26	<0.26	<0.26	<0.26	<0.26
1,1,1-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
1,1,2-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichloroethylene	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichlorofluoromethane (Freon 11)	(µg/m ³)	1.1	1.1	1.15	1.2	1.1
1,1,2-Trichloro-1,2,2-trifluoroethane (Fr	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
1,2,4-Trimethylbenzene	(µg/m ³)	0.71	<0.17	<0.17	<0.17	0.21
1,3,5-Trimethylbenzene	(µg/m ³)	0.34	<0.17	<0.17	<0.17	<0.17
Vinyl Acetate	(µg/m ³)	<2.5	<2.5	<2.5	<2.5	<2.5
Vinyl Chloride	(µg/m ³)	<0.090	<0.090	<0.090	<0.090	<0.090
m&p-Xylene	(µg/m ³)	3.5	<0.30	<0.30	0.49	0.51
o-Xylene	(µg/m ³)	0.86	<0.15	<0.15	0.16	0.2

1 A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

2 A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	2	2	2	2	2
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Oct 26	Oct 26	Oct 26	Oct 26	Oct 26
Start Time (approx.)	15:47	17:05	15:45	15:40	17:45
Stop Date (2022)	Oct 27	Oct 27	Oct 27	Oct 27	Oct 27
Stop Time (approx.)	14:51	15:24	14:20	13:50	16:12
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	750.6	751.5	750.6	750.4	751.6
T _s Temperature (°K)	280.4	280.3	280.4	280.3	280.4
B _w Relative Humidity (%)	84.9	84.9	84.9	84.9	84.9
Sampling Parameters					
SC# Summa Can No.	2037	1813	2224	1095	1641
FC# Flow Controller No.	3255	3468	3056	3055	3743
Dup Duplicate Sample (Y/N)					Y
θ Total sampling time (min)	1,384	1,339	1,355	1,330	1,347
VAC _{IN} Initial Vacuum (in Hg)	-26.0	-28.0	-29.0	-29.0	-26.0
VAC _{FINAL} Final Vacuum (in Hg)	-4.0	-9.0	-8.0	-8.0	-8.0
VAC _{LAB} Receipt Vacuum (in Hg)					

Results

Acetone	(µg/m ³)	6.7	5.4	11	4.9	7.8
Benzene	(µg/m ³)	25	28	0.49	1.2	0.56
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.18	<0.18	<0.18
Bromodichloromethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Bromoform	(µg/m ³)	<0.36	<0.36	<0.36	<0.36	<0.36
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,3-Butadiene	(µg/m ³)	0.32	0.42	<0.078	<0.078	<0.078
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.1	<4.1	<4.1
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
Carbon Tetrachloride	(µg/m ³)	0.45	0.4	0.41	0.47	0.46
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
Chloroethane	(µg/m ³)	<0.093	<0.093	<0.093	<0.093	<0.093
Chloroform	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Chloromethane	(µg/m ³)	0.89	0.87	0.78	0.77	0.78
Cyclohexane	(µg/m ³)	0.21	0.19	<0.12	<0.12	0.13
Dibromochloromethane	(µg/m ³)	<0.30	<0.30	<0.30	<0.30	<0.30
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.27	<0.27	<0.27
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	1.2	1.1	1.1	1.1	1
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
1,2-Dichloro-1,1,2,2-tetrafluoroethane	(µg/m ³)	<0.25	<0.25	<0.25	<0.25	<0.25
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	2	2	2	2	2
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Oct 26	Oct 26	Oct 26	Oct 26	Oct 26
Start Time (approx.)	15:47	17:05	15:45	15:40	17:45
Stop Date (2022)	Oct 27	Oct 27	Oct 27	Oct 27	Oct 27
Stop Time (approx.)	14:51	15:24	14:20	13:50	16:12
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	750.6	751.5	750.6	750.4	751.6
T _s Temperature (°K)	280.4	280.3	280.4	280.3	280.4
B _w Relative Humidity (%)	84.9	84.9	84.9	84.9	84.9
Sampling Parameters					
SC# Summa Can No.	2037	1813	2224	1095	1641
FC# Flow Controller No.	3255	3468	3056	3055	3743
Dup Duplicate Sample (Y/N)					Y
θ Total sampling time (min)	1,384	1,339	1,355	1,330	1,347
VAC _{IN} Initial Vacuum (in Hg)	-26.0	-28.0	-29.0	-29.0	-26.0
VAC _{FINAL} Final Vacuum (in Hg)	-4.0	-9.0	-8.0	-8.0	-8.0
VAC _{LAB} Receipt Vacuum (in Hg)					

Results

Ethanol	(µg/m ³)	6.9	5.4	5.8	4.7	6.6
Ethyl Acetate	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3
Ethylbenzene	(µg/m ³)	0.23	0.21	<0.15	<0.15	0.2
4-Ethyltoluene	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Heptane	(µg/m ³)	0.6	0.37	0.2	0.21	0.29
Hexachlorobutadiene	(µg/m ³)	<0.37	<0.37	<0.37	<0.37	<0.37
Hexane	(µg/m ³)	<4.9	<4.9	<4.9	<4.9	<4.9
2-Hexanone (MBK)	(µg/m ³)	<0.14	<0.14	0.33	<0.14	0.28
Isopropanol	(µg/m ³)	4.1	<3.4	<3.4	<3.4	<3.4
Methyl tert-Butyl Ether (MTBE)	(µg/m ³)	<0.13	<0.13	<0.13	<0.13	<0.13
Methylene Chloride	(µg/m ³)	<1.2	<1.2	<1.2	<1.2	<1.2
4-Methyl-2-pentanone (MIBK)	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
Naphthalene	(µg/m ³)	11	33	0.26	<0.18	<0.18
Propene	(µg/m ³)	<2.4	2.6	<2.4	<2.4	<2.4
Styrene	(µg/m ³)	0.65	0.87	<0.15	<0.15	<0.15
1,1,2,2-Tetrachloroethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrachloroethylene	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	0.37
Tetrahydrofuran	(µg/m ³)	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	(µg/m ³)	5.1	5.7	0.81	0.77	1.3
1,2,4-Trichlorobenzene	(µg/m ³)	<0.26	<0.26	<0.26	<0.26	<0.26
1,1,1-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
1,1,2-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichloroethylene	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichlorofluoromethane (Freon 11)	(µg/m ³)	1.1	1.2	1.2	1.1	1.1
1,1,2-Trichloro-1,2,2-trifluoroethane (Fr	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
1,2,4-Trimethylbenzene	(µg/m ³)	0.55	0.57	<0.17	0.2	0.25
1,3,5-Trimethylbenzene	(µg/m ³)	0.21	0.22	<0.17	<0.17	<0.17
Vinyl Acetate	(µg/m ³)	<2.5	<2.5	<2.5	<2.5	<2.5
Vinyl Chloride	(µg/m ³)	<0.090	<0.090	<0.090	<0.090	<0.090
m&p-Xylene	(µg/m ³)	1.8	2	0.4	0.41	0.64
o-Xylene	(µg/m ³)	0.53	0.59	0.17	0.17	0.27

EES Coke Battery, LLC
 Clean Air Project No: 14796
 River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	2	2	2	2	2
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Oct 26	Oct 26	Oct 26	Oct 26	Oct 26
Start Time (approx.)	15:47	17:05	15:45	15:40	17:45
Stop Date (2022)	Oct 27	Oct 27	Oct 27	Oct 27	Oct 27
Stop Time (approx.)	14:51	15:24	14:20	13:50	16:12
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	750.6	751.5	750.6	750.4	751.6
T _s Temperature (°K)	280.4	280.3	280.4	280.3	280.4
B _w Relative Humidity (%)	84.9	84.9	84.9	84.9	84.9
Sampling Parameters					
SC# Summa Can No.	2037	1813	2224	1095	1641
FC# Flow Controller No.	3255	3468	3056	3055	3743
Dup Duplicate Sample (Y/N)					Y
θ Total sampling time (min)	1,384	1,339	1,355	1,330	1,347
VAC _{IN} Initial Vacuum (in Hg)	-26.0	-28.0	-29.0	-29.0	-26.0
VAC _{FINAL} Final Vacuum (in Hg)	-4.0	-9.0	-8.0	-8.0	-8.0

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	2	
Sampling Location	UPW	REPLICATE
Start Date (2022)	Oct 26	Oct 26
Start Time (approx.)	17:45	17:45
Stop Date (2022)	Oct 27	Oct 27
Stop Time (approx.)	16:12	16:12
Meteorological Conditions		
P _{bar} Barometric pressure (mm Hg)	750.6	750.6
T _s Temperature (°K)	280.4	280.4
B _w Relative Humidity (%)	84.9	84.9
Sampling Parameters		
SC# Summa Can No.	1641	1827
FC# Flow Controller No.	3743	3744
Rep Replicate Sample (Y/N)	Y	
θ Total sampling time (min)	1,347	1,347
VAC _{IN} Initial Vacuum (in Hg)	-26.0	-29.0
VAC _{FINAL} Final Vacuum (in Hg)	-8.0	-7.5
VAC _{LAB} Receipt Vacuum (in Hg)		

Results				Average	Precision (%)
Acetone	(µg/m ³)	7.8	6.1	7.0	24.5
Benzene	(µg/m ³)	0.56	0.54	0.6	3.6
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.18	NA
Bromodichloromethane	(µg/m ³)	<0.24	<0.24	<0.24	NA
Bromoform	(µg/m ³)	<0.36	<0.36	<0.36	NA
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.14	NA
1,3-Butadiene	(µg/m ³)	<0.078	0.081	0.1	NA
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.1	NA
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.1	NA
Carbon Tetrachloride	(µg/m ³)	0.46	0.41	0.4	11.5
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.16	NA
Chloroethane	(µg/m ³)	<0.093	<0.093	<0.093	NA
Chloroform	(µg/m ³)	<0.17	<0.17	<0.17	NA
Chloromethane	(µg/m ³)	0.78	0.82	0.8	5.0
Cyclohexane	(µg/m ³)	0.13	<0.12	0.1	NA
Dibromochloromethane	(µg/m ³)	<0.30	<0.30	<0.30	NA
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.27	NA
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	NA
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	NA
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	NA
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	1	1.1	1.1	9.5
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	NA
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	NA
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	NA
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	NA
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	NA
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.16	NA
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	NA
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	NA
1,2-Dichloro-1,1,2,2-tetrafluoroethane (	(µg/m ³)	<0.25	<0.25	<0.25	NA
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.3	NA

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	2	
Sampling Location	UPW	REPLICATE
Start Date (2022)	Oct 26	Oct 26
Start Time (approx.)	17:45	17:45
Stop Date (2022)	Oct 27	Oct 27
Stop Time (approx.)	16:12	16:12
Meteorological Conditions		
P _{bar} Barometric pressure (mm Hg)	750.6	750.6
T _s Temperature (°K)	280.4	280.4
B _w Relative Humidity (%)	84.9	84.9
Sampling Parameters		
SC# Summa Can No.	1641	1827
FC# Flow Controller No.	3743	3744
Rep Replicate Sample (Y/N)	Y	
θ Total sampling time (min)	1,347	1,347
VAC _{IN} Initial Vacuum (in Hg)	-26.0	-26.0
VAC _{FINAL} Final Vacuum (in Hg)	-8.0	-8.0
VAC _{LAB} Receipt Vacuum (in Hg)		

Results				Average	Precision (%)
Ethanol	(µg/m ³)	6.6	6.1	6.4	7.9
Ethyl Acetate	(µg/m ³)	<1.3	<1.3	<1.3	NA
Ethylbenzene	(µg/m ³)	0.2	0.18	0.2	10.5
4-Ethyltoluene	(µg/m ³)	<0.17	<0.17	<0.17	NA
Heptane	(µg/m ³)	0.29	0.35	0.3	18.8
Hexachlorobutadiene	(µg/m ³)	<0.37	<0.37	<0.37	NA
Hexane	(µg/m ³)	<4.9	<4.9	<4.9	NA
2-Hexanone (MBK)	(µg/m ³)	0.28	<0.14	0.3	NA
Isopropanol	(µg/m ³)	<3.4	<3.4	<3.4	NA
Methyl tert-Butyl Ether (MTBE)	(µg/m ³)	<0.13	<0.13	<0.13	NA
Methylene Chloride	(µg/m ³)	<1.2	<1.2	<1.2	NA
4-Methyl-2-pentanone (MIBK)	(µg/m ³)	<0.14	<0.14	<0.14	NA
Naphthalene	(µg/m ³)	<0.18	<0.18	<0.18	NA
Propene	(µg/m ³)	<2.4	<2.4	<2.4	NA
Styrene	(µg/m ³)	<0.15	<0.15	<0.15	NA
1,1,2,2-Tetrachloroethane	(µg/m ³)	<0.24	<0.24	<0.24	NA
Tetrachloroethylene	(µg/m ³)	0.37	0.37	0.4	0.0
Tetrahydrofuran	(µg/m ³)	<1.0	<1.0	<1.0	NA
Toluene	(µg/m ³)	1.3	1.2	1.3	8.0
1,2,4-Trichlorobenzene	(µg/m ³)	<0.26	<0.26	<0.26	NA
1,1,1-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	NA
1,1,2-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	NA
Trichloroethylene	(µg/m ³)	<0.19	<0.19	<0.19	NA
Trichlorofluoromethane (Freon 11)	(µg/m ³)	1.1	1.1	1.1	0.0
1,1,2-Trichloro-1,2,2-trifluoroethane (Fr	(µg/m ³)	<1.1	<1.1	<1.1	NA
1,2,4-Trimethylbenzene	(µg/m ³)	0.25	0.24	0.2	4.1
1,3,5-Trimethylbenzene	(µg/m ³)	<0.17	<0.17	<0.17	NA
Vinyl Acetate	(µg/m ³)	<2.5	<2.5	<2.5	NA
Vinyl Chloride	(µg/m ³)	<0.090	<0.090	<0.090	NA
m&p-Xylene	(µg/m ³)	0.64	0.63	0.6	1.6
o-Xylene	(µg/m ³)	0.27	0.25	0.3	7.7

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC)
Run Data and Parameters

Run No.		2	2	2	2	2
Sampling Location		IN1	IN2	DW1	DW2	UPW
Start Date (2022)		Oct 26	Oct 26	Oct 26	Oct 26	Oct 26
Start Time (approx.)		15:47	17:05	15:45	15:40	17:45
Stop Date (2022)		Oct 27	Oct 27	Oct 27	Oct 27	Oct 27
Stop Time (approx.)		14:51	15:24	14:20	13:50	16:12
Meteorological Conditions						
P _{bar}	Barometric pressure (mm Hg)	750.6	751.5	750.6	750.4	751.6
T _s	Temperature (°K)	280.4	280.3	280.4	280.3	280.4
B _w	Relative Humidity (%)	84.9	84.9	84.9	84.9	84.9
Sampling Parameters						
SC#	Summa Can No.	2037	1813	2224	1095	1641/1827
FC#	Flow Controller No.	3255	3468	3056	3055	3743/3744
Rep	Replicate Sample (Y/N) ¹					Y
θ	Total sampling time (min)	1,384	1,339	1,355	1,330	1,347
VAC _{IN}	Initial Vacuum (in Hg)	-26.0	-28.0	-29.0	-29.0	-26.0
VAC _{FINA}	Final Vacuum (in Hg)	-4.0	-9.0	-8.0	-8.0	-8.0
VAC _{LAB}	Receipt Vacuum (in Hg)					

Results²

Acetone	(µg/m ³)	6.7	5.4	11	4.9	6.95
Benzene	(µg/m ³)	25	28	0.49	1.2	0.55
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.18	<0.18	<0.18
Bromodichloromethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Bromoform	(µg/m ³)	<0.36	<0.36	<0.36	<0.36	<0.36
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,3-Butadiene	(µg/m ³)	0.32	0.42	<0.078	<0.078	0.081
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.1	<4.1	<4.1
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
Carbon Tetrachloride	(µg/m ³)	0.45	0.4	0.41	0.47	0.435
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
Chloroethane	(µg/m ³)	<0.093	<0.093	<0.093	<0.093	<0.093
Chloroform	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Chloromethane	(µg/m ³)	0.89	0.87	0.78	0.77	0.8
Cyclohexane	(µg/m ³)	0.21	0.19	<0.12	<0.12	0.13
Dibromochloromethane	(µg/m ³)	<0.30	<0.30	<0.30	<0.30	<0.30
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.27	<0.27	<0.27
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	1.2	1.1	1.1	1.1	1.05
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
1,2-Dichloro-1,1,2,2-tetrafluoroethane	(µg/m ³)	<0.25	<0.25	<0.25	<0.25	<0.25
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3

1 A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

2 A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC)
Run Data and Parameters

Run No.	2	2	2	2	2
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Oct 26	Oct 26	Oct 26	Oct 26	Oct 26
Start Time (approx.)	15:47	17:05	15:45	15:40	17:45
Stop Date (2022)	Oct 27	Oct 27	Oct 27	Oct 27	Oct 27
Stop Time (approx.)	14:51	15:24	14:20	13:50	16:12
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	750.6	751.5	750.6	750.4	751.6
T _s Temperature (°K)	280.4	280.3	280.4	280.3	280.4
B _w Relative Humidity (%)	84.9	84.9	84.9	84.9	84.9
Sampling Parameters					
SC# Summa Can No.	2037	1813	2224	1095	1641/1827
FC# Flow Controller No.	3255	3468	3056	3055	3743/3744
Rep Replicate Sample (Y/N) ¹					Y
θ Total sampling time (min)	1,384	1,339	1,355	1,330	1,347
VAC _{IN} Initial Vacuum (in Hg)	-26.0	-28.0	-29.0	-29.0	-26.0
VAC _{FINA} Final Vacuum (in Hg)	-4.0	-9.0	-8.0	-8.0	-8.0
VAC _{LAB} Receipt Vacuum (in Hg)					

Results²

Ethanol	(µg/m ³)	6.9	5.4	5.8	4.7	6.35
Ethyl Acetate	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3
Ethylbenzene	(µg/m ³)	0.23	0.21	<0.15	<0.15	0.19
4-Ethyltoluene	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Heptane	(µg/m ³)	0.6	0.37	0.2	0.21	0.32
Hexachlorobutadiene	(µg/m ³)	<0.37	<0.37	<0.37	<0.37	<0.37
Hexane	(µg/m ³)	<4.9	<4.9	<4.9	<4.9	<4.9
2-Hexanone (MBK)	(µg/m ³)	<0.14	<0.14	0.33	<0.14	0.28
Isopropanol	(µg/m ³)	4.1	<3.4	<3.4	<3.4	<3.4
Methyl tert-Butyl Ether (MTBE)	(µg/m ³)	<0.13	<0.13	<0.13	<0.13	<0.13
Methylene Chloride	(µg/m ³)	<1.2	<1.2	<1.2	<1.2	<1.2
4-Methyl-2-pentanone (MIBK)	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
Naphthalene	(µg/m ³)	11	33	0.26	<0.18	<0.18
Propene	(µg/m ³)	<2.4	2.6	<2.4	<2.4	<2.4
Styrene	(µg/m ³)	0.65	0.87	<0.15	<0.15	<0.15
1,1,2,2-Tetrachloroethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrachloroethylene	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	0.37
Tetrahydrofuran	(µg/m ³)	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	(µg/m ³)	5.1	5.7	0.81	0.77	1.25
1,2,4-Trichlorobenzene	(µg/m ³)	<0.26	<0.26	<0.26	<0.26	<0.26
1,1,1-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
1,1,2-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichloroethylene	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichlorofluoromethane (Freon 11)	(µg/m ³)	1.1	1.2	1.2	1.1	1.1
1,1,2-Trichloro-1,2,2-trifluoroethane (F1)	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
1,2,4-Trimethylbenzene	(µg/m ³)	0.55	0.57	<0.17	0.2	0.245
1,3,5-Trimethylbenzene	(µg/m ³)	0.21	0.22	<0.17	<0.17	<0.17
Vinyl Acetate	(µg/m ³)	<2.5	<2.5	<2.5	<2.5	<2.5
Vinyl Chloride	(µg/m ³)	<0.090	<0.090	<0.090	<0.090	<0.090
m&p-Xylene	(µg/m ³)	1.8	2	0.4	0.41	0.635
o-Xylene	(µg/m ³)	0.53	0.59	0.17	0.17	0.26

1 A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

2 A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	3	3	3	3	3
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Nov 9	Nov 9	Nov 9	Nov 9	Nov 9
Start Time (approx.)	14:30	15:13	13:44	13:12	15:50
Stop Date (2022)	Nov 10	Nov 10	Nov 10	Nov 10	Nov 10
Stop Time (approx.)	12:50	13:30	12:00	11:30	14:09
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	754.6	754.6	754.6	754.6	754.6
T _s Temperature (°K)	288.6	288.6	288.6	288.6	288.6
B _w Relative Humidity (%)	45.0	45.0	45.0	45.0	45.0
Sampling Parameters					
SC# Summa Can No.	1042	2002	1878	1864	2171
FC# Flow Controller No.	3494	3504	3676	3461	3454
Dup Duplicate Sample (Y/N)	Y				
θ Total sampling time (min)	1,340	1,337	1,336	1,338	1,339
VAC _{IN} Initial Vacuum (in Hg)	-29.0	-28.0	-30.0	-28.0	-29.0
VAC _{FINAL} Final Vacuum (in Hg)	-9.0	-7.5	-10.0	-8.0	-8.0
VAC _{LAB} Receipt Vacuum (in Hg)	-8.7	-7.9	-10.4	-8.6	-7.8

Results

Acetone	(µg/m ³)	11	14	11	8.6	15
Benzene	(µg/m ³)	37	1.5	0.7	0.53	0.98
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.18	<0.18	<0.18
Bromodichloromethane	(µg/m ³)	<0.23	<0.23	<0.23	<0.23	<0.23
Bromoform	(µg/m ³)	<0.36	<0.36	<0.36	<0.36	<0.36
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,3-Butadiene	(µg/m ³)	0.19	<0.077	<0.077	<0.077	<0.077
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.1	<4.1	<4.1
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
Carbon Tetrachloride	(µg/m ³)	0.41	0.44	0.42	0.46	0.38
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
Chloroethane	(µg/m ³)	<0.092	<0.092	<0.092	<0.092	<0.092
Chloroform	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Chloromethane	(µg/m ³)	0.96	0.91	0.99	0.95	1
Cyclohexane	(µg/m ³)	0.19	<0.12	<0.12	0.14	0.28
Dibromochloromethane	(µg/m ³)	<0.3	<0.3	<0.3	<0.3	<0.3
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.27	<0.27	<0.27
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	2.2	2.3	2.4	2.4	2.3
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
1,2-Dichloro-1,1,2,2-tetrafluoroethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	3	3	3	3	3
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Nov 9	Nov 9	Nov 9	Nov 9	Nov 9
Start Time (approx.)	14:30	15:13	13:44	13:12	15:50
Stop Date (2022)	Nov 10	Nov 10	Nov 10	Nov 10	Nov 10
Stop Time (approx.)	12:50	13:30	12:00	11:30	14:09
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	754.6	754.6	754.6	754.6	754.6
T _s Temperature (°K)	288.6	288.6	288.6	288.6	288.6
B _w Relative Humidity (%)	45.0	45.0	45.0	45.0	45.0
Sampling Parameters					
SC# Summa Can No.	1042	2002	1878	1864	2171
FC# Flow Controller No.	3494	3504	3676	3461	3454
Dup Duplicate Sample (Y/N)	Y				
θ Total sampling time (min)	1,340	1,337	1,336	1,338	1,339
VAC _{IN} Initial Vacuum (in Hg)	-29.0	-28.0	-30.0	-28.0	-29.0
VAC _{FINAL} Final Vacuum (in Hg)	-9.0	-7.5	-10.0	-8.0	-8.0
VAC _{LAB} Receipt Vacuum (in Hg)	-8.7	-7.9	-10.4	-8.6	-7.8

Results

Ethanol	(µg/m ³)	9.6	9	12	7.5	12
Ethyl Acetate	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	1.7
Ethylbenzene	(µg/m ³)	0.23	<0.15	<0.15	0.16	0.2
4-Ethyltoluene	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Heptane	(µg/m ³)	0.27	0.22	0.26	0.31	0.47
Hexachlorobutadiene	(µg/m ³)	<0.37	<0.37	<0.37	<0.37	<0.37
Hexane	(µg/m ³)	<4.9	<4.9	<4.9	<4.9	<4.9
2-Hexanone (MBK)	(µg/m ³)	0.46	0.46	0.38	0.46	0.67
Isopropanol	(µg/m ³)	<3.4	<3.4	<3.4	<3.4	<3.4
Methyl tert-Butyl Ether (MTBE)	(µg/m ³)	<0.13	<0.13	<0.13	<0.13	<0.13
Methylene Chloride	(µg/m ³)	<1.2	<1.2	<1.2	<1.2	<1.2
4-Methyl-2-pentanone (MIBK)	(µg/m ³)	<0.092	0.16	0.17	0.18	0.33
Naphthalene	(µg/m ³)	40	14	<.21	<0.18	<0.18
Propene	(µg/m ³)	<2.4	<2.4	<2.4	<2.4	<2.4
Styrene	(µg/m ³)	1.8	0.17	<0.15	<0.15	<0.15
1,1,2,2-Tetrachloroethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrachloroethylene	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrahydrofuran	(µg/m ³)	<1	<1	<1.0	<1	<1
Toluene	(µg/m ³)	8.5	0.94	0.72	0.7	1.4
1,2,4-Trichlorobenzene	(µg/m ³)	<0.26	<0.26	<0.26	<0.26	<0.26
1,1,1-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
1,1,2-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichloroethylene	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichlorofluoromethane (Freon 11)	(µg/m ³)	1.2	1.1	1.2	1.3	1.2
1,1,2-Trichloro-1,2,2-trifluoroethane (Fr	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
1,2,4-Trimethylbenzene	(µg/m ³)	0.66	0.18	<0.17	<0.17	0.24
1,3,5-Trimethylbenzene	(µg/m ³)	0.37	<0.17	<0.17	<0.17	<0.17
Vinyl Acetate	(µg/m ³)	<2.5	<2.5	<2.5	<2.5	2.6
Vinyl Chloride	(µg/m ³)	<0.089	<0.089	<0.089	<0.089	<0.089
m&p-Xylene	(µg/m ³)	2.7	0.42	0.38	0.39	0.56
o-Xylene	(µg/m ³)	0.76	0.16	<0.15	0.18	0.22

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	3	
Sampling Location	IN1	REPLICATE
Start Date (2022)	Nov 9	Nov 9
Start Time (approx.)	14:30	14:30
Stop Date (2022)	Nov 10	Nov 10
Stop Time (approx.)	12:50	12:50
Meteorological Conditions		
P _{bar} Barometric pressure (mm Hg)	754.6	754.6
T _s Temperature (°K)	288.6	288.6
B _w Relative Humidity (%)	45.0	45.0
Sampling Parameters		
SC# Summa Can No.	1042	2018
FC# Flow Controller No.	3494	3645
Rep Replicate Sample (Y/N)		
θ Total sampling time (min)	1,340	1,340
VAC _{IN} Initial Vacuum (in Hg)	-29.0	-29.0
VAC _{FINAL} Final Vacuum (in Hg)	-9.0	-9.0
VAC _{LAB} Receipt Vacuum (in Hg)	-8.7	

Results				Average	Precision (%)
Acetone	(µg/m ³)	11	6.8	8.9	47.2
Benzene	(µg/m ³)	37	37	37.0	0.0
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.18	NA
Bromodichloromethane	(µg/m ³)	<0.23	<0.23	<0.23	NA
Bromoform	(µg/m ³)	<0.36	<0.36	<0.36	NA
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.14	NA
1,3-Butadiene	(µg/m ³)	0.19	<0.077	0.2	NA
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.1	NA
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.1	NA
Carbon Tetrachloride	(µg/m ³)	0.41	0.39	0.4	5.0
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.16	NA
Chloroethane	(µg/m ³)	<0.092	<0.092	<0.092	NA
Chloroform	(µg/m ³)	<0.17	<0.17	<0.17	NA
Chloromethane	(µg/m ³)	0.96	0.99	1.0	3.1
Cyclohexane	(µg/m ³)	0.19	0.18	0.2	5.4
Dibromochloromethane	(µg/m ³)	<0.3	<0.3	<0.3	NA
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.27	NA
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	NA
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	NA
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	NA
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	2.2	2.2	2.2	0.0
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	NA
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	NA
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	NA
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	NA
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	NA
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.16	NA
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	NA
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	NA
1,2-Dichloro-1,1,2,2-tetrafluoroethane	(µg/m ³)	<0.24	<0.24	<0.24	NA
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.3	NA

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	1	
Sampling Location	IN1	REPLICATE
Start Date (2022)	Nov 9	Nov 9
Start Time (approx.)	14:30	14:30
Stop Date (2022)	Nov 10	Nov 10
Stop Time (approx.)	12:50	12:50
Meteorological Conditions		
P _{bar} Barometric pressure (mm Hg)	754.6	754.6
T _s Temperature (°K)	288.6	288.6
B _w Relative Humidity (%)	45.0	45.0
Sampling Parameters		
SC# Summa Can No.	1042	2018
FC# Flow Controller No.	3494	3645
Rep Replicate Sample (Y/N)		
θ Total sampling time (min)	1,340	1,340
VAC _{IN} Initial Vacuum (in Hg)	-29.0	-29.0
VAC _{FINAL} Final Vacuum (in Hg)	-9.0	-9.0
VAC _{LAB} Receipt Vacuum (in Hg)	-8.7	

Results				Average	Precision (%)
Ethanol	(µg/m ³)	9.6	9.9	9.8	3.1
Ethyl Acetate	(µg/m ³)	<1.3	<1.3	<1.3	NA
Ethylbenzene	(µg/m ³)	0.23	0.23	0.2	0.0
4-Ethyltoluene	(µg/m ³)	<0.17	<0.17	<0.17	NA
Heptane	(µg/m ³)	0.27	0.32	0.3	16.9
Hexachlorobutadiene	(µg/m ³)	<0.37	<0.37	<0.37	NA
Hexane	(µg/m ³)	<4.9	<4.9	<4.9	NA
2-Hexanone (MBK)	(µg/m ³)	0.46	<0.29	0.5	NA
Isopropanol	(µg/m ³)	<3.4	<3.4	<3.4	NA
Methyl tert-Butyl Ether (MTBE)	(µg/m ³)	<0.13	<0.13	<0.13	NA
Methylene Chloride	(µg/m ³)	<1.2	<1.2	<1.2	NA
4-Methyl-2-pentanone (MIBK)	(µg/m ³)	<0.092	<0.14	<0.092	NA
Naphthalene	(µg/m ³)	40	29	34.5	31.9
Propene	(µg/m ³)	<2.4	<2.4	<2.4	NA
Styrene	(µg/m ³)	1.8	1.7	1.8	5.7
1,1,2,2-Tetrachloroethane	(µg/m ³)	<0.24	<0.24	<0.24	NA
Tetrachloroethylene	(µg/m ³)	<0.24	<0.24	<0.24	NA
Tetrahydrofuran	(µg/m ³)	<1	<1	<1	NA
Toluene	(µg/m ³)	8.5	8.5	8.5	0.0
1,2,4-Trichlorobenzene	(µg/m ³)	<0.26	<0.26	<0.26	NA
1,1,1-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	NA
1,1,2-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	NA
Trichloroethylene	(µg/m ³)	<0.19	<0.19	<0.19	NA
Trichlorofluoromethane (Freon 11)	(µg/m ³)	1.2	1.1	1.2	8.7
1,1,2-Trichloro-1,2,2-trifluoroethane (Fr	(µg/m ³)	<1.1	<1.1		NA
1,2,4-Trimethylbenzene	(µg/m ³)	0.66	0.55		18.2
1,3,5-Trimethylbenzene	(µg/m ³)	0.37	0.32		14.5
Vinyl Acetate	(µg/m ³)	<2.5	<2.5		NA
Vinyl Chloride	(µg/m ³)	<0.089	<0.089		NA
m&p-Xylene	(µg/m ³)	2.7	2.5		7.7
o-Xylene	(µg/m ³)	0.76	0.71		6.8

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC)
Run Data and Parameters

Run No.	3	3	3	3	3
Sampling Location	IN1¹	IN2	DW1	DW2	UPW
Start Date (2022)	Nov 9	Nov 9	Nov 9	Nov 9	Nov 9
Start Time (approx.)	16:08	17:00	15:43	15:24	17:39
Stop Date (2022)	Nov 10	Nov 10	Nov 10	Nov 10	Nov 10
Stop Time (approx.)	14:39	15:10	14:15	13:48	15:41
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	754.6	754.6	754.6	754.6	754.6
T _s Temperature (°K)	288.6	288.6	288.6	288.6	288.6
B _w Relative Humidity (%)	45.0	45.0	45.0	45.0	45.0
Sampling Parameters					
SC# Summa Can No.	1042/2018	2002	1878	1864	2171
FC# Flow Controller No.	3494/3645	3504	3676	3461	3454
Rep Replicate Sample (Y/N) ¹	Y				
θ Total sampling time (min)	1,351	1,330	1,352	1,344	1,322
VAC _{IN} Initial Vacuum (in Hg)	-29.0	-28.0	-30.0	-28.0	-29.0
VAC _{FINA} Final Vacuum (in Hg)	-9.0	-7.5	-10.0	-8.0	-8.0
VAC _{LAB} Receipt Vacuum (in Hg)	-8.7	-7.9	-10.4	-8.6	-7.8

Results²

Acetone	(µg/m ³)	8.9	8.9	3.9	3.9	11
Benzene	(µg/m ³)	37	37	1.4	0.94	0.98
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.18	<0.18	<0.18
Bromodichloromethane	(µg/m ³)	<0.23	<0.23	<0.23	<0.23	<0.23
Bromoform	(µg/m ³)	<0.36	<0.36	<0.36	<0.36	<0.36
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,3-Butadiene	(µg/m ³)	0.19	0.19	<0.077	<0.077	<0.077
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.1	<4.1	<4.1
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
Carbon Tetrachloride	(µg/m ³)	0.4	0.4	0.5	0.5	0.49
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
Chloroethane	(µg/m ³)	<0.092	<0.092	<0.092	<0.092	<0.092
Chloroform	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Chloromethane	(µg/m ³)	0.975	0.975	1.1	1.1	1.1
Cyclohexane	(µg/m ³)	0.185	0.185	0.15	<0.12	0.16
Dibromochloromethane	(µg/m ³)	<0.3	<0.3	<0.30	<0.30	<0.30
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.27	<0.27	<0.27
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	2.2	2.2	4.5	3	2.6
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
1,2-Dichloro-1,1,2,2-tetrafluoroethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3

1 A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

2 A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC)
Run Data and Parameters

Run No.	3	3	3	3	3
Sampling Location	IN1¹	IN2	DW1	DW2	UPW
Start Date (2022)	Nov 9	Nov 9	Nov 9	Nov 9	Nov 9
Start Time (approx.)	16:08	17:00	15:43	15:24	17:39
Stop Date (2022)	Nov 10	Nov 10	Nov 10	Nov 10	Nov 10
Stop Time (approx.)	14:39	15:10	14:15	13:48	15:41
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	754.6	754.6	754.6	754.6	754.6
T _s Temperature ("K)	288.6	288.6	288.6	288.6	288.6
B _w Relative Humidity (%)	45.0	45.0	45.0	45.0	45.0
Sampling Parameters					
SC# Summa Can No.	1042/2018	2002	1878	1864	2171
FC# Flow Controller No.	3494/3645	3504	3676	3461	3454
Rep Replicate Sample (Y/N) ¹	Y				
θ Total sampling time (min)	1,351	1,330	1,352	1,344	1,322
VAC _{IN} Initial Vacuum (in Hg)	-29.0	-28.0	-30.0	-28.0	-29.0
VAC _{FINA} Final Vacuum (in Hg)	-9.0	-7.5	-10.0	-8.0	-8.0
VAC _{LAB} Receipt Vacuum (in Hg)	-8.7	-7.9	-10.4	-8.6	-7.8

Results²

Ethanol	(μg/m ³)	9.75	6	4.7	4.3	8.1
Ethyl Acetate	(μg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3
Ethylbenzene	(μg/m ³)	0.23	<0.15	<0.15	<0.15	<0.15
4-Ethyltoluene	(μg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Heptane	(μg/m ³)	0.295	0.2	0.28	0.22	0.28
Hexachlorobutadiene	(μg/m ³)	<0.37	<0.37	<0.37	<0.37	<0.37
Hexane	(μg/m ³)	<4.9	<4.9	<4.9	<4.9	<4.9
2-Hexanone (MBK)	(μg/m ³)	0.46	<0.29	<0.29	<0.29	0.4
Isopropanol	(μg/m ³)	<3.4	<3.4	<3.4	<3.4	<3.4
Methyl tert-Butyl Ether (MTBE)	(μg/m ³)	<0.13	<0.13	<0.13	<0.13	<0.13
Methylene Chloride	(μg/m ³)	<1.2	<1.2	<1.2	<1.2	<1.2
4-Methyl-2-pentanone (MIBK)	(μg/m ³)	<0.092	<0.14	<0.14	<0.14	<0.14
Naphthalene	(μg/m ³)	34.5	5.7	0.22	0.26	<0.18
Propene	(μg/m ³)	<2.4	<2.4	<2.4	<2.4	<2.4
Styrene	(μg/m ³)	1.75	<0.15	<0.15	<0.15	<0.15
1,1,2,2-Tetrachloroethane	(μg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrachloroethylene	(μg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrahydrofuran	(μg/m ³)	<1	<1.0	<1.0	<1.0	<1.0
Toluene	(μg/m ³)	8.5	0.89	0.57	0.52	1
1,2,4-Trichlorobenzene	(μg/m ³)	<0.26	<0.26	<0.26	<0.26	<0.26
1,1,1-Trichloroethane	(μg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
1,1,2-Trichloroethane	(μg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichloroethylene	(μg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichlorofluoromethane (Freon 11)	(μg/m ³)	1.15	1.3	1.5	1.4	1.3
1,1,2-Trichloro-1,2,2-trifluoroethane (F)	(μg/m ³)	0	<1.1	<1.1	<1.1	<1.1
1,2,4-Trimethylbenzene	(μg/m ³)	0	<0.17	<0.17	<0.17	<0.17
1,3,5-Trimethylbenzene	(μg/m ³)	0	<0.17	<0.17	<0.17	<0.17
Vinyl Acetate	(μg/m ³)	0	<2.5	<2.5	<2.5	<2.5
Vinyl Chloride	(μg/m ³)	0	<0.089	<0.089	<0.089	<0.089
m&p-Xylene	(μg/m ³)	0	0.39	<0.30	<0.30	0.36
o-Xylene	(μg/m ³)	0	0.16	<0.15	<0.15	0.18

1 A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

2 A "<" notation indicates the laboratory results were non-detected. Results with a "<" modifier are presented at the Reporting Limit (RL).

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	4	4	4	4	4
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Dec 5	Dec 5	Dec 5	Dec 5	Dec 5
Start Time (approx.)	16:08	17:00	15:43	15:24	17:39
Stop Date (2022)	Dec 6	Dec 6	Dec 6	Dec 6	Dec 6
Stop Time (approx.)	14:39	15:10	14:15	13:48	15:41
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	748.3	748.3	748.3	748.3	748.3
T _s Temperature (°K)	279.5	279.5	279.5	279.5	279.5
B _w Relative Humidity (%)	60.0	60.0	60.0	60.0	60.0
Sampling Parameters					
SC# Summa Can No.	1831	2042	1301	1281	2134
FC# Flow Controller No.	3177	3261	3473	3472	3178
Dup Duplicate Sample (Y/N)		Y			
θ Total sampling time (min)	1,351	1,330	1,352	1,344	1,322
VAC _{IN} Initial Vacuum (in Hg)	-29.0	-24.0	-28.0	-29.0	-28.0
VAC _{FINAL} Final Vacuum (in Hg)	-8.5	-6.5	-7.0	-6.0	-7.0
VAC _{LAB} Receipt Vacuum (in Hg)	-7.4	-5.3	-8.3	-8.1	-7.9

Results

Acetone	(µg/m ³)	5.7	7.5	3.9	3.9	11
Benzene	(µg/m ³)	37	2.8	1.4	0.94	0.98
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.18	<0.18	<0.18
Bromodichloromethane	(µg/m ³)	<0.23	<0.23	<0.23	<0.23	<0.23
Bromoform	(µg/m ³)	<0.36	<0.36	<0.36	<0.36	<0.36
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,3-Butadiene	(µg/m ³)	<0.077	<0.077	<0.077	<0.077	<0.077
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.1	<4.1	<4.1
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
Carbon Tetrachloride	(µg/m ³)	0.48	0.46	0.5	0.5	0.49
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
Chloroethane	(µg/m ³)	<0.092	<0.092	<0.092	<0.092	<0.092
Chloroform	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Chloromethane	(µg/m ³)	0.99	1	1.1	1.1	1.1
Cyclohexane	(µg/m ³)	0.16	<0.12	0.15	<0.12	0.16
Dibromochloromethane	(µg/m ³)	<0.30	<0.30	<0.30	<0.30	<0.30
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.27	<0.27	<0.27
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	2.6	2.6	4.5	3	2.6
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
1,2-Dichloro-1,1,2,2-tetrafluoroethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	4	4	4	4	4
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Dec 5	Dec 5	Dec 5	Dec 5	Dec 5
Start Time (approx.)	16:08	17:00	15:43	15:24	17:39
Stop Date (2022)	Dec 6	Dec 6	Dec 6	Dec 6	Dec 6
Stop Time (approx.)	14:39	15:10	14:15	13:48	15:41
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	748.3	748.3	748.3	748.3	748.3
T _s Temperature (°K)	279.5	279.5	279.5	279.5	279.5
B _w Relative Humidity (%)	60.0	60.0	60.0	60.0	60.0
Sampling Parameters					
SC# Summa Can No.	1831	2042	1301	1281	2134
FC# Flow Controller No.	3177	3261	3473	3472	3178
Dup Duplicate Sample (Y/N)		Y			
θ Total sampling time (min)	1,351	1,330	1,352	1,344	1,322
VAC _{IN} Initial Vacuum (in Hg)	-29.0	-24.0	-28.0	-29.0	-28.0
VAC _{FINAL} Final Vacuum (in Hg)	-8.5	-6.5	-7.0	-6.0	-7.0
VAC _{LAB} Receipt Vacuum (in Hg)	-7.4	-5.3	-8.3	-8.1	-7.9

Results

Ethanol	(µg/m ³)	5.6	6	4.7	4.3	8.1
Ethyl Acetate	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3
Ethylbenzene	(µg/m ³)	0.2	<0.15	<0.15	<0.15	<0.15
4-Ethyltoluene	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Heptane	(µg/m ³)	0.32	0.2	0.28	0.22	0.28
Hexachlorobutadiene	(µg/m ³)	<0.37	<0.37	<0.37	<0.37	<0.37
Hexane	(µg/m ³)	<4.9	<4.9	<4.9	<4.9	<4.9
2-Hexanone (MBK)	(µg/m ³)	<0.29	<0.29	<0.29	<0.29	0.4
Isopropanol	(µg/m ³)	<3.4	<3.4	<3.4	<3.4	<3.4
Methyl tert-Butyl Ether (MTBE)	(µg/m ³)	<0.13	<0.13	<0.13	<0.13	<0.13
Methylene Chloride	(µg/m ³)	<1.2	<1.2	<1.2	<1.2	<1.2
4-Methyl-2-pentanone (MIBK)	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
Naphthalene	(µg/m ³)	18	5.7	0.22	0.26	<0.18
Propene	(µg/m ³)	<2.4	<2.4	<2.4	<2.4	<2.4
Styrene	(µg/m ³)	0.66	<0.15	<0.15	<0.15	<0.15
1,1,2,2-Tetrachloroethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrachloroethylene	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrahydrofuran	(µg/m ³)	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	(µg/m ³)	5.8	0.89	0.57	0.52	1
1,2,4-Trichlorobenzene	(µg/m ³)	<0.26	<0.26	<0.26	<0.26	<0.26
1,1,1-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
1,1,2-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichloroethylene	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichlorofluoromethane (Freon 11)	(µg/m ³)	1.3	1.3	1.5	1.4	1.3
1,1,2-Trichloro-1,2,2-trifluoroethane (Fr	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
1,2,4-Trimethylbenzene	(µg/m ³)	0.35	<0.17	<0.17	<0.17	<0.17
1,3,5-Trimethylbenzene	(µg/m ³)	0.19	<0.17	<0.17	<0.17	<0.17
Vinyl Acetate	(µg/m ³)	<2.5	<2.5	<2.5	<2.5	<2.5
Vinyl Chloride	(µg/m ³)	<0.089	<0.089	<0.089	<0.089	<0.089
m&p-Xylene	(µg/m ³)	1.5	0.39	<0.30	<0.30	0.36
o-Xylene	(µg/m ³)	0.51	0.16	<0.15	<0.15	0.18

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	4		
Sampling Location	IN2	REPLICATE	
Start Date (2022)	Dec 5	Dec 5	
Start Time (approx.)	17:00	17:00	
Stop Date (2022)	Dec 6	Dec 6	
Stop Time (approx.)	15:10	15:10	
Meteorological Conditions			
P _{bar}	Barometric pressure (mm Hg)	748.3	748.3
T _s	Temperature ("K)	279.5	279.5
B _w	Relative Humidity (%)	60.0	60.0
Sampling Parameters			
SC#	Summa Can No.	2042	1669
FC#	Flow Controller No.	3261	3261
Rep	Replicate Sample (Y/N) ¹	Y	
θ	Total sampling time (min)	1,330	1,330
VAC _{IN}	Initial Vacuum (in Hg)	-24.0	-24.0
VAC _{FINA}	Final Vacuum (in Hg)	-6.5	-6.5
VAC _{LAB}	Receipt Vacuum (in Hg)	-5.3	-5.3

Results²				Average	Precision (%)³
Acetone	(µg/m ³)	7.5	4.5	6	50.0
Benzene	(µg/m ³)	2.8	2.9	2.85	3.5
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.18	NA
Bromodichloromethane	(µg/m ³)	<0.23	<0.23	<0.23	NA
Bromoform	(µg/m ³)	<0.36	<0.36	<0.36	NA
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.14	NA
1,3-Butadiene	(µg/m ³)	<0.077	<0.077	<0.077	NA
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.1	NA
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.1	NA
Carbon Tetrachloride	(µg/m ³)	0.46	0.52	0.49	12.2
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.16	NA
Chloroethane	(µg/m ³)	<0.092	<0.092	<0.092	NA
Chloroform	(µg/m ³)	<0.17	<0.17	<0.17	NA
Chloromethane	(µg/m ³)	1	1.1	1.05	9.5
Cyclohexane	(µg/m ³)	<0.12	0.12	0.12	NA
Dibromochloromethane	(µg/m ³)	<0.30	<0.30	<0.30	NA
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.27	NA
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	NA
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	NA
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	NA
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	2.6	2.6	2.6	0.0
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	NA
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	NA
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	NA
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	NA
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	NA
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.16	NA
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	NA
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	NA
1,2-Dichloro-1,1,2,2-tetrafluoroethane	(µg/m ³)	<0.24	<0.24	<0.24	NA
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.3	NA

1 A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

2 A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

3 EPA Method 325B, Section 11.1.1 specifies replicate precision of 25%.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	4	
Sampling Location	IN2	REPLICATE
Start Date (2022)	Dec 5	Dec 5
Start Time (approx.)	17:00	17:00
Stop Date (2022)	Dec 6	Dec 6
Stop Time (approx.)	15:10	15:10
Meteorological Conditions		
P _{bar} Barometric pressure (mm Hg)	748.3	748.3
T _s Temperature ("K)	279.5	279.5
B _w Relative Humidity (%)	60.0	60.0
Sampling Parameters		
SC# Summa Can No.	2042	1669
FC# Flow Controller No.	3261	3261
Rep Replicate Sample (Y/N) ¹	Y	
θ Total sampling time (min)	1,330	1,330
VAC _{IN} Initial Vacuum (in Hg)	-24.0	-24.0
VAC _{FINA} Final Vacuum (in Hg)	-6.5	-6.5
VAC _{LAB} Receipt Vacuum (in Hg)	-5.3	-5.3

Results ²			Average	Precision (%) ³	
Ethanol	(µg/m ³)	6	5	5.5	18.2
Ethyl Acetate	(µg/m ³)	<1.3	<1.3	<1.3	NA
Ethylbenzene	(µg/m ³)	<0.15	<0.15	<0.15	NA
4-Ethyltoluene	(µg/m ³)	<0.17	<0.17	<0.17	NA
Heptane	(µg/m ³)	0.2	0.24	0.22	18.2
Hexachlorobutadiene	(µg/m ³)	<0.37	<0.37	<0.37	NA
Hexane	(µg/m ³)	<4.9	<4.9	<4.9	NA
2-Hexanone (MBK)	(µg/m ³)	<0.29	<0.29	<0.29	NA
Isopropanol	(µg/m ³)	<3.4	<3.4	<3.4	NA
Methyl tert-Butyl Ether (MTBE)	(µg/m ³)	<0.13	<0.13	<0.13	NA
Methylene Chloride	(µg/m ³)	<1.2	<1.2	<1.2	NA
4-Methyl-2-pentanone (MIBK)	(µg/m ³)	<0.14	<0.14	<0.14	NA
Naphthalene	(µg/m ³)	5.7	4.9	5.3	15.1
Propene	(µg/m ³)	<2.4	<2.4	<2.4	NA
Styrene	(µg/m ³)	<0.15	0.2	0.2	NA
1,1,2,2-Tetrachloroethane	(µg/m ³)	<0.24	<0.24	<0.24	NA
Tetrachloroethylene	(µg/m ³)	<0.24	<0.24	<0.24	NA
Tetrahydrofuran	(µg/m ³)	<1.0	<1.0	<1.0	NA
Toluene	(µg/m ³)	0.89	0.95	0.92	6.5
1,2,4-Trichlorobenzene	(µg/m ³)	<0.26	<0.26	<0.26	NA
1,1,1-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	NA
1,1,2-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	NA
Trichloroethylene	(µg/m ³)	<0.19	<0.19	<0.19	NA
Trichlorofluoromethane (Freon 11)	(µg/m ³)	1.3	1.3	1.3	0.0
1,1,2-Trichloro-1,2,2-trifluoroethane (F113)	(µg/m ³)	<1.1	<1.1	<1.1	NA
1,2,4-Trimethylbenzene	(µg/m ³)	<0.17	<0.17	<0.17	NA
1,3,5-Trimethylbenzene	(µg/m ³)	<0.17	<0.17	<0.17	NA
Vinyl Acetate	(µg/m ³)	<2.5	<2.5	<2.5	NA
Vinyl Chloride	(µg/m ³)	<0.089	<0.089	<0.089	NA
m&p-Xylene	(µg/m ³)	0.39	0.4	0.395	2.5
o-Xylene	(µg/m ³)	0.16	<0.15	0.16	NA

¹ A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

² A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

³ EPA Method 325B, Section 11.1.1 specifies replicate precision of 25%.

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC)
Run Data and Parameters

Run No.	4	4	4	4	4
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Dec 5	Dec 5	Dec 5	Dec 5	Dec 5
Start Time (approx.)	16:08	17:00	15:43	15:24	17:39
Stop Date (2022)	Dec 6	Dec 6	Dec 6	Dec 6	Dec 6
Stop Time (approx.)	14:39	15:10	14:15	13:48	15:41
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	748.3	748.3	748.3	748.3	748.3
T _s Temperature (°K)	279.5	279.5	279.5	279.5	279.5
B _w Relative Humidity (%)	60.0	60.0	60.0	60.0	60.0
Sampling Parameters					
SC# Summa Can No.	1831	2042/1669	1301	1281	2134
FC# Flow Controller No.	3177	3261/3261	3473	3472	3178
Rep Replicate Sample (Y/N) ¹		Y			
θ Total sampling time (min)	1,351	1,330	1,352	1,344	1,322
VAC _{IN} Initial Vacuum (in Hg)	-29.0	-24.0	-28.0	-29.0	-28.0
VAC _{FINA} Final Vacuum (in Hg)	-8.5	-6.5	-7.0	-6.0	-7.0
VAC _{LAB} Receipt Vacuum (in Hg)	-7.4	-5.3	-8.3	-8.1	-7.9

Results²

Acetone	(µg/m ³)	5.7	6.0	3.9	3.9	11
Benzene	(µg/m ³)	37	2.85	1.4	0.94	0.98
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.18	<0.18	<0.18
Bromodichloromethane	(µg/m ³)	<0.23	<0.23	<0.23	<0.23	<0.23
Bromoform	(µg/m ³)	<0.36	<0.36	<0.36	<0.36	<0.36
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,3-Butadiene	(µg/m ³)	<0.077	<0.077	<0.077	<0.077	<0.077
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.1	<4.1	<4.1
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
Carbon Tetrachloride	(µg/m ³)	0.48	0.49	0.5	0.5	0.49
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
Chloroethane	(µg/m ³)	<0.092	<0.092	<0.092	<0.092	<0.092
Chloroform	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Chloromethane	(µg/m ³)	0.99	1.05	1.1	1.1	1.1
Cyclohexane	(µg/m ³)	0.16	0.12	0.15	<0.12	0.16
Dibromochloromethane	(µg/m ³)	<0.30	<0.30	<0.30	<0.30	<0.30
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.27	<0.27	<0.27
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	2.6	2.6	4.5	3	2.6
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
1,2-Dichloro-1,1,2,2-tetrafluoroethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3

1 A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

2 A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC)
Run Data and Parameters

Run No.	4	4	4	4	4
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Dec 5	Dec 5	Dec 5	Dec 5	Dec 5
Start Time (approx.)	16:08	17:00	15:43	15:24	17:39
Stop Date (2022)	Dec 6	Dec 6	Dec 6	Dec 6	Dec 6
Stop Time (approx.)	14:39	15:10	14:15	13:48	15:41
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	748.3	748.3	748.3	748.3	748.3
T _s Temperature (°K)	279.5	279.5	279.5	279.5	279.5
B _w Relative Humidity (%)	60.0	60.0	60.0	60.0	60.0
Sampling Parameters					
SC# Summa Can No.	1831	2042/1669	1301	1281	2134
FC# Flow Controller No.	3177	3261/3261	3473	3472	3178
Rep Replicate Sample (Y/N) ¹		Y			
θ Total sampling time (min)	1,351	1,330	1,352	1,344	1,322
VAC _{IN} Initial Vacuum (in Hg)	-29.0	-24.0	-28.0	-29.0	-28.0
VAC _{FINA} Final Vacuum (in Hg)	-8.5	-6.5	-7.0	-6.0	-7.0
VAC _{LAB} Receipt Vacuum (in Hg)	-7.4	-5.3	-8.3	-8.1	-7.9

Results²

Ethanol	(µg/m ³)	5.6	5.5	4.7	4.3	8.1
Ethyl Acetate	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3
Ethylbenzene	(µg/m ³)	0.2	<0.15	<0.15	<0.15	<0.15
4-Ethyltoluene	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Heptane	(µg/m ³)	0.32	0.22	0.28	0.22	0.28
Hexachlorobutadiene	(µg/m ³)	<0.37	<0.37	<0.37	<0.37	<0.37
Hexane	(µg/m ³)	<4.9	<4.9	<4.9	<4.9	<4.9
2-Hexanone (MBK)	(µg/m ³)	<0.29	<0.29	<0.29	<0.29	0.4
Isopropanol	(µg/m ³)	<3.4	<3.4	<3.4	<3.4	<3.4
Methyl tert-Butyl Ether (MTBE)	(µg/m ³)	<0.13	<0.13	<0.13	<0.13	<0.13
Methylene Chloride	(µg/m ³)	<1.2	<1.2	<1.2	<1.2	<1.2
4-Methyl-2-pentanone (MIBK)	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
Naphthalene	(µg/m ³)	18	5.3	0.22	0.26	<0.18
Propene	(µg/m ³)	<2.4	<2.4	<2.4	<2.4	<2.4
Styrene	(µg/m ³)	0.66	0.2	<0.15	<0.15	<0.15
1,1,2,2-Tetrachloroethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrachloroethylene	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrahydrofuran	(µg/m ³)	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	(µg/m ³)	5.8	0.92	0.57	0.52	1
1,2,4-Trichlorobenzene	(µg/m ³)	<0.26	<0.26	<0.26	<0.26	<0.26
1,1,1-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
1,1,2-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichloroethylene	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichlorofluoromethane (Freon 11)	(µg/m ³)	1.3	1.3	1.5	1.4	1.3
1,1,2-Trichloro-1,2,2-trifluoroethane (F1)	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
1,2,4-Trimethylbenzene	(µg/m ³)	0.35	<0.17	<0.17	<0.17	<0.17
1,3,5-Trimethylbenzene	(µg/m ³)	0.19	<0.17	<0.17	<0.17	<0.17
Vinyl Acetate	(µg/m ³)	<2.5	<2.5	<2.5	<2.5	<2.5
Vinyl Chloride	(µg/m ³)	<0.089	<0.089	<0.089	<0.089	<0.089
m&p-Xylene	(µg/m ³)	1.5	0.395	<0.30	<0.30	0.36
o-Xylene	(µg/m ³)	0.51	0.16	<0.15	<0.15	0.18

1 A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

2 A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	5	5	5	5	5
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Dec 20	Dec 20	Dec 20	Dec 20	Dec 20
Start Time (approx.)	12:09	12:52	11:20	10:35	13:35
Stop Date (2022)	Dec 21	Dec 21	Dec 21	Dec 21	Dec 21
Stop Time (approx.)	10:50	11:15	10:30	10:05	13:10
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	755.7	755.7	755.7	755.7	755.7
T _s Temperature (°K)	271.8	271.8	271.8	271.8	271.8
B _w Relative Humidity (%)	72.0	72.0	72.0	72.0	72.0
Sampling Parameters					
SC# Summa Can No.	1169	1858	1225	9017	1611
FC# Flow Controller No.	3327	3523	3056	3055	3433
Dup Duplicate Sample (Y/N)					Y
θ Total sampling time (min)	1,361	1,343	1,390	1,410	1,415
VAC _{IN} Initial Vacuum (in Hg)	-30.0	-28.5	-29.0	-29.0	-30.0
VAC _{FINAL} Final Vacuum (in Hg)	-10.0	-7.0	-7.0	-6.0	-9.0
VAC _{LAB} Receipt Vacuum (in Hg)	-7.8	-7.1	-5.6	-3.8	-8.1

Results

Acetone	(µg/m ³)	9.2	7.3	9	7.7	6.4
Benzene	(µg/m ³)	49	5.5	1.4	1.6	0.81
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.18	<0.18	<0.18
Bromodichloromethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Bromoform	(µg/m ³)	<0.36	<0.36	<0.36	<0.36	<0.36
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,3-Butadiene	(µg/m ³)	0.2	0.14	0.1	0.1	0.11
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.1	<4.1	<4.1
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
Carbon Tetrachloride	(µg/m ³)	<0.22	0.41	0.4	0.41	0.27
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
Chloroethane	(µg/m ³)	<0.093	<0.093	<0.093	<0.093	<0.093
Chloroform	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Chloromethane	(µg/m ³)	0.77	0.8	0.82	0.79	0.8
Cyclohexane	(µg/m ³)	0.17	0.16	<0.12	0.14	0.17
Dibromochloromethane	(µg/m ³)	<0.30	<0.30	<0.30	<0.30	<0.30
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.27	<0.27	<0.27
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	1.1	1.3	1.5	1.5	1.3
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
1,2-Dichloro-1,1,2,2-tetrafluoroethane	(µg/m ³)	<0.25	<0.25	<0.25	<0.25	<0.25
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	5	5	5	5	5
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Dec 20	Dec 20	Dec 20	Dec 20	Dec 20
Start Time (approx.)	12:09	12:52	11:20	10:35	13:35
Stop Date (2022)	Dec 21	Dec 21	Dec 21	Dec 21	Dec 21
Stop Time (approx.)	10:50	11:15	10:30	10:05	13:10
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	755.7	755.7	755.7	755.7	755.7
T _s Temperature (°K)	271.8	271.8	271.8	271.8	271.8
B _w Relative Humidity (%)	72.0	72.0	72.0	72.0	72.0
Sampling Parameters					
SC# Summa Can No.	1169	1858	1225	9017	1611
FC# Flow Controller No.	3327	3523	3056	3055	3433
Dup Duplicate Sample (Y/N)		Y			Y
θ Total sampling time (min)	1,361	1,343	1,390	1,410	1,415
VAC _{IN} Initial Vacuum (in Hg)	-30.0	-28.5	-29.0	-29.0	-30.0
VAC _{FINAL} Final Vacuum (in Hg)	-10.0	-7.0	-7.0	-6.0	-9.0
VAC _{LAB} Receipt Vacuum (in Hg)	-7.8	-7.1	-5.6	-3.8	-8.1

Results

Ethanol	(µg/m ³)	6	5.9	4.8	4.7	6.9
Ethyl Acetate	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3
Ethylbenzene	(µg/m ³)	0.24	0.18	<0.15	<0.15	0.18
4-Ethyltoluene	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Heptane	(µg/m ³)	0.29	0.32	0.26	0.32	0.31
Hexachlorobutadiene	(µg/m ³)	<0.37	<0.37	<0.37	<0.37	<0.37
Hexane	(µg/m ³)	<4.9	<4.9	<4.9	<4.9	<4.9
2-Hexanone (MBK)	(µg/m ³)	<0.14	0.27	0.24	0.4	<0.14
Isopropanol	(µg/m ³)	<3.4	<3.4	<3.4	<3.4	<3.4
Methyl tert-Butyl Ether (MTBE)	(µg/m ³)	<0.13	<0.13	<0.13	<0.13	<0.13
Methylene Chloride	(µg/m ³)	6.9	<1.2	1.4	<1.2	<1.2
4-Methyl-2-pentanone (MIBK)	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
Naphthalene	(µg/m ³)	36	15	0.27	0.74	0.48
Propene	(µg/m ³)	<2.4	<2.4	<2.4	<2.4	<2.4
Styrene	(µg/m ³)	2.8	0.28	<0.15	<0.15	<0.15
1,1,2,2-Tetrachloroethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrachloroethylene	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrahydrofuran	(µg/m ³)	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	(µg/m ³)	13	1.7	0.82	0.87	1.1
1,2,4-Trichlorobenzene	(µg/m ³)	<0.26	<0.26	<0.26	<0.26	<0.26
1,1,1-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
1,1,2-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichloroethylene	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichlorofluoromethane (Freon 11)	(µg/m ³)	1.1	1.1	1.2	1.1	1.2
1,1,2-Trichloro-1,2,2-trifluoroethane (Fr	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
1,2,4-Trimethylbenzene	(µg/m ³)	0.84	0.26	<0.17	0.22	0.24
1,3,5-Trimethylbenzene	(µg/m ³)	0.41	<0.17	<0.17	<0.17	<0.17
Vinyl Acetate	(µg/m ³)	<2.5	<2.5	<2.5	<2.5	<2.5
Vinyl Chloride	(µg/m ³)	<0.090	<0.090	<0.090	<0.090	<0.090
m&p-Xylene	(µg/m ³)	4.5	0.67	0.4	0.47	0.54
o-Xylene	(µg/m ³)	1.1	0.26	0.16	0.19	0.21

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	5	
Sampling Location	UPW	REPLICATE
Start Date (2022)	Dec 20	Dec 20
Start Time (approx.)	13:35	13:35
Stop Date (2022)	Dec 21	Dec 21
Stop Time (approx.)	12:10	12:10
Meteorological Conditions		
P _{bar} Barometric pressure (mm Hg)	755.7	755.7
T _s Temperature (°K)	271.8	271.8
B _w Relative Humidity (%)	72.0	72.0
Sampling Parameters		
SC# Summa Can No.	1611	1247
FC# Flow Controller No.	3433	3433
Rep Replicate Sample (Y/N)	Y	
θ Total sampling time (min)	1,355	1,355
VAC _{IN} Initial Vacuum (in Hg)	-30.0	-30.0
VAC _{FINAL} Final Vacuum (in Hg)	-9.0	-9.0
VAC _{LAB} Receipt Vacuum (in Hg)	-8.1	-8.1

Results				Average	Precision (%)
Acetone	(µg/m ³)	6.4	5.3	5.85	18.8
Benzene	(µg/m ³)	0.81	0.77	0.79	5.1
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.18	NA
Bromodichloromethane	(µg/m ³)	<0.24	<0.24	<0.24	NA
Bromoform	(µg/m ³)	<0.36	<0.36	<0.36	NA
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.14	NA
1,3-Butadiene	(µg/m ³)	0.11	0.092	0.101	17.8
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.1	NA
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.1	NA
Carbon Tetrachloride	(µg/m ³)	0.27	0.44	0.355	47.9
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.16	NA
Chloroethane	(µg/m ³)	<0.093	<0.093	<0.093	NA
Chloroform	(µg/m ³)	<0.17	<0.17	<0.17	NA
Chloromethane	(µg/m ³)	0.8	0.81	0.805	1.2
Cyclohexane	(µg/m ³)	0.17	0.14	0.155	19.4
Dibromochloromethane	(µg/m ³)	<0.30	<0.30	<0.30	NA
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.27	NA
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	NA
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	NA
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	NA
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	1.3	1.3	1.3	0.0
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	NA
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	NA
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	NA
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	NA
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	0.39	0.39	NA
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.16	NA
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	NA
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	NA
1,2-Dichloro-1,1,2,2-tetrafluoroethane (	(µg/m ³)	<0.25	<0.25	<0.25	NA
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.3	NA

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	5	
Sampling Location	UPW	REPLICATE
Start Date (2022)	Dec 20	Dec 20
Start Time (approx.)	13:35	13:35
Stop Date (2022)	Dec 21	Dec 21
Stop Time (approx.)	12:10	12:10
Meteorological Conditions		
P _{bar} Barometric pressure (mm Hg)	755.7	755.7
T _s Temperature (°K)	271.8	271.8
B _w Relative Humidity (%)	72.0	72.0
Sampling Parameters		
SC# Summa Can No.	1611	1247
FC# Flow Controller No.	3433	3433
Rep Replicate Sample (Y/N)	Y	
θ Total sampling time (min)	1,355	1,355
VAC _{IN} Initial Vacuum (in Hg)	-30.0	-30.0
VAC _{FINAL} Final Vacuum (in Hg)	-9.0	-9.0
VAC _{LAB} Receipt Vacuum (in Hg)	-8.1	-8.1

Results				Average	Precision (%)
Ethanol	(µg/m ³)	6.9	11	8.95	45.8
Ethyl Acetate	(µg/m ³)	<1.3	<1.3	<1.3	NA
Ethylbenzene	(µg/m ³)	0.18	0.16	0.17	11.8
4-Ethyltoluene	(µg/m ³)	<0.17	<0.17	<0.17	NA
Heptane	(µg/m ³)	0.31	0.42	0.365	30.1
Hexachlorobutadiene	(µg/m ³)	<0.37	<0.37	<0.37	NA
Hexane	(µg/m ³)	<4.9	<4.9	<4.9	NA
2-Hexanone (MBK)	(µg/m ³)	<0.14	<0.14	<0.14	NA
Isopropanol	(µg/m ³)	<3.4	<3.4	<3.4	NA
Methyl tert-Butyl Ether (MTBE)	(µg/m ³)	<0.13	<0.13	<0.13	NA
Methylene Chloride	(µg/m ³)	<1.2	<1.2	<1.2	NA
4-Methyl-2-pentanone (MIBK)	(µg/m ³)	<0.14	<0.14	<0.14	NA
Naphthalene	(µg/m ³)	0.48	<0.18	0.48	NA
Propene	(µg/m ³)	<2.4	<2.4	<2.4	NA
Styrene	(µg/m ³)	<0.15	<0.15	<0.15	NA
1,1,2,2-Tetrachloroethane	(µg/m ³)	<0.24	<0.24	<0.24	NA
Tetrachloroethylene	(µg/m ³)	<0.24	<0.24	<0.24	NA
Tetrahydrofuran	(µg/m ³)	<1.0	<1.0	<1.0	NA
Toluene	(µg/m ³)	1.1	1	1.05	9.5
1,2,4-Trichlorobenzene	(µg/m ³)	<0.26	<0.26	<0.26	NA
1,1,1-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	NA
1,1,2-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	NA
Trichloroethylene	(µg/m ³)	<0.19	<0.19	<0.19	NA
Trichlorofluoromethane (Freon 11)	(µg/m ³)	1.2	1.1	1.15	8.7
1,1,2-Trichloro-1,2,2-trifluoroethane (Fr	(µg/m ³)	<1.1	<1.1	<1.1	NA
1,2,4-Trimethylbenzene	(µg/m ³)	0.24	0.22	0.23	8.7
1,3,5-Trimethylbenzene	(µg/m ³)	<0.17	<0.17	<0.17	NA
Vinyl Acetate	(µg/m ³)	<2.5	<2.5	<2.5	NA
Vinyl Chloride	(µg/m ³)	<0.090	<0.090	<0.090	NA
m&p-Xylene	(µg/m ³)	0.54	0.51	0.525	5.7
o-Xylene	(µg/m ³)	0.21	0.19	0.2	10.0

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC)
Run Data and Parameters

Run No.	5	5	5	5	5
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Dec 20	Dec 20	Dec 20	Dec 20	Dec 20
Start Time (approx.)	12:09	12:52	11:20	10:35	13:35
Stop Date (2022)	Dec 21	Dec 21	Dec 21	Dec 21	Dec 21
Stop Time (approx.)	10:50	11:15	10:30	10:05	13:10
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	755.7	755.7	755.7	755.7	755.7
T _s Temperature ("K)	271.8	271.8	271.8	271.8	271.8
B _w Relative Humidity (%)	72.0	72.0	72.0	72.0	72.0
Sampling Parameters					
SC# Summa Can No.	1169	1858	1225	9017	1611/1247
FC# Flow Controller No.	3327	3523	3056	3055	3433/3433
Rep Replicate Sample (Y/N) ¹					Y
θ Total sampling time (min)	1,361	1,343	1,390	1,410	1,415
VAC _{IN} Initial Vacuum (in Hg)	-29.0	-24.0	-28.0	-29.0	-28.0
VAC _{FINA} Final Vacuum (in Hg)	-8.5	-6.5	-7.0	-6.0	-7.0
VAC _{LAB} Receipt Vacuum (in Hg)	-7.4	-5.3	-8.3	-8.1	-7.9

Results²

Acetone	(µg/m ³)	9.2	7.3	9	7.7	5.85
Benzene	(µg/m ³)	49	5.5	1.4	1.6	0.79
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.18	<0.18	<0.18
Bromodichloromethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Bromoform	(µg/m ³)	<0.36	<0.36	<0.36	<0.36	<0.36
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,3-Butadiene	(µg/m ³)	0.2	0.14	0.1	0.1	0.101
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.1	<4.1	<4.1
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
Carbon Tetrachloride	(µg/m ³)	<0.22	0.41	0.4	0.41	0.355
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
Chloroethane	(µg/m ³)	<0.093	<0.093	<0.093	<0.093	<0.093
Chloroform	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Chloromethane	(µg/m ³)	0.77	0.8	0.82	0.79	0.805
Cyclohexane	(µg/m ³)	0.17	0.16	<0.12	0.14	0.155
Dibromochloromethane	(µg/m ³)	<0.30	<0.30	<0.30	<0.30	<0.30
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.27	<0.27	<0.27
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	<0.21	<0.21
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	1.1	1.3	1.5	1.5	1.3
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	0.39
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	<0.16	<0.16
1,2-Dichloro-1,1,2,2-tetrafluoroethane	(µg/m ³)	<0.25	<0.25	<0.25	<0.25	<0.25
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3

1 A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

2 A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC)
Run Data and Parameters

Run No.	5	5	5	5	5
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2022)	Dec 20	Dec 20	Dec 20	Dec 20	Dec 20
Start Time (approx.)	12:09	12:52	11:20	10:35	13:35
Stop Date (2022)	Dec 21	Dec 21	Dec 21	Dec 21	Dec 21
Stop Time (approx.)	10:50	11:15	10:30	10:05	13:10
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	755.7	755.7	755.7	755.7	755.7
T _s Temperature (°K)	271.8	271.8	271.8	271.8	271.8
B _w Relative Humidity (%)	72.0	72.0	72.0	72.0	72.0
Sampling Parameters					
SC# Summa Can No.	1169	1858	1225	9017	1611/1247
FC# Flow Controller No.	3327	3523	3056	3055	3433/3433
Rep Replicate Sample (Y/N) ¹		Y			Y
θ Total sampling time (min)	1,361	1,343	1,390	1,410	1,415
VAC _{IN} Initial Vacuum (in Hg)	-29.0	-24.0	-28.0	-29.0	-28.0
VAC _{FINA} Final Vacuum (in Hg)	-8.5	-6.5	-7.0	-6.0	-7.0
VAC _{LAB} Receipt Vacuum (in Hg)	-7.4	-5.3	-8.3	-8.1	-7.9

Results²

Ethanol	(µg/m ³)	6	5.9	4.8	4.7	8.95
Ethyl Acetate	(µg/m ³)	<1.3	<1.3	<1.3	<1.3	<1.3
Ethylbenzene	(µg/m ³)	0.24	0.18	<0.15	<0.15	0.17
4-Ethyltoluene	(µg/m ³)	<0.17	<0.17	<0.17	<0.17	<0.17
Heptane	(µg/m ³)	0.29	0.32	0.26	0.32	0.365
Hexachlorobutadiene	(µg/m ³)	<0.37	<0.37	<0.37	<0.37	<0.37
Hexane	(µg/m ³)	<4.9	<4.9	<4.9	<4.9	<4.9
2-Hexanone (MBK)	(µg/m ³)	<0.14	0.27	0.24	0.4	<0.14
Isopropanol	(µg/m ³)	<3.4	<3.4	<3.4	<3.4	<3.4
Methyl tert-Butyl Ether (MTBE)	(µg/m ³)	<0.13	<0.13	<0.13	<0.13	<0.13
Methylene Chloride	(µg/m ³)	6.9	<1.2	1.4	<1.2	<1.2
4-Methyl-2-pentanone (MIBK)	(µg/m ³)	<0.14	<0.14	<0.14	<0.14	<0.14
Naphthalene	(µg/m ³)	36	15	0.27	0.74	0.48
Propene	(µg/m ³)	<2.4	<2.4	<2.4	<2.4	<2.4
Styrene	(µg/m ³)	2.8	0.28	<0.15	<0.15	<0.15
1,1,2,2-Tetrachloroethane	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrachloroethylene	(µg/m ³)	<0.24	<0.24	<0.24	<0.24	<0.24
Tetrahydrofuran	(µg/m ³)	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	(µg/m ³)	13	1.7	0.82	0.87	1.05
1,2,4-Trichlorobenzene	(µg/m ³)	<0.26	<0.26	<0.26	<0.26	<0.26
1,1,1-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
1,1,2-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichloroethylene	(µg/m ³)	<0.19	<0.19	<0.19	<0.19	<0.19
Trichlorofluoromethane (Freon 11)	(µg/m ³)	1.1	1.1	1.2	1.1	1.15
1,1,2-Trichloro-1,2,2-trifluoroethane (F1)	(µg/m ³)	<1.1	<1.1	<1.1	<1.1	<1.1
1,2,4-Trimethylbenzene	(µg/m ³)	0.84	0.26	<0.17	0.22	0.23
1,3,5-Trimethylbenzene	(µg/m ³)	0.41	<0.17	<0.17	<0.17	<0.17
Vinyl Acetate	(µg/m ³)	<2.5	<2.5	<2.5	<2.5	<2.5
Vinyl Chloride	(µg/m ³)	<0.090	<0.090	<0.090	<0.090	<0.090
m&p-Xylene	(µg/m ³)	4.5	0.67	0.4	0.47	0.525
o-Xylene	(µg/m ³)	1.1	0.26	0.16	0.19	0.2

1 A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

2 A "<" notation indicates the laboratory results were non-detected. Results with a "<" modifier are presented at the Reporting Limit (RL).

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	6	6	6	6	6
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2023)	Jan 4	Jan 4	Jan 4	Jan 4	Jan 4
Start Time (approx.)	17:32	18:15	17:12	16:12	18:39
Stop Date (2023)	Jan 5	Jan 5	Jan 5	Jan 5	Jan 5
Stop Time (approx.)	15:45	16:17	15:10	14:23	16:54
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	740.6	740.6	740.6	740.6	740.6
T _s Temperature (°K)	278.8	278.8	278.8	278.8	278.8
B _w Relative Humidity (%)	75.0	75.0	75.0	75.0	75.0
Sampling Parameters					
SC# Summa Can No.	1060	1811	1470	1065	1987
FC# Flow Controller No.	3067	3254	3615	3722	3530
Dup Duplicate Sample (Y/N)		Y			
θ Total sampling time (min)	1,333	1,322	1,318	1,331	1,335
VAC _{IN} Initial Vacuum (in Hg)	-28.0	-28.5	-28.5	-28.5	-28.0
VAC _{FINAL} Final Vacuum (in Hg)	-9.0	-12.0	-9.5	-9.5	-8.0
VAC _{LAB} Receipt Vacuum (in Hg)	-8.9	-11.1	-11.8	-9.1	-8.5

Results

Acetone	(µg/m ³)	6	6.8	13	6.2	6.9
Benzene	(µg/m ³)	29	1.4	5.6	2.2	0.45
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.21	<0.18	<0.18
Bromodichloromethane	(µg/m ³)	<0.23	<0.23	<0.27	<0.23	<0.23
Bromoform	(µg/m ³)	<0.36	<0.36	<0.41	<0.36	<0.36
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.16	<0.14	<0.14
1,3-Butadiene	(µg/m ³)	0.3	0.082	0.16	0.12	<0.077
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.7	<4.1	<4.1
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.2	<1.1	<1.1
Carbon Tetrachloride	(µg/m ³)	0.43	0.44	<0.25	0.42	0.45
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.18	<0.16	<0.16
Chloroethane	(µg/m ³)	<0.092	<0.092	<0.11	<0.092	<0.092
Chloroform	(µg/m ³)	<0.17	<0.17	<0.20	<0.17	<0.17
Chloromethane	(µg/m ³)	0.92	0.9	0.94	0.93	0.9
Cyclohexane	(µg/m ³)	<0.12	<0.12	<0.14	0.13	<0.12
Dibromochloromethane	(µg/m ³)	<0.30	<0.30	<0.34	<0.30	<0.30
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.31	<0.27	<0.27
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.24	<0.21	<0.21
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.24	<0.21	<0.21
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.24	<0.21	<0.21
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	1.3	1.2	1.2	1.3	1.3
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.16	<0.14	<0.14
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.16	<0.14	<0.14
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.16	<0.14	<0.14
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.16	<0.14	<0.14
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.16	<0.14	<0.14
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.18	<0.16	<0.16
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.18	<0.16	<0.16
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.18	<0.16	<0.16
1,2-Dichloro-1,1,2,2-tetrafluoroethane	(µg/m ³)	<0.24	<0.24	<0.28	<0.24	<0.24
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.4	<1.3	<1.3

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	6	6	6	6	6
Sampling Location	IN1	IN2	DW1	DW2	UPW
Start Date (2023)	Jan 4	Jan 4	Jan 4	Jan 4	Jan 4
Start Time (approx.)	17:32	18:15	17:12	16:12	18:39
Stop Date (2023)	Jan 5	Jan 5	Jan 5	Jan 5	Jan 5
Stop Time (approx.)	15:45	16:17	15:10	14:23	16:54
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	740.6	740.6	740.6	740.6	740.6
T _s Temperature (°K)	278.8	278.8	278.8	278.8	278.8
B _w Relative Humidity (%)	75.0	75.0	75.0	75.0	75.0
Sampling Parameters					
SC# Summa Can No.	1060	1811	1470	1065	1987
FC# Flow Controller No.	3067	3254	3615	3722	3530
Dup Duplicate Sample (Y/N)		Y			
θ Total sampling time (min)	1,333	1,322	1,318	1,331	1,335
VAC _{IN} Initial Vacuum (in Hg)	-28.0	-28.5	-28.5	-28.5	-28.0
VAC _{FINAL} Final Vacuum (in Hg)	-9.0	-12.0	-9.5	-9.5	-8.0
VAC _{LAB} Receipt Vacuum (in Hg)	-8.9	-11.1	-11.8	-9.1	-8.5

Results

Ethanol	(µg/m ³)	3.6	4	<3.0	3.2	3.4
Ethyl Acetate	(µg/m ³)	<1.3	<1.3	<1.4	<1.3	<1.3
Ethylbenzene	(µg/m ³)	<0.15	<0.15	<0.17	<0.15	<0.15
4-Ethyltoluene	(µg/m ³)	<0.17	<0.17	<0.20	<0.17	<0.17
Heptane	(µg/m ³)	0.21	0.22	0.24	0.23	0.16
Hexachlorobutadiene	(µg/m ³)	<0.37	<0.37	<0.43	<0.37	<0.37
Hexane	(µg/m ³)	<4.9	<4.9	<5.6	<4.9	<4.9
2-Hexanone (MBK)	(µg/m ³)	0.21	0.26	0.33	0.19	0.28
Isopropanol	(µg/m ³)	<3.4	<3.4	<3.9	<3.4	<3.4
Methyl tert-Butyl Ether (MTBE)	(µg/m ³)	<0.13	<0.13	<0.14	<0.13	<0.13
Methylene Chloride	(µg/m ³)	1.2	<1.2	<1.4	<1.2	<1.2
4-Methyl-2-pentanone (MIBK)	(µg/m ³)	<0.14	<0.14	0.2	<0.14	<0.14
Naphthalene	(µg/m ³)	33	8.6	0.41	1.5	<0.18
Propene	(µg/m ³)	2.6	<2.4	<2.8	<2.4	<2.4
Styrene	(µg/m ³)	1.1	<0.15	0.25	<0.15	<0.15
1,1,2,2-Tetrachloroethane	(µg/m ³)	<0.24	<0.24	<0.27	<0.24	<0.24
Tetrachloroethylene	(µg/m ³)	<0.24	<0.24	<0.27	<0.24	<0.24
Tetrahydrofuran	(µg/m ³)	<1.0	<1.0	<1.2	<1.0	<1.0
Toluene	(µg/m ³)	5.6	0.52	1.1	0.71	0.36
1,2,4-Trichlorobenzene	(µg/m ³)	<0.26	<0.26	<0.30	<0.26	<0.26
1,1,1-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.22	<0.19	<0.19
1,1,2-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.22	<0.19	<0.19
Trichloroethylene	(µg/m ³)	<0.19	<0.19	<0.21	<0.19	<0.19
Trichlorofluoromethane (Freon 11)	(µg/m ³)	1.1	1.5	1.1	1.4	1.2
1,1,2-Trichloro-1,2,2-trifluoroethane (Fr	(µg/m ³)	<1.1	1.4	<1.2	<1.1	<1.1
1,2,4-Trimethylbenzene	(µg/m ³)	0.38	<0.17	<0.20	0.24	<0.17
1,3,5-Trimethylbenzene	(µg/m ³)	0.17	<0.17	<0.20	<0.17	<0.17
Vinyl Acetate	(µg/m ³)	<2.5	<2.5	<2.8	<2.5	<2.5
Vinyl Chloride	(µg/m ³)	<0.089	<0.089	<0.10	<0.089	<0.089
m&p-Xylene	(µg/m ³)	1.6	<0.30	0.4	0.4	<0.30
o-Xylene	(µg/m ³)	0.4	<0.15	<0.17	0.16	<0.15

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	6	
Sampling Location	IN2	REPLICATE
Start Date (2023)	Jan 4	Jan 4
Start Time (approx.)	18:15	18:15
Stop Date (2023)	Jan 5	Jan 5
Stop Time (approx.)	16:17	16:17
Meteorological Conditions		
P _{bar} Barometric pressure (mm Hg)	740.6	740.6
T _s Temperature (°K)	278.8	278.8
B _w Relative Humidity (%)	75.0	75.0
Sampling Parameters		
SC# Summa Can No.	1811	2197
FC# Flow Controller No.	3254	3254
Rep Replicate Sample (Y/N)	Y	
θ Total sampling time (min)	1,322	1,322
VAC _{IN} Initial Vacuum (in Hg)	-28.5	-28.5
VAC _{FINAL} Final Vacuum (in Hg)	-12.0	-12.0
VAC _{LAB} Receipt Vacuum (in Hg)	-11.1	-11.1

Results				Average	Precision (%)
Acetone	(µg/m ³)	6.8	9	7.9	27.8
Benzene	(µg/m ³)	1.4	1.3	1.35	7.4
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.18	NA
Bromodichloromethane	(µg/m ³)	<0.23	<0.23	<0.23	NA
Bromoform	(µg/m ³)	<0.36	<0.36	<0.36	NA
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.14	NA
1,3-Butadiene	(µg/m ³)	0.082	<0.077	0.082	NA
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.1	NA
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.1	NA
Carbon Tetrachloride	(µg/m ³)	0.44	0.43	0.435	2.3
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.16	NA
Chloroethane	(µg/m ³)	<0.092	<0.092	<0.092	NA
Chloroform	(µg/m ³)	<0.17	<0.17	<0.17	NA
Chloromethane	(µg/m ³)	0.9	0.87	0.885	3.4
Cyclohexane	(µg/m ³)	<0.12	<0.12	<0.12	NA
Dibromochloromethane	(µg/m ³)	<0.30	<0.30	<0.30	NA
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.27	NA
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	NA
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	NA
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.21	NA
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	1.2	1.2	1.2	0.0
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	NA
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.14	NA
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	NA
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	NA
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.14	NA
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.16	NA
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	NA
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.16	NA
1,2-Dichloro-1,1,2,2-tetrafluoroethane (	(µg/m ³)	<0.24	<0.24	<0.24	NA
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.3	NA

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC) Run Data and Parameters

Run No.	6	
Sampling Location	IN2	REPLICATE
Start Date (2023)	Jan 4	Jan 4
Start Time (approx.)	18:15	18:15
Stop Date (2023)	Jan 5	Jan 5
Stop Time (approx.)	16:17	16:17
Meteorological Conditions		
P _{bar} Barometric pressure (mm Hg)	740.6	740.6
T _s Temperature (°K)	278.8	278.8
B _w Relative Humidity (%)	75.0	75.0
Sampling Parameters		
SC# Summa Can No.	1811	2197
FC# Flow Controller No.	3254	3254
Rep Replicate Sample (Y/N)	Y	
θ Total sampling time (min)	1,322	1,322
VAC _{IN} Initial Vacuum (in Hg)	-28.5	-28.5
VAC _{FINAL} Final Vacuum (in Hg)	-12.0	-12.0
VAC _{LAB} Receipt Vacuum (in Hg)	-11.1	-11.1

Results				Average	Precision (%)
Ethanol	(µg/m ³)	4	5.4	4.7	29.8
Ethyl Acetate	(µg/m ³)	<1.3	<1.3	<1.3	NA
Ethylbenzene	(µg/m ³)	<0.15	<0.15	<0.15	NA
4-Ethyltoluene	(µg/m ³)	<0.17	<0.17	<0.17	NA
Heptane	(µg/m ³)	0.22	0.2	0.21	9.5
Hexachlorobutadiene	(µg/m ³)	<0.37	<0.37	<0.37	NA
Hexane	(µg/m ³)	<4.9	<4.9	<4.9	NA
2-Hexanone (MBK)	(µg/m ³)	0.26	0.41	0.335	44.8
Isopropanol	(µg/m ³)	<3.4	<3.4	<3.4	NA
Methyl tert-Butyl Ether (MTBE)	(µg/m ³)	<0.13	<0.13	<0.13	NA
Methylene Chloride	(µg/m ³)	<1.2	<1.2	<1.2	NA
4-Methyl-2-pentanone (MIBK)	(µg/m ³)	<0.14	<0.14	<0.14	NA
Naphthalene	(µg/m ³)	8.6	8.4	8.5	2.4
Propene	(µg/m ³)	<2.4	<2.4	<2.4	NA
Styrene	(µg/m ³)	<0.15	<0.15	<0.15	NA
1,1,2,2-Tetrachloroethane	(µg/m ³)	<0.24	<0.24	<0.24	NA
Tetrachloroethylene	(µg/m ³)	<0.24	<0.24	<0.24	NA
Tetrahydrofuran	(µg/m ³)	<1.0	<1.0	<1.0	NA
Toluene	(µg/m ³)	0.52	0.52	0.52	0.0
1,2,4-Trichlorobenzene	(µg/m ³)	<0.26	<0.26	<0.26	NA
1,1,1-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	NA
1,1,2-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.19	NA
Trichloroethylene	(µg/m ³)	<0.19	<0.19	<0.19	NA
Trichlorofluoromethane (Freon 11)	(µg/m ³)	1.5	1.2	1.35	22.2
1,1,2-Trichloro-1,2,2-trifluoroethane (Fr	(µg/m ³)	1.4	<1.1	1.4	NA
1,2,4-Trimethylbenzene	(µg/m ³)	<0.17	<0.17	<0.17	NA
1,3,5-Trimethylbenzene	(µg/m ³)	<0.17	<0.17	<0.17	NA
Vinyl Acetate	(µg/m ³)	<2.5	<2.5	<2.5	NA
Vinyl Chloride	(µg/m ³)	<0.089	<0.089	<0.089	NA
m&p-Xylene	(µg/m ³)	<0.30	<0.30	<0.30	NA
o-Xylene	(µg/m ³)	<0.15	<0.15	<0.15	NA

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC)
Run Data and Parameters

Run No.	6	6	6	6	6
Sampling Location	IN1	IN2 ¹	DW1	DW2	UPW
Start Date (2022)	Jan 4	Jan 4	Jan 4	Jan 4	Jan 4
Start Time (approx.)	16:08	17:00	15:43	15:24	17:39
Stop Date (2022)	Jan 5	Jan 5	Jan 5	Jan 5	Jan 5
Stop Time (approx.)	14:39	15:10	14:15	13:48	15:41
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	740.6	740.6	740.6	740.6	740.6
T _s Temperature (°K)	278.8	278.8	278.8	278.8	278.8
B _w Relative Humidity (%)	75.0	75.0	75.0	75.0	75.0
Sampling Parameters					
SC# Summa Can No.	1060	1811/2197	1470	1065	1987
FC# Flow Controller No.	3067	3254/3254	3615	3722	3530
Rep Replicate Sample (Y/N) ¹		Y			
θ Total sampling time (min)	1,351	1,330	1,352	1,344	1,322
VAC _{IN} Initial Vacuum (in Hg)	-28.0	-28.5	-28.5	-28.5	-28.0
VAC _{FINA} Final Vacuum (in Hg)	-9.0	-12.0	-9.5	-9.5	-8.0
VAC _{LAB} Receipt Vacuum (in Hg)	-8.9	-11.1	-11.8	-9.1	-8.5

Results²

Acetone	(µg/m ³)	6	7.9	13	6.2	6.9
Benzene	(µg/m ³)	29	1.35	5.6	2.2	0.45
Benzyl chloride	(µg/m ³)	<0.18	<0.18	<0.21	<0.18	<0.18
Bromodichloromethane	(µg/m ³)	<0.23	<0.23	<0.27	<0.23	<0.23
Bromoform	(µg/m ³)	<0.36	<0.36	<0.41	<0.36	<0.36
Bromomethane	(µg/m ³)	<0.14	<0.14	<0.16	<0.14	<0.14
1,3-Butadiene	(µg/m ³)	0.3	0.082	0.16	0.12	<0.077
2-Butanone (MEK)	(µg/m ³)	<4.1	<4.1	<4.7	<4.1	<4.1
Carbon Disulfide	(µg/m ³)	<1.1	<1.1	<1.2	<1.1	<1.1
Carbon Tetrachloride	(µg/m ³)	0.43	0.435	<0.25	0.42	0.45
Chlorobenzene	(µg/m ³)	<0.16	<0.16	<0.18	<0.16	<0.16
Chloroethane	(µg/m ³)	<0.092	<0.092	<0.11	<0.092	<0.092
Chloroform	(µg/m ³)	<0.17	<0.17	<0.20	<0.17	<0.17
Chloromethane	(µg/m ³)	0.92	0.885	0.94	0.93	0.9
Cyclohexane	(µg/m ³)	<0.12	<0.12	<0.14	0.13	<0.12
Dibromochloromethane	(µg/m ³)	<0.30	<0.30	<0.34	<0.30	<0.30
1,2-Dibromoethane (EDB)	(µg/m ³)	<0.27	<0.27	<0.31	<0.27	<0.27
1,2-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.24	<0.21	<0.21
1,3-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.24	<0.21	<0.21
1,4-Dichlorobenzene	(µg/m ³)	<0.21	<0.21	<0.24	<0.21	<0.21
Dichlorodifluoromethane (Freon 12)	(µg/m ³)	1.3	1.2	1.2	1.3	1.3
1,1-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.16	<0.14	<0.14
1,2-Dichloroethane	(µg/m ³)	<0.14	<0.14	<0.16	<0.14	<0.14
1,1-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.16	<0.14	<0.14
cis-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.16	<0.14	<0.14
trans-1,2-Dichloroethylene	(µg/m ³)	<0.14	<0.14	<0.16	<0.14	<0.14
1,2-Dichloropropane	(µg/m ³)	<0.16	<0.16	<0.18	<0.16	<0.16
cis-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.18	<0.16	<0.16
trans-1,3-Dichloropropene	(µg/m ³)	<0.16	<0.16	<0.18	<0.16	<0.16
1,2-Dichloro-1,1,2,2-tetrafluoroethane	(µg/m ³)	<0.24	<0.24	<0.28	<0.24	<0.24
1,4-Dioxane	(µg/m ³)	<1.3	<1.3	<1.4	<1.3	<1.3

1 A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

2 A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

EES Coke Battery, LLC
Clean Air Project No: 14796
River Rouge, MI

TO-15 (VOC)
Run Data and Parameters

Run No.	6	6	6	6	6
Sampling Location	IN1	IN2¹	DW1	DW2	UPW
Start Date (2022)	Jan 4	Jan 4	Jan 4	Jan 4	Jan 4
Start Time (approx.)	16:08	17:00	15:43	15:24	17:39
Stop Date (2022)	Jan 5	Jan 5	Jan 5	Jan 5	Jan 5
Stop Time (approx.)	14:39	15:10	14:15	13:48	15:41
Meteorological Conditions					
P _{bar} Barometric pressure (mm Hg)	740.6	740.6	740.6	740.6	740.6
T _s Temperature ("K)	278.8	278.8	278.8	278.8	278.8
B _w Relative Humidity (%)	75.0	75.0	75.0	75.0	75.0
Sampling Parameters					
SC# Summa Can No.	1060	1811/2197	1470	1065	1987
FC# Flow Controller No.	3067	3254/3254	3615	3722	3530
Rep Replicate Sample (Y/N) ¹		Y			
θ Total sampling time (min)	1,351	1,330	1,352	1,344	1,322
VAC _{IN} Initial Vacuum (in Hg)	-28.0	-28.5	-28.5	-28.5	-28.0
VAC _{FINA} Final Vacuum (in Hg)	-9.0	-12.0	-9.5	-9.5	-8.0
VAC _{LAB} Receipt Vacuum (in Hg)	-8.9	-11.1	-11.8	-9.1	-8.5

Results²

Ethanol	(µg/m ³)	3.6	4.7	<3.0	3.2	3.4
Ethyl Acetate	(µg/m ³)	<1.3	<1.3	<1.4	<1.3	<1.3
Ethylbenzene	(µg/m ³)	<0.15	<0.15	<0.17	<0.15	<0.15
4-Ethyltoluene	(µg/m ³)	<0.17	<0.17	<0.20	<0.17	<0.17
Heptane	(µg/m ³)	0.21	0.21	0.24	0.23	0.16
Hexachlorobutadiene	(µg/m ³)	<0.37	<0.37	<0.43	<0.37	<0.37
Hexane	(µg/m ³)	<4.9	<4.9	<5.6	<4.9	<4.9
2-Hexanone (MBK)	(µg/m ³)	0.21	0.335	0.33	0.19	0.28
Isopropanol	(µg/m ³)	<3.4	<3.4	<3.9	<3.4	<3.4
Methyl tert-Butyl Ether (MTBE)	(µg/m ³)	<0.13	<0.13	<0.14	<0.13	<0.13
Methylene Chloride	(µg/m ³)	1.2	<1.2	<1.4	<1.2	<1.2
4-Methyl-2-pentanone (MIBK)	(µg/m ³)	<0.14	<0.14	0.2	<0.14	<0.14
Naphthalene	(µg/m ³)	33	8.5	0.41	1.5	<0.18
Propene	(µg/m ³)	2.6	<2.4	<2.8	<2.4	<2.4
Styrene	(µg/m ³)	1.1	<0.15	0.25	<0.15	<0.15
1,1,2,2-Tetrachloroethane	(µg/m ³)	<0.24	<0.24	<0.27	<0.24	<0.24
Tetrachloroethylene	(µg/m ³)	<0.24	<0.24	<0.27	<0.24	<0.24
Tetrahydrofuran	(µg/m ³)	<1.0	<1.0	<1.2	<1.0	<1.0
Toluene	(µg/m ³)	5.6	0.52	1.1	0.71	0.36
1,2,4-Trichlorobenzene	(µg/m ³)	<0.26	<0.26	<0.30	<0.26	<0.26
1,1,1-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.22	<0.19	<0.19
1,1,2-Trichloroethane	(µg/m ³)	<0.19	<0.19	<0.22	<0.19	<0.19
Trichloroethylene	(µg/m ³)	<0.19	<0.19	<0.21	<0.19	<0.19
Trichlorofluoromethane (Freon 11)	(µg/m ³)	1.1	1.35	1.1	1.4	1.2
1,1,2-Trichloro-1,2,2-trifluoroethane (F1)	(µg/m ³)	<1.1	1.4	<1.2	<1.1	<1.1
1,2,4-Trimethylbenzene	(µg/m ³)	0.38	<0.17	<0.20	0.24	<0.17
1,3,5-Trimethylbenzene	(µg/m ³)	0.17	<0.17	<0.20	<0.17	<0.17
Vinyl Acetate	(µg/m ³)	<2.5	<2.5	<2.8	<2.5	<2.5
Vinyl Chloride	(µg/m ³)	<0.089	<0.089	<0.10	<0.089	<0.089
m&p-Xylene	(µg/m ³)	1.6	<0.30	0.4	0.4	<0.30
o-Xylene	(µg/m ³)	0.4	<0.15	<0.17	0.16	<0.15

1 A "Y" notation indicates the results are the average of two (2) concurrent samples (1 Routine and 1 Replicate). See Appendix parameters for individual sample results and replicate precision.

2 A "<" notation indicates the laboratory results were non-detect. Results with a "<" modifier are presented at the Reporting Limit (RL).

End of Appendix Section

APPENDIX C: QA/QC DATA

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Certificate of Calibration

Calibration Certification Information

Cal. Date: August 1, 2022	Rootsmeter S/N: 438320	Ta: 297 °K
Operator: Jim Tisch	Pa: 749.6 mm Hg	
Calibration Model #: TE-5040A	Calibrator S/N: Z8	

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	6.707	3.70	2.00
2	3	4	1	4.016	10.10	5.50
3	5	6	1	3.219	15.60	8.50
4	7	8	1	2.754	21.10	11.50
5	9	10	1	2.432	26.60	14.50
6	11	12	1	2.275	30.30	16.50

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)}$ (y-axis)
0.9847	0.1468	1.4068	0.9951	0.1484	0.8902
0.9762	0.2431	2.3330	0.9865	0.2456	1.4762
0.9690	0.3010	2.9002	0.9792	0.3042	1.8352
0.9617	0.3492	3.3734	0.9718	0.3529	2.1346
0.9545	0.3925	3.7880	0.9645	0.3966	2.3970
0.9496	0.4174	4.0408	0.9596	0.4218	2.5569
QSTD	m=	9.73032	QA	m=	6.09296
	b=	-0.02645		b=	-0.01674
	r=	0.99999		r=	0.99999

Calculations

Vstd=	$\Delta Vol((Pa-\Delta P)/Pstd)(Tstd/Ta)$	Va=	$\Delta Vol((Pa-\Delta P)/Pa)$
Qstd=	Vstd/ΔTime	Qa=	Va/ΔTime
For subsequent flow rate calculations:			
Qstd=	$1/m \left(\left(\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)} \right) - b \right)$	Qa=	$1/m \left(\left(\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)} \right) - b \right)$

Standard Conditions

Tstd: 298.15 °K

Pstd: 760 mm Hg

Key

ΔH: calibrator manometer reading (in H2O)

ΔP: rootsmeter manometer reading (mm Hg)

Ta: actual absolute temperature (°K)

Pa: actual barometric pressure (mm Hg)

b: intercept

m: slope

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30



COMET SYSTEM s.r.o.
Bezručova 2901
756 61 Rožnov p. Radhoštěm

Page 1 of 1
Strana 1 z 1
22900118/001

CALIBRATION CERTIFICATE

No: 22900118/001

Datalogger: C4141
Serial number: 22900118

Calibration standards (valid to):

PE133: Thermometer F200 ser.n.: 008408/01+J0295A-1-1 (6.9.2023)
PE140: Humidity meter Testo645 ser.n.: 20145248/801 (1.12.2022)
PE139: Pressure meter PACE1001 (6.1.2023)

All standards are traceable to ČMI (Czech Metrology Institute, a signatory to the arrangement CIPM MRA, see www.bipm.org) or in terms of relative humidity to DKD accredited laboratory Testo Germany.

Process of calibration: Direct comparison

Ambient temperature: $(23 \pm 5) ^\circ\text{C}$

Results of measurement:

Input	Standard	Device	Uncertainty	Uses standard	Note
Tex[°C]	23.78	23.6	0.21 °C	PE133	
RH [%]	50.4	50.3	1.8 %	PE140	
Tin[°C]	23.78	23.6	0.21 °C	PE133	
P [hPa]	974.5	974.7	1.1 hPa	PE139	

The expanded uncertainty of measurement corresponding to the measurement results is stated as the standard uncertainty of measurement multiplied by the coverage factor $k=2$. Usually the true value is located in the corresponding interval with probability of approximately 95%. This was determined in accordance with EA4/02.

Date of calibration: 31.08.2022

Calibrated by: Michal Poruba

Approved: Josef Čížek

COMET
System s.r.o.
Bezručova 2901
756 61 Rožnov p. Radhoštěm
IČO: 25076846

Calibration Summary

Calibration ID	Calibration Type	Date	Station	Slope	Intercept	Corr. Coeff.
CAL-1	5-Point (Initial)	10/10/2022	Interior Station 1	36.9876	-2.5561	0.9982
CAL-2	5-Point (Initial)	10/10/2022	Interior Station 2	31.7215	-0.6286	0.9996
CAL-3	5-Point (Initial)	10/10/2022	Downwind Station 1	30.0035	-0.3096	0.9944
CAL-4	5-Point (Initial)	10/10/2022	Downwind Station 2	30.4360	-0.4160	0.9984
CAL-5	5-Point (Initial)	10/10/2022	Upwind Station	34.0221	-1.2261	0.9977
CAL-6	5-Point (Pre-Run)	1/4/2023	Interior Station 1	31.0699	-0.8298	0.9964



TE-1000 PUF Calibration Worksheet

Site Information

Location: EES Coke	Site ID: IN1	Date: 10-Oct-22
Sampler: TE-1000	Serial No: 201760	Tech: Soudabeh Gorjinezhad

Site Conditions

Barometric Pressure (in Hg): 29.06	Corrected Pressure (mm Hg): 738.1
Temperature (deg F): 69.3	Temperature (deg K): 293.9
Average Pressure (in Hg): 29.70	Corrected Average Pressure (mm Hg): 754.4
Average Temperature (deg F): 72.0	Average Temperature (deg K): 295.4

Calibration Orifice

Make: Tisch	Qstd Slope: 9.73032
Model: TE-5040A	Qstd Intercept: -0.02645
Serial#: Z8	Calibration Due Date: 1-Aug-23

Calibration Information

Plate or Test #	Pressure (in H ₂ O)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression
1	8.10	0.293	70.0	8.30	Slope: 36.9876
2	7.20	0.276	60.0	7.69	Intercept: -2.5561
3	6.30	0.259	50.0	7.02	Corr. Coeff: 0.9982
4	5.50	0.242	40.0	6.28	
5	4.30	0.214	30.0	5.44	# of Observations: 5

Calculations

Qstd = $1/m[\text{Sqrt}((H_2O)(Pa/760)(298/Ta))-b]$
Flow (corrected) = $\text{Sqrt}((\text{magn})(Pa/Pstd)(Tstd/Ta))$

Qstd = standard flow rate
Flow (magn) = reading from magnehelic gauge
Flow (corrected) = corrected flow rate
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
Qstd = $1/m[\text{Sqrt}((H_2O)(Pa/760)(298/Ta))-b]$

m = sampler slope
b = sampler intercept
(magn) = magnehelic reading
Tav = daily average temperature
Pav = daily average pressure

Average Flow (magn): 34.0
Average Flow Over Sample (m3/min) 0.226867
Enter Total Time (hrs): 23.9
Total Flow Over Sample (m3) 325.3270773
Total Flow Over Sample (liters) 325327.0773

NOTE: Ensure calibration orifice has been certified within 12 months of use



TE-1000 PUF Calibration Worksheet

Site Information

Location: EES Coke	Site ID: IN2	Date: 10-Oct-22
Sampler: TE-1000	Serial No: 201749	Tech: Soudabeh Gorjinezhad

Site Conditions

Barometric Pressure (in Hg): 29.11	Corrected Pressure (mm Hg): 739.4
Temperature (deg F): 53.6	Temperature (deg K): 285.2
Average Pressure (in Hg): 29.70	Corrected Average Pressure (mm Hg): 754.4
Average Temperature (deg F): 72.0	Average Temperature (deg K): 295.4

Calibration Orifice

Make: Tisch	Qstd Slope: 9.73032
Model: TE-5040A	Qstd Intercept: -0.02645
Serial#: Z8	Calibration Due Date: 1-Aug-23

Calibration Information

Plate or Test #	Pressure (in H ₂ O)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression
1	7.40	0.285	70.0	8.44	Slope: 31.7215
2	6.50	0.267	60.0	7.81	Intercept: -0.6286
3	5.50	0.246	50.0	7.13	Corr. Coeff: 0.9996
4	4.40	0.220	40.0	6.38	
5	3.40	0.194	30.0	5.52	
					# of Observations: 5

Calculations

Qstd = $1/m[\text{Sqrt}((H_2O)(Pa/760)(298/Ta))-b]$
 Flow (corrected) = $\text{Sqrt}((\text{magn})(Pa/Pstd)(Tstd/Ta))$

Qstd = standard flow rate
 Flow (magn) = reading from magnehelic gauge
 Flow (corrected) = corrected flow rate
 m = calibrator Qstd slope
 b = calibrator Qstd intercept
 Ta = actual temperature during calibration (deg K)
 Pa = actual pressure during calibration (mm Hg)
 Tstd = 298 deg K
 Pstd = 760 mm Hg
 For subsequent calculation of sampler flow:
 Qstd = $1/m[\text{Sqrt}((H_2O)(Pa/760)(298/Ta))-b]$

m = sampler slope
 b = sampler intercept
 (magn) = magnehelic reading
 Tav = daily average temperature
 Pav = daily average pressure

Average Flow (magn):	40.0
Average Flow Over Sample (m3/min)	0.219338
Enter Total Time (hrs):	23.9
Total Flow Over Sample (m3)	314.531127
Total Flow Over Sample (liters)	314531.127

NOTE: Ensure calibration orifice has been certified within 12 months of use



TE-1000 PUF Calibration Worksheet

Site Information

Location: EES Coke	Site ID: DW1	Date: 10-Oct-22
Sampler: TE-1000	Serial No: 209324	Tech: Soudabeh Gorjinezhad

Site Conditions

Barometric Pressure (in Hg): 29.05	Corrected Pressure (mm Hg): 737.9
Temperature (deg F): 65.3	Temperature (deg K): 291.7
Average Pressure (in Hg): 29.70	Corrected Average Pressure (mm Hg): 754.4
Average Temperature (deg F): 72.0	Average Temperature (deg K): 295.4

Calibration Orifice

Make: Tisch	Qstd Slope: 9.73032
Model: TE-5040A	Qstd Intercept: -0.02645
Serial#: Z8	Calibration Due Date: 1-Aug-23

Calibration Information

Plate or Test #	Pressure (in H ₂ O)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression
1	7.70	0.287	70.0	8.33	Slope: 30.0035
2	6.50	0.264	60.0	7.71	Intercept: -0.3096
3	5.80	0.249	50.0	7.04	Corr. Coeff: 0.9944
4	4.70	0.225	40.0	6.30	
5	3.30	0.189	30.0	5.46	
					# of Observations: 5

Calculations

Qstd = $1/m[\text{Sqrt}((H_2O)(Pa/760)(298/Ta))-b]$
 Flow (corrected) = $\text{Sqrt}((\text{magn})(Pa/Pstd)(Tstd/Ta))$

Qstd = standard flow rate
 Flow (magn) = reading from magnehelic gauge
 Flow (corrected) = corrected flow rate
 m = calibrator Qstd slope
 b = calibrator Qstd intercept
 Ta = actual temperature during calibration (deg K)
 Pa = actual pressure during calibration (mm Hg)
 Tstd = 298 deg K
 Pstd = 760 mm Hg
 For subsequent calculation of sampler flow:
 Qstd = $1/m[\text{Sqrt}((H_2O)(Pa/760)(298/Ta))-b]$

m = sampler slope
 b = sampler intercept
 (magn) = magnehelic reading
 Tav = daily average temperature
 Pav = daily average pressure

Average Flow (magn):	40.0
Average Flow Over Sample (m3/min)	0.221264
Enter Total Time (hrs):	23.9
Total Flow Over Sample (m3)	317.2927861
Total Flow Over Sample (liters)	317292.7861

NOTE: Ensure calibration orifice has been certified within 12 months of use



TE-1000 PUF Calibration Worksheet

Site Information

Location: EES Coke	Site ID: DW2	Date: 10-Oct-22
Sampler: TE-1000	Serial No: 204013	Tech: Soudabeh Gorjinezhad

Site Conditions

Barometric Pressure (in Hg): 29.04	Corrected Pressure (mm Hg): 737.6
Temperature (deg F): 64.9	Temperature (deg K): 291.5
Average Pressure (in Hg): 29.70	Corrected Average Pressure (mm Hg): 754.4
Average Temperature (deg F): 72.0	Average Temperature (deg K): 295.4

Calibration Orifice

Make: Tisch	Qstd Slope: 9.73032
Model: TE-5040A	Qstd Intercept: -0.02645
Serial#: Z8	Calibration Due Date: 1-Aug-23

Calibration Information

Plate or Test #	Pressure (in H ₂ O)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression
1	7.60	0.285	70.0	8.33	Slope: 30.4360
2	6.80	0.270	60.0	7.72	Intercept: -0.4160
3	5.60	0.245	50.0	7.04	Corr. Coeff: 0.9984
4	4.60	0.222	40.0	6.30	
5	3.40	0.191	30.0	5.46	# of Observations: 5

Calculations

$Qstd = 1/m[\text{Sqrt}((H20)(Pa/760)(298/Ta))-b]$
 Flow (corrected)= $\text{Sqrt}((\text{magn})(Pa/Pstd)(Tstd/Ta))$

Qstd = standard flow rate
 Flow (magn)= reading from magnehelic gauge
 Flow (corrected)= corrected flow rate
 m = calibrator Qstd slope
 b = calibrator Qstd intercept
 Ta = actual temperature during calibration (deg K)
 Pa = actual pressure during calibration (mm Hg)
 Tstd = 298 deg K
 Pstd = 760 mm Hg
 For subsequent calculation of sampler flow:
 $Qstd = 1/m[\text{Sqrt}((H20)(Pa/760)(298/Ta))-b]$

m = sampler slope
 b = sampler intercept
 (magn) = magnehelic reading
 Tav = daily average temperature
 Pav = daily average pressure

Average Flow (magn): **40.0**
 Average Flow Over Sample (m3/min)
 0.221617
 Enter Total Time (hrs): **23.9**
 Total Flow Over Sample (m3)
 317.7988592
 Total Flow Over Sample (liters)
 317798.8592

NOTE: Ensure calibration orifice has been certified within 12 months of use



TE-1000 PUF Calibration Worksheet

Site Information

Location: EES Coke	Site ID: UPW	Date: 10-Oct-22
Sampler: TE-1000	Serial No: 209388	Tech: Soudabeh Gorjinezhad

Site Conditions

Barometric Pressure (in Hg): 29.04	Corrected Pressure (mm Hg): 737.6
Temperature (deg F): 66.4	Temperature (deg K): 292.3
Average Pressure (in Hg): 29.70	Corrected Average Pressure (mm Hg): 754.4
Average Temperature (deg F): 72.0	Average Temperature (deg K): 295.4

Calibration Orifice

Make: Tisch	Qstd Slope: 9.73032
Model: TE-5040A	Qstd Intercept: -0.02645
Serial#: Z8	Calibration Due Date: 1-Aug-23

Calibration Information

Plate or Test #	Pressure (in H ₂ O)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression
1	7.30	0.279	70.0	8.32	Slope: 34.0221
2	6.50	0.263	60.0	7.71	Intercept: -1.2261
3	5.50	0.242	50.0	7.03	Corr. Coeff: 0.9977
4	4.70	0.224	40.0	6.29	
5	3.50	0.194	30.0	5.45	# of Observations: 5

Calculations

Qstd = $1/m[\text{Sqrt}((H_2O)(Pa/760)(298/Ta))-b]$
Flow (corrected) = $\text{Sqrt}((\text{magn})(Pa/Pstd)(Tstd/Ta))$

Qstd = standard flow rate
Flow (magn) = reading from magnehelic gauge
Flow (corrected) = corrected flow rate
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
Qstd = $1/m[\text{Sqrt}((H_2O)(Pa/760)(298/Ta))-b]$

m = sampler slope
b = sampler intercept
(magn) = magnehelic reading
Tav = daily average temperature
Pav = daily average pressure

Average Flow (magn): **40.0**
Average Flow Over Sample (m3/min)
0.222067
Enter Total Time (hrs): **23.9**
Total Flow Over Sample (m3)
318.4440156
Total Flow Over Sample (liters)
318444.0156

NOTE: Ensure calibration orifice has been certified within 12 months of use



TE-1000 PUF Calibration Worksheet

Site Information

Location: EES Coke	Site ID: IN1	Date: 4-Jan-23
Sampler: TE-1000	Serial No: 201760	Tech: TR

Site Conditions

Barometric Pressure (in Hg): 29.04	Corrected Pressure (mm Hg): 737.6
Temperature (deg F): 51.1	Temperature (deg K): 283.8
Average Pressure (in Hg): 29.04	Corrected Average Pressure (mm Hg): 737.6
Average Temperature (deg F): 51.1	Average Temperature (deg K): 283.8

Calibration Orifice

Make: Tisch	Qstd Slope: 9.73032
Model: TE-5040A	Qstd Intercept: -0.02645
Serial#: Z8	Calibration Due Date: 1-Aug-23

Calibration Information

Plate or Test #	Pressure (in H ₂ O)	Qstd (m3/min)	Flow (magn)	Flow (corrected)	Linear Regression
1	7.90	0.294	70.0	8.45	Slope: 31.0699
2	7.20	0.281	60.0	7.82	Intercept: -0.8298
3	6.15	0.260	50.0	7.14	Corr. Coeff: 0.9964
4	4.85	0.231	40.0	6.39	
5	3.75	0.204	30.0	5.53	# of Observations: 5

Calculations

Qstd = $1/m[\text{Sqrt}((H_2O)(Pa/760)(298/Ta))-b]$
Flow (corrected) = $\text{Sqrt}((\text{magn})(Pa/Pstd)(Tstd/Ta))$

Qstd = standard flow rate
Flow (magn) = reading from magnehelic gauge
Flow (corrected) = corrected flow rate
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
Qstd = $1/m[\text{Sqrt}((H_2O)(Pa/760)(298/Ta))-b]$

m = sampler slope
b = sampler intercept
(magn) = magnehelic reading
Tav = daily average temperature
Pav = daily average pressure

Average Flow (magn): 36.0
Average Flow Over Sample (m3/min) 0.221676
Enter Total Time (hrs): 23.9
Total Flow Over Sample (m3) 317.8828403
Total Flow Over Sample (liters) 317882.8403

NOTE: Ensure calibration orifice has been certified within 12 months of use



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION

Client: EES Coke Battery
Facility: Zug Island
Station: IN1
SN: 201760

Project #: 14796

Run: 1

Technician (As-Left): TR
Technician (As-Found): TR

TRANSFER STANDARDS

TEMPERATURE and BP STANDARD

Manufacturer: COMET
Model: C4141
SN: 22900118
Calibration Date: 08/31/22
Calibration Due Date: 08/31/23

CALIBRATION ORIFICE

Manufacturer: Tisch
Model: TE-5040A
SN: 438320
Calibration Date: 08/01/22
Calibration Due Date: 08/01/23

Qstd, m = 9.73032
Qstd, b = -0.02645
Qa, m = 6.09296
Qa, b = -0.01674

CALIBRATION DATA

Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left								
As-Found	8.7	987.7	40	6.42	5.0	0.243	0.236	2.8%

LINEAR REGRESSION

Slope: 36.9876

Intercept: -2.5561

Magn SP:

Acceptance Criteria: < +/- 10.1% of working standard for all settings

START / STOP SETTINGS

Start Date: 10/13/22
Start Time (CST): 9:56
Flow (Magn): 36

Stop Date: 10/14/22
Stop Time (CST): 8:00
Flow (Magn): 36

ADDITIONAL NOTES



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION

Client: EES Coke Battery
Facility: Zug Island
Station: IN2
SN: 201749

Project #: 14796
Run: 1

Technician (As-Left): TR
Technician (As-Found): TR

TRANSFER STANDARDS

TEMPERATURE and BP STANDARD

Manufacturer: COMET
Model: C4141
SN: 22900118
Calibration Date: 08/31/22
Calibration Due Date: 08/31/23

CALIBRATION ORIFICE

Manufacturer: Tisch
Model: TE-5040A
SN: 438320
Calibration Date: 08/01/22
Calibration Due Date: 08/01/23

Qstd, m = 9.73032
Qstd, b = -0.02645
Qa, m = 6.09296
Qa, b = -0.01674

CALIBRATION DATA

Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left								
As-Found	8.7	987.7	40	6.42	4.3	0.222	0.219	1.4%

LINEAR REGRESSION

Slope: 31.7215

Intercept: -0.6286

Magn SP:

Acceptance Criteria: < +/- 10.1% of working standard for all settings

START / STOP SETTINGS

Start Date: 10/13/22
Start Time (CST): 9:34
Flow (Magn): 42

Stop Date: 10/14/22
Stop Time (CST): 8:21
Flow (Magn): 42

ADDITIONAL NOTES



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION

Client: EES Coke Battery
Facility: Zug Island
Station: DW1
SN: 209324

Project #: 14796
Run: 1

Technician (As-Left): TR
Technician (As-Found): TR

TRANSFER STANDARDS

TEMPERATURE and BP STANDARD

Manufacturer: COMET
Model: C4141
SN: 22900118
Calibration Date: 08/31/22
Calibration Due Date: 08/31/23

CALIBRATION ORIFICE

Manufacturer: Tisch
Model: TE-5040A
SN: 438320
Calibration Date: 08/01/22
Calibration Due Date: 08/01/23

Qstd, m = 9.73032
Qstd, b = -0.02645
Qa, m = 6.09296
Qa, b = -0.01674

CALIBRATION DATA

Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left								
As-Found	8.7	987.7	40	6.42	4.6	0.224	0.226	-1.0%

LINEAR REGRESSION

Slope: 30.0035

Intercept: -0.3093

Magn SP:

Acceptance Criteria: < +/- 10.1% of working standard for all settings

START / STOP SETTINGS

Start Date: 10/13/22
Start Time (CST): 10:23
Flow (Magn): 40

Stop Date: 10/14/22
Stop Time (CST): 10:23
Flow (Magn): 40

ADDITIONAL NOTES



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION

Client: EES Coke Battery
Facility: Zug Island
Station: DW2
SN: 204013

Project #: 14796
Run: 1

Technician (As-Left): TR
Technician (As-Found): TR

TRANSFER STANDARDS

TEMPERATURE and BP STANDARD

Manufacturer: COMET
Model: C4141
SN: 22900118
Calibration Date: 08/31/22
Calibration Due Date: 08/31/23

CALIBRATION ORIFICE

Manufacturer: Tisch
Model: TE-5040A
SN: 438320
Calibration Date: 08/01/22
Calibration Due Date: 08/01/23

Qstd, m = 9.73032
Qstd, b = -0.02645
Qa, m = 6.09296
Qa, b = -0.01674

CALIBRATION DATA

Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left								
As-Found	8.7	987.7	41	6.50	4.5	0.227	0.224	1.4%

LINEAR REGRESSION

Slope: 30.4360

Intercept: -0.4160

Magn SP:

Acceptance Criteria: < +/- 10.1% of working standard for all settings

START / STOP SETTINGS

Start Date: 10/13/22
Start Time (CST): 10:45
Flow (Magn): 40

Stop Date: 10/14/22
Stop Time (CST): 10:40
Flow (Magn): 40

ADDITIONAL NOTES



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION								
Client: EES Coke Battery				Project #: 14796				
Facility: Zug Island				Run: 1				
Station: UPW								
SN: 209388				Technician (As-Left): TR				
				Technician (As-Found): TR				
TRANSFER STANDARDS								
TEMPERATURE and BP STANDARD				CALIBRATION ORIFICE				
Manufacturer: COMET				Manufacturer: Tisch		Qstd, m = 9.73032		
Model: C4141				Model: TE-5040A		Qstd, b = -0.02645		
SN: 22900118				SN: 438320		Qa, m = 6.09296		
Calibration Date: 08/31/22				Calibration Date: 08/01/22		Qa, b = -0.01674		
Calibration Due Date: 08/31/23				Calibration Due Date: 08/01/23				
CALIBRATION DATA								
Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left								
As-Found	8.7	987.7	40	6.42	4.7	0.225	0.229	-1.9%
LINEAR REGRESSION								
Slope:	30.4360		Intercept:	-0.4160		Magn SP:		
Acceptance Criteria: < +/- 10.1% of working standard for all settings								
START / STOP SETTINGS								
Start Date: 10/13/22				Stop Date: 10/14/22				
Start Time (CST): 11:17				Stop Time (CST): 11:02				
Flow (Magn): 40				Flow (Magn): 40				
ADDITIONAL NOTES								



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION								
Client: EES Coke Battery				Project #: 14796				
Facility: Zug Island				Run: 2				
Station: IN1								
SN: 201760				Technician (As-Left): TR				
				Technician (As-Found): TR				
TRANSFER STANDARDS								
TEMPERATURE and BP STANDARD					CALIBRATION ORIFICE			
Manufacturer: COMET					Manufacturer: Tisch		Qstd, m = 9.73032	
Model: C4141					Model: TE-5040A		Qstd, b = -0.02645	
SN: 22900118					SN: 438320		Qa, m = 6.09296	
Calibration Date: 08/31/22					Calibration Date: 08/01/22		Qa, b = -0.01674	
Calibration Due Date: 08/31/23					Calibration Due Date: 08/01/23			
CALIBRATION DATA								
Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	9.5	988.5	34	5.91	4.4	0.229	0.221	3.5%
As-Found	10.0	1007.0	40	6.47	4.8	0.244	0.233	4.7%
LINEAR REGRESSION								
Slope:	36.9876		Intercept:	-2.5561		Magn SP:	32	
Acceptance Criteria: < +/- 10.1% of working standard for all settings								
START / STOP SETTINGS								
Start Date: 10/26/22				Stop Date: 10/27/22				
Start Time (CST): 16:25				Stop Time (CST): 14:51				
Flow (Magn): 34				Flow (Magn): 34				
ADDITIONAL NOTES								



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION								
Client: EES Coke Battery				Project #: 14796				
Facility: Zug Island				Run: 2				
Station: IN2								
SN: 201749				Technician (As-Left): TR				
				Technician (As-Found): TR				
TRANSFER STANDARDS								
TEMPERATURE and BP STANDARD					CALIBRATION ORIFICE			
Manufacturer: COMET					Manufacturer: Tisch		Qstd, m = 9.73032	
Model: C4141					Model: TE-5040A		Qstd, b = -0.02645	
SN: 22900118					SN: 438320		Qa, m = 6.09296	
Calibration Date: 08/31/22					Calibration Date: 08/01/22		Qa, b = -0.01674	
Calibration Due Date: 08/31/23					Calibration Due Date: 08/01/23			
CALIBRATION DATA								
Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	9.5	988.5	42	6.57	4.4	0.227	0.220	3.1%
As-Found	10.0	1007.0	40	6.47	4.4	0.224	0.222	0.8%
LINEAR REGRESSION								
Slope:	31.7215		Intercept:	-0.6286		Magn SP:	41	
Acceptance Criteria: < +/- 10.1% of working standard for all settings								
START / STOP SETTINGS								
Start Date: 10/26/22				Stop Date: 10/27/22				
Start Time (CST): 17:05				Stop Time (CST): 15:24				
Flow (Magn): 42				Flow (Magn): 42				
ADDITIONAL NOTES								



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION								
Client: EES Coke Battery				Project #: 14796				
Facility: Zug Island				Run: 2				
Station: DW1								
SN: 209324				Technician (As-Left): TR				
				Technician (As-Found): TR				
TRANSFER STANDARDS								
TEMPERATURE and BP STANDARD				CALIBRATION ORIFICE				
Manufacturer: COMET				Manufacturer: Tisch		Qstd, m = 9.73032		
Model: C4141				Model: TE-5040A		Qstd, b = -0.02645		
SN: 22900118				SN: 438320		Qa, m = 6.09296		
Calibration Date: 08/31/22				Calibration Date: 08/01/22		Qa, b = -0.01674		
Calibration Due Date: 08/31/23				Calibration Due Date: 08/01/23				
CALIBRATION DATA								
Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	9.5	988.5	40	6.41	4.5	0.224	0.224	0.1%
As-Found	10.0	1007.0	40	6.47	4.6	0.226	0.228	-1.0%
LINEAR REGRESSION								
Slope:	30.0035		Intercept:	-0.3093		Magn SP:	40	
Acceptance Criteria: < +/- 10.1% of working standard for all settings								
START / STOP SETTINGS								
Start Date: 10/26/22				Stop Date: 10/27/22				
Start Time (CST): 15:49				Stop Time (CST): 14:20				
Flow (Magn): 40				Flow (Magn): 40				
ADDITIONAL NOTES								



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION								
Client: EES Coke Battery				Project #: 14796				
Facility: Zug Island				Run: 2				
Station: DW2								
SN: 204013				Technician (As-Left): TR				
				Technician (As-Found): TR				
TRANSFER STANDARDS								
TEMPERATURE and BP STANDARD				CALIBRATION ORIFICE				
Manufacturer: COMET				Manufacturer: Tisch		Qstd, m = 9.73032		
Model: C4141				Model: TE-5040A		Qstd, b = -0.02645		
SN: 22900118				SN: 438320		Qa, m = 6.09296		
Calibration Date: 08/31/22				Calibration Date: 08/01/22		Qa, b = -0.01674		
Calibration Due Date: 08/31/23				Calibration Due Date: 08/01/23				
CALIBRATION DATA								
Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	9.5	988.5	40	6.41	4.6	0.224	0.225	-0.3%
As-Found	10.0	1007.0	40	6.47	4.6	0.226	0.228	-0.9%
LINEAR REGRESSION								
Slope:	30.4360		Intercept:	-0.4160		Magn SP:	40	
Acceptance Criteria: < +/- 10.1% of working standard for all settings								
START / STOP SETTINGS								
Start Date: 10/26/22				Stop Date: 10/27/22				
Start Time (CST): 15:40				Stop Time (CST): 13:50				
Flow (Magn): 40				Flow (Magn): 40				
ADDITIONAL NOTES								



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION								
Client: EES Coke Battery				Project #: 14796				
Facility: Zug Island				Run: 2				
Station: UPW								
SN: 209388				Technician (As-Left): TR				
				Technician (As-Found): TR				
TRANSFER STANDARDS								
TEMPERATURE and BP STANDARD				CALIBRATION ORIFICE				
Manufacturer: COMET				Manufacturer: Tisch		Qstd, m = 9.73032		
Model: C4141				Model: TE-5040A		Qstd, b = -0.02645		
SN: 22900118				SN: 438320		Qa, m = 6.09296		
Calibration Date: 08/31/22				Calibration Date: 08/01/22		Qa, b = -0.01674		
Calibration Due Date: 08/31/23				Calibration Due Date: 08/01/23				
CALIBRATION DATA								
Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	9.5	988.5	40	6.41	4.8	0.224	0.231	-2.9%
As-Found	10.0	1007.0	40	6.47	4.7	0.226	0.231	-1.9%
LINEAR REGRESSION								
Slope:	30.4360		Intercept:	-0.4160		Magn SP:	40	
Acceptance Criteria: < +/- 10.1% of working standard for all settings								
START / STOP SETTINGS								
Start Date: 10/26/22				Stop Date: 10/27/22				
Start Time (CST): 17:45				Stop Time (CST): 16:12				
Flow (Magn): 40				Flow (Magn): 40				
ADDITIONAL NOTES								



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION

Client: EES Coke Battery
Facility: Zug Island
Station: IN1
SN: 201760

Project #: 14796
Run: 3

Technician (As-Left): TR
Technician (As-Found): TR

TRANSFER STANDARDS

TEMPERATURE and BP STANDARD

Manufacturer: COMET
Model: C4141
SN: 22900118
Calibration Date: 08/31/22
Calibration Due Date: 08/31/23

CALIBRATION ORIFICE

Manufacturer: Tisch
Model: TE-5040A
SN: 438320
Calibration Date: 08/01/22
Calibration Due Date: 08/01/23

Qstd, m = 9.73032
Qstd, b = -0.02645
Qa, m = 6.09296
Qa, b = -0.01674

CALIBRATION DATA

Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	5.5	1010.0	40	6.53	4.8	0.246	0.235	4.4%
As-Found	7.8	1114.8	40	6.83	4.8	0.254	0.246	3.2%

LINEAR REGRESSION

Slope: 36.9876 **Intercept:** -2.5561 **Magn SP:** 31

Acceptance Criteria: < +/- 10.1% of working standard for all settings

START / STOP SETTINGS

Start Date: 11/09/22
Start Time (CST): 14:30
Flow (Magn): 34

Stop Date: 11/10/22
Stop Time (CST): 12:50
Flow (Magn): 34

ADDITIONAL NOTES



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION

Client: EES Coke Battery
Facility: Zug Island
Station: IN2
SN: 201749

Project #: 14796
Run: 3

Technician (As-Left): TR
Technician (As-Found): TR

TRANSFER STANDARDS

TEMPERATURE and BP STANDARD

Manufacturer: COMET
Model: C4141
SN: 22900118
Calibration Date: 08/31/22
Calibration Due Date: 08/31/23

CALIBRATION ORIFICE

Manufacturer: Tisch
Model: TE-5040A
SN: 438320
Calibration Date: 08/01/22
Calibration Due Date: 08/01/23

Qstd, m = 9.73032
Qstd, b = -0.02645
Qa, m = 6.09296
Qa, b = -0.01674

CALIBRATION DATA

Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	5.5	1010.0	40	6.53	4.4	0.226	0.225	0.2%
As-Found	7.8	1114.8	40	6.83	4.4	0.235	0.234	0.4%

LINEAR REGRESSION

Slope: 31.7215 **Intercept:** -0.6286 **Magn SP:** 39

Acceptance Criteria: < +/- 10.1% of working standard for all settings

START / STOP SETTINGS

Start Date: 11/09/22
Start Time (CST): 15:13
Flow (Magn): 40

Stop Date: 11/10/22
Stop Time (CST): 13:40
Flow (Magn): 40

ADDITIONAL NOTES



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION

Client: EES Coke Battery
Facility: Zug Island
Station: DW1
SN: 209324

Project #: 14796
Run: 3

Technician (As-Left): TR
Technician (As-Found): TR

TRANSFER STANDARDS

TEMPERATURE and BP STANDARD

Manufacturer: COMET
Model: C4141
SN: 22900118

Calibration Date: 08/31/22

Calibration Due Date: 08/31/23

CALIBRATION ORIFICE

Manufacturer: Tisch
Model: TE-5040A
SN: 438320

Calibration Date: 08/01/22

Calibration Due Date: 08/01/23

Qstd, m = 9.73032

Qstd, b = -0.02645

Qa, m = 6.09296

Qa, b = -0.01674

CALIBRATION DATA

Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	5.5	1010.0	40	6.53	4.7	0.228	0.233	-2.1%
As-Found	7.8	1114.8	36	6.48	3.9	0.226	0.222	2.0%

LINEAR REGRESSION

Slope: 30.0035

Intercept: -0.3093

Magn SP: 39

Acceptance Criteria: < +/- 10.1% of working standard for all settings

START / STOP SETTINGS

Start Date: 11/09/22

Stop Date: 11/10/22

Start Time (CST): 13:44

Stop Time (CST): 12:00

Flow (Magn): 38

Flow (Magn): 38

ADDITIONAL NOTES



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION

Client: EES Coke Battery
Facility: Zug Island
Station: DW2
SN: 204013

Project #: 14796
Run: 3

Technician (As-Left): TR
Technician (As-Found): TR

TRANSFER STANDARDS

TEMPERATURE and BP STANDARD

Manufacturer: COMET
Model: C4141
SN: 22900118

Calibration Date: 08/31/22

Calibration Due Date: 08/31/23

CALIBRATION ORIFICE

Manufacturer: Tisch
Model: TE-5040A
SN: 438320

Calibration Date: 08/01/22

Calibration Due Date: 08/01/23

Qstd, m = 9.73032

Qstd, b = -0.02645

Qa, m = 6.09296

Qa, b = -0.01674

CALIBRATION DATA

Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	5.5	1010.0	40	6.53	4.5	0.228	0.228	0.2%
As-Found	7.8	1114.8	40	6.83	4.5	0.238	0.238	0.0%

LINEAR REGRESSION

Slope: 30.4360

Intercept: -0.4160

Magn SP: 38

Acceptance Criteria: < +/- 10.1% of working standard for all settings

START / STOP SETTINGS

Start Date: 11/09/22

Stop Date: 11/10/22

Start Time (CST): 13:30

Stop Time (CST): 11:33

Flow (Magn): 40

Flow (Magn): 40

ADDITIONAL NOTES



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION

Client: EES Coke Battery
Facility: Zug Island
Station: UPW
SN: 209388

Project #: 14796
Run: 3

Technician (As-Left): TR
Technician (As-Found): TR

TRANSFER STANDARDS

TEMPERATURE and BP STANDARD

Manufacturer: COMET
Model: C4141
SN: 22900118

Calibration Date: 08/31/22

Calibration Due Date: 08/31/23

CALIBRATION ORIFICE

Manufacturer: Tisch
Model: TE-5040A
SN: 438320

Calibration Date: 08/01/22

Calibration Due Date: 08/01/23

Qstd, m = 9.73032

Qstd, b = -0.02645

Qa, m = 6.09296

Qa, b = -0.01674

CALIBRATION DATA

Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	5.5	1010.0	40	6.53	4.5	0.228	0.228	0.2%
As-Found	7.8	1114.8	40	6.83	4.4	0.238	0.236	1.1%

LINEAR REGRESSION

Slope: 30.4360

Intercept: -0.4160

Magn SP: 38

Acceptance Criteria: < +/- 10.1% of working standard for all settings

START / STOP SETTINGS

Start Date: 11/09/22

Stop Date: 11/10/22

Start Time (CST): 15:50

Stop Time (CST): 14:10

Flow (Magn): 42

Flow (Magn): 40

ADDITIONAL NOTES



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION

Client: EES Coke Battery
Facility: Zug Island
Station: IN1
SN: 201760

Project #: 14796
Run: 4

Technician (As-Left): TR
Technician (As-Found): TR

TRANSFER STANDARDS

TEMPERATURE and BP STANDARD

Manufacturer: COMET
Model: C4141
SN: 22900118
Calibration Date: 08/31/22
Calibration Due Date: 08/31/23

CALIBRATION ORIFICE

Manufacturer: Tisch
Model: TE-5040A
SN: 438320
Calibration Date: 08/01/22
Calibration Due Date: 08/01/23

Qstd, m = 9.73032
Qstd, b = -0.02645
Qa, m = 6.09296
Qa, b = -0.01674

CALIBRATION DATA

Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	5.3	990.6	40	6.47	4.6	0.244	0.228	6.9%
As-Found	8.2	994.6	40	6.45	4.7	0.243	0.230	5.9%

LINEAR REGRESSION

Slope: 36.9876 **Intercept:** -2.5561 **Magn SP:** 31

Acceptance Criteria: < +/- 10.1% of working standard for all settings

START / STOP SETTINGS

Start Date: 12/05/22
Start Time (CST): 16:14
Flow (Magn): 38

Stop Date: 12/06/22
Stop Time (CST): 14:40
Flow (Magn): 38

ADDITIONAL NOTES



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION								
Client: EES Coke Battery				Project #: 14796				
Facility: Zug Island				Run: 4				
Station: IN2				Technician (As-Left): TR				
SN: 201749				Technician (As-Found): TR				
TRANSFER STANDARDS								
TEMPERATURE and BP STANDARD				CALIBRATION ORIFICE				
Manufacturer: COMET				Manufacturer: Tisch		Qstd, m = 9.73032		
Model: C4141				Model: TE-5040A		Qstd, b = -0.02645		
SN: 22900118				SN: 438320		Qa, m = 6.09296		
Calibration Date: 08/31/22				Calibration Date: 08/01/22		Qa, b = -0.01674		
Calibration Due Date: 08/31/23				Calibration Due Date: 08/01/23				
CALIBRATION DATA								
Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	5.3	990.6	40	6.47	4.4	0.224	0.223	0.2%
As-Found	8.2	994.6	40	6.45	4.3	0.223	0.220	1.4%
LINEAR REGRESSION								
Slope:	31.7215		Intercept:	-0.6286		Magn SP:	40	
Acceptance Criteria: < +/- 10.1% of working standard for all settings								
START / STOP SETTINGS								
Start Date: 12/05/22				Stop Date: 12/06/22				
Start Time (CST): 16:39				Stop Time (CST): 15:05				
Flow (Magn): 40				Flow (Magn): 40				
ADDITIONAL NOTES								



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION								
Client: EES Coke Battery					Project #: 14796			
Facility: Zug Island					Run: 4			
Station: DW1					Technician (As-Left): TR			
SN: 209324					Technician (As-Found): TR			
TRANSFER STANDARDS								
TEMPERATURE and BP STANDARD					CALIBRATION ORIFICE			
Manufacturer: COMET					Manufacturer: Tisch		Qstd, m = 9.73032	
Model: C4141					Model: TE-5040A		Qstd, b = -0.02645	
SN: 22900118					SN: 438320		Qa, m = 6.09296	
Calibration Date: 08/31/22					Calibration Date: 08/01/22		Qa, b = -0.01674	
Calibration Due Date: 08/31/23					Calibration Due Date: 08/01/23			
CALIBRATION DATA								
Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	5.3	990.6	40	6.47	4.7	0.226	0.231	-2.0%
As-Found	8.2	994.6	40	6.45	4.5	0.225	0.225	0.1%
LINEAR REGRESSION								
Slope:	30.0035		Intercept:	-0.3093		Magn SP:	39	
Acceptance Criteria: < +/- 10.1% of working standard for all settings								
START / STOP SETTINGS								
Start Date: 12/05/22					Stop Date: 12/06/22			
Start Time (CST): 15:45					Stop Time (CST): 14:15			
Flow (Magn): 40					Flow (Magn): 40			
ADDITIONAL NOTES								



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION								
Client: EES Coke Battery				Project #: 14796				
Facility: Zug Island				Run: 4				
Station: DW2								
SN: 204013				Technician (As-Left): TR				
				Technician (As-Found): TR				
TRANSFER STANDARDS								
TEMPERATURE and BP STANDARD				CALIBRATION ORIFICE				
Manufacturer: COMET				Manufacturer: Tisch		Qstd, m = 9.73032		
Model: C4141				Model: TE-5040A		Qstd, b = -0.02645		
SN: 22900118				SN: 438320		Qa, m = 6.09296		
Calibration Date: 08/31/22				Calibration Date: 08/01/22		Qa, b = -0.01674		
Calibration Due Date: 08/31/23				Calibration Due Date: 08/01/23				
CALIBRATION DATA								
Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	5.3	990.6	40	6.47	4.5	0.226	0.226	0.2%
As-Found	8.2	994.6	40	6.45	4.4	0.226	0.223	1.4%
LINEAR REGRESSION								
Slope:	30.4360		Intercept:	-0.4160		Magn SP:	39	
Acceptance Criteria: < +/- 10.1% of working standard for all settings								
START / STOP SETTINGS								
Start Date: 12/05/22				Stop Date: 12/06/22				
Start Time (CST): 15:15				Stop Time (CST): 13:55				
Flow (Magn): 40				Flow (Magn): 40				
ADDITIONAL NOTES								



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION								
Client: EES Coke Battery				Project #: 14796				
Facility: Zug Island				Run: 4				
Station: UPW								
SN: 209388				Technician (As-Left): TR				
				Technician (As-Found): TR				
TRANSFER STANDARDS								
TEMPERATURE and BP STANDARD				CALIBRATION ORIFICE				
Manufacturer: COMET				Manufacturer: Tisch		Qstd, m = 9.73032		
Model: C4141				Model: TE-5040A		Qstd, b = -0.02645		
SN: 22900118				SN: 438320		Qa, m = 6.09296		
Calibration Date: 08/31/22				Calibration Date: 08/01/22		Qa, b = -0.01674		
Calibration Due Date: 08/31/23				Calibration Due Date: 08/01/23				
CALIBRATION DATA								
Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	5.3	990.6	40	6.47	4.5	0.226	0.226	0.2%
As-Found	8.2	994.6	40	6.45	4.6	0.226	0.227	-0.8%
LINEAR REGRESSION								
Slope:	30.4360		Intercept:	-0.4160		Magn SP:	39	
Acceptance Criteria: < +/- 10.1% of working standard for all settings								
START / STOP SETTINGS								
Start Date: 12/05/22				Stop Date: 12/06/22				
Start Time (CST): 17:35				Stop Time (CST): 15:38				
Flow (Magn): 42				Flow (Magn): 42				
ADDITIONAL NOTES								



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION								
Client: EES Coke Battery				Project #: 14796				
Facility: Zug Island				Run: 5				
Station: IN1				Technician (As-Left): TR				
SN: 201760				Technician (As-Found): TR				
TRANSFER STANDARDS								
TEMPERATURE and BP STANDARD				CALIBRATION ORIFICE				
Manufacturer: COMET				Manufacturer: Tisch		Qstd, m = 9.73032		
Model: C4141				Model: TE-5040A		Qstd, b = -0.02645		
SN: 22900118				SN: 438320		Qa, m = 6.09296		
Calibration Date: 08/31/22				Calibration Date: 08/01/22		Qa, b = -0.01674		
Calibration Due Date: 08/31/23				Calibration Due Date: 08/01/23				
CALIBRATION DATA								
Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	-0.5	1009.4	40	6.60	4.8	0.248	0.238	4.2%
As-Found	1.7	1010.7	40	6.58	4.8	0.247	0.237	4.2%
LINEAR REGRESSION								
Slope:	36.9876		Intercept:	-2.5561		Magn SP:	30	
Acceptance Criteria: < +/- 10.1% of working standard for all settings								
START / STOP SETTINGS								
Start Date: 12/20/22				Stop Date: 12/21/22				
Start Time (CST): 12:22				Stop Time (CST): 10:58				
Flow (Magn): 40				Flow (Magn): 40				
ADDITIONAL NOTES								



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION								
Client: EES Coke Battery				Project #: 14796				
Facility: Zug Island				Run: 5				
Station: IN2				Technician (As-Left): TR				
SN: 201749				Technician (As-Found): TR				
TRANSFER STANDARDS								
TEMPERATURE and BP STANDARD				CALIBRATION ORIFICE				
Manufacturer: COMET				Manufacturer: Tisch		Qstd, m = 9.73032		
Model: C4141				Model: TE-5040A		Qstd, b = -0.02645		
SN: 22900118				SN: 438320		Qa, m = 6.09296		
Calibration Date: 08/31/22				Calibration Date: 08/01/22		Qa, b = -0.01674		
Calibration Due Date: 08/31/23				Calibration Due Date: 08/01/23				
CALIBRATION DATA								
Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	-0.5	1009.4	40	6.60	4.4	0.228	0.228	0.1%
As-Found	1.7	1010.7	40	6.58	4.3	0.227	0.224	1.3%
LINEAR REGRESSION								
Slope:	31.7215		Intercept:	-0.6286		Magn SP:	39	
Acceptance Criteria: < +/- 10.1% of working standard for all settings								
START / STOP SETTINGS								
Start Date: 12/20/22				Stop Date: 12/21/22				
Start Time (CST): 13:05				Stop Time (CST): 11:15				
Flow (Magn): 38				Flow (Magn): 37				
ADDITIONAL NOTES								



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION

Client: EES Coke Battery
Facility: Zug Island
Station: DW1
SN: 209324

Project #: 14796
Run: 5

Technician (As-Left): TR
Technician (As-Found): TR

TRANSFER STANDARDS

TEMPERATURE and BP STANDARD

Manufacturer: COMET
Model: C4141
SN: 22900118
Calibration Date: 08/31/22
Calibration Due Date: 08/31/23

CALIBRATION ORIFICE

Manufacturer: Tisch
Model: TE-5040A
SN: 438320
Calibration Date: 08/01/22
Calibration Due Date: 08/01/23

Qstd, m = 9.73032
Qstd, b = -0.02645
Qa, m = 6.09296
Qa, b = -0.01674

CALIBRATION DATA

Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	-0.5	1009.4	40	6.60	4.6	0.230	0.233	-1.1%
As-Found	1.7	1010.7	40	6.58	4.5	0.230	0.229	0.0%

LINEAR REGRESSION

Slope: 30.0035 **Intercept:** -0.3093 **Magn SP:** 38

Acceptance Criteria: < +/- 10.1% of working standard for all settings

START / STOP SETTINGS

Start Date: 12/20/22
Start Time (CST): 11:40
Flow (Magn): 38

Stop Date: 12/21/22
Stop Time (CST): 10:30
Flow (Magn): 37

ADDITIONAL NOTES



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION

Client: EES Coke Battery
Facility: Zug Island
Station: DW2
SN: 204013

Project #: 14796
Run: 5

Technician (As-Left): TR
Technician (As-Found): TR

TRANSFER STANDARDS

TEMPERATURE and BP STANDARD

Manufacturer: COMET
Model: C4141
SN: 22900118
Calibration Date: 08/31/22
Calibration Due Date: 08/31/23

CALIBRATION ORIFICE

Manufacturer: Tisch
Model: TE-5040A
SN: 438320
Calibration Date: 08/01/22
Calibration Due Date: 08/01/23

Qstd, m = 9.73032
Qstd, b = -0.02645
Qa, m = 6.09296
Qa, b = -0.01674

CALIBRATION DATA

Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	-0.5	1009.4	40	6.60	4.8	0.230	0.238	-3.0%
As-Found	1.7	1010.7	40	6.58	4.7	0.230	0.234	-2.0%

LINEAR REGRESSION

Slope: 30.4360 **Intercept:** -0.4160 **Magn SP:** 38

Acceptance Criteria: < +/- 10.1% of working standard for all settings

START / STOP SETTINGS

Start Date: 12/20/22
Start Time (CST): 10:52
Flow (Magn): 38

Stop Date: 12/21/22
Stop Time (CST): 10:05
Flow (Magn): 36

ADDITIONAL NOTES



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION

Client: EES Coke Battery
Facility: Zug Island
Station: UPW
SN: 209388

Project #: 14796
Run: 5

Technician (As-Left): TR
Technician (As-Found): TR

TRANSFER STANDARDS

TEMPERATURE and BP STANDARD

Manufacturer: COMET
Model: C4141
SN: 22900118
Calibration Date: 08/31/22
Calibration Due Date: 08/31/23

CALIBRATION ORIFICE

Manufacturer: Tisch
Model: TE-5040A
SN: 438320
Calibration Date: 08/01/22
Calibration Due Date: 08/01/23

Qstd, m = 9.73032
Qstd, b = -0.02645
Qa, m = 6.09296
Qa, b = -0.01674

CALIBRATION DATA

Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	-0.5	1009.4	40	6.60	4.3	0.230	0.224	3.0%
As-Found	1.7	1010.7	40	6.58	4.4	0.230	0.227	1.3%

LINEAR REGRESSION

Slope: 30.4360 **Intercept:** -0.4160 **Magn SP:** 38

Acceptance Criteria: < +/- 10.1% of working standard for all settings

START / STOP SETTINGS

Start Date: 12/20/22
Start Time (CST): 14:00
Flow (Magn): 38

Stop Date: 12/21/22
Stop Time (CST): 12:10
Flow (Magn): 38

ADDITIONAL NOTES



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION

Client: EES Coke Battery
Facility: Zug Island
Station: IN1
SN: 201760

Project #: 14796
Run: 6

Technician (As-Left): TR
Technician (As-Found): TR

TRANSFER STANDARDS

TEMPERATURE and BP STANDARD

Manufacturer: COMET
Model: C4141
SN: 22900118
Calibration Date: 08/31/22
Calibration Due Date: 08/31/23

CALIBRATION ORIFICE

Manufacturer: Tisch
Model: TE-5040A
SN: 438320
Calibration Date: 08/01/22
Calibration Due Date: 08/01/23

Qstd, m = 9.73032
Qstd, b = -0.02645
Qa, m = 6.09296
Qa, b = -0.01674

CALIBRATION DATA

Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	12.9	982.0	40	6.35	4.9	0.231	0.230	0.5%
As-Found	4.1	989.8	40	6.48	4.9	0.235	0.236	-0.2%

LINEAR REGRESSION

Slope: 31.0699 **Intercept:** -0.82985 **Magn SP:** 37

Acceptance Criteria: < +/- 10.1% of working standard for all settings

START / STOP SETTINGS

Start Date: 01/04/23
Start Time (CST): 17:40
Flow (Magn): 40

Stop Date: 01/05/23
Stop Time (CST): 15:46
Flow (Magn): 40

ADDITIONAL NOTES



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION

Client: EES Coke Battery
Facility: Zug Island
Station: IN2
SN: 201749

Project #: 14796
Run: 6

Technician (As-Left): TR
Technician (As-Found): TR

TRANSFER STANDARDS

TEMPERATURE and BP STANDARD

Manufacturer: COMET
Model: C4141
SN: 22900118
Calibration Date: 08/31/22
Calibration Due Date: 08/31/23

CALIBRATION ORIFICE

Manufacturer: Tisch
Model: TE-5040A
SN: 438320
Calibration Date: 08/01/22
Calibration Due Date: 08/01/23

Qstd, m = 9.73032
Qstd, b = -0.02645
Qa, m = 6.09296
Qa, b = -0.01674

CALIBRATION DATA

Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	12.9	982.0	40	6.35	4.3	0.220	0.217	1.5%
As-Found	4.1	989.8	40	6.48	4.4	0.224	0.224	0.2%

LINEAR REGRESSION

Slope: 31.7215 **Intercept:** -0.6286 **Magn SP:** 42

Acceptance Criteria: < +/- 10.1% of working standard for all settings

START / STOP SETTINGS

Start Date: 01/04/23
Start Time (CST): 18:00
Flow (Magn): 40

Stop Date: 01/05/23
Stop Time (CST): 16:17
Flow (Magn): 40

ADDITIONAL NOTES



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION								
Client: EES Coke Battery				Project #: 14796				
Facility: Zug Island				Run: 6				
Station: DW1								
SN: 209324				Technician (As-Left): TR				
				Technician (As-Found): TR				
TRANSFER STANDARDS								
TEMPERATURE and BP STANDARD				CALIBRATION ORIFICE				
Manufacturer: COMET				Manufacturer: Tisch		Qstd, m = 9.73032		
Model: C4141				Model: TE-5040A		Qstd, b = -0.02645		
SN: 22900118				SN: 438320		Qa, m = 6.09296		
Calibration Date: 08/31/22				Calibration Date: 08/01/22		Qa, b = -0.01674		
Calibration Due Date: 08/31/23				Calibration Due Date: 08/01/23				
CALIBRATION DATA								
Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	12.9	982.0	40	6.35	4.7	0.222	0.227	-2.0%
As-Found	4.1	989.8	40	6.48	4.6	0.226	0.229	-1.0%
LINEAR REGRESSION								
Slope:	30.0035		Intercept:	-0.3093		Magn SP:	41	
Acceptance Criteria: < +/- 10.1% of working standard for all settings								
START / STOP SETTINGS								
Start Date: 01/04/23				Stop Date: 01/05/23				
Start Time (CST): 17:05				Stop Time (CST): 15:10				
Flow (Magn): 40				Flow (Magn): 40				
ADDITIONAL NOTES								



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION								
Client: EES Coke Battery				Project #: 14796				
Facility: Zug Island				Run: 6				
Station: DW2								
SN: 204013				Technician (As-Left): TR				
				Technician (As-Found): TR				
TRANSFER STANDARDS								
TEMPERATURE and BP STANDARD				CALIBRATION ORIFICE				
Manufacturer: COMET				Manufacturer: Tisch		Qstd, m = 9.73032		
Model: C4141				Model: TE-5040A		Qstd, b = -0.02645		
SN: 22900118				SN: 438320		Qa, m = 6.09296		
Calibration Date: 08/31/22				Calibration Date: 08/01/22		Qa, b = -0.01674		
Calibration Due Date: 08/31/23				Calibration Due Date: 08/01/23				
CALIBRATION DATA								
Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	12.9	982.0	40	6.35	4.6	0.222	0.224	-0.8%
As-Found	4.1	989.8	40	6.48	4.5	0.227	0.226	0.2%
LINEAR REGRESSION								
Slope:	30.4360		Intercept:	-0.4160		Magn SP:	41	
Acceptance Criteria: < +/- 10.1% of working standard for all settings								
START / STOP SETTINGS								
Start Date: 01/04/23				Stop Date: 01/05/23				
Start Time (CST): 15:51				Stop Time (CST): 14:18				
Flow (Magn): 40				Flow (Magn): 40				
ADDITIONAL NOTES								



TE - 1000 1-Point Flow Check TO-13A

STATION INFORMATION

Client: EES Coke Battery
Facility: Zug Island
Station: UPW
SN: 209388

Project #: 14796
Run: 6

Technician (As-Left): TR
Technician (As-Found): TR

TRANSFER STANDARDS

TEMPERATURE and BP STANDARD

Manufacturer: COMET
Model: C4141
SN: 22900118

Calibration Date: 08/31/22

Calibration Due Date: 08/31/23

CALIBRATION ORIFICE

Manufacturer: Tisch
Model: TE-5040A
SN: 438320

Calibration Date: 08/01/22

Calibration Due Date: 08/01/23

Qstd, m = 9.73032

Qstd, b = -0.02645

Qa, m = 6.09296

Qa, b = -0.01674

CALIBRATION DATA

Check	Temp	Bar Press	Flow	Flow	dP Meas.	Qstd	Qstd REF	Difference
--	(C)	(hPa)	(Magn)	(Corrected)	(in H2O)	(m ³ /min)	(m3/min)	(%)
As-Left	12.9	982.0	40	6.35	4.3	0.222	0.216	3.2%
As-Found	4.1	989.8	40	6.48	4.4	0.227	0.224	1.3%

LINEAR REGRESSION

Slope: 30.4360

Intercept: -0.4160

Magn SP: 41

Acceptance Criteria: < +/- 10.1% of working standard for all settings

START / STOP SETTINGS

Start Date: 01/04/23

Stop Date: 01/05/23

Start Time (CST): 18:35

Stop Time (CST): 16:55

Flow (Magn): 40

Flow (Magn): 40

ADDITIONAL NOTES

End of Appendix Section

APPENDIX D: LABORATORY DATA

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11/18/2022

Mr. Volker Schmid
Clean Air Engineering
110 Technology Drive

Pittsburgh PA 15275

Project Name: 14796
Project #:
Workorder #: 2211016

Dear Mr. Volker Schmid

The following report includes the data for the above referenced project for sample(s) received on 11/1/2022 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by EPA Method 325B are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kathleen Kaneko at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kathleen Kaneko
Project Manager

WORK ORDER #: 2211016

Work Order Summary

CLIENT: Mr. Volker Schmid
Clean Air Engineering
110 Technology Drive
Pittsburgh, PA 15275

BILL TO: Mr. Volker Schmid
Clean Air Engineering
110 Technology Drive
Pittsburgh, PA 15275

PHONE: 724-227-0148

P.O. # 3289

FAX:

PROJECT # 14796

DATE RECEIVED: 11/01/2022

CONTACT: Kathleen Kaneko

DATE COMPLETED: 11/18/2022

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
01A	m325-1-1	EPA Method 325B
02A	m325-1B-1	EPA Method 325B
03A	m325-2-1	EPA Method 325B
04A	m325-2D-1	EPA Method 325B
05A	m325-3-1	EPA Method 325B
06A	m325-4-1	EPA Method 325B
07A	m325-5-1	EPA Method 325B
08A	m325-6-1	EPA Method 325B
09A	m325-7-1	EPA Method 325B
10A	m325-7B-1	EPA Method 325B
11A	m325-8-1	EPA Method 325B
12A	m325-8D-1	EPA Method 325B
13A	m325-9-1	EPA Method 325B
14A	m325-10-1	EPA Method 325B
15A	m325-11-1	EPA Method 325B
16A	m325-12-1	EPA Method 325B
17A	Lab Blank	EPA Method 325B
18A	CCV	EPA Method 325B
18B	CCV	EPA Method 325B

CERTIFIED BY:



Technical Director

DATE: 11/18/22

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209221, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-21-17, UT NELAP – CA009332021-13, VA NELAP - 10615, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-015, Effective date: 10/18/2021, Expiration date: 10/17/2022.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
ATM EPA 325B
Clean Air Engineering
Workorder# 2211016

Sixteen Carbopack X CA-SF samples were received on November 01, 2022. The laboratory performed the analysis via EPA Method 325B using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the uptake rate for each VOC. Uptake rates are adjusted for local conditions and concentrations are reported based on normal ambient temperature and pressure conditions (25 deg C and 760 mm Hg) following the required calculations in EPA Method 325B. These adjustments are reflected in the dilution factor.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The field duplicate pair m325-2-1 and m325-2D-1 exceeded the method required 30%RPD criterion with a precision of 34 %RPD. As required by the method, associated sample results from the monitoring period are qualified to indicate method precision was not met. The data qualifier "Pc" was applied to indicate that the sample concentrations of the sample and/or its duplicate were less than 2 times the reporting limit which likely influenced the measured precision.

Definition of Data Qualifying Flags

The following qualifiers may have been used on the data analysis sheets and indicate as follows:

- B - Compound present in field blank(s) greater than 1/3 the compliance limit or measured target analyte (background subtraction not performed).
- J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the MDL value.
- I - Internal Standard recovery outside acceptance limits
- P - Field Duplicate(s) exceed 30%RPD
- Pc- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.
- PI - Field Duplicate(s) exceed 30%RPD, lab anomaly noted.
- L - Recovery of bracketing CCV(s) exceeded acceptance limits.
- H - Sample analyzed outside of method hold time.
- D - Sample duration outside 14+/-1 days
- Fe - Field Error or discrepancy
- Te - Tube Error or discrepancy
- CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Summary of Detected Compounds

EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: m325-1-1

Lab ID#: 2211016-01A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	2.4
Toluene	0.49	1.1
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.54 JPC
o-Xylene	0.55	0.28 U

Client Sample ID: m325-1B-1

Lab ID#: 2211016-02A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.19 U
Toluene	0.49	0.24 U
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.28 UPC
o-Xylene	0.55	0.28 U

Client Sample ID: m325-2-1

Lab ID#: 2211016-03A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.98
Toluene	0.49	0.69
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.39 JPC
o-Xylene	0.55	0.28 U

Client Sample ID: m325-2D-1

Lab ID#: 2211016-04A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: m325-2D-1

Lab ID#: 2211016-04A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.81
Toluene	0.49	0.54
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.28 UPC
o-Xylene	0.55	0.28 U

Client Sample ID: m325-3-1

Lab ID#: 2211016-05A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.8
Toluene	0.49	0.81
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.38 JPC
o-Xylene	0.55	0.28 U

Client Sample ID: m325-4-1

Lab ID#: 2211016-06A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	4.0
Toluene	0.49	1.5
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.73 PC
o-Xylene	0.55	0.28 U

Client Sample ID: m325-5-1

Lab ID#: 2211016-07A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: m325-5-1

Lab ID#: 2211016-07A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.8
Toluene	0.49	1.1
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.55 JPC
o-Xylene	0.55	0.28 U

Client Sample ID: m325-6-1

Lab ID#: 2211016-08A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.42
Toluene	0.49	0.56
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.33 JPC
o-Xylene	0.55	0.28 U

Client Sample ID: m325-7-1

Lab ID#: 2211016-09A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.46
Toluene	0.49	0.58
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.32 JPC
o-Xylene	0.55	0.28 U

Client Sample ID: m325-7B-1

Lab ID#: 2211016-10A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: m325-7B-1

Lab ID#: 2211016-10A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.19 U
Toluene	0.49	0.24 U
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.28 UPC
o-Xylene	0.55	0.28 U

Client Sample ID: m325-8-1

Lab ID#: 2211016-11A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.44
Toluene	0.49	0.57
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.32 JPC
o-Xylene	0.55	0.28 U

Client Sample ID: m325-8D-1

Lab ID#: 2211016-12A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.51
Toluene	0.49	0.55
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.28 UPC
o-Xylene	0.55	0.28 U

Client Sample ID: m325-9-1

Lab ID#: 2211016-13A

Summary of Detected Compounds

EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: m325-9-1

Lab ID#: 2211016-13A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.50
Toluene	0.49	0.56
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.29 JPC
o-Xylene	0.55	0.28 U

Client Sample ID: m325-10-1

Lab ID#: 2211016-14A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.48
Toluene	0.49	0.60
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.28 JPC
o-Xylene	0.55	0.28 U

Client Sample ID: m325-11-1

Lab ID#: 2211016-15A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.46
Toluene	0.49	0.54
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.28 UPC
o-Xylene	0.55	0.28 U

Client Sample ID: m325-12-1

Lab ID#: 2211016-16A

Summary of Detected Compounds

EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: m325-12-1

Lab ID#: 2211016-16A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.70
Toluene	0.49	0.60
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.30 JPC
o-Xylene	0.55	0.28 U



Air Toxics

Client Sample ID: m325-1-1

Lab ID#: 2211016-01A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80110806	Date of Collection: 10/26/22 12:43:00 P
Dil. Factor:	1.02	Date of Analysis: 11/8/22 12:28 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	2.4
Toluene	0.49	1.1
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.54 JPC
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Pc = Field duplicate(s) exceed 30% RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: m325-1B-1

Lab ID#: 2211016-02A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80110805	Date of Collection: 10/26/22 12:43:00 P
Dil. Factor:	1.02	Date of Analysis: 11/8/22 11:59 AM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.19 U
Toluene	0.49	0.24 U
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.28 UPC
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

Pc = Field duplicate(s) exceed 30% RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: m325-2-1

Lab ID#: 2211016-03A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80110807	Date of Collection: 10/26/22 10:40:00 A
Dil. Factor:	1.02	Date of Analysis: 11/8/22 12:56 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.98
Toluene	0.49	0.69
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.39 JPC
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Pc = Field duplicate(s) exceed 30% RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

Container Type: Carbopack X CA-SF

Client Sample ID: m325-2D-1

Lab ID#: 2211016-04A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80110808	Date of Collection: 10/26/22 10:40:00 A
Dil. Factor:	1.02	Date of Analysis: 11/8/22 01:24 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.81
Toluene	0.49	0.54
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.28 UPC
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

Pc = Field duplicate(s) exceed 30% RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: m325-3-1

Lab ID#: 2211016-05A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80110809	Date of Collection: 10/26/22 10:58:00 A
Dil. Factor:	1.02	Date of Analysis: 11/8/22 01:52 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.8
Toluene	0.49	0.81
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.38 JPC
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Pc = Field duplicate(s) exceed 30% RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

Container Type: Carbopack X CA-SF

Client Sample ID: m325-4-1

Lab ID#: 2211016-06A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80110810	Date of Collection: 10/26/22 11:10:00 A
Dil. Factor:	1.02	Date of Analysis: 11/8/22 02:21 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	4.0
Toluene	0.49	1.5
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.73 PC
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

PC = Field duplicate(s) exceed 30% RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: m325-5-1

Lab ID#: 2211016-07A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80110811	Date of Collection: 10/26/22 11:20:00 A
Dil. Factor:	1.02	Date of Analysis: 11/8/22 02:49 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.8
Toluene	0.49	1.1
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.55 JPC
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Pc = Field duplicate(s) exceed 30% RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

Container Type: Carbopack X CA-SF

Client Sample ID: m325-6-1

Lab ID#: 2211016-08A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80110812	Date of Collection: 10/26/22 1:30:00 PM
Dil. Factor:	1.02	Date of Analysis: 11/8/22 03:17 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.42
Toluene	0.49	0.56
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.33 JPC
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Pc = Field duplicate(s) exceed 30% RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

Container Type: Carbopack X CA-SF

Client Sample ID: m325-7-1

Lab ID#: 2211016-09A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80110813	Date of Collection: 10/26/22 1:26:00 PM
Dil. Factor:	1.02	Date of Analysis: 11/8/22 03:46 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.46
Toluene	0.49	0.58
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.32 JPC
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Pc = Field duplicate(s) exceed 30% RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: m325-7B-1

Lab ID#: 2211016-10A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80110821	Date of Collection: 10/26/22 1:26:00 PM
Dil. Factor:	1.02	Date of Analysis: 11/8/22 07:30 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.19 U
Toluene	0.49	0.24 U
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.28 UPC
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

Pc = Field duplicate(s) exceed 30% RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

Container Type: Carbopack X CA-SF

Client Sample ID: m325-8-1

Lab ID#: 2211016-11A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80110814	Date of Collection: 10/26/22 1:08:00 PM
Dil. Factor:	1.02	Date of Analysis: 11/8/22 04:14 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.44
Toluene	0.49	0.57
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.32 JPC
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Pc = Field duplicate(s) exceed 30% RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: m325-8D-1

Lab ID#: 2211016-12A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80110816	Date of Collection: 10/26/22 1:08:00 PM
Dil. Factor:	1.02	Date of Analysis: 11/8/22 05:09 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.51
Toluene	0.49	0.55
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.28 UPC
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

Pc = Field duplicate(s) exceed 30% RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: m325-9-1

Lab ID#: 2211016-13A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80110817	Date of Collection: 10/26/22 12:55:00 P
Dil. Factor:	1.02	Date of Analysis: 11/8/22 05:37 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.50
Toluene	0.49	0.56
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.29 JPC
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Pc = Field duplicate(s) exceed 30% RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: m325-10-1

Lab ID#: 2211016-14A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80110818	Date of Collection: 10/26/22 12:32:00 P
Dil. Factor:	1.02	Date of Analysis: 11/8/22 06:05 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.48
Toluene	0.49	0.60
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.28 JPC
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Pc = Field duplicate(s) exceed 30% RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: m325-11-1

Lab ID#: 2211016-15A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80110819	Date of Collection: 10/26/22 12:20:00 P
Dil. Factor:	1.02	Date of Analysis: 11/8/22 06:33 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.46
Toluene	0.49	0.54
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.28 UPC
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

Pc = Field duplicate(s) exceed 30% RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: m325-12-1

Lab ID#: 2211016-16A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80110820	Date of Collection: 10/26/22 12:10:00 P
Dil. Factor:	1.02	Date of Analysis: 11/8/22 07:02 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.70
Toluene	0.49	0.60
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.30 JPC
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Pc = Field duplicate(s) exceed 30% RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2211016-17A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80110804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/8/22 11:09 AM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.13 U
Benzene	0.37	0.18 U
Toluene	0.48	0.24 U
Ethyl Benzene	0.54	0.27 U
m,p-Xylene	0.54	0.27 UPC
o-Xylene	0.54	0.27 U

U = The analyte was not present above the Method Detection Limit.

Pc = Field duplicate(s) exceed 30% RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: CCV

Lab ID#: 2211016-18A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80110815	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/8/22 04:41 PM
		Date of Extraction: NA

Compound	%Recovery
----------	-----------

1,3-Butadiene	89
Benzene	89
Toluene	84
Ethyl Benzene	83
m,p-Xylene	86
o-Xylene	83

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: CCV

Lab ID#: 2211016-18B

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80110822	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/8/22 07:57 PM
		Date of Extraction: NA

Compound	%Recovery
----------	-----------

1,3-Butadiene	88
Benzene	91
Toluene	85
Ethyl Benzene	82
m,p-Xylene	84
o-Xylene	83

Container Type: NA - Not Applicable

Deploy Tubes by: 10/26/22
(Date)Kit ID: (A) B C D
(Circle One) 0982Case Seal#: 1875499Return Seal#: 1875500

WO#:

2211016

Client: <u>EES Coke Battery</u>			PID: <u>3289</u>			P.O.# <u>3289</u>			Sample Type (check one)		Target List		Turn Around Time:	
Project Name: <u>14796</u>			Project Manager: <u>Tim Rodak</u>										<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush Specify	
Site Name: <u>Zug Island</u>			Collected by: <u>TR</u>											
Lab ID	Sample Identification	Station	Carbopack X Tube ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Location (gps)	Routine Sample	Field Duplicate	Field Blank	Benzene	Project VOC list	Sample Comments:
01A	M325-1-1 (1)	1	1186104	10/12	12:43	10/26	12:43		✓				✓	① BTEX +1,3
02A	M325-1B-1 (1B)	1	1188421	10/12	11:43	10/26	12:43				✓		✓	FB Buted one
03A	M325-2-1 (2)	2	1188458	10/12	8:41	10/26	10:40		✓				✓	
04A	M325-2D-1 (1D)	2	1188455	10/12	8:41	10/26	10:40			✓			✓	duplicate
05A	M325-3-1 (3)	3	1188480	10/12	10:30	10/26	10:58		✓				✓	
06A	M325-4-1 (4)	4	1188486	10/12	10:10	10/26	11:10		✓				✓	
07A	M325-5-1 (5)	5	1188490	10/12	9:46	10/26	11:20		✓				✓	
08A	M325-6-1 (6)	6	1188498	10/12	13:16	10/26	13:30		✓				✓	
09A	M325-7-1 (7)	7	1188529	10/12	13:27	10/26	13:26		✓				✓	
10A	M325-7B-1 (7B)	7	1188542	10/12	13:27	10/26	13:26			② ✓			✓	Field blank
11A	M325-8-1 (8)	8	1188554	10/12	12:48	10/26	13:08		✓				✓	
12A	M325-8D-1 (7D)	8	1188534	10/12	12:48	10/26	13:08			✓			✓	duplicate
Relinquished by: <u>Tim Rodak</u>				Date	Time	Received by: <u>[Signature]</u>				Date	Time	Avg Ambient Temperature:		
				10/31	14:00					11/1/22	0920			
Relinquished by:				Date	Time	Received by:				Date	Time	Units: °F °C		
												Avg Barometric Pressure:		
Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.														
Units: hPa atm inHg mmHg														
Shipper Name: <u>Fedex</u>														
Custody Seals Intact? <u>Yes</u> <input checked="" type="checkbox"/> <u>No</u> <input type="checkbox"/> <u>None</u> <input type="checkbox"/>														
Blue Ice present or insulated cooler used? <input checked="" type="checkbox"/> <u>Yes</u> <input type="checkbox"/> <u>No</u>														
Sample Condition Upon Receipt: <u>Good</u>														

Deploy Tubes by: _____
(Date)

Kit ID: A B C D
(Circle One) 8982

Case Seal#: 1875499 Return Seal#: 1875500

WO#: 241814

209

11/30/2022

Mr. Volker Schmid
Clean Air Engineering
110 Technology Drive

Pittsburgh PA 15275

Project Name: 14796
Project #:
Workorder #: 2211386

Dear Mr. Volker Schmid

The following report includes the data for the above referenced project for sample(s) received on 11/16/2022 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by EPA Method 325B are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kathleen Kaneko at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kathleen Kaneko
Project Manager

WORK ORDER #: 2211386

Work Order Summary

CLIENT: Mr. Volker Schmid
Clean Air Engineering
110 Technology Drive
Pittsburgh, PA 15275

BILL TO: Mr. Volker Schmid
Clean Air Engineering
110 Technology Drive
Pittsburgh, PA 15275

PHONE: 724-227-0148

P.O. # 03291-44-14796

FAX:

PROJECT # 14796

DATE RECEIVED: 11/16/2022

CONTACT: Kathleen Kaneko

DATE COMPLETED: 11/30/2022

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
01A	1-1026-3	EPA Method 325B
02A	2-1026-3	EPA Method 325B
03A	3-1026-3A	EPA Method 325B
04A	3-1026-3B	EPA Method 325B
05A	4-1026-3A	EPA Method 325B
06A	4-1026-3B	EPA Method 325B
07A	5-1026-3	EPA Method 325B
08A	6-1026-3	EPA Method 325B
09A	7-1026-3	EPA Method 325B
10A	8-1026-3A	EPA Method 325B
11A	8-1026-3B	EPA Method 325B
12A	9-1026-3A	EPA Method 325B
13A	9-1026-3B	EPA Method 325B
14A	10-1026-3	EPA Method 325B
15A	11-1026-3	EPA Method 325B
16A	12-1026-3	EPA Method 325B
17A	Lab Blank	EPA Method 325B
18A	CCV	EPA Method 325B
18B	CCV	EPA Method 325B

CERTIFIED BY:



Technical Director

DATE: 11/30/22

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209221, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-21-17, UT NELAP – CA009332021-13, VA NELAP - 10615, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-015, Effective date: 10/18/2021, Expiration date: 10/17/2022.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
ATM EPA 325B
Clean Air Engineering
Workorder# 2211386

Sixteen Carbopack X CA-SF samples were received on November 16, 2022. The laboratory performed the analysis via EPA Method 325B using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the uptake rate for each VOC. Uptake rates are adjusted for local conditions and concentrations are reported based on normal ambient temperature and pressure conditions (25 deg C and 760 mm Hg) following the required calculations in EPA Method 325B. These adjustments are reflected in the dilution factor.

Receiving Notes

Sample 5-1026-3 was received with loose storage caps. Caps were affixed to the sampling end, but not fully tightened. All sample tubes were received securely in their storage vials. After notification to the client, sample analysis proceeded.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

The following qualifiers may have been used on the data analysis sheets and indicate as follows:

- B - Compound present in field blank(s) greater than 1/3 the compliance limit or measured target analyte (background subtraction not performed).
- J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the MDL value.
- I - Internal Standard recovery outside acceptance limits
- P - Field Duplicate(s) exceed 30%RPD
- Pc- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.
- Pl - Field Duplicate(s) exceed 30%RPD, lab anomaly noted.
- L - Recovery of bracketing CCV(s) exceeded acceptance limits.
- H - Sample analyzed outside of method hold time.
- D - Sample duration outside 14+/-1 days
- Fe - Field Error or discrepancy
- Te - Tube Error or discrepancy
- CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified

b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Summary of Detected Compounds

EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 1-1026-3

Lab ID#: 2211386-01A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	2.4
Toluene	0.49	2.1
Ethyl Benzene	0.55	0.29 J
m,p-Xylene	0.55	1.0
o-Xylene	0.55	0.41 J

Client Sample ID: 2-1026-3

Lab ID#: 2211386-02A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	0.91
Toluene	0.49	1.6
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.85
o-Xylene	0.55	0.31 J

Client Sample ID: 3-1026-3A

Lab ID#: 2211386-03A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	1.2
Toluene	0.49	1.6
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.83
o-Xylene	0.55	0.32 J

Client Sample ID: 3-1026-3B

Lab ID#: 2211386-04A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 3-1026-3B

Lab ID#: 2211386-04A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	1.0
Toluene	0.49	1.5
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.78
o-Xylene	0.55	0.29 J

Client Sample ID: 4-1026-3A

Lab ID#: 2211386-05A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	2.0
Toluene	0.49	1.8
Ethyl Benzene	0.55	0.28 J
m,p-Xylene	0.55	0.98
o-Xylene	0.55	0.35 J

Client Sample ID: 4-1026-3B

Lab ID#: 2211386-06A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	0.19 U
Toluene	0.49	0.24 U
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.28 U
o-Xylene	0.55	0.28 U

Client Sample ID: 5-1026-3

Lab ID#: 2211386-07A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 5-1026-3

Lab ID#: 2211386-07A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	1.9
Toluene	0.49	1.8
Ethyl Benzene	0.55	0.29 J
m,p-Xylene	0.55	0.88
o-Xylene	0.55	0.35 J

Client Sample ID: 6-1026-3

Lab ID#: 2211386-08A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	1.2
Toluene	0.49	1.4
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.73
o-Xylene	0.55	0.28 U

Client Sample ID: 7-1026-3

Lab ID#: 2211386-09A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	1.0
Toluene	0.49	1.4
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.64
o-Xylene	0.55	0.28 U

Client Sample ID: 8-1026-3A

Lab ID#: 2211386-10A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 8-1026-3A

Lab ID#: 2211386-10A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	1.0
Toluene	0.49	1.3
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.58
o-Xylene	0.55	0.28 U

Client Sample ID: 8-1026-3B

Lab ID#: 2211386-11A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	1.1
Toluene	0.49	1.4
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.62
o-Xylene	0.55	0.28 U

Client Sample ID: 9-1026-3A

Lab ID#: 2211386-12A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	1.2
Toluene	0.49	1.4
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.75
o-Xylene	0.55	0.28 U

Client Sample ID: 9-1026-3B

Lab ID#: 2211386-13A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 9-1026-3B

Lab ID#: 2211386-13A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	0.19 U
Toluene	0.49	0.24 U
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.28 U
o-Xylene	0.55	0.28 U

Client Sample ID: 10-1026-3

Lab ID#: 2211386-14A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	1.1
Toluene	0.49	1.7
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.81
o-Xylene	0.55	0.28 J

Client Sample ID: 11-1026-3

Lab ID#: 2211386-15A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	0.96
Toluene	0.49	1.6
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.76
o-Xylene	0.55	0.29 J

Client Sample ID: 12-1026-3

Lab ID#: 2211386-16A

Summary of Detected Compounds
EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 12-1026-3

Lab ID#: 2211386-16A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	0.90
Toluene	0.49	1.8
Ethyl Benzene	0.55	0.29 J
m,p-Xylene	0.55	0.93
o-Xylene	0.55	0.35 J



Air Toxics

Client Sample ID: 1-1026-3

Lab ID#: 2211386-01A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10112108	Date of Collection: 11/9/22 12:43:00 PM
Dil. Factor:	1.02	Date of Analysis: 11/21/22 01:32 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	2.4
Toluene	0.49	2.1
Ethyl Benzene	0.55	0.29 J
m,p-Xylene	0.55	1.0
o-Xylene	0.55	0.41 J

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 2-1026-3

Lab ID#: 2211386-02A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10112109	Date of Collection: 11/9/22 12:55:00 PM
Dil. Factor:	1.02	Date of Analysis: 11/21/22 02:01 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	0.91
Toluene	0.49	1.6
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.85
o-Xylene	0.55	0.31 J

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 3-1026-3A

Lab ID#: 2211386-03A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10112110	Date of Collection: 11/9/22 10:30:00 AM
Dil. Factor:	1.02	Date of Analysis: 11/21/22 02:31 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	1.2
Toluene	0.49	1.6
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.83
o-Xylene	0.55	0.32 J

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 3-1026-3B

Lab ID#: 2211386-04A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10112111	Date of Collection: 11/9/22 10:30:00 AM
Dil. Factor:	1.02	Date of Analysis: 11/21/22 03:00 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	1.0
Toluene	0.49	1.5
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.78
o-Xylene	0.55	0.29 J

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 4-1026-3A

Lab ID#: 2211386-05A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10112112	Date of Collection: 11/9/22 10:53:00 AM
Dil. Factor:	1.02	Date of Analysis: 11/21/22 03:29 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	2.0
Toluene	0.49	1.8
Ethyl Benzene	0.55	0.28 J
m,p-Xylene	0.55	0.98
o-Xylene	0.55	0.35 J

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 4-1026-3B

Lab ID#: 2211386-06A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10112107	Date of Collection: 11/9/22 10:53:00 AM
Dil. Factor:	1.02	Date of Analysis: 11/21/22 01:03 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	0.19 U
Toluene	0.49	0.24 U
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.28 U
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 5-1026-3

Lab ID#: 2211386-07A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10112113	Date of Collection: 11/9/22 11:00:00 AM
Dil. Factor:	1.02	Date of Analysis: 11/21/22 03:58 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	1.9
Toluene	0.49	1.8
Ethyl Benzene	0.55	0.29 J
m,p-Xylene	0.55	0.88
o-Xylene	0.55	0.35 J

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF

Client Sample ID: 6-1026-3

Lab ID#: 2211386-08A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10112114	Date of Collection: 11/9/22 11:21:00 AM
Dil. Factor:	1.02	Date of Analysis: 11/21/22 04:27 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	1.2
Toluene	0.49	1.4
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.73
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

Container Type: Carbopack X CA-SF

Client Sample ID: 7-1026-3

Lab ID#: 2211386-09A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10112115	Date of Collection: 11/9/22 11:28:00 AM
Dil. Factor:	1.02	Date of Analysis: 11/21/22 04:57 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	1.0
Toluene	0.49	1.4
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.64
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 8-1026-3A

Lab ID#: 2211386-10A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10112116	Date of Collection: 11/9/22 11:49:00 AM
Dil. Factor:	1.02	Date of Analysis: 11/21/22 05:26 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	1.0
Toluene	0.49	1.3
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.58
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 8-1026-3B

Lab ID#: 2211386-11A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10112118	Date of Collection: 11/9/22 11:49:00 AM
Dil. Factor:	1.02	Date of Analysis: 11/21/22 06:24 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	1.1
Toluene	0.49	1.4
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.62
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 9-1026-3A

Lab ID#: 2211386-12A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10112119	Date of Collection: 11/9/22 11:39:00 AM
Dil. Factor:	1.02	Date of Analysis: 11/21/22 06:53 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	1.2
Toluene	0.49	1.4
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.75
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 9-1026-3B

Lab ID#: 2211386-13A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10112123	Date of Collection: 11/9/22 11:39:00 AM
Dil. Factor:	1.02	Date of Analysis: 11/21/22 08:50 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	0.19 U
Toluene	0.49	0.24 U
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.28 U
o-Xylene	0.55	0.28 U

U = The analyte was not present above the Method Detection Limit.

Container Type: Carbopack X CA-SF

Client Sample ID: 10-1026-3

Lab ID#: 2211386-14A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10112120	Date of Collection: 11/9/22 12:28:00 PM
Dil. Factor:	1.02	Date of Analysis: 11/21/22 07:22 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	1.1
Toluene	0.49	1.7
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.81
o-Xylene	0.55	0.28 J

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 11-1026-3

Lab ID#: 2211386-15A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10112121	Date of Collection: 11/9/22 12:14:00 PM
Dil. Factor:	1.02	Date of Analysis: 11/21/22 07:52 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	0.96
Toluene	0.49	1.6
Ethyl Benzene	0.55	0.28 U
m,p-Xylene	0.55	0.76
o-Xylene	0.55	0.29 J

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 12-1026-3

Lab ID#: 2211386-16A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10112122	Date of Collection: 11/9/22 12:00:00 PM
Dil. Factor:	1.02	Date of Analysis: 11/21/22 08:21 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.14 U
Benzene	0.38	0.90
Toluene	0.49	1.8
Ethyl Benzene	0.55	0.29 J
m,p-Xylene	0.55	0.93
o-Xylene	0.55	0.35 J

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF

Client Sample ID: Lab Blank

Lab ID#: 2211386-17A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10112106	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/21/22 12:03 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.13 U
Benzene	0.37	0.18 U
Toluene	0.48	0.24 U
Ethyl Benzene	0.54	0.27 U
m,p-Xylene	0.54	0.27 U
o-Xylene	0.54	0.27 U

U = The analyte was not present above the Method Detection Limit.

Container Type: NA - Not Applicable

Client Sample ID: CCV

Lab ID#: 2211386-18A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10112117	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/21/22 05:55 PM
		Date of Extraction: NA

Compound	%Recovery
----------	-----------

1,3-Butadiene	93
Benzene	104
Toluene	104
Ethyl Benzene	115
m,p-Xylene	114
o-Xylene	118

Container Type: NA - Not Applicable

Client Sample ID: CCV

Lab ID#: 2211386-18B

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10112128	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/21/22 11:16 PM
		Date of Extraction: NA

Compound	%Recovery
----------	-----------

1,3-Butadiene	98
Benzene	99
Toluene	103
Ethyl Benzene	114
m,p-Xylene	116
o-Xylene	113

Container Type: NA - Not Applicable



Air Toxics

EPA Method 325 Chain of Custody (Passive)

Page 2211386

Deploy Tubes by: 11/4/22
(Date)Kit ID: A B C D
(Circle One)

Case Seal#: 1875529 Return Seal#: 1875530

WO#:

Client: Clean Air BSS Cove Battery

PID:

P.O.#

Project Name: 14796

Project Manager:

Tim Rodak
Tim Rodak

Site Name: Zvg Island

Collected by:

Sample Type
(check one)

Target List

Turn Around Time:



Normal



Rush

Specify

Sample Comments:

Lab ID	Sample Identification	Station	Carbopack X Tube ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Location (gps)	Routine Sample	Field Duplicate	Field Blank	Benzene	Project VOC list
01A	1-1026-3(1)	1	1185776	10/26	1243	11/9	1243		✓				✓
02A	2-1026-3(2)	2	1185930	10/26	1040	11/9	1255		✓				✓
03A	3-1026-3A(3)	3	1186149	10/26	1058	11/9	1030		✓				✓
04A	3-1026-3B(4)	3	1186385	10/26	1058	11/9	1030			✓			✓
05A	4-1026-3A(4)	4	1186177	10/26	1110	11/9	1053		✓				✓
06A	4-1026-3B(6)	4	1185896	10/26	1110	11/9	1053				✓		✓
07A	5-1026-3(5)	5	1186338	10/26	1120	11/9	1100		✓				✓
08A	6-1026-3(6)	6	1186359	10/26	1330	11/9	1121		✓				✓
09A	7-1026-3(7)	7	1186370	10/26	1326	11/9	1128		✓				✓
10A	8-1026-3A(8)	8	1186487	10/26	1308	11/9	1149		✓				✓
11A	8-1026-3B(10)	8	1185850	10/26	1308	11/9	1149			✓			✓
12A	9-1026-3A(9)	9	1186562	10/26	1255	11/9	1139		✓				✓
13A	9-1026-3B(10)	9	1186392	10/26	1255	11/9	1139				✓		✓

Relinquished by:

Date

Time

Received by:

Date

Time

Avg Ambient Temperature:

Relinquished by:

Date

Time

Received by:

Date

Time

Units: °F °C

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Avg Barometric Pressure:

Units: hPa atm inHg mmHg

Lab Use Only

Shipper Name: Fedex

Custody Seals Intact?

Yes

No

None

Blue Ice present or insulated cooler used?

Yes

No

Sample Condition Upon Receipt:

Good

Eurofins Air Toxics, Inc. 180 Blue Ravine Rd. Suite B Folsom, CA 95630 (916) 985-1000 Fax: (916) 351-8279

Page ____ of ____

Deploy Tubes by: _____
(Date)

Kit ID: A B C D
(Circle One)

Case Seal#:

Return Seal#:

WO#:

22/384

240

12/9/2022

Mr. Volker Schmid
Clean Air Engineering
110 Technology Drive

Pittsburgh PA 15275

Project Name: 14796

Project #:

Workorder #: 2211681

Dear Mr. Volker Schmid

The following report includes the data for the above referenced project for sample(s) received on 11/28/2022 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by EPA Method 325B are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kathleen Kaneko at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kathleen Kaneko
Project Manager

WORK ORDER #: 2211681

Work Order Summary

CLIENT: Mr. Volker Schmid
Clean Air Engineering
110 Technology Drive
Pittsburgh, PA 15275

BILL TO: Mr. Volker Schmid
Clean Air Engineering
110 Technology Drive
Pittsburgh, PA 15275

PHONE: 724-227-0148

P.O. # 03291-44-14796

FAX:

PROJECT # 14796

DATE RECEIVED: 11/28/2022

CONTACT: Kathleen Kaneko

DATE COMPLETED: 12/09/2022

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
01A	1-1109-33-1	EPA Method 325B
02A	2-1109-33-2	EPA Method 325B
03A	3-1109-33-3	EPA Method 325B
04A	4-1109-33-4	EPA Method 325B
05A	5-1109-33-5	EPA Method 325B
06A	5-1109-33-7B	EPA Method 325B
07A	6-1109-33-7D	EPA Method 325B
08A	6-1109-33-6	EPA Method 325B
09A	7-1109-33-7	EPA Method 325B
10A	8-1109-33-8	EPA Method 325B
11A	9-1109-33-9	EPA Method 325B
12A	9-1109-33-1D	EPA Method 325B
13A	10-1109-33-11	EPA Method 325B
14A	11-1109-33-10	EPA Method 325B
15A	12-1109-33-12	EPA Method 325B
16A	10-1109-33-1B	EPA Method 325B
17A	Lab Blank	EPA Method 325B
18A	CCV	EPA Method 325B
18B	CCV	EPA Method 325B

CERTIFIED BY:



Technical Director

DATE: 12/09/22

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209221, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-21-17, UT NELAP – CA009332021-13, VA NELAP - 10615, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-015, Effective date: 10/18/2021, Expiration date: 10/17/2022.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
ATM EPA 325B
Clean Air Engineering
Workorder# 2211681

Sixteen Carbopack X CA-SF samples were received on November 28, 2022. Sixteen Carbopack X CA-SF samples were received on November 28, 2022. The laboratory performed the analysis via EPA Method 325B using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the uptake rate for each VOC. Uptake rates are adjusted for local conditions and concentrations are reported based on normal ambient temperature and pressure conditions (25 deg C and 760 mm Hg) following the required calculations in EPA Method 325B. These adjustments are reflected in the dilution factor.

Receiving Notes

There were no receiving discrepancy.

Analytical Notes

All samples were collected over a 13-day period.

Definition of Data Qualifying Flags

The following qualifiers may have been used on the data analysis sheets and indicate as follows:

- B - Compound present in field blank(s) greater than 1/3 the compliance limit or measured target analyte (background subtraction not performed).
- J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the MDL value.
- I - Internal Standard recovery outside acceptance limits
- P - Field Duplicate(s) exceed 30%RPD
- Pc- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.
- Pl - Field Duplicate(s) exceed 30%RPD, lab anomaly noted.
- L - Recovery of bracketing CCV(s) exceeded acceptance limits.
- H - Sample analyzed outside of method hold time.
- D - Sample duration outside 14+/-1 days
- Fe - Field Error or discrepancy
- Te - Tube Error or discrepancy
- CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 1-1109-33-1

Lab ID#: 2211681-01A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	1.2
Toluene	0.53	0.92
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.39 J
o-Xylene	0.60	0.30 U

Client Sample ID: 2-1109-33-2

Lab ID#: 2211681-02A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	1.4
Toluene	0.53	0.86
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.33 J
o-Xylene	0.60	0.30 U

Client Sample ID: 3-1109-33-3

Lab ID#: 2211681-03A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	1.8
Toluene	0.53	0.98
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.42 J
o-Xylene	0.60	0.30 U

Client Sample ID: 4-1109-33-4

Lab ID#: 2211681-04A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 4-1109-33-4

Lab ID#: 2211681-04A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	4.1
Toluene	0.53	1.6
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.78
o-Xylene	0.60	0.30 U

Client Sample ID: 5-1109-33-5

Lab ID#: 2211681-05A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	2.1
Toluene	0.53	1.1
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.48 J
o-Xylene	0.60	0.30 U

Client Sample ID: 5-1109-33-7B

Lab ID#: 2211681-06A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	2.0
Toluene	0.53	1.1
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.51 J
o-Xylene	0.60	0.30 U

Client Sample ID: 6-1109-33-7D

Lab ID#: 2211681-07A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 6-1109-33-7D

Lab ID#: 2211681-07A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	0.63
Toluene	0.53	0.70
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.32 J
o-Xylene	0.60	0.30 U

Client Sample ID: 6-1109-33-6

Lab ID#: 2211681-08A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	0.21 U
Toluene	0.53	0.27 U
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.30 U
o-Xylene	0.60	0.30 U

Client Sample ID: 7-1109-33-7

Lab ID#: 2211681-09A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	0.55
Toluene	0.53	0.80
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.46 J
o-Xylene	0.60	0.30 U

Client Sample ID: 8-1109-33-8

Lab ID#: 2211681-10A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 8-1109-33-8

Lab ID#: 2211681-10A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	0.92
Toluene	0.53	0.84
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.32 J
o-Xylene	0.60	0.30 U

Client Sample ID: 9-1109-33-9

Lab ID#: 2211681-11A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	0.95
Toluene	0.53	0.92
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.39 J
o-Xylene	0.60	0.30 U

Client Sample ID: 9-1109-33-1D

Lab ID#: 2211681-12A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	0.89
Toluene	0.53	0.89
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.38 J
o-Xylene	0.60	0.30 U

Client Sample ID: 10-1109-33-11

Lab ID#: 2211681-13A

Summary of Detected Compounds

EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 10-1109-33-11

Lab ID#: 2211681-13A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	0.43
Toluene	0.53	0.62
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.30 U
o-Xylene	0.60	0.30 U

Client Sample ID: 11-1109-33-10

Lab ID#: 2211681-14A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	0.50
Toluene	0.53	0.67
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.32 J
o-Xylene	0.60	0.30 U

Client Sample ID: 12-1109-33-12

Lab ID#: 2211681-15A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	0.59
Toluene	0.53	1.0
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.55 J
o-Xylene	0.60	0.30 U

Client Sample ID: 10-1109-33-1B

Lab ID#: 2211681-16A

Summary of Detected Compounds
EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 10-1109-33-1B

Lab ID#: 2211681-16A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	0.21 U
Toluene	0.53	0.27 U
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.30 U
o-Xylene	0.60	0.30 U



Air Toxics

Client Sample ID: 1-1109-33-1

Lab ID#: 2211681-01A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10120106	Date of Collection: 11/22/22 1:50:00 PM
Dil. Factor:	1.04	Date of Analysis: 12/1/22 12:22 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	1.2
Toluene	0.53	0.92
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.39 J
o-Xylene	0.60	0.30 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 2-1109-33-2

Lab ID#: 2211681-02A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10120107	Date of Collection: 11/22/22 11:00:00 A
Dil. Factor:	1.04	Date of Analysis: 12/1/22 12:51 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	1.4
Toluene	0.53	0.86
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.33 J
o-Xylene	0.60	0.30 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 3-1109-33-3

Lab ID#: 2211681-03A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10120108	Date of Collection: 11/22/22 11:22:00 A
Dil. Factor:	1.04	Date of Analysis: 12/1/22 01:20 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	1.8
Toluene	0.53	0.98
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.42 J
o-Xylene	0.60	0.30 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF

Client Sample ID: 4-1109-33-4

Lab ID#: 2211681-04A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10120109	Date of Collection: 11/22/22 11:33:00 A
Dil. Factor:	1.04	Date of Analysis: 12/1/22 01:49 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	4.1
Toluene	0.53	1.6
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.78
o-Xylene	0.60	0.30 U

U = The analyte was not present above the Method Detection Limit.

Container Type: Carbopack X CA-SF

Client Sample ID: 5-1109-33-5

Lab ID#: 2211681-05A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10120110	Date of Collection: 11/22/22 11:42:00 A
Dil. Factor:	1.04	Date of Analysis: 12/1/22 02:18 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	2.1
Toluene	0.53	1.1
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.48 J
o-Xylene	0.60	0.30 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 5-1109-33-7B

Lab ID#: 2211681-06A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10120105	Date of Collection: 11/22/22 11:44:00 A
Dil. Factor:	1.04	Date of Analysis: 12/1/22 11:53 AM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	2.0
Toluene	0.53	1.1
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.51 J
o-Xylene	0.60	0.30 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 6-1109-33-7D

Lab ID#: 2211681-07A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10120111	Date of Collection: 11/22/22 12:35:00 P
Dil. Factor:	1.04	Date of Analysis: 12/1/22 02:47 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	0.63
Toluene	0.53	0.70
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.32 J
o-Xylene	0.60	0.30 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 6-1109-33-6

Lab ID#: 2211681-08A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10120112	Date of Collection: 11/22/22 12:36:00 P
Dil. Factor:	1.04	Date of Analysis: 12/1/22 03:16 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	0.21 U
Toluene	0.53	0.27 U
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.30 U
o-Xylene	0.60	0.30 U

U = The analyte was not present above the Method Detection Limit.

Container Type: Carbopack X CA-SF

Client Sample ID: 7-1109-33-7

Lab ID#: 2211681-09A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10120113	Date of Collection: 11/22/22 1:22:00 PM
Dil. Factor:	1.04	Date of Analysis: 12/1/22 03:45 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	0.55
Toluene	0.53	0.80
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.46 J
o-Xylene	0.60	0.30 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF

Client Sample ID: 8-1109-33-8

Lab ID#: 2211681-10A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10120114	Date of Collection: 11/22/22 1:23:00 PM
Dil. Factor:	1.04	Date of Analysis: 12/1/22 04:15 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	0.92
Toluene	0.53	0.84
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.32 J
o-Xylene	0.60	0.30 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 9-1109-33-9

Lab ID#: 2211681-11A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10120116	Date of Collection: 11/22/22 1:15:00 PM
Dil. Factor:	1.04	Date of Analysis: 12/1/22 05:13 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	0.95
Toluene	0.53	0.92
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.39 J
o-Xylene	0.60	0.30 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 9-1109-33-1D

Lab ID#: 2211681-12A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10120117	Date of Collection: 11/22/22 1:16:00 PM
Dil. Factor:	1.04	Date of Analysis: 12/1/22 05:42 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	0.89
Toluene	0.53	0.89
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.38 J
o-Xylene	0.60	0.30 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 10-1109-33-11

Lab ID#: 2211681-13A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10120118	Date of Collection: 11/22/22 2:42:00 PM
Dil. Factor:	1.04	Date of Analysis: 12/1/22 06:12 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	0.43
Toluene	0.53	0.62
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.30 U
o-Xylene	0.60	0.30 U

U = The analyte was not present above the Method Detection Limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 11-1109-33-10

Lab ID#: 2211681-14A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10120119	Date of Collection: 11/22/22 2:52:00 PM
Dil. Factor:	1.04	Date of Analysis: 12/1/22 06:41 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	0.50
Toluene	0.53	0.67
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.32 J
o-Xylene	0.60	0.30 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 12-1109-33-12

Lab ID#: 2211681-15A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10120120	Date of Collection: 11/22/22 2:13:00 PM
Dil. Factor:	1.04	Date of Analysis: 12/1/22 07:10 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	0.59
Toluene	0.53	1.0
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.55 J
o-Xylene	0.60	0.30 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 10-1109-33-1B

Lab ID#: 2211681-16A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10120121	Date of Collection: 11/22/22 2:43:00 PM
Dil. Factor:	1.04	Date of Analysis: 12/1/22 07:40 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.31	0.15 U
Benzene	0.42	0.21 U
Toluene	0.53	0.27 U
Ethyl Benzene	0.60	0.30 U
m,p-Xylene	0.60	0.30 U
o-Xylene	0.60	0.30 U

U = The analyte was not present above the Method Detection Limit.

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2211681-17A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10120104	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/1/22 11:02 AM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.30	0.14 U
Benzene	0.40	0.20 U
Toluene	0.51	0.26 U
Ethyl Benzene	0.58	0.29 U
m,p-Xylene	0.58	0.29 U
o-Xylene	0.58	0.29 U

U = The analyte was not present above the Method Detection Limit.

Container Type: NA - Not Applicable

Client Sample ID: CCV

Lab ID#: 2211681-18A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10120115	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/1/22 04:44 PM
		Date of Extraction: NA

Compound	%Recovery
----------	-----------

1,3-Butadiene	103
Benzene	96
Toluene	96
Ethyl Benzene	94
m,p-Xylene	99
o-Xylene	98

Container Type: NA - Not Applicable

Client Sample ID: CCV

Lab ID#: 2211681-18B

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10120126	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/1/22 10:06 PM
		Date of Extraction: NA

Compound	%Recovery
1,3-Butadiene	101
Benzene	98
Toluene	97
Ethyl Benzene	98
m,p-Xylene	102
o-Xylene	100

Container Type: NA - Not Applicable

Deploy Tubes by: 11/19/22
(Date)Kit ID: A B C D
(Circle One)

Case Seal#: 1875585

Return Seal#: 1875586

WO#:

2211681

Client: BN Clean Air Engineering

PID:

P.O.# 03291-44-14796

Project Name:

14796

Project Manager:

Tim Rodak

Site Name:

Lug Island

Collected by:

SGSample Type
(check one)

Target List

Turn Around Time:

☒ Normal☐ Rush

Specify

Sample Comments:

Lab ID	Sample Identification	Station	Carbopack X Tube ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Location (gps)	Routine Sample	Field Duplicate	Field Blank	Benzene	Project VOC list	Sample Comments:
01A	1-1109-33-1	1	1185712	11/19/22	12:43	11/22/22	13:50		✓				✓	
02A	2-1109-33-2	2	1188102	11/19/22	12:55	11/22/22	11:00		✓				✓	
03A	3-1109-33-3	3	1188105	11/19/22	10:30	11/22/22	11:22		✓				✓	
04A	4-1109-33-4	4	1188117	11/19/22	10:56	11/22/22	11:33		✓				✓	
05A	5-1109-33-5	5	1188125	11/19/22	11:04	11/22/22	11:42		✓				✓	
06A	5-1109-33-7B	5	1188145	11/19/22	11:04	11/22/22	11:44			✓	<u>SG</u>		✓	Field Duplicate
07A	6-1109-33-7D	6	1188136	11/19/22	11:24	11/22/22	12:35		✓				✓	
08A	6-1109-33-6	6	1188151	11/19/22	11:24	11/22/22	12:36				✓		✓	
09A	7-1109-33-7	7	1188137	11/19/22	11:29	11/22/22	13:22		✓				✓	
10A	8-1109-33-8	8	1188179	11/19/22	11:51	11/22/22	13:23		✓				✓	
11A	9-1109-33-9	9	1188180	11/19/22	11:43	11/22/22	13:15		✓				✓	
12A	9-1109-33-1D	9	1185743	11/19/22	11:43	11/22/22	13:16			✓			✓	
13A	10-1109-33-11	10	1188203	11/19/22	12:30	11/22/22	14:42		✓				✓	

Relinquished by:

9

Date

11/23/22

Time

12:45

Received by:

BN Clean

Date

11/28/22

Time

1008

Avg Ambient Temperature:

Relinquished by:

Date

Time

Received by:

Date

Time

Units: °F °C

Avg Barometric Pressure:

Units: hPa atm inHg mmHg

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind.
 Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name:

FedExFedEx

Custody Seals Intact?

Yes

No

None

Blue Ice present or insulated cooler used?

Yes

No

Sample Condition Upon Receipt:

Good

Return Seal#:

221401

Turn Around Time:

☒ Normal☐ Rush

Specify

Sample Comments:

Avg Ambient Temperature:	
--------------------------	--

Units: °F °C

Avg Barometric Pressure:

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind.
Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Units: hPa atm inHg mmHg

NI-

Sample Condition Upon Receipt:

12/22/2022

Mr. Volker Schmid
Clean Air Engineering
110 Technology Drive

Pittsburgh PA 15275

Project Name: 14796
Project #:
Workorder #: 2212198

Dear Mr. Volker Schmid

The following report includes the data for the above referenced project for sample(s) received on 12/9/2022 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by EPA Method 325B are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kathleen Kaneko at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kathleen Kaneko
Project Manager

WORK ORDER #: 2212198

Work Order Summary

CLIENT: Mr. Volker Schmid
Clean Air Engineering
110 Technology Drive
Pittsburgh, PA 15275

BILL TO: Mr. Volker Schmid
Clean Air Engineering
110 Technology Drive
Pittsburgh, PA 15275

PHONE: 724-227-0148

P.O. # 3289

FAX:

PROJECT # 14796

DATE RECEIVED: 12/09/2022

CONTACT: Kathleen Kaneko

DATE COMPLETED: 12/22/2022

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
01A	2-1122-4-9	EPA Method 325B
02A	3-1122-4-8	EPA Method 325B
03A	4-1122-4-5	EPA Method 325B
04A	5-1122-4-1B	EPA Method 325B
05A	7-1122-4-6	EPA Method 325B
06A	7-1122-4-7D	EPA Method 325B
07A	6-1122-4-4	EPA Method 325B
08A	6-1122-4-7	EPA Method 325B
09A	9-1122-4-10	EPA Method 325B
10A	8-1122-4-3	EPA Method 325B
11A	1-1122-4-7B	EPA Method 325B
12A	12-1122-4-2	EPA Method 325B
13A	10-1122-4-1D	EPA Method 325B
14A	10-1122-4-1	EPA Method 325B
15A	11-1122-4-12	EPA Method 325B
16A	11-1122-4-11	EPA Method 325B
17A	Lab Blank	EPA Method 325B
18A	CCV	EPA Method 325B
18B	CCV	EPA Method 325B

CERTIFIED BY:



Technical Director

DATE: 12/22/22

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209221, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-21-17, UT NELAP – CA009332021-13, VA NELAP - 10615, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-015, Effective date: 10/18/2021, Expiration date: 10/17/2022.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
ATM EPA 325B
Clean Air Engineering
Workorder# 2212198

Sixteen Carbopack X CA-SF samples were received on December 09, 2022. The laboratory performed the analysis via EPA Method 325B using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the uptake rate for each VOC. Uptake rates are adjusted for local conditions and concentrations are reported based on normal ambient temperature and pressure conditions (25 deg C and 760 mm Hg) following the required calculations in EPA Method 325B. These adjustments are reflected in the dilution factor.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Samples 2-1122-4-9, 3-1122-4-8, 4-1122-4-5, 5-1122-4-1B, 7-1122-4-6, 7-1122-4-7D, 6-1122-4-4, 6-1122-4-7, 9-1122-4-10 and 8-1122-4-3 were collected over a 15-day period.

Definition of Data Qualifying Flags

The following qualifiers may have been used on the data analysis sheets and indicate as follows:

- B - Compound present in field blank(s) greater than 1/3 the compliance limit or measured target analyte (background subtraction not performed).
- J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the MDL value.
- I - Internal Standard recovery outside acceptance limits
- P - Field Duplicate(s) exceed 30%RPD
- Pc- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.
- Pl - Field Duplicate(s) exceed 30%RPD, lab anomaly noted.
- L - Recovery of bracketing CCV(s) exceeded acceptance limits.
- H - Sample analyzed outside of method hold time.
- D - Sample duration outside 14+/-1 days
- Fe - Field Error or discrepancy
- Te - Tube Error or discrepancy
- CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 2-1122-4-9

Lab ID#: 2212198-01A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	1.1
Toluene	0.46	0.75
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.34 J
o-Xylene	0.52	0.26 U

Client Sample ID: 3-1122-4-8

Lab ID#: 2212198-02A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	1.8
Toluene	0.46	0.99
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.39 J
o-Xylene	0.52	0.26 U

Client Sample ID: 4-1122-4-5

Lab ID#: 2212198-03A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	3.0
Toluene	0.46	1.2
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.44 J
o-Xylene	0.52	0.26 U

Client Sample ID: 5-1122-4-1B

Lab ID#: 2212198-04A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 5-1122-4-1B

Lab ID#: 2212198-04A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	1.6
Toluene	0.46	0.83
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.32 J
o-Xylene	0.52	0.26 U

Client Sample ID: 7-1122-4-6

Lab ID#: 2212198-05A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.68
Toluene	0.46	0.70
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.27 J
o-Xylene	0.52	0.26 U

Client Sample ID: 7-1122-4-7D

Lab ID#: 2212198-06A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.18 U
Toluene	0.46	0.23 U
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

Client Sample ID: 6-1122-4-4

Lab ID#: 2212198-07A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 6-1122-4-4

Lab ID#: 2212198-07A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.90
Toluene	0.46	0.73
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

Client Sample ID: 6-1122-4-7

Lab ID#: 2212198-08A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.90
Toluene	0.46	0.76
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.29 J
o-Xylene	0.52	0.26 U

Client Sample ID: 9-1122-4-10

Lab ID#: 2212198-09A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.84
Toluene	0.46	0.66
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.27 J
o-Xylene	0.52	0.26 U

Client Sample ID: 8-1122-4-3

Lab ID#: 2212198-10A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 8-1122-4-3

Lab ID#: 2212198-10A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.69
Toluene	0.46	0.62
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

Client Sample ID: 1-1122-4-7B

Lab ID#: 2212198-11A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.6
Toluene	0.50	1.0
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.43 J
o-Xylene	0.56	0.28 U

Client Sample ID: 12-1122-4-2

Lab ID#: 2212198-12A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.65
Toluene	0.50	1.1
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.35 J
o-Xylene	0.56	0.28 U

Client Sample ID: 10-1122-4-1D

Lab ID#: 2212198-13A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 10-1122-4-1D

Lab ID#: 2212198-13A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.19 U
Toluene	0.50	0.25 U
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.28 U
o-Xylene	0.56	0.28 U

Client Sample ID: 10-1122-4-1

Lab ID#: 2212198-14A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.57
Toluene	0.50	0.79
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.31 J
o-Xylene	0.56	0.28 U

Client Sample ID: 11-1122-4-12

Lab ID#: 2212198-15A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.83
Toluene	0.50	0.92
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.42 J
o-Xylene	0.56	0.28 U

Client Sample ID: 11-1122-4-11

Lab ID#: 2212198-16A

Summary of Detected Compounds
EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 11-1122-4-11

Lab ID#: 2212198-16A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.82
Toluene	0.50	0.91
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.40 J
o-Xylene	0.56	0.28 U



Air Toxics

Client Sample ID: 2-1122-4-9

Lab ID#: 2212198-01A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10121306	Date of Collection: 12/7/22 8:26:00 AM
Dil. Factor:	1.04	Date of Analysis: 12/13/22 12:11 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	1.1
Toluene	0.46	0.75
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.34 J
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 3-1122-4-8

Lab ID#: 2212198-02A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10121307	Date of Collection: 12/7/22 8:36:00 AM
Dil. Factor:	1.04	Date of Analysis: 12/13/22 12:40 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	1.8
Toluene	0.46	0.99
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.39 J
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 4-1122-4-5

Lab ID#: 2212198-03A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10121308	Date of Collection: 12/7/22 8:48:00 AM
Dil. Factor:	1.04	Date of Analysis: 12/13/22 01:09 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	3.0
Toluene	0.46	1.2
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.44 J
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 5-1122-4-1B

Lab ID#: 2212198-04A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10121309	Date of Collection: 12/7/22 8:52:00 AM
Dil. Factor:	1.04	Date of Analysis: 12/13/22 01:38 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	1.6
Toluene	0.46	0.83
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.32 J
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 7-1122-4-6

Lab ID#: 2212198-05A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10121310	Date of Collection: 12/7/22 7:55:00 AM
Dil. Factor:	1.04	Date of Analysis: 12/13/22 02:07 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.68
Toluene	0.46	0.70
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.27 J
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 7-1122-4-7D

Lab ID#: 2212198-06A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10121305	Date of Collection: 12/7/22 7:55:00 AM
Dil. Factor:	1.04	Date of Analysis: 12/13/22 11:42 AM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.18 U
Toluene	0.46	0.23 U
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 6-1122-4-4

Lab ID#: 2212198-07A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10121311	Date of Collection: 12/7/22 8:05:00 AM
Dil. Factor:	1.04	Date of Analysis: 12/13/22 02:35 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.90
Toluene	0.46	0.73
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 6-1122-4-7

Lab ID#: 2212198-08A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10121312	Date of Collection: 12/7/22 8:05:00 AM
Dil. Factor:	1.04	Date of Analysis: 12/13/22 03:04 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.90
Toluene	0.46	0.76
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.29 J
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 9-1122-4-10

Lab ID#: 2212198-09A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10121313	Date of Collection: 12/7/22 7:30:00 AM
Dil. Factor:	1.04	Date of Analysis: 12/13/22 03:33 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.84
Toluene	0.46	0.66
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.27 J
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 8-1122-4-3

Lab ID#: 2212198-10A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10121314	Date of Collection: 12/7/22 7:35:00 AM
Dil. Factor:	1.04	Date of Analysis: 12/13/22 04:02 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.69
Toluene	0.46	0.62
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 1-1122-4-7B

Lab ID#: 2212198-11A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10121316	Date of Collection: 12/6/22 4:59:00 PM
Dil. Factor:	1.04	Date of Analysis: 12/13/22 05:00 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.6
Toluene	0.50	1.0
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.43 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 12-1122-4-2

Lab ID#: 2212198-12A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10121317	Date of Collection: 12/6/22 4:49:00 PM
Dil. Factor:	1.04	Date of Analysis: 12/13/22 05:29 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.65
Toluene	0.50	1.1
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.35 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 10-1122-4-1D

Lab ID#: 2212198-13A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10121321	Date of Collection: 12/6/22 4:25:00 PM
Dil. Factor:	1.04	Date of Analysis: 12/13/22 07:24 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.19 U
Toluene	0.50	0.25 U
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.28 U
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 10-1122-4-1

Lab ID#: 2212198-14A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10121318	Date of Collection: 12/6/22 4:25:00 PM
Dil. Factor:	1.04	Date of Analysis: 12/13/22 05:57 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.57
Toluene	0.50	0.79
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.31 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 11-1122-4-12

Lab ID#: 2212198-15A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10121319	Date of Collection: 12/6/22 4:02:00 PM
Dil. Factor:	1.04	Date of Analysis: 12/13/22 06:26 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.83
Toluene	0.50	0.92
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.42 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 11-1122-4-11

Lab ID#: 2212198-16A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10121320	Date of Collection: 12/6/22 4:02:00 PM
Dil. Factor:	1.04	Date of Analysis: 12/13/22 06:55 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.82
Toluene	0.50	0.91
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.40 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF

Client Sample ID: Lab Blank

Lab ID#: 2212198-17A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10121304	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/13/22 10:48 AM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.26	0.12 U
Benzene	0.35	0.17 U
Toluene	0.45	0.22 U
Ethyl Benzene	0.50	0.25 U
m,p-Xylene	0.50	0.25 U
o-Xylene	0.50	0.25 U

U = The analyte was not present above the Method Detection Limit.

Container Type: NA - Not Applicable

Client Sample ID: CCV

Lab ID#: 2212198-18A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10121315	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/13/22 04:31 PM
		Date of Extraction: NA

Compound	%Recovery
1,3-Butadiene	96
Benzene	96
Toluene	99
Ethyl Benzene	94
m,p-Xylene	92
o-Xylene	88

Container Type: NA - Not Applicable

Client Sample ID: CCV

Lab ID#: 2212198-18B

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10121326	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/13/22 09:48 PM
		Date of Extraction: NA

Compound	%Recovery
1,3-Butadiene	97
Benzene	94
Toluene	98
Ethyl Benzene	97
m,p-Xylene	98
o-Xylene	97

Container Type: NA - Not Applicable



Air Toxics

EPA Method 325 Chain of Custody (Passive)

Page 2 of 2Deploy Tubes by: 12/9/22
(Date)Kit ID: A B C D
(Circle One)Case Seal#: 1875617 Return Seal#: 1875618WO#:

Client: EES Coke Battery PID: P.O.# 3289

Project Name: 14796 Project Manager: Tim Rodak

Site Name: Zug Island Collected by: T.R.-S.G

Lab ID	Sample Identification	Station	Carbopack X Tube ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Location (gps)	Routine Sample	Field Duplicate	Field Blank	Benzene	Project VOC list	Turn Around Time:	Sample Comments:
														<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush Specify: <u> </u>	
	2-1122-4-7	2	1188455	11/22/22	11:14	12/7/22	8:26		✓				✓		
	3-1122-4-8	3	1188480	11/22/22	11:25	12/7/22	8:36		✓				✓		
	4-1122-4-5	4	1188486	11/22/22	11:38	12/7/22	8:48		✓				✓		
	5-1122-4-11	5	1188490	11/22/22	11:45	12/7/22	8:52		✓				✓		
	7-1122-4-6	7	1188554	11/22/22	12:26	12/7/22	7:55		✓				✓	7:55	
	7-1122-4-7D	7	1188534	11/22/22	12:27	12/7/22	7:55				✓		✓		
	6-1122-4-4	6	1188498	11/22/22	12:38	12/7/22	8:05		✓				✓		
	6-1122-4-7	6	1188458	11/22/22	12:40	12/7/22	8:05			✓			✓		
	9-1122-4-10	9	1188558	11/22/22	13:18	12/7/22	7:30		✓				✓		
	8-1122-4-3	8	1188542	11/22/22	13:25	12/7/22	7:35		✓				✓		
	9-1122-4-7B	9	1188104	11/22/22	13:55	12/6/22	16:59		✓				✓	1186104	
	12-1122-4-2	12	1188584	11/22/22	14:15	12/6/22	16:49		✓				✓		
	10-1122-4-10	10	1188579	11/22/22	14:47	12/6/22	16:25				✓		✓		

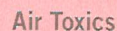
Relinquished by: <u> </u>	Date: <u>12/8/22</u>	Time: <u>10:00</u>	Received by: <u> </u>	Date: <u> </u>	Time: <u> </u>	Avg Ambient Temperature: <u> </u>
Relinquished by: <u> </u>	Date: <u> </u>	Time: <u> </u>	Received by: <u> </u>	Date: <u> </u>	Time: <u> </u>	Units: °F °C
						Avg Barometric Pressure: <u> </u>

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Units: hPa atm inHg mmHg

Lab Use Only

Shipper Name: <u> </u>	Custody Seals Intact? <u>Yes No None</u>	Blue Ice present or insulated cooler used? <u>Yes No</u>
Sample Condition Upon Receipt: <u> </u>		



Page of 2

Case Seal#: 1875-617 Return Seal#: 1875-618

WO#:

Eurofins Air Toxics, Inc. 180 Blue Ravine Rd. Suite B Folsom, CA 95630 (916) 985-1000 Fax: (916) 351-8279

1/10/2023

Mr. Volker Schmid

Clean Air Engineering

110 Technology Drive

Pittsburgh PA 15275

Project Name: 14796

Project #:

Workorder #: 2212599

Dear Mr. Volker Schmid

The following report includes the data for the above referenced project for sample(s) received on 12/28/2022 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by EPA Method 325B are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kathleen Kaneko at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kathleen Kaneko

Project Manager

WORK ORDER #: 2212599

Work Order Summary

CLIENT:	Mr. Volker Schmid Clean Air Engineering 110 Technology Drive Pittsburgh, PA 15275	BILL TO:	Mr. Volker Schmid Clean Air Engineering 110 Technology Drive Pittsburgh, PA 15275
PHONE:	724-227-0148	P.O. #	03291-44-14796
FAX:		PROJECT #	14796
DATE RECEIVED:	12/28/2022	CONTACT:	Kathleen Kaneko
DATE COMPLETED:	01/10/2023		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
01A	1-1206-5	EPA Method 325B
02A	2-1207-5	EPA Method 325B
03A	3-1207-5A	EPA Method 325B
04A	3-1207-5B	EPA Method 325B
05A	4-1207-5A	EPA Method 325B
06A	4-1207-5B	EPA Method 325B
07A	5-1207-5	EPA Method 325B
08A	6-1207-5	EPA Method 325B
09A	7-1207-5	EPA Method 325B
10A	8-1207-5	EPA Method 325B
11A	9-1207-5	EPA Method 325B
12A	10-1206-5A	EPA Method 325B
13A	10-1206-5B	EPA Method 325B
14A	11-1206-5A	EPA Method 325B
15A	11-1206-5B	EPA Method 325B
16A	12-1206-5	EPA Method 325B
17A	Lab Blank	EPA Method 325B
18A	CCV	EPA Method 325B
18B	CCV	EPA Method 325B
18C	CCV	EPA Method 325B

CERTIFIED BY:



Technical Director

DATE: 01/10/23

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP – 209222, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP – T104704434-22-18, UT NELAP – CA009332022-14, VA NELAP - 12240, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-017, Effective date: 10/18/2022, Expiration date: 10/17/2023.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
ATM EPA 325B
Clean Air Engineering
Workorder# 2212599

Sixteen Carbopack X CA-SF samples were received on December 28, 2022. The laboratory performed the analysis via EPA Method 325B using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the uptake rate for each VOC. Uptake rates are adjusted for local conditions and concentrations are reported based on normal ambient temperature and pressure conditions (25 deg C and 760 mm Hg) following the required calculations in EPA Method 325B. These adjustments are reflected in the dilution factor.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Samples 1-1206-5, 10-1206-5A, 10-1206-5B, 11-1206-5A, 11-1206-5B and 12-1206-5 were collected over a 15-day period.

Definition of Data Qualifying Flags

The following qualifiers may have been used on the data analysis sheets and indicate as follows:

- B - Compound present in field blank(s) greater than 1/3 the compliance limit or measured target analyte (background subtraction not performed).
- J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the MDL value.
- I - Internal Standard recovery outside acceptance limits
- P - Field Duplicate(s) exceed 30%RPD
- Pc- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.
- Pl - Field Duplicate(s) exceed 30%RPD, lab anomaly noted.
- L - Recovery of bracketing CCV(s) exceeded acceptance limits.
- H - Sample analyzed outside of method hold time.
- D - Sample duration outside 14+/-1 days
- Fe - Field Error or discrepancy
- Te - Tube Error or discrepancy
- CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 1-1206-5

Lab ID#: 2212599-01A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.63
Toluene	0.47	0.88
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.39 J
o-Xylene	0.52	0.26 U

Client Sample ID: 2-1207-5

Lab ID#: 2212599-02A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.81
Toluene	0.50	0.77
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.35 J
o-Xylene	0.56	0.28 U

Client Sample ID: 3-1207-5A

Lab ID#: 2212599-03A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.5
Toluene	0.50	0.99
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.49 J
o-Xylene	0.56	0.28 U

Client Sample ID: 3-1207-5B

Lab ID#: 2212599-04A

Summary of Detected Compounds

EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 3-1207-5B

Lab ID#: 2212599-04A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.7
Toluene	0.50	1.1
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.52 J
o-Xylene	0.56	0.28 U

Client Sample ID: 4-1207-5A

Lab ID#: 2212599-05A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.9
Toluene	0.50	1.1
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.46 J
o-Xylene	0.56	0.28 U

Client Sample ID: 4-1207-5B

Lab ID#: 2212599-06A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.19 U
Toluene	0.50	0.25 U
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.28 U
o-Xylene	0.56	0.28 U

Client Sample ID: 5-1207-5

Lab ID#: 2212599-07A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 5-1207-5

Lab ID#: 2212599-07A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.6
Toluene	0.50	0.99
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.50 J
o-Xylene	0.56	0.28 U

Client Sample ID: 6-1207-5

Lab ID#: 2212599-08A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.1
Toluene	0.50	0.96
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.42 J
o-Xylene	0.56	0.28 U

Client Sample ID: 7-1207-5

Lab ID#: 2212599-09A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.99
Toluene	0.50	0.87
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.44 J
o-Xylene	0.56	0.28 U

Client Sample ID: 8-1207-5

Lab ID#: 2212599-10A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 8-1207-5

Lab ID#: 2212599-10A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.8
Toluene	0.50	1.1
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.49 J
o-Xylene	0.56	0.28 U

Client Sample ID: 9-1207-5

Lab ID#: 2212599-11A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	2.0
Toluene	0.50	1.3
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.76
o-Xylene	0.56	0.28 U

Client Sample ID: 10-1206-5A

Lab ID#: 2212599-12A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.86
Toluene	0.47	0.88
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.40 J
o-Xylene	0.52	0.26 U

Client Sample ID: 10-1206-5B

Lab ID#: 2212599-13A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 10-1206-5B

Lab ID#: 2212599-13A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.84
Toluene	0.47	0.86
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.34 J
o-Xylene	0.52	0.26 U

Client Sample ID: 11-1206-5A

Lab ID#: 2212599-14A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.78
Toluene	0.47	0.86
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.38 J
o-Xylene	0.52	0.26 U

Client Sample ID: 11-1206-5B

Lab ID#: 2212599-15A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.18 U
Toluene	0.47	0.23 U
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

Client Sample ID: 12-1206-5

Lab ID#: 2212599-16A

Summary of Detected Compounds

EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 12-1206-5

Lab ID#: 2212599-16A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.60
Toluene	0.47	0.87
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.46 J
o-Xylene	0.52	0.26 U



Air Toxics

Client Sample ID: 1-1206-5

Lab ID#: 2212599-01A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10010424	Date of Collection: 12/21/22 3:55:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/4/23 09:07 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.63
Toluene	0.47	0.88
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.39 J
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 2-1207-5

Lab ID#: 2212599-02A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10010425	Date of Collection: 12/21/22 2:45:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/4/23 09:37 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.81
Toluene	0.50	0.77
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.35 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 3-1207-5A

Lab ID#: 2212599-03A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10010426	Date of Collection: 12/21/22 2:52:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/4/23 10:06 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.5
Toluene	0.50	0.99
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.49 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 3-1207-5B

Lab ID#: 2212599-04A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10010427	Date of Collection: 12/21/22 2:52:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/4/23 10:35 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.7
Toluene	0.50	1.1
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.52 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 4-1207-5A

Lab ID#: 2212599-05A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10010428	Date of Collection: 12/21/22 3:02:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/4/23 11:05 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.9
Toluene	0.50	1.1
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.46 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 4-1207-5B

Lab ID#: 2212599-06A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10010423	Date of Collection: 12/21/22 3:02:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/4/23 08:38 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.19 U
Toluene	0.50	0.25 U
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.28 U
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: 5-1207-5

Lab ID#: 2212599-07A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10010429	Date of Collection: 12/21/22 3:12:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/4/23 11:35 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.6
Toluene	0.50	0.99
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.50 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 6-1207-5

Lab ID#: 2212599-08A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10010431	Date of Collection: 12/21/22 2:32:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/5/23 12:33 AM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.1
Toluene	0.50	0.96
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.42 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 7-1207-5

Lab ID#: 2212599-09A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10010432	Date of Collection: 12/21/22 2:24:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/5/23 01:03 AM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.99
Toluene	0.50	0.87
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.44 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 8-1207-5

Lab ID#: 2212599-10A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10010433	Date of Collection: 12/21/22 3:45:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/5/23 01:32 AM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.8
Toluene	0.50	1.1
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.49 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 9-1207-5

Lab ID#: 2212599-11A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10010434	Date of Collection: 12/21/22 3:35:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/5/23 02:02 AM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	2.0
Toluene	0.50	1.3
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.76
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 10-1206-5A

Lab ID#: 2212599-12A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10010435	Date of Collection: 12/21/22 12:50:00 P
Dil. Factor:	1.04	Date of Analysis: 1/5/23 02:31 AM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.86
Toluene	0.47	0.88
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.40 J
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 10-1206-5B

Lab ID#: 2212599-13A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10010436	Date of Collection: 12/21/22 12:50:00 P
Dil. Factor:	1.04	Date of Analysis: 1/5/23 03:01 AM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.84
Toluene	0.47	0.86
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.34 J
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 11-1206-5A

Lab ID#: 2212599-14A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10010437	Date of Collection: 12/21/22 12:40:00 P
Dil. Factor:	1.04	Date of Analysis: 1/5/23 03:30 AM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.78
Toluene	0.47	0.86
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.38 J
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 11-1206-5B

Lab ID#: 2212599-15A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10010439	Date of Collection: 12/21/22 12:40:00 P
Dil. Factor:	1.04	Date of Analysis: 1/5/23 04:29 AM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.18 U
Toluene	0.47	0.23 U
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 12-1206-5

Lab ID#: 2212599-16A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10010438	Date of Collection: 12/21/22 2:00:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/5/23 04:00 AM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.60
Toluene	0.47	0.87
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.46 J
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2212599-17A

EPA METHOD 325B GC/MS FULL SCAN

File Name: 10010408
Dil. Factor: 1.00

Date of Collection: NA
Date of Analysis: 1/4/23 12:58 PM
Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.26	0.12 U
Benzene	0.35	0.17 U
Toluene	0.45	0.22 U
Ethyl Benzene	0.50	0.25 U
m,p-Xylene	0.50	0.25 U
o-Xylene	0.50	0.25 U

U = The analyte was not present above the Method Detection Limit.

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: CCV

Lab ID#: 2212599-18A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10010419	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/4/23 06:40 PM
		Date of Extraction: NA

Compound	%Recovery
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1,3-Butadiene	97
Benzene	97
Toluene	102
Ethyl Benzene	101
m,p-Xylene	108
o-Xylene	99

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: CCV

Lab ID#: 2212599-18B

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10010430	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/5/23 12:04 AM
		Date of Extraction: NA

Compound	%Recovery
1,3-Butadiene	98
Benzene	100
Toluene	109
Ethyl Benzene	100
m,p-Xylene	103
o-Xylene	98

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: CCV

Lab ID#: 2212599-18C

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10010440	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/5/23 04:58 AM
		Date of Extraction: NA

Compound	%Recovery
1,3-Butadiene	100
Benzene	100
Toluene	106
Ethyl Benzene	103
m,p-Xylene	106
o-Xylene	102

Container Type: NA - Not Applicable

EPA Method 325 Chain of Custody (Passive)

Deploy Tubes by: 12/22/22
(Date)

Kit ID: A B C D
(Circle One)

Case Seal#: 1875655 Return Seal#: 1875656

WO#: 2212599

Client: Clean Air Engineering

PID: P.O.#

Project Name: 14796

Project Manager: Tim Rodak

Site Name: Zug Island

Collected by: Tim Rodak

Sample Type
(check one)

Target List

Turn Around Time:

☒ Normal

☐ Rush

Specify

Sample Comments:

Lab ID	Sample Identification	Station	Carbopack X Tube ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Location (gps)	Routine Sample	Field Duplicate	Field Blank	Benzene	Project VOC list
01A	1-1206-5 (1)	1	1186564	1206	16:59	12/21	1545						
02A	2-1207-5 (2)	2	1186370	1207	8:28	12/21	1445		✓				
03A	3-1207-5A (3)	3	1185850	1207	8:38	12/21	1452		✓				
04A	3-1207-5B (7)	3	1186359	1207	8:38	12/21	1452			✓			
05A	4-1207-5A (4)	4	1186338	1207	8:52	12/21	1502		✓				
06A	4-1207-5B (7)	4	1186562	1207	8:52	12/21	1502		✓				
07A	5-1207-5 (5)	5	1186487	1207	8:53	12/21	1512				✓		
08A	6-1207-5 (6)	6	1185776	1207	8:07	12/21	1432		✓				
09A	7-1207-5 (7)	7	1185896	1207	7:59	12/21	1424		✓				
10A	8-1207-5 (8)	8	1186149	1207	7:35	12/21	1545		✓				
11A	9-1207-5	9	1185930	1207	7:30	12/21	1535		✓				

* Collection tubes circled

Relinquished by: [Signature]

Date: 12/26 Time: 1430

Received by: [Signature]

Date: 12/28/22 Time: 0945

Avg Ambient Temperature:

Pending
Units: °F °C

Relinquished by:

Date: Time:

Received by:

Date: Time:

Avg Barometric Pressure:

Pending
Units: hPa atm mHg mmHg

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Shipper Name:

FedEx

Custody Seals Intact?

(Yes) No None

Blue Ice present or insulated cooler used?

(Yes) No

Sample Condition Upon Receipt:

Good



Air Toxics

EPA Method 325 Chain of Custody (Passive)

Page 2 of 2Deploy Tubes by: 12/22/22
(Date)Kit ID: A B C D
(Circle One)Case Seal#: 187965Return Seal#: 1879656WO#: 242599

Client: <u>Clean Air Engineering</u>		PID: _____		P.O.# _____		Sample Type (check one)		Target List		Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush Specify _____				
Project Name: <u>14796</u>		Project Manager: <u>Jim Rodak</u>		Collected by: <u>Jim Rodak</u>										
Site Name: <u>ZV9 Island</u>														
Lab ID	Sample Identification	Station	Carbopack X Tube ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Location (gps)	Routine Sample	Field Duplicate	Field Blank	Benzene	Project VOC list	Sample Comments:
10A	10-1206-5A(10)	10	1186385	1206	1625	12/21	1250		✓					
10B	10-1206-5B(10)	10	1186239	1206	1625	12/21	1250			✓				
11A	11-1206-5A(11)	11	1186392	1206	1615	12/21	1240		✓					
11B	11-1206-5B(11)	11	1188148	1206	1615	12/21	1240				✓			
12A	12-1206-5(12)	12	1186177	1206	1651	12/21	1400		✓					
Relinquished by: <u>[Signature]</u> Date: <u>12/26</u> Time: <u>1430</u> Received by: <u>[Signature]</u> Date: <u>12/28/22</u> Time: <u>0945</u>														
Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____														
Avg Ambient Temperature: <u>Pending</u> Units: °F °C														
Avg Barometric Pressure: <u>Pending</u> Units: hPa atm inHg mmHg														
Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.														
Lab Use Only														
Shipper Name: <u>FedEx</u>			Custody Seals Intact? <u>Yes</u> <u>No</u> <u>None</u>		Blue Ice present or insulated cooler used? <u>Yes</u> <u>No</u>									
			Sample Condition Upon Receipt: <u>Good</u>											

Eurofins Air Toxics, Inc. 180 Blue Ravine Rd. Suite B Folsom, CA 95630 (916) 985-1000 Fax: (916) 351-8279

1/19/2023

Mr. Volker Schmid

Clean Air Engineering

110 Technology Drive

Pittsburgh PA 15275

Project Name: 14796

Project #:

Workorder #: 2301128

Dear Mr. Volker Schmid

The following report includes the data for the above referenced project for sample(s) received on 1/10/2023 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by EPA Method 325B are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kathleen Kaneko at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kathleen Kaneko

Project Manager

WORK ORDER #: 2301128

Work Order Summary

CLIENT: Mr. Volker Schmid
Clean Air Engineering
110 Technology Drive
Pittsburgh, PA 15275

BILL TO: Mr. Volker Schmid
Clean Air Engineering
110 Technology Drive
Pittsburgh, PA 15275

PHONE: 724-227-0148

P.O. # 03291-44-14796

FAX:

PROJECT # 14796

DATE RECEIVED: 01/10/2023

CONTACT: Kathleen Kaneko

DATE COMPLETED: 01/19/2023

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
01A	1-1221-6A	EPA Method 325B
02A	1-1221-6B	EPA Method 325B
03A	2-1221-6	EPA Method 325B
04A	3-1221-6	EPA Method 325B
05A	4-1221-6	EPA Method 325B
06A	5-1221-6	EPA Method 325B
07A	6-1221-6A	EPA Method 325B
08A	6-1221-6B	EPA Method 325B
09A	7-1221-6A	EPA Method 325B
10A	7-1221-6B	EPA Method 325B
11A	8-1221-6	EPA Method 325B
12A	9-1221-6	EPA Method 325B
13A	10-1221-6	EPA Method 325B
14A	11-1221-6	EPA Method 325B
15A	12-1221-6A	EPA Method 325B
16A	12-1221-6B	EPA Method 325B
17A	Lab Blank	EPA Method 325B
18A	CCV	EPA Method 325B
18B	CCV	EPA Method 325B

CERTIFIED BY:



Technical Director

DATE: 01/19/23

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP – 209222, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP – T104704434-22-18, UT NELAP – CA009332022-14, VA NELAP - 12240, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-017, Effective date: 10/18/2022, Expiration date: 10/17/2023.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
ATM EPA 325B
Clean Air Engineering
Workorder# 2301128

Sixteen Carbopack X CA-SF samples were received on January 10, 2023. The laboratory performed the analysis via EPA Method 325B using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the uptake rate for each VOC. Uptake rates are adjusted for local conditions and concentrations are reported based on normal ambient temperature and pressure conditions (25 deg C and 760 mm Hg) following the required calculations in EPA Method 325B. These adjustments are reflected in the dilution factor.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

The following qualifiers may have been used on the data analysis sheets and indicate as follows:

- B - Compound present in field blank(s) greater than 1/3 the compliance limit or measured target analyte (background subtraction not performed).
- J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the MDL value.
- I - Internal Standard recovery outside acceptance limits
- P - Field Duplicate(s) exceed 30%RPD
- Pc- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.
- Pl - Field Duplicate(s) exceed 30%RPD, lab anomaly noted.
- L - Recovery of bracketing CCV(s) exceeded acceptance limits.
- H - Sample analyzed outside of method hold time.
- D - Sample duration outside 14+/-1 days
- Fe - Field Error or discrepancy
- Te - Tube Error or discrepancy
- CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue

Summary of Detected Compounds

EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 1-1221-6A

Lab ID#: 2301128-01A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	2.2
Toluene	0.47	1.0
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.32 J
o-Xylene	0.52	0.26 U

Client Sample ID: 1-1221-6B

Lab ID#: 2301128-02A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.23 J
Toluene	0.47	0.23 U
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

Client Sample ID: 2-1221-6

Lab ID#: 2301128-03A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	1.2
Toluene	0.47	0.65
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

Client Sample ID: 3-1221-6

Lab ID#: 2301128-04A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 3-1221-6

Lab ID#: 2301128-04A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	2.6
Toluene	0.47	0.99
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.40 J
o-Xylene	0.52	0.26 U

Client Sample ID: 4-1221-6

Lab ID#: 2301128-05A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	2.0
Toluene	0.47	0.77
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

Client Sample ID: 5-1221-6

Lab ID#: 2301128-06A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	1.2
Toluene	0.47	0.59
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

Client Sample ID: 6-1221-6A

Lab ID#: 2301128-07A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 6-1221-6A

Lab ID#: 2301128-07A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	1.1
Toluene	0.47	0.57
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

Client Sample ID: 6-1221-6B

Lab ID#: 2301128-08A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.23 J
Toluene	0.47	0.23 U
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

Client Sample ID: 7-1221-6A

Lab ID#: 2301128-09A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.82
Toluene	0.47	0.57
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

Client Sample ID: 7-1221-6B

Lab ID#: 2301128-10A

Summary of Detected Compounds

EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 7-1221-6B

Lab ID#: 2301128-10A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.80
Toluene	0.47	0.61
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

Client Sample ID: 8-1221-6

Lab ID#: 2301128-11A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	1.3
Toluene	0.47	0.62
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

Client Sample ID: 9-1221-6

Lab ID#: 2301128-12A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	1.3
Toluene	0.47	0.71
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

Client Sample ID: 10-1221-6

Lab ID#: 2301128-13A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 10-1221-6

Lab ID#: 2301128-13A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.89
Toluene	0.47	0.63
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

Client Sample ID: 11-1221-6

Lab ID#: 2301128-14A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.84
Toluene	0.47	0.74
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

Client Sample ID: 12-1221-6A

Lab ID#: 2301128-15A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.91
Toluene	0.47	0.68
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

Client Sample ID: 12-1221-6B

Lab ID#: 2301128-16A

Summary of Detected Compounds
EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: 12-1221-6B

Lab ID#: 2301128-16A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.84
Toluene	0.47	0.74
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.30 J
o-Xylene	0.52	0.26 U



Air Toxics

Client Sample ID: 1-1221-6A

Lab ID#: 2301128-01A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10011806	Date of Collection: 1/5/23 6:24:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/18/23 12:04 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	2.2
Toluene	0.47	1.0
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.32 J
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

1,3-Butadiene MDL value = 0.13 ug/m3

Benzene MDL value = 0.18 ug/m3

Toluene MDL value = 0.23 ug/m3

Ethyl Benzene MDL value = 0.26 ug/m3

m,p-Xylene MDL value = 0.26 ug/m3

o-Xylene MDL value = 0.26 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: 1-1221-6B

Lab ID#: 2301128-02A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10011805	Date of Collection: 1/5/23 6:24:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/18/23 11:35 AM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.23 J
Toluene	0.47	0.23 U
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

1,3-Butadiene MDL value = 0.13 ug/m3

Benzene MDL value = 0.18 ug/m3

Toluene MDL value = 0.23 ug/m3

Ethyl Benzene MDL value = 0.26 ug/m3

m,p-Xylene MDL value = 0.26 ug/m3

o-Xylene MDL value = 0.26 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: 2-1221-6

Lab ID#: 2301128-03A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10011807	Date of Collection: 1/5/23 6:05:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/18/23 12:33 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	1.2
Toluene	0.47	0.65
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

1,3-Butadiene MDL value = 0.13 ug/m3

Benzene MDL value = 0.18 ug/m3

Toluene MDL value = 0.23 ug/m3

Ethyl Benzene MDL value = 0.26 ug/m3

m,p-Xylene MDL value = 0.26 ug/m3

o-Xylene MDL value = 0.26 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: 3-1221-6

Lab ID#: 2301128-04A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10011808	Date of Collection: 1/5/23 6:09:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/18/23 01:02 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	2.6
Toluene	0.47	0.99
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.40 J
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

1,3-Butadiene MDL value = 0.13 ug/m3

Benzene MDL value = 0.18 ug/m3

Toluene MDL value = 0.23 ug/m3

Ethyl Benzene MDL value = 0.26 ug/m3

m,p-Xylene MDL value = 0.26 ug/m3

o-Xylene MDL value = 0.26 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: 4-1221-6

Lab ID#: 2301128-05A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10011809	Date of Collection: 1/5/23 6:09:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/18/23 01:31 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	2.0
Toluene	0.47	0.77
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

1,3-Butadiene MDL value = 0.13 ug/m3

Benzene MDL value = 0.18 ug/m3

Toluene MDL value = 0.23 ug/m3

Ethyl Benzene MDL value = 0.26 ug/m3

m,p-Xylene MDL value = 0.26 ug/m3

o-Xylene MDL value = 0.26 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: 5-1221-6

Lab ID#: 2301128-06A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10011810	Date of Collection: 1/5/23 5:45:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/18/23 02:00 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	1.2
Toluene	0.47	0.59
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

1,3-Butadiene MDL value = 0.13 ug/m3

Benzene MDL value = 0.18 ug/m3

Toluene MDL value = 0.23 ug/m3

Ethyl Benzene MDL value = 0.26 ug/m3

m,p-Xylene MDL value = 0.26 ug/m3

o-Xylene MDL value = 0.26 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: 6-1221-6A

Lab ID#: 2301128-07A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10011811	Date of Collection: 1/5/23 5:40:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/18/23 02:29 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	1.1
Toluene	0.47	0.57
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

1,3-Butadiene MDL value = 0.13 ug/m3

Benzene MDL value = 0.18 ug/m3

Toluene MDL value = 0.23 ug/m3

Ethyl Benzene MDL value = 0.26 ug/m3

m,p-Xylene MDL value = 0.26 ug/m3

o-Xylene MDL value = 0.26 ug/m3

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 6-1221-6B

Lab ID#: 2301128-08A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10011821	Date of Collection: 1/5/23 5:13:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/18/23 07:18 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.23 J
Toluene	0.47	0.23 U
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

1,3-Butadiene MDL value = 0.13 ug/m3

Benzene MDL value = 0.18 ug/m3

Toluene MDL value = 0.23 ug/m3

Ethyl Benzene MDL value = 0.26 ug/m3

m,p-Xylene MDL value = 0.26 ug/m3

o-Xylene MDL value = 0.26 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: 7-1221-6A

Lab ID#: 2301128-09A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10011812	Date of Collection: 1/5/23 5:08:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/18/23 02:57 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.82
Toluene	0.47	0.57
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

1,3-Butadiene MDL value = 0.13 ug/m3

Benzene MDL value = 0.18 ug/m3

Toluene MDL value = 0.23 ug/m3

Ethyl Benzene MDL value = 0.26 ug/m3

m,p-Xylene MDL value = 0.26 ug/m3

o-Xylene MDL value = 0.26 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: 7-1221-6B

Lab ID#: 2301128-10A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10011813	Date of Collection: 1/5/23 5:08:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/18/23 03:27 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.80
Toluene	0.47	0.61
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

1,3-Butadiene MDL value = 0.13 ug/m3

Benzene MDL value = 0.18 ug/m3

Toluene MDL value = 0.23 ug/m3

Ethyl Benzene MDL value = 0.26 ug/m3

m,p-Xylene MDL value = 0.26 ug/m3

o-Xylene MDL value = 0.26 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: 8-1221-6

Lab ID#: 2301128-11A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10011814	Date of Collection: 1/5/23 5:35:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/18/23 03:55 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	1.3
Toluene	0.47	0.62
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

1,3-Butadiene MDL value = 0.13 ug/m3

Benzene MDL value = 0.18 ug/m3

Toluene MDL value = 0.23 ug/m3

Ethyl Benzene MDL value = 0.26 ug/m3

m,p-Xylene MDL value = 0.26 ug/m3

o-Xylene MDL value = 0.26 ug/m3

Container Type: Carbopack X CA-SF



Air Toxics

Client Sample ID: 9-1221-6

Lab ID#: 2301128-12A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10011816	Date of Collection: 1/5/23 5:25:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/18/23 04:53 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	1.3
Toluene	0.47	0.71
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

1,3-Butadiene MDL value = 0.13 ug/m3

Benzene MDL value = 0.18 ug/m3

Toluene MDL value = 0.23 ug/m3

Ethyl Benzene MDL value = 0.26 ug/m3

m,p-Xylene MDL value = 0.26 ug/m3

o-Xylene MDL value = 0.26 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: 10-1221-6

Lab ID#: 2301128-13A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10011817	Date of Collection: 1/5/23 4:58:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/18/23 05:22 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.89
Toluene	0.47	0.63
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

1,3-Butadiene MDL value = 0.13 ug/m3

Benzene MDL value = 0.18 ug/m3

Toluene MDL value = 0.23 ug/m3

Ethyl Benzene MDL value = 0.26 ug/m3

m,p-Xylene MDL value = 0.26 ug/m3

o-Xylene MDL value = 0.26 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: 11-1221-6

Lab ID#: 2301128-14A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10011818	Date of Collection: 1/5/23 4:55:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/18/23 05:51 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.84
Toluene	0.47	0.74
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

1,3-Butadiene MDL value = 0.13 ug/m3

Benzene MDL value = 0.18 ug/m3

Toluene MDL value = 0.23 ug/m3

Ethyl Benzene MDL value = 0.26 ug/m3

m,p-Xylene MDL value = 0.26 ug/m3

o-Xylene MDL value = 0.26 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: 12-1221-6A

Lab ID#: 2301128-15A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10011819	Date of Collection: 1/5/23 6:15:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/18/23 06:20 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.91
Toluene	0.47	0.68
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.26 U
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

1,3-Butadiene MDL value = 0.13 ug/m3

Benzene MDL value = 0.18 ug/m3

Toluene MDL value = 0.23 ug/m3

Ethyl Benzene MDL value = 0.26 ug/m3

m,p-Xylene MDL value = 0.26 ug/m3

o-Xylene MDL value = 0.26 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: 12-1221-6B

Lab ID#: 2301128-16A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10011820	Date of Collection: 1/5/23 6:15:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/18/23 06:49 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.27	0.13 U
Benzene	0.36	0.84
Toluene	0.47	0.74
Ethyl Benzene	0.52	0.26 U
m,p-Xylene	0.52	0.30 J
o-Xylene	0.52	0.26 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

1,3-Butadiene MDL value = 0.13 ug/m3

Benzene MDL value = 0.18 ug/m3

Toluene MDL value = 0.23 ug/m3

Ethyl Benzene MDL value = 0.26 ug/m3

m,p-Xylene MDL value = 0.26 ug/m3

o-Xylene MDL value = 0.26 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2301128-17A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10011804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/18/23 10:47 AM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.26	0.12 U
Benzene	0.35	0.17 U
Toluene	0.45	0.22 U
Ethyl Benzene	0.50	0.25 U
m,p-Xylene	0.50	0.25 U
o-Xylene	0.50	0.25 U

U = The analyte was not present above the Method Detection Limit.

1,3-Butadiene MDL value = 0.12 ug/m3

Benzene MDL value = 0.17 ug/m3

Toluene MDL value = 0.22 ug/m3

Ethyl Benzene MDL value = 0.25 ug/m3

m,p-Xylene MDL value = 0.25 ug/m3

o-Xylene MDL value = 0.25 ug/m3

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: CCV

Lab ID#: 2301128-18A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10011815	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/18/23 04:24 PM
		Date of Extraction: NA

Compound	%Recovery
----------	-----------

1,3-Butadiene	100
Benzene	94
Toluene	98
Ethyl Benzene	98
m,p-Xylene	101
o-Xylene	97

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: CCV

Lab ID#: 2301128-18B

EPA METHOD 325B GC/MS FULL SCAN

File Name:	10011826	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/18/23 09:42 PM
		Date of Extraction: NA

Compound	%Recovery
----------	-----------

1,3-Butadiene	97
Benzene	93
Toluene	92
Ethyl Benzene	83
m,p-Xylene	83
o-Xylene	82

Container Type: NA - Not Applicable

EPA Method 325 Chain of Custody (Passive)

Deploy Tubes by: 1/2/23
(Date)Kit ID: A B C D
(Circle One)

Case Seal#: 1875697 Return Seal#: 1075698

WO#:

2301128

Client: Clean Air Engineering

PID:

P.O.#

Project Name: 14796

Project Manager:

Tim Rodak

Site Name: Zug Island

Collected by:

Tim Rodak

Sample Type
(check one)

Target List

Turn Around Time:

☒ Normal
☐ Rush

Specify

Sample Comments:

Lab ID	Sample Identification	Station	Carbopack X Tube ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Location (gps)	Routine Sample	Field Duplicate	Field Blank	Benzene	Project VOC list
1A	1-1221-6A (1)	1	1188117	12/21/22	1556	1/5/23	1824		✓				✓
2A	1-1221-6B (1B)	1	1185712	12/21/22	1556	1/5/23	1824		✓				✓
3A	2-1221-6 (2)	2	1188105	12/21/22	1447	1/5/23	1805		✓		✓		✓
4A	3-1221-6 (3)	3	1185933	12/21/22	1455	1/5/23	1809		✓				✓
5A	4-1221-6 (4)	4	1188102	12/21/22	1505	1/5/23	1809		✓				✓
6A	5-1221-6 (5)	5	1185743	12/21/22	1515	1/5/23	1745		✓				✓
7A	6-1221-6A (6)	6	1188136	12/21/22	1434	1/5/23	1740		✓				✓
8A	6-1221-6B (7B)	6	1188235	12/21/22	1434	1/5/23	1713		✓		✓		✓
9A	7-1221-6A (7D)	7	1188137	12/21/22	1426	1/5/23	1708		✓				✓
10A	7-1221-6B (7)	7	1188145	12/21/22	1426	1/5/23	1708		✓				✓
11A	8-1221-6 (8)	8	1188179	12/21/22	1546	1/5/23	1735		✓	✓			✓
12A	9-1221-6 (9)	9	1188125	12/21/22	1538	1/5/23	1725		✓				✓
13A	AP 1/10/23								✓				✓

Relinquished by:

Date

Time

Received by:

Date

Time

Avg Ambient Temperature:

Relinquished by:

Date

Time

Received by:

Date

Time

Units: °F °C

Avg Barometric Pressure:

Pending

Units: hPa atm inHg mmHg

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Shipper Name: Fedex

Lab Use Only

Custody Seals Intact?

Yes

No

None

Blue Ice present or insulated cooler used?

Yes

No

Sample Condition Upon Receipt:

good

EPA Method 325 Chain of Custody (Passive)

Deploy Tubes by: _____
(Date)

Kit ID: A B C D
(Circle One)

Case Seal#: 1875697 Return Seal#: 1875698

WO#: 230128

Client: Clean Air Engineering
Project Name: 11/701

Project Name: 14796

Site Name: Zug Island

PID: _____ P.O.# _____

Project Manager: Tim Rodak

Collected by: Tim Rodey

Sample Type
(check one)

Target List

Turn Around Time:

☒ Normal

☐ Rush

Specify

Sample Comments:

[illegible]

Relinquished by:

Relinquished by:

Relinquished by:

Date	1/9/23	Time	1417
Date		Time	

Received by:
K. Mitchell EATL
Received by:

Date	Time
1/10/23	0955
Date	Time

Avg Ambient Temperature:

Units: °F °C

Avg Barometric Pressure:

Units: hPa atm inHg mmHg

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind.

Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Shipper Name: *Feelex*

Lab Use Only

Custody Seals Intact?	<u>Yes</u>	No	None
-----------------------	------------	----	------

Blue Ice present or insulated cooler used?

☒ Yes ☐ No

Sample Condition Upon Receipt: good

1/27/2023

Mr. Volker Schmid
Clean Air Engineering
110 Technology Drive

Pittsburgh PA 15275

Project Name:
Project #: 14796
Workorder #: 2301427

Dear Mr. Volker Schmid

The following report includes the data for the above referenced project for sample(s) received on 1/25/2023 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by EPA Method 325B are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kathleen Kaneko at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kathleen Kaneko
Project Manager

WORK ORDER #: 2301427

Work Order Summary

CLIENT: Mr. Volker Schmid
Clean Air Engineering
110 Technology Drive
Pittsburgh, PA 15275

BILL TO: Mr. Volker Schmid
Clean Air Engineering
110 Technology Drive
Pittsburgh, PA 15275

PHONE: 724-227-0148

P.O. # 03291-44-14796

FAX:

PROJECT # 14796

DATE RECEIVED: 01/25/2023

CONTACT: Kathleen Kaneko

DATE COMPLETED: 01/27/2023

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
01A	M325-1-7	EPA Method 325B
02A	M325-1D-7	EPA Method 325B
03A	M325-2-7	EPA Method 325B
04A	M325-2B-7	EPA Method 325B
05A	M325-3-7	EPA Method 325B
06A	M325-4-7	EPA Method 325B
07A	M325-5-7	EPA Method 325B
08A	M325-6-7	EPA Method 325B
09A	M325-7-7	EPA Method 325B
10A	M325-7B-7	EPA Method 325B
11A	M325-8-7	EPA Method 325B
12A	M325-9-7	EPA Method 325B
13A	M325-10-7	EPA Method 325B
14A	M325-11-7	EPA Method 325B
15A	M325-11D-7	EPA Method 325B
16A	M325-12-7	EPA Method 325B
17A	Lab Blank	EPA Method 325B
18A	CCV	EPA Method 325B
18B	CCV	EPA Method 325B

CERTIFIED BY:



Technical Director

DATE: 01/27/23

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP – 209222, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP – T104704434-22-18, UT NELAP – CA009332022-14, VA NELAP - 12240, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-017, Effective date: 10/18/2022, Expiration date: 10/17/2023.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
ATM EPA 325B
Clean Air Engineering
Workorder# 2301427

Sixteen Carbopack X CA-SF samples were received on January 25, 2023. The laboratory performed the analysis via EPA Method 325B using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the uptake rate for each VOC. Uptake rates are adjusted for local conditions and concentrations are reported based on normal ambient temperature and pressure conditions (25 deg C and 760 mm Hg) following the required calculations in EPA Method 325B. These adjustments are reflected in the dilution factor.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

The following qualifiers may have been used on the data analysis sheets and indicate as follows:

- B - Compound present in field blank(s) greater than 1/3 the compliance limit or measured target analyte (background subtraction not performed).
- J - Estimated value - analyte detected between the Method Detection Limit and Reporting Limit.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the MDL value.
- I - Internal Standard recovery outside acceptance limits
- P - Field Duplicate(s) exceed 30%RPD
- Pc- Field Duplicate(s) exceed 30%RPD, concentrations of sample and/or its duplicate less than 2 times reporting limit.
- Pl - Field Duplicate(s) exceed 30%RPD, lab anomaly noted.
- L - Recovery of bracketing CCV(s) exceeded acceptance limits.
- H - Sample analyzed outside of method hold time.
- D - Sample duration outside 14+/-1 days
- Fe - Field Error or discrepancy
- Te - Tube Error or discrepancy
- CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: M325-1-7

Lab ID#: 2301427-01A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.3
Toluene	0.50	0.97
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.40 J
o-Xylene	0.56	0.28 U

Client Sample ID: M325-1D-7

Lab ID#: 2301427-02A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.3
Toluene	0.50	0.98
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.40 J
o-Xylene	0.56	0.28 U

Client Sample ID: M325-2-7

Lab ID#: 2301427-03A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.87
Toluene	0.50	0.77
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.33 J
o-Xylene	0.56	0.28 U

Client Sample ID: M325-2B-7

Lab ID#: 2301427-04A

Summary of Detected Compounds

EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: M325-2B-7

Lab ID#: 2301427-04A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.19 U
Toluene	0.50	0.25 U
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.28 U
o-Xylene	0.56	0.28 U

Client Sample ID: M325-3-7

Lab ID#: 2301427-05A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	2.2
Toluene	0.50	1.6
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.46 J
o-Xylene	0.56	0.28 U

Client Sample ID: M325-4-7

Lab ID#: 2301427-06A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	3.0
Toluene	0.50	1.8
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.41 J
o-Xylene	0.56	0.28 U

Client Sample ID: M325-5-7

Lab ID#: 2301427-07A

Summary of Detected Compounds

EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: M325-5-7

Lab ID#: 2301427-07A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	2.4
Toluene	0.50	1.8
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.45 J
o-Xylene	0.56	0.28 U

Client Sample ID: M325-6-7

Lab ID#: 2301427-08A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	3.6
Toluene	0.50	1.2
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.46 J
o-Xylene	0.56	0.28 U

Client Sample ID: M325-7-7

Lab ID#: 2301427-09A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.6
Toluene	0.50	0.89
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.38 J
o-Xylene	0.56	0.28 U

Client Sample ID: M325-7B-7

Lab ID#: 2301427-10A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: M325-7B-7

Lab ID#: 2301427-10A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.19 U
Toluene	0.50	0.25 U
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.28 U
o-Xylene	0.56	0.28 U

Client Sample ID: M325-8-7

Lab ID#: 2301427-11A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.74
Toluene	0.50	0.74
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.28 J
o-Xylene	0.56	0.28 U

Client Sample ID: M325-9-7

Lab ID#: 2301427-12A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.75
Toluene	0.50	0.88
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.33 J
o-Xylene	0.56	0.28 U

Client Sample ID: M325-10-7

Lab ID#: 2301427-13A

Summary of Detected Compounds EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: M325-10-7

Lab ID#: 2301427-13A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	2.4
Toluene	0.50	0.96
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.39 J
o-Xylene	0.56	0.28 U

Client Sample ID: M325-11-7

Lab ID#: 2301427-14A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.7
Toluene	0.50	0.94
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.39 J
o-Xylene	0.56	0.28 U

Client Sample ID: M325-11D-7

Lab ID#: 2301427-15A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.7
Toluene	0.50	0.94
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.30 J
o-Xylene	0.56	0.28 U

Client Sample ID: M325-12-7

Lab ID#: 2301427-16A

Summary of Detected Compounds
EPA METHOD 325B GC/MS FULL SCAN

Client Sample ID: M325-12-7

Lab ID#: 2301427-16A

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.87
Toluene	0.50	0.89
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.36 J
o-Xylene	0.56	0.28 U



Air Toxics

Client Sample ID: M325-1-7

Lab ID#: 2301427-01A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80012606	Date of Collection: 1/19/23 5:26:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/26/23 12:09 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.3
Toluene	0.50	0.97
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.40 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

1,3-Butadiene MDL value = 0.14 ug/m3

Benzene MDL value = 0.19 ug/m3

Toluene MDL value = 0.25 ug/m3

Ethyl Benzene MDL value = 0.28 ug/m3

m,p-Xylene MDL value = 0.28 ug/m3

o-Xylene MDL value = 0.28 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: M325-1D-7

Lab ID#: 2301427-02A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80012607	Date of Collection: 1/19/23 5:26:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/26/23 12:37 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.3
Toluene	0.50	0.98
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.40 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

1,3-Butadiene MDL value = 0.14 ug/m3

Benzene MDL value = 0.19 ug/m3

Toluene MDL value = 0.25 ug/m3

Ethyl Benzene MDL value = 0.28 ug/m3

m,p-Xylene MDL value = 0.28 ug/m3

o-Xylene MDL value = 0.28 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: M325-2-7

Lab ID#: 2301427-03A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80012608	Date of Collection: 1/19/23 3:42:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/26/23 01:05 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.87
Toluene	0.50	0.77
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.33 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

1,3-Butadiene MDL value = 0.14 ug/m3

Benzene MDL value = 0.19 ug/m3

Toluene MDL value = 0.25 ug/m3

Ethyl Benzene MDL value = 0.28 ug/m3

m,p-Xylene MDL value = 0.28 ug/m3

o-Xylene MDL value = 0.28 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: M325-2B-7

Lab ID#: 2301427-04A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80012605	Date of Collection: 1/19/23 3:42:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/26/23 11:41 AM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.19 U
Toluene	0.50	0.25 U
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.28 U
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

1,3-Butadiene MDL value = 0.14 ug/m3

Benzene MDL value = 0.19 ug/m3

Toluene MDL value = 0.25 ug/m3

Ethyl Benzene MDL value = 0.28 ug/m3

m,p-Xylene MDL value = 0.28 ug/m3

o-Xylene MDL value = 0.28 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: M325-3-7

Lab ID#: 2301427-05A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80012609	Date of Collection: 1/19/23 3:47:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/26/23 01:33 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	2.2
Toluene	0.50	1.6
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.46 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

1,3-Butadiene MDL value = 0.14 ug/m3

Benzene MDL value = 0.19 ug/m3

Toluene MDL value = 0.25 ug/m3

Ethyl Benzene MDL value = 0.28 ug/m3

m,p-Xylene MDL value = 0.28 ug/m3

o-Xylene MDL value = 0.28 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: M325-4-7

Lab ID#: 2301427-06A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80012610	Date of Collection: 1/19/23 3:55:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/26/23 02:01 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	3.0
Toluene	0.50	1.8
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.41 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

1,3-Butadiene MDL value = 0.14 ug/m3

Benzene MDL value = 0.19 ug/m3

Toluene MDL value = 0.25 ug/m3

Ethyl Benzene MDL value = 0.28 ug/m3

m,p-Xylene MDL value = 0.28 ug/m3

o-Xylene MDL value = 0.28 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: M325-5-7

Lab ID#: 2301427-07A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80012611	Date of Collection: 1/19/23 4:00:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/26/23 02:29 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	2.4
Toluene	0.50	1.8
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.45 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

1,3-Butadiene MDL value = 0.14 ug/m3

Benzene MDL value = 0.19 ug/m3

Toluene MDL value = 0.25 ug/m3

Ethyl Benzene MDL value = 0.28 ug/m3

m,p-Xylene MDL value = 0.28 ug/m3

o-Xylene MDL value = 0.28 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: M325-6-7

Lab ID#: 2301427-08A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80012612	Date of Collection: 1/19/23 4:38:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/26/23 02:57 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	3.6
Toluene	0.50	1.2
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.46 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

1,3-Butadiene MDL value = 0.14 ug/m3

Benzene MDL value = 0.19 ug/m3

Toluene MDL value = 0.25 ug/m3

Ethyl Benzene MDL value = 0.28 ug/m3

m,p-Xylene MDL value = 0.28 ug/m3

o-Xylene MDL value = 0.28 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: M325-7-7

Lab ID#: 2301427-09A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80012613	Date of Collection: 1/19/23 4:31:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/26/23 03:25 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.6
Toluene	0.50	0.89
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.38 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

1,3-Butadiene MDL value = 0.14 ug/m3

Benzene MDL value = 0.19 ug/m3

Toluene MDL value = 0.25 ug/m3

Ethyl Benzene MDL value = 0.28 ug/m3

m,p-Xylene MDL value = 0.28 ug/m3

o-Xylene MDL value = 0.28 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: M325-7B-7

Lab ID#: 2301427-10A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80012621	Date of Collection: 1/19/23 4:31:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/26/23 07:08 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.19 U
Toluene	0.50	0.25 U
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.28 U
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

1,3-Butadiene MDL value = 0.14 ug/m3

Benzene MDL value = 0.19 ug/m3

Toluene MDL value = 0.25 ug/m3

Ethyl Benzene MDL value = 0.28 ug/m3

m,p-Xylene MDL value = 0.28 ug/m3

o-Xylene MDL value = 0.28 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: M325-8-7

Lab ID#: 2301427-11A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80012614	Date of Collection: 1/19/23 4:23:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/26/23 03:53 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.74
Toluene	0.50	0.74
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.28 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

1,3-Butadiene MDL value = 0.14 ug/m3

Benzene MDL value = 0.19 ug/m3

Toluene MDL value = 0.25 ug/m3

Ethyl Benzene MDL value = 0.28 ug/m3

m,p-Xylene MDL value = 0.28 ug/m3

o-Xylene MDL value = 0.28 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: M325-9-7

Lab ID#: 2301427-12A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80012616	Date of Collection: 1/19/23 4:17:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/26/23 04:48 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.75
Toluene	0.50	0.88
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.33 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

1,3-Butadiene MDL value = 0.14 ug/m3

Benzene MDL value = 0.19 ug/m3

Toluene MDL value = 0.25 ug/m3

Ethyl Benzene MDL value = 0.28 ug/m3

m,p-Xylene MDL value = 0.28 ug/m3

o-Xylene MDL value = 0.28 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: M325-10-7

Lab ID#: 2301427-13A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80012617	Date of Collection: 1/19/23 5:08:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/26/23 05:16 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	2.4
Toluene	0.50	0.96
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.39 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

1,3-Butadiene MDL value = 0.14 ug/m3

Benzene MDL value = 0.19 ug/m3

Toluene MDL value = 0.25 ug/m3

Ethyl Benzene MDL value = 0.28 ug/m3

m,p-Xylene MDL value = 0.28 ug/m3

o-Xylene MDL value = 0.28 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: M325-11-7

Lab ID#: 2301427-14A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80012618	Date of Collection: 1/19/23 5:02:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/26/23 05:44 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.7
Toluene	0.50	0.94
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.39 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

1,3-Butadiene MDL value = 0.14 ug/m3

Benzene MDL value = 0.19 ug/m3

Toluene MDL value = 0.25 ug/m3

Ethyl Benzene MDL value = 0.28 ug/m3

m,p-Xylene MDL value = 0.28 ug/m3

o-Xylene MDL value = 0.28 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: M325-11D-7

Lab ID#: 2301427-15A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80012619	Date of Collection: 1/19/23 5:02:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/26/23 06:12 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	1.7
Toluene	0.50	0.94
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.30 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

1,3-Butadiene MDL value = 0.14 ug/m3

Benzene MDL value = 0.19 ug/m3

Toluene MDL value = 0.25 ug/m3

Ethyl Benzene MDL value = 0.28 ug/m3

m,p-Xylene MDL value = 0.28 ug/m3

o-Xylene MDL value = 0.28 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: M325-12-7

Lab ID#: 2301427-16A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80012620	Date of Collection: 1/19/23 5:20:00 PM
Dil. Factor:	1.04	Date of Analysis: 1/26/23 06:40 PM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.29	0.14 U
Benzene	0.38	0.87
Toluene	0.50	0.89
Ethyl Benzene	0.56	0.28 U
m,p-Xylene	0.56	0.36 J
o-Xylene	0.56	0.28 U

U = The analyte was not present above the Method Detection Limit.

J = Estimated value.

1,3-Butadiene MDL value = 0.14 ug/m3

Benzene MDL value = 0.19 ug/m3

Toluene MDL value = 0.25 ug/m3

Ethyl Benzene MDL value = 0.28 ug/m3

m,p-Xylene MDL value = 0.28 ug/m3

o-Xylene MDL value = 0.28 ug/m3

Container Type: Carboxpack X CA-SF



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2301427-17A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80012604	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/26/23 10:42 AM
		Date of Extraction: NA

Compound	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.28	0.13 U
Benzene	0.37	0.18 U
Toluene	0.48	0.24 U
Ethyl Benzene	0.54	0.27 U
m,p-Xylene	0.54	0.27 U
o-Xylene	0.54	0.27 U

U = The analyte was not present above the Method Detection Limit.

1,3-Butadiene MDL value = 0.13 ug/m3

Benzene MDL value = 0.18 ug/m3

Toluene MDL value = 0.24 ug/m3

Ethyl Benzene MDL value = 0.27 ug/m3

m,p-Xylene MDL value = 0.27 ug/m3

o-Xylene MDL value = 0.27 ug/m3

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: CCV

Lab ID#: 2301427-18A

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80012615	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/26/23 04:20 PM
		Date of Extraction: NA

Compound	%Recovery
----------	-----------

1,3-Butadiene	84
Benzene	102
Toluene	103
Ethyl Benzene	102
m,p-Xylene	104
o-Xylene	100

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: CCV

Lab ID#: 2301427-18B

EPA METHOD 325B GC/MS FULL SCAN

File Name:	80012624	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/26/23 08:30 PM
		Date of Extraction: NA

Compound	%Recovery
----------	-----------

1,3-Butadiene	81
Benzene	103
Toluene	104
Ethyl Benzene	104
m,p-Xylene	108
o-Xylene	112

Container Type: NA - Not Applicable

Deploy Tubes by: 6/14/22
(Date)Kit ID: A B C D
(Circle One)Case Seal#: 1875761Return Seal#: 1875762

WO#:

2301427

Client: Clean Air Engineering PID: _____ P.O.# _____
 Project Name: 14796 Project Manager: Tim Rodale
 Site Name: River Rouge Collected by: Tim Rodale

Lab ID	Sample Identification	Station	Carbopack X Tube ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Location (gps)	Sample Type (check one)			Benzene	Project VOC list	Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush Specify _____
									Routine Sample	Field Duplicate	Field Blank			
QA	M325-1-7 (1)	1	1186104	1/5/23	1825	1/19/23	1726		✓				✓	
QA	M325-1D-7 (1D)	1	1188421	1/5/23	1806	1/19/23	1726			✓			✓	
QA	M325-2-7 (2)	2	1188458	1/5/23	1900	1/19/23	1542		✓				✓	
QA	M325-2B-7 (1B)	2	1188455	1/5/23	1745	1/19/23	1542				✓		✓	
QA	M325-3-7 (3)	3	1188480	1/5/23	1740	1/19/23	1547		✓				✓	
QA	M325-4-7 (4)	4	1188486	1/5/23	1745	1/19/23	1555		✓				✓	
QA	M325-5-7 (5)	5	1188490	1/5/23	1740	1/19/23	1600		✓				✓	
QA	M325-6-7 (6)	6	1188498	1/5/23	1715	1/19/23	1638		✓				✓	
QA	M325-7-7 (7)	7	1188529	1/5/23	1710	1/19/23	1631		✓				✓	
QA	M325-7B-7 (7B)	7	1188542	1/5/23	1710	1/19/23	1631				✓		✓	
QA	M325-8-7 (8)	8	1188554	1/5/23	1735	1/19/23	1623		✓				✓	
QA	M325-9-7 (9)	9	1188558	1/5/23	1728	1/19/23	1617		✓				✓	

⑧ container #

Relinquished by: [Signature] Date: 1/23/23 Time: 1400 Received by: K. Mitchell EATL Date: 1/25/23 Time: 1000
 Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____

Avg Ambient Temperature:

Units: °F °C

Avg Barometric Pressure:

Units: hPa atm inHg mmHg

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind.
 Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Shipper Name: Fedex 607298360753
 Custody Seals Intact? ☒ Yes ☐ No ☐ None Blue Ice present or insulated cooler used? ☒ Yes ☐ No
 Sample Condition Upon Receipt: good

Deploy Tubes by: _____
(Date)

Kit ID: A B C D
(Circle One)

Case Seal#:

Return Seal#: 1875762

WO#:

2301427

Client: Clean Air Engineering

PID:

P.O.#

Project Name: 14796

Project Manager:

Site Name: River Rouge

Collected by:

[illegible]

Relinquished by:

Date _____

Time

Received by:

Date _____

Time

Avg Ambient Temperature:

Relinquished by:

Date _____

Time

Received by:

Date _____

Time

Units: °F °C

Avg Barometric Pressure:

Units: hPa atm inHg mmHg

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Shipper Name:

Lab Use Only

Custody Seals Intact?

☒ Yes ☐ No

None

Blue Ice present or insulated cooler used?

Yes

No

Sample Condition Upon Receipt:

good

November 4, 2022

Dr. Volker Schmid
Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275

Project Location: Detroit, MI
Client Job Number:
Project Number: 00123249 - 14777-TO-13A_TO-15
Laboratory Work Order Number: 22J2538

Enclosed are results of analyses for samples as received by the laboratory on October 18, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Alexandra M Gooch
Project Manager

Table of Contents

Sample Summary	3
Case Narrative	4
Sample Results	6
Sample Preparation Information	14
QC Data	15
Air Toxics by EPA Compendium Methods	15
B320728	15
Flag/Qualifier Summary	17
Internal standard Area & RT Summary	18
Continuing Calibration Check	22
Certifications	23
Chain of Custody/Sample Receipt	24

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275
ATTN: Dr. Volker Schmid

REPORT DATE: 11/4/2022

PURCHASE ORDER NUMBER: 03292-44-14777

PROJECT NUMBER: 00123249 - 14777-TO-13A_TO-15

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22J2538

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Detroit, MI

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Int1-100522-02	22J2538-01	Air		EPA TO-13A	
Dwn1-100522-04	22J2538-02	Air		EPA TO-13A	
Dwn2-100522-03	22J2538-03	Air		EPA TO-13A	
Int2-100522-01	22J2538-04	Air		EPA TO-13A	
UP-100522-05	22J2538-05	Air		EPA TO-13A	
FB-100522-06	22J2538-06	Air		EPA TO-13A	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA TO-13A**Qualifications:**

I-02
Result not attainable due to sample matrix interferences (a chemical or physical interference which could not be eliminated).

Analyte & Samples(s) Qualified:

Naphthalene-d8
22J2538-01[Int1-100522-02], 22J2538-03[Dwn2-100522-03], 22J2538-04[Int2-100522-01]

L-05
Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

Naphthalene
22J2538-05RE1[UP-100522-05], 22J2538-06[FB-100522-06], B320728-BS1, B320728-BSD1

RL-08
Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.

Analyte & Samples(s) Qualified:

22J2538-01[Int1-100522-02], 22J2538-01RE1[Int1-100522-02], 22J2538-01RE2[Int1-100522-02], 22J2538-02[Dwn1-100522-04], 22J2538-02RE1[Dwn1-100522-04]

S-01
The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

Benzo(a)pyrene-d12
22J2538-01RE3[Int1-100522-02], 22J2538-03RE2[Dwn2-100522-03], 22J2538-04RE3[Int2-100522-01]

Fluoranthene-d10
22J2538-01RE3[Int1-100522-02], 22J2538-03RE2[Dwn2-100522-03], 22J2538-04RE3[Int2-100522-01]

Fluorene-d10
22J2538-01RE3[Int1-100522-02], 22J2538-03RE2[Dwn2-100522-03], 22J2538-04RE3[Int2-100522-01]

Naphthalene-d8
22J2538-01RE3[Int1-100522-02]

Pyrene-d10
22J2538-01RE3[Int1-100522-02], 22J2538-03RE2[Dwn2-100522-03], 22J2538-04RE3[Int2-100522-01]

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

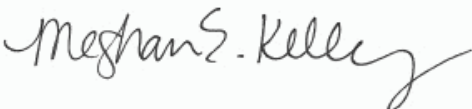
EPA TO-13A

Reported results for air samples are calculated based on client sampling and sampling information provided by the laboratory.

Blank is not subtracted unless otherwise specified.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Detroit, MI
Date Received: 10/18/2022
Field Sample #: Int1-100522-02
Sample ID: 22J2538-01
Sample Matrix: Air
Sampled: 10/17/2022 00:00

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 22J2538

EPA TO-13A

Sample Flags: RL-08

Sample Flags: RL-08		Total µg		Date/Time			
Analyte	Results	RL	Flag/Qual	Dilution	Analyzed	Analyst	
Acenaphthene	13	5.0		25	10/28/22 13:02	SPF	
Acenaphthene	11	0.40		2	10/26/22 17:03	SPF	
Acenaphthylene	320	10		50	10/28/22 13:30	SPF	
Anthracene	35	5.0		25	10/28/22 13:02	SPF	
Anthracene	34	10		50	10/28/22 13:30	SPF	
Benzo(a)anthracene	11	0.40		2	10/26/22 17:03	SPF	
Benzo(a)pyrene	2.5	0.40		2	10/26/22 17:03	SPF	
Benzo(b)fluoranthene	7.7	0.40		2	10/26/22 17:03	SPF	
Benzo(e)pyrene	3.0	0.40		2	10/26/22 17:03	SPF	
Benzo(g,h,i)perylene	1.5	0.40		2	10/26/22 17:03	SPF	
Benzo(k)fluoranthene	2.9	0.40		2	10/26/22 17:03	SPF	
Chrysene	13	0.40		2	10/26/22 17:03	SPF	
Dibenz(a,h)anthracene	ND	0.40		2	10/26/22 17:03	SPF	
Fluoranthene	54	5.0		25	10/28/22 13:02	SPF	
Fluorene	110	5.0		25	10/28/22 13:02	SPF	
Indeno(1,2,3-cd)pyrene	1.8	0.40		2	10/26/22 17:03	SPF	
1-Methylnaphthalene	150	5.0		25	10/28/22 13:02	SPF	
2-Methylnaphthalene	430	10		50	10/28/22 13:30	SPF	
Naphthalene	7000	500		1000	10/31/22 14:43	SPF	
Perylene	0.67	0.40		2	10/26/22 17:03	SPF	
Phenanthrene	160	5.0		25	10/28/22 13:02	SPF	
Pyrene	31	5.0		25	10/28/22 13:02	SPF	

Surrogates	% Recovery		% REC Limits	
Benzo(a)pyrene-d12	90.0		60-120	10/28/22 13:30
Benzo(a)pyrene-d12	90.0		60-120	10/28/22 13:02
Benzo(a)pyrene-d12	90.0		60-120	10/26/22 17:03
Benzo(a)pyrene-d12	*	S-01	60-120	10/31/22 14:43
Fluoranthene-d10	90.0		60-120	10/28/22 13:02
Fluoranthene-d10	90.0		60-120	10/28/22 13:30
Fluoranthene-d10	88.8		60-120	10/26/22 17:03
Fluoranthene-d10	*	S-01	60-120	10/31/22 14:43
Fluorene-d10	100		60-120	10/28/22 13:02
Fluorene-d10	105		60-120	10/28/22 13:30
Fluorene-d10	86.2		60-120	10/26/22 17:03
Fluorene-d10	*	S-01	60-120	10/31/22 14:43
Pyrene-d10	90.0		60-120	10/28/22 13:02
Pyrene-d10	90.0		60-120	10/28/22 13:30

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ANALYTICAL RESULTS

Project Location: Detroit, MI
Date Received: 10/18/2022
Field Sample #: Int1-100522-02
Sample ID: 22J2538-01
Sample Matrix: Air
Sampled: 10/17/2022 00:00

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 22J2538
EPA TO-13A

Sample Flags: RL-08

Sample Flags: RL-08		Total µg		Date/Time		
Analyte	Results	RL	Flag/Qual	Dilution	Analyzed	Analyst
Surrogates	% Recovery		% REC Limits			
Pyrene-d10	93.6		60-120		10/26/22 17:03	
Pyrene-d10	*		S-01	60-120		10/31/22 14:43

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ANALYTICAL RESULTS

Project Location: Detroit, MI

Date Received: 10/18/2022

Field Sample #: Dwn1-100522-04
Sample ID: 22J2538-02

Sample Matrix: Air

Sampled: 10/17/2022 00:00

Sample Description/Location:

Sub Description/Location:

Work Order: 22J2538

Flow Controller ID:

Sample Type:

EPA TO-13A

Sample Flags: RL-08

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	4.6	0.40		2	10/26/22 17:32		SPF
Acenaphthylene	14	0.40		2	10/26/22 17:32		SPF
Anthracene	8.2	0.40		2	10/26/22 17:32		SPF
Benzo(a)anthracene	13	0.40		2	10/26/22 17:32		SPF
Benzo(a)pyrene	8.7	0.40		2	10/26/22 17:32		SPF
Benzo(b)fluoranthene	15	0.40		2	10/26/22 17:32		SPF
Benzo(e)pyrene	7.4	0.40		2	10/26/22 17:32		SPF
Benzo(g,h,i)perylene	5.9	0.40		2	10/26/22 17:32		SPF
Benzo(k)fluoranthene	5.4	0.40		2	10/26/22 17:32		SPF
Chrysene	12	0.40		2	10/26/22 17:32		SPF
Dibenz(a,h)anthracene	1.9	0.40		2	10/26/22 17:32		SPF
Fluoranthene	27	1.0		5	10/28/22 15:51		SPF
Fluorene	12	0.40		2	10/26/22 17:32		SPF
Indeno(1,2,3-cd)pyrene	6.9	0.40		2	10/26/22 17:32		SPF
1-Methylnaphthalene	14	0.40		2	10/26/22 17:32		SPF
2-Methylnaphthalene	31	1.0		5	10/28/22 15:51		SPF
Naphthalene	340	25		50	10/31/22 15:11		SPF
Perylene	2.2	0.40		2	10/26/22 17:32		SPF
Phenanthrene	31	1.0		5	10/28/22 15:51		SPF
Pyrene	18	0.40		2	10/26/22 17:32		SPF

Surrogates	% Recovery	% REC Limits	
Benzo(a)pyrene-d12	100	60-120	10/31/22 15:11
Benzo(a)pyrene-d12	87.4	60-120	10/26/22 17:32
Benzo(a)pyrene-d12	92.0	60-120	10/28/22 15:51
Fluoranthene-d10	105	60-120	10/31/22 15:11
Fluoranthene-d10	95.8	60-120	10/26/22 17:32
Fluoranthene-d10	99.5	60-120	10/28/22 15:51
Fluorene-d10	105	60-120	10/31/22 15:11
Fluorene-d10	92.2	60-120	10/26/22 17:32
Fluorene-d10	90.5	60-120	10/28/22 15:51
Pyrene-d10	100	60-120	10/31/22 15:11
Pyrene-d10	92.0	60-120	10/26/22 17:32
Pyrene-d10	91.5	60-120	10/28/22 15:51

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ANALYTICAL RESULTS

Project Location: Detroit, MI

Date Received: 10/18/2022

Field Sample #: Dwn2-100522-03
Sample ID: 22J2538-03

Sample Matrix: Air

Sampled: 10/17/2022 00:00

Sample Description/Location:

Sub Description/Location:

Work Order: 22J2538

Flow Controller ID:

Sample Type:

EPA TO-13A

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	5.9	0.20		1	10/26/22 18:00		SPF
Acenaphthene	6.8	2.0		10	10/28/22 16:19		SPF
Acenaphthylene	38	2.0		10	10/28/22 16:19		SPF
Anthracene	16	2.0		10	10/28/22 16:19		SPF
Benzo(a)anthracene	5.8	0.20		1	10/26/22 18:00		SPF
Benzo(a)pyrene	3.0	0.20		1	10/26/22 18:00		SPF
Benzo(b)fluoranthene	6.1	0.20		1	10/26/22 18:00		SPF
Benzo(e)pyrene	3.1	0.20		1	10/26/22 18:00		SPF
Benzo(g,h,i)perylene	2.3	0.20		1	10/26/22 18:00		SPF
Benzo(k)fluoranthene	2.1	0.20		1	10/26/22 18:00		SPF
Chrysene	6.0	0.20		1	10/26/22 18:00		SPF
Dibenz(a,h)anthracene	ND	0.20		1	10/26/22 18:00		SPF
Fluoranthene	31	2.0		10	10/28/22 16:19		SPF
Fluorene	26	2.0		10	10/28/22 16:19		SPF
Indeno(1,2,3-cd)pyrene	2.7	0.20		1	10/26/22 18:00		SPF
1-Methylnaphthalene	27	2.0		10	10/28/22 16:19		SPF
2-Methylnaphthalene	60	2.0		10	10/28/22 16:19		SPF
Naphthalene	840	50		100	11/2/22 13:09		SPF
Perylene	0.82	0.20		1	10/26/22 18:00		SPF
Phenanthrene	64	2.0		10	10/28/22 16:19		SPF
Pyrene	18	2.0		10	10/28/22 16:19		SPF

Surrogates	% Recovery		% REC Limits	
Benzo(a)pyrene-d12	100		60-120	10/28/22 16:19
Benzo(a)pyrene-d12	94.8		60-120	10/26/22 18:00
Benzo(a)pyrene-d12	*	S-01	60-120	11/2/22 13:09
Fluoranthene-d10	84.6		60-120	10/26/22 18:00
Fluoranthene-d10	98.0		60-120	10/28/22 16:19
Fluoranthene-d10	*	S-01	60-120	11/2/22 13:09
Fluorene-d10	77.5		60-120	10/26/22 18:00
Fluorene-d10	93.0		60-120	10/28/22 16:19
Fluorene-d10	*	S-01	60-120	11/2/22 13:09
Pyrene-d10	*	S-01	60-120	11/2/22 13:09
Pyrene-d10	89.0		60-120	10/26/22 18:00
Pyrene-d10	85.0		60-120	10/28/22 16:19

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ANALYTICAL RESULTS

Project Location: Detroit, MI
Date Received: 10/18/2022
Field Sample #: Int2-100522-01
Sample ID: 22J2538-04
Sample Matrix: Air
Sampled: 10/17/2022 00:00

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 22J2538
EPA TO-13A

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	6.6	0.20		1	10/26/22 18:29		SPF
Acenaphthylene	160	5.0		25	10/28/22 14:54		SPF
Anthracene	9.2	2.0		10	10/28/22 16:47		SPF
Benzo(a)anthracene	0.81	0.20		1	10/26/22 18:29		SPF
Benzo(a)pyrene	0.53	0.20		1	10/26/22 18:29		SPF
Benzo(b)fluoranthene	1.0	0.20		1	10/26/22 18:29		SPF
Benzo(e)pyrene	0.54	0.20		1	10/26/22 18:29		SPF
Benzo(g,h,i)perylene	0.47	0.20		1	10/26/22 18:29		SPF
Benzo(k)fluoranthene	0.35	0.20		1	10/26/22 18:29		SPF
Chrysene	0.91	0.20		1	10/26/22 18:29		SPF
Dibenz(a,h)anthracene	ND	0.20		1	10/26/22 18:29		SPF
Fluoranthene	5.5	0.20		1	10/26/22 18:29		SPF
Fluorene	45	2.0		10	10/28/22 16:47		SPF
Indeno(1,2,3-cd)pyrene	0.51	0.20		1	10/26/22 18:29		SPF
1-Methylnaphthalene	62	2.0		10	10/28/22 16:47		SPF
2-Methylnaphthalene	160	5.0		25	10/28/22 14:54		SPF
Naphthalene	1700	250		500	10/31/22 16:08		SPF
Perylene	ND	0.20		1	10/26/22 18:29		SPF
Phenanthrene	40	2.0		10	10/28/22 16:47		SPF
Pyrene	2.9	0.20		1	10/26/22 18:29		SPF

Surrogates	% Recovery		% REC Limits		
Benzo(a)pyrene-d12	100		60-120		10/26/22 18:29
Benzo(a)pyrene-d12	*	S-01	60-120		10/31/22 16:08
Benzo(a)pyrene-d12	97.5		60-120		10/28/22 14:54
Benzo(a)pyrene-d12	104		60-120		10/28/22 16:47
Fluoranthene-d10	93.7		60-120		10/26/22 18:29
Fluoranthene-d10	101		60-120		10/28/22 16:47
Fluoranthene-d10	97.5		60-120		10/28/22 14:54
Fluoranthene-d10	*	S-01	60-120		10/31/22 16:08
Fluorene-d10	80.5		60-120		10/26/22 18:29
Fluorene-d10	102		60-120		10/28/22 14:54
Fluorene-d10	97.0		60-120		10/28/22 16:47
Fluorene-d10	*	S-01	60-120		10/31/22 16:08
Pyrene-d10	85.4		60-120		10/26/22 18:29
Pyrene-d10	94.0		60-120		10/28/22 16:47
Pyrene-d10	90.0		60-120		10/28/22 14:54
Pyrene-d10	*	S-01	60-120		10/31/22 16:08

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Detroit, MI
Date Received: 10/18/2022
Field Sample #: Int2-100522-01
Sample ID: 22J2538-04
Sample Matrix: Air
Sampled: 10/17/2022 00:00

Sample Description/Location:
Sub Description/Location:

Work Order: 22J2538

Flow Controller ID:
Sample Type:

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Detroit, MI
Date Received: 10/18/2022
Field Sample #: UP-100522-05
Sample ID: 22J2538-05
Sample Matrix: Air
Sampled: 10/17/2022 00:00

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 22J2538
EPA TO-13A

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	2.8	0.20		1	10/26/22 18:57		SPF
Acenaphthylene	0.25	0.20		1	10/26/22 18:57		SPF
Anthracene	0.23	0.20		1	10/26/22 18:57		SPF
Benzo(a)anthracene	0.31	0.20		1	10/26/22 18:57		SPF
Benzo(a)pyrene	0.33	0.20		1	10/26/22 18:57		SPF
Benzo(b)fluoranthene	0.54	0.20		1	10/26/22 18:57		SPF
Benzo(e)pyrene	0.32	0.20		1	10/26/22 18:57		SPF
Benzo(g,h,i)perylene	0.32	0.20		1	10/26/22 18:57		SPF
Benzo(k)fluoranthene	ND	0.20		1	10/26/22 18:57		SPF
Chrysene	0.37	0.20		1	10/26/22 18:57		SPF
Dibenz(a,h)anthracene	ND	0.20		1	10/26/22 18:57		SPF
Fluoranthene	0.84	0.20		1	10/26/22 18:57		SPF
Fluorene	1.6	0.20		1	10/26/22 18:57		SPF
Indeno(1,2,3-cd)pyrene	0.30	0.20		1	10/26/22 18:57		SPF
1-Methylnaphthalene	4.3	0.20		1	10/26/22 18:57		SPF
2-Methylnaphthalene	8.4	0.20		1	10/26/22 18:57		SPF
Naphthalene	13	1.0	L-05	2	10/28/22 17:15		SPF
Perylene	ND	0.20		1	10/26/22 18:57		SPF
Phenanthrene	2.3	0.20		1	10/26/22 18:57		SPF
Pyrene	0.52	0.20		1	10/26/22 18:57		SPF

Surrogates	% Recovery	% REC Limits	
Benzo(a)pyrene-d12	106	60-120	10/28/22 17:15
Benzo(a)pyrene-d12	98.8	60-120	10/26/22 18:57
Fluoranthene-d10	93.0	60-120	10/28/22 17:15
Fluoranthene-d10	96.1	60-120	10/26/22 18:57
Fluorene-d10	95.6	60-120	10/28/22 17:15
Fluorene-d10	93.3	60-120	10/26/22 18:57
Pyrene-d10	107	60-120	10/28/22 17:15
Pyrene-d10	90.5	60-120	10/26/22 18:57

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Detroit, MI
Date Received: 10/18/2022
Field Sample #: FB-100522-06
Sample ID: 22J2538-06
Sample Matrix: Air
Sampled: 10/17/2022 00:00

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 22J2538
EPA TO-13A

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	ND	0.20		1	10/26/22 19:26		SPF
Acenaphthylene	ND	0.20		1	10/26/22 19:26		SPF
Anthracene	ND	0.20		1	10/26/22 19:26		SPF
Benzo(a)anthracene	ND	0.20		1	10/26/22 19:26		SPF
Benzo(a)pyrene	ND	0.20		1	10/26/22 19:26		SPF
Benzo(b)fluoranthene	ND	0.20		1	10/26/22 19:26		SPF
Benzo(e)pyrene	ND	0.20		1	10/26/22 19:26		SPF
Benzo(g,h,i)perylene	ND	0.20		1	10/26/22 19:26		SPF
Benzo(k)fluoranthene	ND	0.20		1	10/26/22 19:26		SPF
Chrysene	ND	0.20		1	10/26/22 19:26		SPF
Dibenz(a,h)anthracene	ND	0.20		1	10/26/22 19:26		SPF
Fluoranthene	ND	0.20		1	10/26/22 19:26		SPF
Fluorene	ND	0.20		1	10/26/22 19:26		SPF
Indeno(1,2,3-cd)pyrene	ND	0.20		1	10/26/22 19:26		SPF
1-Methylnaphthalene	ND	0.20		1	10/26/22 19:26		SPF
2-Methylnaphthalene	ND	0.20		1	10/26/22 19:26		SPF
Naphthalene	0.90	0.50	L-05	1	10/26/22 19:26		SPF
Perylene	ND	0.20		1	10/26/22 19:26		SPF
Phenanthrene	ND	0.20		1	10/26/22 19:26		SPF
Pyrene	ND	0.20		1	10/26/22 19:26		SPF

Surrogates	% Recovery	% REC Limits	
Benzo(a)pyrene-d12	86.9	60-120	10/26/22 19:26
Fluoranthene-d10	98.2	60-120	10/26/22 19:26
Fluorene-d10	91.4	60-120	10/26/22 19:26
Pyrene-d10	103	60-120	10/26/22 19:26

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data**Prep Method: SW-846 3540C Analytical Method: EPA TO-13A**

Lab Number [Field ID]	Batch	Initial [Cartridge	Final [mL]	Date
22J2538-01 [Int1-100522-02]	B320728	1.00	1.00	10/21/22
22J2538-01RE1 [Int1-100522-02]	B320728	1.00	1.00	10/21/22
22J2538-01RE2 [Int1-100522-02]	B320728	1.00	1.00	10/21/22
22J2538-01RE3 [Int1-100522-02]	B320728	1.00	1.00	10/21/22
22J2538-02 [Dwn1-100522-04]	B320728	1.00	1.00	10/21/22
22J2538-02RE1 [Dwn1-100522-04]	B320728	1.00	1.00	10/21/22
22J2538-02RE2 [Dwn1-100522-04]	B320728	1.00	1.00	10/21/22
22J2538-03 [Dwn2-100522-03]	B320728	1.00	1.00	10/21/22
22J2538-03RE1 [Dwn2-100522-03]	B320728	1.00	1.00	10/21/22
22J2538-03RE2 [Dwn2-100522-03]	B320728	1.00	1.00	10/21/22
22J2538-04 [Int2-100522-01]	B320728	1.00	1.00	10/21/22
22J2538-04RE1 [Int2-100522-01]	B320728	1.00	1.00	10/21/22
22J2538-04RE2 [Int2-100522-01]	B320728	1.00	1.00	10/21/22
22J2538-04RE3 [Int2-100522-01]	B320728	1.00	1.00	10/21/22
22J2538-05 [UP-100522-05]	B320728	1.00	1.00	10/21/22
22J2538-05RE1 [UP-100522-05]	B320728	1.00	1.00	10/21/22
22J2538-06 [FB-100522-06]	B320728	1.00	1.00	10/21/22

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	Total µg		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	Total µg	Result	%REC	Limits	RPD	Limit	

Batch B320728 - SW-846 3540C

Blank (B320728-BLK1)

Prepared: 10/21/22 Analyzed: 10/26/22

Acenaphthene	ND	0.20									
Acenaphthylene	ND	0.20									
Anthracene	ND	0.20									
Benzo(a)anthracene	ND	0.20									
Benzo(a)pyrene	ND	0.20									
Benzo(b)fluoranthene	ND	0.20									
Benzo(e)pyrene	ND	0.20									
Benzo(g,h,i)perylene	ND	0.20									
Benzo(k)fluoranthene	ND	0.20									
Chrysene	ND	0.20									
Dibenz(a,h)anthracene	ND	0.20									
Fluoranthene	ND	0.20									
Fluorene	ND	0.20									
Indeno(1,2,3-cd)pyrene	ND	0.20									
1-Methylnaphthalene	ND	0.20									
2-Methylnaphthalene	ND	0.20									
Naphthalene	ND	0.50									
Perylene	ND	0.20									
Phenanthrene	ND	0.20									
Pyrene	ND	0.20									
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Surrogate: Fluorene-d10	0.758				1.00		75.8	60-120			
Surrogate: Pyrene-d10	0.747				1.00		74.7	60-120			

LCS (B320728-BS1)

Prepared: 10/21/22 Analyzed: 10/26/22

Acenaphthene	0.313	0.20	1.3	0.500		62.6	60-110				
Acenaphthylene	0.324	0.20	1.2	0.500		64.8	60-110				
Anthracene	0.305	0.20	1.5	0.500		61.0	60-110				
Benzo(a)anthracene	0.322	0.20	1.9	0.500		64.4	60-110				
Benzo(a)pyrene	0.342	0.20	2.1	0.500		68.4	60-110				
Benzo(b)fluoranthene	0.385	0.20	2.1	0.500		77.0	60-111				
Benzo(e)pyrene	0.413	0.20	2.1	0.500		82.6	60-118				
Benzo(g,h,i)perylene	0.362	0.20	2.3	0.500		72.4	60-111				
Benzo(k)fluoranthene	0.374	0.20	2.1	0.500		74.8	60-114				
Chrysene	0.325	0.20	1.9	0.500		65.0	60-110				
Dibenz(a,h)anthracene	0.347	0.20	2.3	0.500		69.4	60-113				
Fluoranthene	0.321	0.20	1.7	0.500		64.2	60-110				
Fluorene	0.339	0.20	1.4	0.500		67.8	60-110				
Indeno(1,2,3-cd)pyrene	0.369	0.20	2.3	0.500		73.8	60-110				
1-Methylnaphthalene	0.341	0.20	1.2	0.500		68.2	60-110				
2-Methylnaphthalene	0.372	0.20	1.2	0.500		74.4	60-110				
Naphthalene	0.779	0.50	2.6	0.500		156 *	60-118				L-05
Perylene	0.363	0.20	2.1	0.500		72.6	60-110				
Phenanthrene	0.375	0.20	1.5	0.500		75.0	60-110				
Pyrene	0.323	0.20	1.7	0.500		64.6	60-110				
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Surrogate: Fluorene-d10	0.900			1.00		90.0	60-120				
Surrogate: Pyrene-d10	0.953			1.00		95.3	60-120				

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	Total µg		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	Total µg	Result	%REC	Limits	RPD	Limit	
Batch B320728 - SW-846 3540C											
LCS Dup (B320728-BSD1)					Prepared: 10/21/22 Analyzed: 10/26/22						
Acenaphthene	0.352	0.20		1.3	0.500		70.4	60-110	11.7	29.8	
Acenaphthylene	0.315	0.20		1.2	0.500		63.0	60-110	2.82	50	
Anthracene	0.311	0.20		1.5	0.500		62.2	60-110	1.95	35.8	
Benzo(a)anthracene	0.355	0.20		1.9	0.500		71.0	60-110	9.75	27.3	
Benzo(a)pyrene	0.361	0.20		2.1	0.500		72.2	60-110	5.41	27.3	
Benzo(b)fluoranthene	0.417	0.20		2.1	0.500		83.4	60-111	7.98	32.7	
Benzo(e)pyrene	0.458	0.20		2.1	0.500		91.6	60-118	10.3	33.6	
Benzo(g,h,i)perylene	0.411	0.20		2.3	0.500		82.2	60-111	12.7	36	
Benzo(k)fluoranthene	0.412	0.20		2.1	0.500		82.4	60-114	9.67	32.5	
Chrysene	0.357	0.20		1.9	0.500		71.4	60-110	9.38	28	
Dibenz(a,h)anthracene	0.402	0.20		2.3	0.500		80.4	60-113	14.7	37.1	
Fluoranthene	0.356	0.20		1.7	0.500		71.2	60-110	10.3	29.5	
Fluorene	0.368	0.20		1.4	0.500		73.6	60-110	8.20	31.1	
Indeno(1,2,3-cd)pyrene	0.414	0.20		2.3	0.500		82.8	60-110	11.5	34	
1-Methylnaphthalene	0.390	0.20		1.2	0.500		78.0	60-110	13.4	28.9	
2-Methylnaphthalene	0.416	0.20		1.2	0.500		83.2	60-110	11.2	28.3	
Naphthalene	0.657	0.50		2.6	0.500		131	* 60-118	17.0	28.3	L-05
Perylene	0.383	0.20		2.1	0.500		76.6	60-110	5.36	25.9	
Phenanthrene	0.381	0.20		1.5	0.500		76.2	60-110	1.59	27.4	
Pyrene	0.347	0.20		1.7	0.500		69.4	60-110	7.16	30.7	
Surrogate: Fluorene-d10	0.863				1.00		86.3	60-120			
Surrogate: Pyrene-d10	0.918				1.00		91.8	60-120			

L-05

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
I-02	Result not attainable due to sample matrix interferences (a chemical or physical interference which could not be eliminated).
L-05	Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the high side.
RL-08	Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B320728-BLK1)									
Lab File ID: E22S299004.D					Analyzed: 10/26/22 14:33				
Naphthalene-d8	133346	7.882	125572	7.89	106	50 - 200	-0.0080	+/-0.50	
Acenaphthene-d10	76894	9.617	82358	9.62	93	50 - 200	-0.0030	+/-0.50	
Phenanthrene-d10	142879	11.085	166516	11.08	86	50 - 200	0.0050	+/-0.50	
Chrysene-d12	139312	14.819	156005	14.811	89	50 - 200	0.0080	+/-0.50	
Perylene-d12	148796	18.197	160148	18.185	93	50 - 200	0.0120	+/-0.50	
LCS (B320728-BS1)									
Lab File ID: E22S299009.D					Analyzed: 10/26/22 16:06				
Naphthalene-d8	133579	7.886	125572	7.89	106	50 - 200	-0.0040	+/-0.50	
Acenaphthene-d10	86454	9.62	82358	9.62	105	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	142560	11.085	166516	11.08	86	50 - 200	0.0050	+/-0.50	
Chrysene-d12	120214	14.819	156005	14.811	77	50 - 200	0.0080	+/-0.50	
Perylene-d12	119695	18.201	160148	18.185	75	50 - 200	0.0160	+/-0.50	
LCS Dup (B320728-BSD1)									
Lab File ID: E22S299010.D					Analyzed: 10/26/22 16:35				
Naphthalene-d8	128114	7.89	125572	7.89	102	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	81945	9.621	82358	9.62	99	50 - 200	0.0010	+/-0.50	
Phenanthrene-d10	135767	11.085	166516	11.08	82	50 - 200	0.0050	+/-0.50	
Chrysene-d12	118926	14.823	156005	14.811	76	50 - 200	0.0120	+/-0.50	
Perylene-d12	122033	18.205	160148	18.185	76	50 - 200	0.0200	+/-0.50	
Int1-100522-02 (22J2538-01)									
Lab File ID: E22S299011.D					Analyzed: 10/26/22 17:03				
Naphthalene-d8	5053	7.89	125572	7.89	4	50 - 200	0.0000	+/-0.50	*
Acenaphthene-d10	104014	9.632	82358	9.62	126	50 - 200	0.0120	+/-0.50	
Phenanthrene-d10	171555	11.099	166516	11.08	103	50 - 200	0.0190	+/-0.50	
Chrysene-d12	161731	14.835	156005	14.811	104	50 - 200	0.0240	+/-0.50	
Perylene-d12	173975	18.212	160148	18.185	109	50 - 200	0.0270	+/-0.50	
Dwn1-100522-04 (22J2538-02)									
Lab File ID: E22S299012.D					Analyzed: 10/26/22 17:32				
Naphthalene-d8	136128	7.91	125572	7.89	108	50 - 200	0.0200	+/-0.50	
Acenaphthene-d10	91571	9.629	82358	9.62	111	50 - 200	0.0090	+/-0.50	
Phenanthrene-d10	157238	11.089	166516	11.08	94	50 - 200	0.0090	+/-0.50	
Chrysene-d12	136224	14.832	156005	14.811	87	50 - 200	0.0210	+/-0.50	
Perylene-d12	155994	18.212	160148	18.185	97	50 - 200	0.0270	+/-0.50	
Dwn2-100522-03 (22J2538-03)									
Lab File ID: E22S299013.D					Analyzed: 10/26/22 18:00				
Naphthalene-d8	4494	7.845	125572	7.89	4	50 - 200	-0.0450	+/-0.50	*
Acenaphthene-d10	94884	9.629	82358	9.62	115	50 - 200	0.0090	+/-0.50	
Phenanthrene-d10	129950	11.094	166516	11.08	78	50 - 200	0.0140	+/-0.50	
Chrysene-d12	105008	14.828	156005	14.811	67	50 - 200	0.0170	+/-0.50	
Perylene-d12	112852	18.216	160148	18.185	70	50 - 200	0.0310	+/-0.50	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Int2-100522-01 (22J2538-04) Lab File ID: E22S299014.D Analyzed: 10/26/22 18:29									
Naphthalene-d8	53119	7.918	125572	7.89	42	50 - 200	0.0280	+/-0.50	*
Acenaphthene-d10	111071	9.633	82358	9.62	135	50 - 200	0.0130	+/-0.50	
Phenanthrene-d10	181443	11.094	166516	11.08	109	50 - 200	0.0140	+/-0.50	
Chrysene-d12	176741	14.832	156005	14.811	113	50 - 200	0.0210	+/-0.50	
Perylene-d12	179547	18.216	160148	18.185	112	50 - 200	0.0310	+/-0.50	
UP-100522-05 (22J2538-05) Lab File ID: E22S299015.D Analyzed: 10/26/22 18:57									
Naphthalene-d8	145882	7.89	125572	7.89	116	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	101466	9.625	82358	9.62	123	50 - 200	0.0050	+/-0.50	
Phenanthrene-d10	192688	11.094	166516	11.08	116	50 - 200	0.0140	+/-0.50	
Chrysene-d12	191796	14.836	156005	14.811	123	50 - 200	0.0250	+/-0.50	
Perylene-d12	213848	18.224	160148	18.185	134	50 - 200	0.0390	+/-0.50	
FB-100522-06 (22J2538-06) Lab File ID: E22S299016.D Analyzed: 10/26/22 19:26									
Naphthalene-d8	144499	7.886	125572	7.89	115	50 - 200	-0.0040	+/-0.50	
Acenaphthene-d10	94309	9.621	82358	9.62	115	50 - 200	0.0010	+/-0.50	
Phenanthrene-d10	184861	11.089	166516	11.08	111	50 - 200	0.0090	+/-0.50	
Chrysene-d12	183982	14.84	156005	14.811	118	50 - 200	0.0290	+/-0.50	
Perylene-d12	195931	18.22	160148	18.185	122	50 - 200	0.0350	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Int1-100522-02 (22J2538-01RE1) Lab File ID: E22S301005.D Analyzed: 10/28/22 13:02									
Naphthalene-d8	138478	7.902	112879	7.874	123	50 - 200	0.0280	+/-0.50	
Acenaphthene-d10	84483	9.609	75041	9.605	113	50 - 200	0.0040	+/-0.50	
Phenanthrene-d10	167407	11.071	152089	11.071	110	50 - 200	0.0000	+/-0.50	
Chrysene-d12	165604	14.787	150728	14.787	110	50 - 200	0.0000	+/-0.50	
Perylene-d12	177822	18.151	168065	18.154	106	50 - 200	-0.0030	+/-0.50	
Int1-100522-02 (22J2538-01RE2) Lab File ID: E22S301006.D Analyzed: 10/28/22 13:30									
Naphthalene-d8	135529	7.89	112879	7.874	120	50 - 200	0.0160	+/-0.50	
Acenaphthene-d10	85569	9.605	75041	9.605	114	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	167474	11.07	152089	11.071	110	50 - 200	-0.0010	+/-0.50	
Chrysene-d12	160340	14.783	150728	14.787	106	50 - 200	-0.0040	+/-0.50	
Perylene-d12	168397	18.147	168065	18.154	100	50 - 200	-0.0070	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Int2-100522-01 (22J2538-04RE2)									
Lab File ID: E22S301009.D					Analyzed: 10/28/22 14:54				
Naphthalene-d8	123710	7.89	112879	7.874	110	50 - 200	0.0160	+/-0.50	
Acenaphthene-d10	79714	9.605	75041	9.605	106	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	169803	11.071	152089	11.071	112	50 - 200	0.0000	+/-0.50	
Chrysene-d12	166158	14.783	150728	14.787	110	50 - 200	-0.0040	+/-0.50	
Perylene-d12	173662	18.147	168065	18.154	103	50 - 200	-0.0070	+/-0.50	
Dwn1-100522-04 (22J2538-02RE1)									
Lab File ID: E22S301011.D					Analyzed: 10/28/22 15:51				
Naphthalene-d8	129724	7.89	112879	7.874	115	50 - 200	0.0160	+/-0.50	
Acenaphthene-d10	84956	9.608	75041	9.605	113	50 - 200	0.0030	+/-0.50	
Phenanthrene-d10	163546	11.07	152089	11.071	108	50 - 200	-0.0010	+/-0.50	
Chrysene-d12	155171	14.791	150728	14.787	103	50 - 200	0.0040	+/-0.50	
Perylene-d12	156016	18.155	168065	18.154	93	50 - 200	0.0010	+/-0.50	
Dwn2-100522-03 (22J2538-03RE1)									
Lab File ID: E22S301012.D					Analyzed: 10/28/22 16:19				
Naphthalene-d8	133653	7.882	112879	7.874	118	50 - 200	0.0080	+/-0.50	
Acenaphthene-d10	85708	9.604	75041	9.605	114	50 - 200	-0.0010	+/-0.50	
Phenanthrene-d10	173466	11.07	152089	11.071	114	50 - 200	-0.0010	+/-0.50	
Chrysene-d12	171662	14.783	150728	14.787	114	50 - 200	-0.0040	+/-0.50	
Perylene-d12	182289	18.147	168065	18.154	108	50 - 200	-0.0070	+/-0.50	
Int2-100522-01 (22J2538-04RE1)									
Lab File ID: E22S301013.D					Analyzed: 10/28/22 16:47				
Naphthalene-d8	133494	7.902	112879	7.874	118	50 - 200	0.0280	+/-0.50	
Acenaphthene-d10	84167	9.609	75041	9.605	112	50 - 200	0.0040	+/-0.50	
Phenanthrene-d10	167498	11.071	152089	11.071	110	50 - 200	0.0000	+/-0.50	
Chrysene-d12	160322	14.783	150728	14.787	106	50 - 200	-0.0040	+/-0.50	
Perylene-d12	162615	18.151	168065	18.154	97	50 - 200	-0.0030	+/-0.50	
UP-100522-05 (22J2538-05RE1)									
Lab File ID: E22S301014.D					Analyzed: 10/28/22 17:15				
Naphthalene-d8	127567	7.882	112879	7.874	113	50 - 200	0.0080	+/-0.50	
Acenaphthene-d10	83550	9.608	75041	9.605	111	50 - 200	0.0030	+/-0.50	
Phenanthrene-d10	157786	11.07	152089	11.071	104	50 - 200	-0.0010	+/-0.50	
Chrysene-d12	121609	14.787	150728	14.787	81	50 - 200	0.0000	+/-0.50	
Perylene-d12	118025	18.155	168065	18.154	70	50 - 200	0.0010	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
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INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Int1-100522-02 (22J2538-01RE3) Lab File ID: E22S304008.D Analyzed: 10/31/22 14:43									
Naphthalene-d8	116878	7.877	113865	7.877	103	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	72479	9.608	74024	9.604	98	50 - 200	0.0040	+/-0.50	
Phenanthrene-d10	142114	11.066	154752	11.07	92	50 - 200	-0.0040	+/-0.50	
Chrysene-d12	119844	14.779	142157	14.783	84	50 - 200	-0.0040	+/-0.50	
Perylene-d12	124440	18.143	154218	18.147	81	50 - 200	-0.0040	+/-0.50	
Dwn1-100522-04 (22J2538-02RE2) Lab File ID: E22S304009.D Analyzed: 10/31/22 15:11									
Naphthalene-d8	124437	7.882	113865	7.877	109	50 - 200	0.0050	+/-0.50	
Acenaphthene-d10	76752	9.605	74024	9.604	104	50 - 200	0.0010	+/-0.50	
Phenanthrene-d10	152219	11.071	154752	11.07	98	50 - 200	0.0010	+/-0.50	
Chrysene-d12	137265	14.783	142157	14.783	97	50 - 200	0.0000	+/-0.50	
Perylene-d12	144675	18.147	154218	18.147	94	50 - 200	0.0000	+/-0.50	
Int2-100522-01 (22J2538-04RE3) Lab File ID: E22S304011.D Analyzed: 10/31/22 16:08									
Naphthalene-d8	106549	7.878	113865	7.877	94	50 - 200	0.0010	+/-0.50	
Acenaphthene-d10	64334	9.608	74024	9.604	87	50 - 200	0.0040	+/-0.50	
Phenanthrene-d10	127185	11.07	154752	11.07	82	50 - 200	0.0000	+/-0.50	
Chrysene-d12	110243	14.779	142157	14.783	78	50 - 200	-0.0040	+/-0.50	
Perylene-d12	115166	18.143	154218	18.147	75	50 - 200	-0.0040	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Dwn2-100522-03 (22J2538-03RE2) Lab File ID: E22S306003.D Analyzed: 11/02/22 13:09									
Naphthalene-d8	104399	7.878	90685	7.878	115	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	66423	9.604	57519	9.604	115	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	131579	11.061	114997	11.066	114	50 - 200	-0.0050	+/-0.50	
Chrysene-d12	108101	14.771	93397	14.771	116	50 - 200	0.0000	+/-0.50	
Perylene-d12	106979	18.135	97165	18.135	110	50 - 200	0.0000	+/-0.50	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332**CONTINUING CALIBRATION CHECK**

COMPOUND	TYPE			RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-13A in Air</i>	
Acenaphthene	AIHA,NJ,NY,NH
Acenaphthylene	AIHA,NJ,NY,NH
Anthracene	AIHA,NJ,NY,NH
Benzo(a)anthracene	AIHA,NJ,NY,NH
Benzo(a)pyrene	AIHA,NJ,NY,FL,NH
Benzo(b)fluoranthene	AIHA,NJ,NY,NH
Benzo(e)pyrene	AIHA,NJ
Benzo(g,h,i)perylene	AIHA,NJ,NY,NH
Benzo(k)fluoranthene	AIHA,NJ,NY,NH
Chrysene	AIHA,NJ,NY,NH
Dibenz(a,h)anthracene	AIHA,NJ,NY,NH
Fluoranthene	AIHA,NJ,NY,NH
Fluorene	AIHA,NJ,NY,NH
Indeno(1,2,3-cd)pyrene	AIHA,NJ,NY,NH
1-Methylnaphthalene	AIHA
2-Methylnaphthalene	AIHA
Naphthalene	AIHA,NJ,NY,FL,NH
Perylene	AIHA,NJ
Phenanthrene	AIHA,NJ,NY,NH
Pyrene	AIHA,NJ,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO 17025:2017	100033	03/1/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
FL	Florida Department of Health	E871027 NELAP	06/30/2023

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I Have Not Confirmed Sample Container
Numbers With Lab Staff Before
Relinquishing Over
Samples _____



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ANALYTICAL LABORATORY

Doc# 278 Rev 6 2017

**Air Media Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False
Statement will be brought to the attention of the Client - State True or False**

Client Clean air

Received By ABP Date 10/18 Time 1:00
How were the samples received? In Cooler T On Ice T No Ice _____
In Box _____ Ambient _____ Melted Ice _____
Were samples within Temperature Compliance? 2-6°C T By Gun # 3 Actual Temp - 57
By Blank # _____ Actual Temp - _____
Was Custody Seal Intact? A Were Samples Tampered with? N
Was COC Relinquished? T Does Chain Agree With Samples? T
Are there any loose caps/valves on any samples? F
Is COC in ink/ Legible? T
Did COC Include all Client T Analysis T Sampler Name T
Pertinent Information? Project + ID's + Collection Dates/Times 2/1/18
Are Sample Labels filled out and legible? T
Are there Rushes? F Who was notified? _____
Samples are received within holding time? T
Proper Media Used? T Individually Certified Cans? F
Are there Trip Blanks? F Is there enough Volume? +

Containers:	#	Size	Regulator	Duration	Accessories:		
Summa Cans					Nut/Ferrule		IC Train
Tedlar Bags					Tubing		
TO-17 Tubes					T-Connector		Shipping Charges
Radiello					Syringe		
Pufs/TO-11s	<u>6</u>	<u>nv</u>			Tedlar		

Can #'s					Reg #'s				
Unused Media					Pufs/TO-17's				
					<u>100522-02</u>	<u>100522-06</u>			
					<u>-04</u>				
					<u>-03</u>				
					<u>-01</u>				
					<u>-05</u>				

Comments:

No sample time/date on coc or containers

November 11, 2022

Dr. Volker Schmid
Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275

Project Location: PA
Client Job Number:
Project Number: 00123249 - 14777-TO-13A_TO-15
Laboratory Work Order Number: 22K0001

Enclosed are results of analyses for samples as received by the laboratory on November 1, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Alexandra M Gooch
Project Manager

Table of Contents

Sample Summary	3
Case Narrative	4
Sample Results	7
Sample Preparation Information	15
QC Data	16
Air Toxics by EPA Compendium Methods	16
B321914	16
Flag/Qualifier Summary	18
Internal standard Area & RT Summary	19
Continuing Calibration Check	22
Certifications	23
Chain of Custody/Sample Receipt	24

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275
ATTN: Dr. Volker Schmid

REPORT DATE: 11/11/2022

PURCHASE ORDER NUMBER: 03292-44-14777

PROJECT NUMBER: 00123249 - 14777-TO-13A_TO-15

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22K0001

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: PA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
FB-101922A-01	22K0001-01	Air		EPA TO-13A	
VPW-101922A-02	22K0001-02	Air		EPA TO-13A	
IN2-101922A-03	22K0001-03	Air		EPA TO-13A	
IN1-101922A-04	22K0001-04	Air		EPA TO-13A	
DW1-101922A-05	22K0001-05	Air		EPA TO-13A	
DW2-101922A-06	22K0001-06	Air		EPA TO-13A	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

EPA TO-13A**Qualifications:****L-04**

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**Acenaphthene**

22K0001-01[FB-101922A-01], 22K0001-02[VPW-101922A-02], 22K0001-03[IN2-101922A-03], 22K0001-04[IN1-101922A-04], 22K0001-05[DW1-101922A-05], 22K0001-06[DW2-101922A-06], B321914-BS1, B321914-BSD1

L-06

Laboratory fortified blank/laboratory control sample recovery and/or duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the high side.

Analyte & Samples(s) Qualified:**Naphthalene**

22K0001-01[FB-101922A-01], 22K0001-02[VPW-101922A-02], 22K0001-03RE3[IN2-101922A-03], 22K0001-04RE3[IN1-101922A-04], 22K0001-05[DW1-101922A-05], 22K0001-06[DW2-101922A-06], B321914-BS1, B321914-BSD1

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:**Indeno(1,2,3-cd)pyrene**

B321914-BS1

Perylene

B321914-BS1

L-07A

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:**Acenaphthylene**

22K0001-01[FB-101922A-01], 22K0001-02[VPW-101922A-02], 22K0001-03RE2[IN2-101922A-03], 22K0001-04RE1[IN1-101922A-04], 22K0001-05[DW1-101922A-05], 22K0001-06[DW2-101922A-06], B321914-BS1

Anthracene

22K0001-01[FB-101922A-01], 22K0001-02[VPW-101922A-02], 22K0001-03RE1[IN2-101922A-03], 22K0001-04[IN1-101922A-04], 22K0001-05[DW1-101922A-05], 22K0001-06[DW2-101922A-06], B321914-BS1

Benzo(a)pyrene

22K0001-01[FB-101922A-01], 22K0001-02[VPW-101922A-02], 22K0001-03[IN2-101922A-03], 22K0001-04[IN1-101922A-04], 22K0001-05[DW1-101922A-05], 22K0001-06[DW2-101922A-06], B321914-BS1

R-05

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:**Acenaphthylene**

B321914-BSD1

Anthracene

B321914-BSD1

Benzo(a)pyrene

B321914-BSD1

RL-12

Elevated reporting limit due to matrix interference.

Analyte & Samples(s) Qualified:

22K0001-03[IN2-101922A-03], 22K0001-03RE1[IN2-101922A-03], 22K0001-03RE2[IN2-101922A-03], 22K0001-03RE3[IN2-101922A-03]

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S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:**Benzo(a)pyrene-d12**

22K0001-03RE2[IN2-101922A-03], 22K0001-03RE3[IN2-101922A-03], 22K0001-04RE3[IN1-101922A-04]

Fluoranthene-d10

22K0001-03RE2[IN2-101922A-03], 22K0001-03RE3[IN2-101922A-03], 22K0001-04RE3[IN1-101922A-04]

Fluorene-d10

22K0001-03RE2[IN2-101922A-03], 22K0001-03RE3[IN2-101922A-03], 22K0001-04RE3[IN1-101922A-04]

Pyrene-d10

22K0001-03RE2[IN2-101922A-03], 22K0001-03RE3[IN2-101922A-03], 22K0001-04RE3[IN1-101922A-04]

EPA TO-13A

Reported results for air samples are calculated based on client sampling and sampling information provided by the laboratory.

Blank is not subtracted unless otherwise specified.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Tod E. Kopyscinski
Laboratory Director

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: PA
Date Received: 11/1/2022
Field Sample #: FB-101922A-01
Sample ID: 22K0001-01
Sample Matrix: Air
Sampled: 10/27/2022 00:00

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 22K0001

EPA TO-13A						
Analyte	Total µg		Flag/Qual	Dilution	Date/Time	
	Results	RL			Analyzed	Analyst
Acenaphthene	ND	0.20	L-04	1	11/7/22 11:34	SPF
Acenaphthylene	ND	0.20	L-07A	1	11/7/22 11:34	SPF
Anthracene	ND	0.20	L-07A	1	11/7/22 11:34	SPF
Benzo(a)anthracene	ND	0.20		1	11/7/22 11:34	SPF
Benzo(a)pyrene	ND	0.20	L-07A	1	11/7/22 11:34	SPF
Benzo(b)fluoranthene	ND	0.20		1	11/7/22 11:34	SPF
Benzo(e)pyrene	ND	0.20		1	11/7/22 11:34	SPF
Benzo(g,h,i)perylene	ND	0.20		1	11/7/22 11:34	SPF
Benzo(k)fluoranthene	ND	0.20		1	11/7/22 11:34	SPF
Chrysene	ND	0.20		1	11/7/22 11:34	SPF
Dibenz(a,h)anthracene	ND	0.20		1	11/7/22 11:34	SPF
Fluoranthene	ND	0.20		1	11/7/22 11:34	SPF
Fluorene	ND	0.20		1	11/7/22 11:34	SPF
Indeno(1,2,3-cd)pyrene	ND	0.20		1	11/7/22 11:34	SPF
1-Methylnaphthalene	ND	0.20		1	11/7/22 11:34	SPF
2-Methylnaphthalene	ND	0.20		1	11/7/22 11:34	SPF
Naphthalene	0.53	0.50	L-06	1	11/7/22 11:34	SPF
Perylene	ND	0.20		1	11/7/22 11:34	SPF
Phenanthrene	ND	0.20		1	11/7/22 11:34	SPF
Pyrene	ND	0.20		1	11/7/22 11:34	SPF

Surrogates	% Recovery	% REC Limits	
Benzo(a)pyrene-d12	79.4	60-120	11/7/22 11:34
Fluoranthene-d10	91.9	60-120	11/7/22 11:34
Fluorene-d10	89.3	60-120	11/7/22 11:34
Pyrene-d10	94.7	60-120	11/7/22 11:34

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ANALYTICAL RESULTS

Project Location: PA
Date Received: 11/1/2022
Field Sample #: VPW-101922A-02
Sample ID: 22K0001-02
Sample Matrix: Air
Sampled: 10/27/2022 16:12

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 22K0001
EPA TO-13A

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	1.1	0.20	L-04	1	11/7/22 12:03		SPF
Acenaphthylene	ND	0.20	L-07A	1	11/7/22 12:03		SPF
Anthracene	ND	0.20	L-07A	1	11/7/22 12:03		SPF
Benzo(a)anthracene	ND	0.20		1	11/7/22 12:03		SPF
Benzo(a)pyrene	ND	0.20	L-07A	1	11/7/22 12:03		SPF
Benzo(b)fluoranthene	ND	0.20		1	11/7/22 12:03		SPF
Benzo(e)pyrene	ND	0.20		1	11/7/22 12:03		SPF
Benzo(g,h,i)perylene	ND	0.20		1	11/7/22 12:03		SPF
Benzo(k)fluoranthene	ND	0.20		1	11/7/22 12:03		SPF
Chrysene	ND	0.20		1	11/7/22 12:03		SPF
Dibenz(a,h)anthracene	ND	0.20		1	11/7/22 12:03		SPF
Fluoranthene	0.35	0.20		1	11/7/22 12:03		SPF
Fluorene	1.0	0.20		1	11/7/22 12:03		SPF
Indeno(1,2,3-cd)pyrene	ND	0.20		1	11/7/22 12:03		SPF
1-Methylnaphthalene	1.8	0.20		1	11/7/22 12:03		SPF
2-Methylnaphthalene	3.9	0.20		1	11/7/22 12:03		SPF
Naphthalene	4.4	0.50	L-06	1	11/7/22 12:03		SPF
Perylene	ND	0.20		1	11/7/22 12:03		SPF
Phenanthrene	1.4	0.20		1	11/7/22 12:03		SPF
Pyrene	0.24	0.20		1	11/7/22 12:03		SPF

Surrogates	% Recovery	% REC Limits	
Benzo(a)pyrene-d12	68.9	60-120	11/7/22 12:03
Fluoranthene-d10	88.5	60-120	11/7/22 12:03
Fluorene-d10	80.5	60-120	11/7/22 12:03
Pyrene-d10	86.1	60-120	11/7/22 12:03

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: PA
Date Received: 11/1/2022
Field Sample #: IN2-101922A-03
Sample ID: 22K0001-03
Sample Matrix: Air
Sampled: 10/27/2022 15:24

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 22K0001

EPA TO-13A

Sample Flags: RL-12

Sample Flags: RL-12		Total µg		Date/Time			
Analyte	Results	RL	Flag/Qual	Dilution	Analyzed	Analyst	
Acenaphthene	11	0.40	L-04	2	11/7/22 12:31	SPF	
Acenaphthylene	270	20	L-07A	100	11/10/22 16:43	SPF	
Anthracene	51	2.0	L-07A	10	11/10/22 16:15	SPF	
Benzo(a)anthracene	21	2.0		10	11/10/22 16:15	SPF	
Benzo(a)pyrene	14	0.40	L-07A	2	11/7/22 12:31	SPF	
Benzo(b)fluoranthene	21	0.40		2	11/7/22 12:31	SPF	
Benzo(e)pyrene	10	0.40		2	11/7/22 12:31	SPF	
Benzo(g,h,i)perylene	8.3	0.40		2	11/7/22 12:31	SPF	
Benzo(k)fluoranthene	7.8	0.40		2	11/7/22 12:31	SPF	
Chrysene	20	0.40		2	11/7/22 12:31	SPF	
Dibenz(a,h)anthracene	2.8	0.40		2	11/7/22 12:31	SPF	
Fluoranthene	65	2.0		10	11/10/22 16:15	SPF	
Fluorene	130	20		100	11/10/22 16:43	SPF	
Indeno(1,2,3-cd)pyrene	9.9	0.40		2	11/7/22 12:31	SPF	
1-Methylnaphthalene	80	2.0		10	11/10/22 16:15	SPF	
2-Methylnaphthalene	230	20		100	11/10/22 16:43	SPF	
Naphthalene	2300	200	L-06	400	11/9/22 13:49	SPF	
Perylene	3.3	0.40		2	11/7/22 12:31	SPF	
Phenanthrene	180	20		100	11/10/22 16:43	SPF	
Pyrene	51	2.0		10	11/10/22 16:15	SPF	

Surrogates	% Recovery		% REC Limits		
Benzo(a)pyrene-d12	*	S-01	60-120		11/9/22 13:49
Benzo(a)pyrene-d12	92.0		60-120		11/10/22 16:15
Benzo(a)pyrene-d12	93.0		60-120		11/7/22 12:31
Benzo(a)pyrene-d12	*	S-01	60-120		11/10/22 16:43
Fluoranthene-d10	83.0		60-120		11/10/22 16:15
Fluoranthene-d10	*	S-01	60-120		11/9/22 13:49
Fluoranthene-d10	105		60-120		11/7/22 12:31
Fluoranthene-d10	*	S-01	60-120		11/10/22 16:43
Fluorene-d10	88.0		60-120		11/10/22 16:15
Fluorene-d10	*	S-01	60-120		11/9/22 13:49
Fluorene-d10	*	S-01	60-120		11/10/22 16:43
Fluorene-d10	76.0		60-120		11/7/22 12:31
Pyrene-d10	95.8		60-120		11/7/22 12:31
Pyrene-d10	*	S-01	60-120		11/9/22 13:49
Pyrene-d10	*	S-01	60-120		11/10/22 16:43
Pyrene-d10	102		60-120		11/10/22 16:15

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: PA
Date Received: 11/1/2022
Field Sample #: IN2-101922A-03
Sample ID: 22K0001-03
Sample Matrix: Air
Sampled: 10/27/2022 15:24

Sample Description/Location:
Sub Description/Location:

Work Order: 22K0001

Flow Controller ID:
Sample Type:

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: PA
Date Received: 11/1/2022
Field Sample #: IN1-101922A-04
Sample ID: 22K0001-04
Sample Matrix: Air
Sampled: 10/27/2022 14:51

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 22K0001
EPA TO-13A

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		
	Results	RL			Analyzed	Analyst	
Acenaphthene	3.0	0.20	L-04	1	11/7/22	12:59	SPF
Acenaphthylene	29	1.0	L-07A	5	11/10/22	17:12	SPF
Anthracene	5.1	0.20	L-07A	1	11/7/22	12:59	SPF
Benzo(a)anthracene	0.71	0.20	L-07A	1	11/7/22	12:59	SPF
Benzo(a)pyrene	0.57	0.20		1	11/7/22	12:59	SPF
Benzo(b)fluoranthene	1.3	0.20		1	11/7/22	12:59	SPF
Benzo(e)pyrene	0.66	0.20		1	11/7/22	12:59	SPF
Benzo(g,h,i)perylene	0.52	0.20		1	11/7/22	12:59	SPF
Benzo(k)fluoranthene	0.43	0.20	L-06	1	11/7/22	12:59	SPF
Chrysene	1.1	0.20		1	11/7/22	12:59	SPF
Dibenz(a,h)anthracene	ND	0.20		1	11/7/22	12:59	SPF
Fluoranthene	11	1.0		5	11/10/22	17:12	SPF
Fluorene	23	1.0		5	11/10/22	17:12	SPF
Indeno(1,2,3-cd)pyrene	0.60	0.20		1	11/7/22	12:59	SPF
1-Methylnaphthalene	20	1.0		5	11/10/22	17:12	SPF
2-Methylnaphthalene	50	10		50	11/10/22	17:40	SPF
Naphthalene	570	50		100	11/9/22	12:24	SPF
Perylene	ND	0.20		1	11/7/22	12:59	SPF
Phenanthrene	40	1.0	5	11/10/22	17:12	SPF	
Pyrene	ND	20	100	11/9/22	12:24	SPF	
Pyrene	5.8	0.20	1	11/7/22	12:59	SPF	

Surrogates	% Recovery		% REC Limits	
Benzo(a)pyrene-d12	91.5		60-120	11/7/22 12:59
Benzo(a)pyrene-d12	*	S-01	60-120	11/9/22 12:24
Benzo(a)pyrene-d12	92.5		60-120	11/10/22 17:12
Benzo(a)pyrene-d12	90.0		60-120	11/10/22 17:40
Fluoranthene-d10	86.0		60-120	11/10/22 17:12
Fluoranthene-d10	80.0		60-120	11/10/22 17:40
Fluoranthene-d10	91.2		60-120	11/7/22 12:59
Fluoranthene-d10	*	S-01	60-120	11/9/22 12:24
Fluorene-d10	87.0		60-120	11/10/22 17:12
Fluorene-d10	85.0		60-120	11/10/22 17:40
Fluorene-d10	*	S-01	60-120	11/9/22 12:24
Fluorene-d10	74.0		60-120	11/7/22 12:59
Pyrene-d10	110		60-120	11/10/22 17:12
Pyrene-d10	*	S-01	60-120	11/9/22 12:24
Pyrene-d10	95.0		60-120	11/10/22 17:40

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: PA

Date Received: 11/1/2022

Field Sample #: IN1-101922A-04
Sample ID: 22K0001-04

Sample Matrix: Air

Sampled: 10/27/2022 14:51

Sample Description/Location:

Sub Description/Location:

Work Order: 22K0001

Flow Controller ID:

Sample Type:

EPA TO-13A

Analyte	Total µg			Date/Time		
	Results	RL	Flag/Qual	Dilution	Analyzed	Analyst
Surrogates	% Recovery		% REC Limits			
Pyrene-d10	89.1		60-120		11/7/22 12:59	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: PA
Date Received: 11/1/2022
Field Sample #: DW1-101922A-05
Sample ID: 22K0001-05
Sample Matrix: Air
Sampled: 10/27/2022 14:20

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 22K0001
EPA TO-13A

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	1.9	0.20	L-04	1	11/7/22 13:28		SPF
Acenaphthylene	0.34	0.20	L-07A	1	11/7/22 13:28		SPF
Anthracene	ND	0.20	L-07A	1	11/7/22 13:28		SPF
Benzo(a)anthracene	ND	0.20		1	11/7/22 13:28		SPF
Benzo(a)pyrene	ND	0.20	L-07A	1	11/7/22 13:28		SPF
Benzo(b)fluoranthene	ND	0.20		1	11/7/22 13:28		SPF
Benzo(e)pyrene	ND	0.20		1	11/7/22 13:28		SPF
Benzo(g,h,i)perylene	ND	0.20		1	11/7/22 13:28		SPF
Benzo(k)fluoranthene	ND	0.20		1	11/7/22 13:28		SPF
Chrysene	ND	0.20		1	11/7/22 13:28		SPF
Dibenz(a,h)anthracene	ND	0.20		1	11/7/22 13:28		SPF
Fluoranthene	0.43	0.20		1	11/7/22 13:28		SPF
Fluorene	1.5	0.20		1	11/7/22 13:28		SPF
Indeno(1,2,3-cd)pyrene	ND	0.20		1	11/7/22 13:28		SPF
1-Methylnaphthalene	2.2	0.20		1	11/7/22 13:28		SPF
2-Methylnaphthalene	4.8	0.20		1	11/7/22 13:28		SPF
Naphthalene	7.6	0.50	L-06	1	11/7/22 13:28		SPF
Perylene	ND	0.20		1	11/7/22 13:28		SPF
Phenanthrene	2.1	0.20		1	11/7/22 13:28		SPF
Pyrene	0.30	0.20		1	11/7/22 13:28		SPF

Surrogates	% Recovery	% REC Limits	
Benzo(a)pyrene-d12	82.3	60-120	11/7/22 13:28
Fluoranthene-d10	80.0	60-120	11/7/22 13:28
Fluorene-d10	80.0	60-120	11/7/22 13:28
Pyrene-d10	89.0	60-120	11/7/22 13:28

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: PA
Date Received: 11/1/2022
Field Sample #: DW2-101922A-06
Sample ID: 22K0001-06
Sample Matrix: Air
Sampled: 10/27/2022 13:50

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 22K0001
EPA TO-13A

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	2.6	0.20	L-04	1	11/7/22 13:56		SPF
Acenaphthylene	0.21	0.20	L-07A	1	11/7/22 13:56		SPF
Anthracene	ND	0.20	L-07A	1	11/7/22 13:56		SPF
Benzo(a)anthracene	ND	0.20		1	11/7/22 13:56		SPF
Benzo(a)pyrene	ND	0.20	L-07A	1	11/7/22 13:56		SPF
Benzo(b)fluoranthene	0.23	0.20		1	11/7/22 13:56		SPF
Benzo(e)pyrene	ND	0.20		1	11/7/22 13:56		SPF
Benzo(g,h,i)perylene	ND	0.20		1	11/7/22 13:56		SPF
Benzo(k)fluoranthene	ND	0.20		1	11/7/22 13:56		SPF
Chrysene	ND	0.20		1	11/7/22 13:56		SPF
Dibenz(a,h)anthracene	ND	0.20		1	11/7/22 13:56		SPF
Fluoranthene	0.48	0.20		1	11/7/22 13:56		SPF
Fluorene	1.9	0.20		1	11/7/22 13:56		SPF
Indeno(1,2,3-cd)pyrene	ND	0.20		1	11/7/22 13:56		SPF
1-Methylnaphthalene	2.4	0.20		1	11/7/22 13:56		SPF
2-Methylnaphthalene	4.7	0.20		1	11/7/22 13:56		SPF
Naphthalene	5.3	0.50	L-06	1	11/7/22 13:56		SPF
Perylene	ND	0.20		1	11/7/22 13:56		SPF
Phenanthrene	1.9	0.20		1	11/7/22 13:56		SPF
Pyrene	0.34	0.20		1	11/7/22 13:56		SPF

Surrogates	% Recovery	% REC Limits	
Benzo(a)pyrene-d12	91.4	60-120	11/7/22 13:56
Fluoranthene-d10	86.1	60-120	11/7/22 13:56
Fluorene-d10	84.9	60-120	11/7/22 13:56
Pyrene-d10	93.1	60-120	11/7/22 13:56

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data**Prep Method: SW-846 3540C Analytical Method: EPA TO-13A**

Lab Number [Field ID]	Batch	Initial [Cartridge	Final [mL]	Date
22K0001-01 [FB-101922A-01]	B321914	1.00	1.00	11/03/22
22K0001-02 [VPW-101922A-02]	B321914	1.00	1.00	11/03/22
22K0001-03 [IN2-101922A-03]	B321914	1.00	1.00	11/03/22
22K0001-03RE1 [IN2-101922A-03]	B321914	1.00	1.00	11/03/22
22K0001-03RE2 [IN2-101922A-03]	B321914	1.00	1.00	11/03/22
22K0001-03RE3 [IN2-101922A-03]	B321914	1.00	1.00	11/03/22
22K0001-04 [IN1-101922A-04]	B321914	1.00	1.00	11/03/22
22K0001-04RE1 [IN1-101922A-04]	B321914	1.00	1.00	11/03/22
22K0001-04RE2 [IN1-101922A-04]	B321914	1.00	1.00	11/03/22
22K0001-04RE3 [IN1-101922A-04]	B321914	1.00	1.00	11/03/22
22K0001-05 [DW1-101922A-05]	B321914	1.00	1.00	11/03/22
22K0001-06 [DW2-101922A-06]	B321914	1.00	1.00	11/03/22

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	Total µg		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	Total µg	Result	%REC	Limits	RPD	Limit	

Batch B321914 - SW-846 3540C
Blank (B321914-BLK1)

Prepared: 11/02/22 Analyzed: 11/07/22

Acenaphthene	ND	0.20
Acenaphthylene	ND	0.20
Anthracene	ND	0.20
Benzo(a)anthracene	ND	0.20
Benzo(a)pyrene	ND	0.20
Benzo(b)fluoranthene	ND	0.20
Benzo(e)pyrene	ND	0.20
Benzo(g,h,i)perylene	ND	0.20
Benzo(k)fluoranthene	ND	0.20
Chrysene	ND	0.20
Dibenz(a,h)anthracene	ND	0.20
Fluoranthene	ND	0.20
Fluorene	ND	0.20
Indeno(1,2,3-cd)pyrene	ND	0.20
1-Methylnaphthalene	ND	0.20
2-Methylnaphthalene	ND	0.20
Naphthalene	ND	0.50
Perylene	ND	0.20
Phenanthrene	ND	0.20
Pyrene	ND	0.20

Surrogate: Fluorene-d10

0.734

1.00

73.4 60-120

Surrogate: Pyrene-d10

0.776

1.00

77.6 60-120

LCS (B321914-BS1)

Prepared: 11/02/22 Analyzed: 11/07/22

Acenaphthene	0.297	0.20	1.3	0.500	59.4	*	60-110	L-04
Acenaphthylene	0.141	0.20	1.2	0.500	28.2	*	60-110	L-07A
Anthracene	0.200	0.20	1.5	0.500	40.0	*	60-110	L-07A
Benzo(a)anthracene	0.311	0.20	1.9	0.500	62.2		60-110	
Benzo(a)pyrene	0.232	0.20	2.1	0.500	46.4	*	60-110	L-07A
Benzo(b)fluoranthene	0.360	0.20	2.1	0.500	72.0		60-111	
Benzo(e)pyrene	0.414	0.20	2.1	0.500	82.8		60-118	
Benzo(g,h,i)perylene	0.349	0.20	2.3	0.500	69.8		60-111	
Benzo(k)fluoranthene	0.352	0.20	2.1	0.500	70.4		60-114	
Chrysene	0.345	0.20	1.9	0.500	69.0		60-110	
Dibenz(a,h)anthracene	0.324	0.20	2.3	0.500	64.8		60-113	
Fluoranthene	0.346	0.20	1.7	0.500	69.2		60-110	
Fluorene	0.339	0.20	1.4	0.500	67.8		60-110	
Indeno(1,2,3-cd)pyrene	0.292	0.20	2.3	0.500	58.4	*	60-110	L-07
1-Methylnaphthalene	0.329	0.20	1.2	0.500	65.8		60-110	
2-Methylnaphthalene	0.357	0.20	1.2	0.500	71.4		60-110	
Naphthalene	0.660	0.50	2.6	0.500	132	*	60-118	L-06
Perylene	0.287	0.20	2.1	0.500	57.4	*	60-110	L-07
Phenanthrene	0.359	0.20	1.5	0.500	71.8		60-110	
Pyrene	0.347	0.20	1.7	0.500	69.4		60-110	

Surrogate: Fluorene-d10

0.965

1.00

96.5 60-120

Surrogate: Pyrene-d10

1.07

1.00

107 60-120

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	Total µg		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	Total µg	Result	%REC	Limits	RPD	Limit	
Batch B321914 - SW-846 3540C											
LCS Dup (B321914-BSD1)						Prepared: 11/02/22 Analyzed: 11/07/22					
Acenaphthene	0.298	0.20		1.3	0.500		59.6	* 60-110	0.336	29.8	L-04
Acenaphthylene	0.325	0.20		1.2	0.500		65.0	60-110	79.0	50	R-05
Anthracene	0.342	0.20		1.5	0.500		68.4	60-110	52.4	35.8	R-05
Benzo(a)anthracene	0.349	0.20		1.9	0.500		69.8	60-110	11.5	27.3	
Benzo(a)pyrene	0.337	0.20		2.1	0.500		67.4	60-110	36.9	27.3	R-05
Benzo(b)fluoranthene	0.363	0.20		2.1	0.500		72.6	60-111	0.830	32.7	
Benzo(e)pyrene	0.393	0.20		2.1	0.500		78.6	60-118	5.20	33.6	
Benzo(g,h,i)perylene	0.334	0.20		2.3	0.500		66.8	60-111	4.39	36	
Benzo(k)fluoranthene	0.356	0.20		2.1	0.500		71.2	60-114	1.13	32.5	
Chrysene	0.345	0.20		1.9	0.500		69.0	60-110	0.00	28	
Dibenz(a,h)anthracene	0.311	0.20		2.3	0.500		62.2	60-113	4.09	37.1	
Fluoranthene	0.366	0.20		1.7	0.500		73.2	60-110	5.62	29.5	
Fluorene	0.353	0.20		1.4	0.500		70.6	60-110	4.05	31.1	
Indeno(1,2,3-cd)pyrene	0.345	0.20		2.3	0.500		69.0	60-110	16.6	34	
1-Methylnaphthalene	0.342	0.20		1.2	0.500		68.4	60-110	3.87	28.9	
2-Methylnaphthalene	0.373	0.20		1.2	0.500		74.6	60-110	4.38	28.3	
Naphthalene	0.614	0.50		2.6	0.500		123	* 60-118	7.22	28.3	L-06
Perylene	0.366	0.20		2.1	0.500		73.2	60-110	24.2	25.9	
Phenanthrene	0.403	0.20		1.5	0.500		80.6	60-110	11.5	27.4	
Pyrene	0.357	0.20		1.7	0.500		71.4	60-110	2.84	30.7	
Surrogate: Fluorene-d10	0.996				1.00		99.6	60-120			
Surrogate: Pvrene-d10	1.09				1.00		109	60-120			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
L-06	Laboratory fortified blank/laboratory control sample recovery and/or duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the high side.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
L-07A	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
RL-12	Elevated reporting limit due to matrix interference.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

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INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B321914-BLK1) Lab File ID: E22S311004.D Analyzed: 11/07/22 09:40									
Naphthalene-d8	133981	7.874	130166	7.878	103	50 - 200	-0.0040	+/-0.50	
Acenaphthene-d10	84078	9.605	80530	9.608	104	50 - 200	-0.0030	+/-0.50	
Phenanthrene-d10	167225	11.07	157761	11.066	106	50 - 200	0.0040	+/-0.50	
Chrysene-d12	154885	14.787	128812	14.783	120	50 - 200	0.0040	+/-0.50	
Perylene-d12	164288	18.162	132353	18.158	124	50 - 200	0.0040	+/-0.50	
LCS (B321914-BS1) Lab File ID: E22S311006.D Analyzed: 11/07/22 10:37									
Naphthalene-d8	144387	7.873	130166	7.878	111	50 - 200	-0.0050	+/-0.50	
Acenaphthene-d10	88837	9.604	80530	9.608	110	50 - 200	-0.0040	+/-0.50	
Phenanthrene-d10	171733	11.07	157761	11.066	109	50 - 200	0.0040	+/-0.50	
Chrysene-d12	148023	14.791	128812	14.783	115	50 - 200	0.0080	+/-0.50	
Perylene-d12	154222	18.166	132353	18.158	117	50 - 200	0.0080	+/-0.50	
LCS Dup (B321914-BSD1) Lab File ID: E22S311007.D Analyzed: 11/07/22 11:06									
Naphthalene-d8	142022	7.874	130166	7.878	109	50 - 200	-0.0040	+/-0.50	
Acenaphthene-d10	90883	9.609	80530	9.608	113	50 - 200	0.0010	+/-0.50	
Phenanthrene-d10	175166	11.071	157761	11.066	111	50 - 200	0.0050	+/-0.50	
Chrysene-d12	152474	14.795	128812	14.783	118	50 - 200	0.0120	+/-0.50	
Perylene-d12	164775	18.174	132353	18.158	124	50 - 200	0.0160	+/-0.50	
FB-101922A-01 (22K0001-01) Lab File ID: E22S311008.D Analyzed: 11/07/22 11:34									
Naphthalene-d8	141816	7.877	130166	7.878	109	50 - 200	-0.0010	+/-0.50	
Acenaphthene-d10	90378	9.608	80530	9.608	112	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	178753	11.075	157761	11.066	113	50 - 200	0.0090	+/-0.50	
Chrysene-d12	155289	14.799	128812	14.783	121	50 - 200	0.0160	+/-0.50	
Perylene-d12	164571	18.174	132353	18.158	124	50 - 200	0.0160	+/-0.50	
VPW-101922A-02 (22K0001-02) Lab File ID: E22S311009.D Analyzed: 11/07/22 12:03									
Naphthalene-d8	140159	7.878	130166	7.878	108	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	94420	9.613	80530	9.608	117	50 - 200	0.0050	+/-0.50	
Phenanthrene-d10	176207	11.075	157761	11.066	112	50 - 200	0.0090	+/-0.50	
Chrysene-d12	157931	14.799	128812	14.783	123	50 - 200	0.0160	+/-0.50	
Perylene-d12	165348	18.182	132353	18.158	125	50 - 200	0.0240	+/-0.50	
IN2-101922A-03 (22K0001-03) Lab File ID: E22S311010.D Analyzed: 11/07/22 12:31									
Naphthalene-d8	96454	7.914	130166	7.878	74	50 - 200	0.0360	+/-0.50	
Acenaphthene-d10	112280	9.62	80530	9.608	139	50 - 200	0.0120	+/-0.50	
Phenanthrene-d10	177833	11.089	157761	11.066	113	50 - 200	0.0230	+/-0.50	
Chrysene-d12	161743	14.823	128812	14.783	126	50 - 200	0.0400	+/-0.50	
Perylene-d12	194971	18.205	132353	18.158	147	50 - 200	0.0470	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
IN1-101922A-04 (22K0001-04) Lab File ID: E22S311011.D Analyzed: 11/07/22 12:59									
Naphthalene-d8	119118	7.91	130166	7.878	92	50 - 200	0.0320	+/-0.50	
Acenaphthene-d10	108337	9.621	80530	9.608	135	50 - 200	0.0130	+/-0.50	
Phenanthrene-d10	185296	11.09	157761	11.066	117	50 - 200	0.0240	+/-0.50	
Chrysene-d12	166177	14.812	128812	14.783	129	50 - 200	0.0290	+/-0.50	
Perylene-d12	175510	18.197	132353	18.158	133	50 - 200	0.0390	+/-0.50	
DW1-101922A-05 (22K0001-05) Lab File ID: E22S311012.D Analyzed: 11/07/22 13:28									
Naphthalene-d8	155164	7.882	130166	7.878	119	50 - 200	0.0040	+/-0.50	
Acenaphthene-d10	100249	9.613	80530	9.608	124	50 - 200	0.0050	+/-0.50	
Phenanthrene-d10	190778	11.08	157761	11.066	121	50 - 200	0.0140	+/-0.50	
Chrysene-d12	167458	14.811	128812	14.783	130	50 - 200	0.0280	+/-0.50	
Perylene-d12	173707	18.193	132353	18.158	131	50 - 200	0.0350	+/-0.50	
DW2-101922A-06 (22K0001-06) Lab File ID: E22S311013.D Analyzed: 11/07/22 13:56									
Naphthalene-d8	143845	7.882	130166	7.878	111	50 - 200	0.0040	+/-0.50	
Acenaphthene-d10	100313	9.617	80530	9.608	125	50 - 200	0.0090	+/-0.50	
Phenanthrene-d10	188192	11.08	157761	11.066	119	50 - 200	0.0140	+/-0.50	
Chrysene-d12	173235	14.816	128812	14.783	134	50 - 200	0.0330	+/-0.50	
Perylene-d12	185587	18.201	132353	18.158	140	50 - 200	0.0430	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
IN1-101922A-04 (22K0001-04RE3) Lab File ID: E22S313009.D Analyzed: 11/09/22 12:24									
Naphthalene-d8	117712	7.873	141756	7.882	83	50 - 200	-0.0090	+/-0.50	
Acenaphthene-d10	67842	9.6	82725	9.605	82	50 - 200	-0.0050	+/-0.50	
Phenanthrene-d10	118797	11.066	150397	11.07	79	50 - 200	-0.0040	+/-0.50	
Chrysene-d12	80494	14.779	109047	14.791	74	50 - 200	-0.0120	+/-0.50	
Perylene-d12	76711	18.154	117015	18.166	66	50 - 200	-0.0120	+/-0.50	
IN2-101922A-03 (22K0001-03RE3) Lab File ID: E22S313012.D Analyzed: 11/09/22 13:49									
Naphthalene-d8	100659	7.878	141756	7.882	71	50 - 200	-0.0040	+/-0.50	
Acenaphthene-d10	55895	9.6	82725	9.605	68	50 - 200	-0.0050	+/-0.50	
Phenanthrene-d10	101529	11.066	150397	11.07	68	50 - 200	-0.0040	+/-0.50	
Chrysene-d12	71462	14.783	109047	14.791	66	50 - 200	-0.0080	+/-0.50	
Perylene-d12	70444	18.154	117015	18.166	60	50 - 200	-0.0120	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
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INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
IN2-101922A-03 (22K0001-03RE1) Lab File ID: E22S314020.D Analyzed: 11/10/22 16:15									
Naphthalene-d8	152340	7.898	133935	7.882	114	50 - 200	0.0160	+/-0.50	
Acenaphthene-d10	87462	9.604	79119	9.605	111	50 - 200	-0.0010	+/-0.50	
Phenanthrene-d10	151250	11.07	140728	11.071	107	50 - 200	-0.0010	+/-0.50	
Chrysene-d12	104784	14.783	110184	14.787	95	50 - 200	-0.0040	+/-0.50	
Perylene-d12	104313	18.158	112821	18.162	92	50 - 200	-0.0040	+/-0.50	
IN2-101922A-03 (22K0001-03RE2) Lab File ID: E22S314021.D Analyzed: 11/10/22 16:43									
Naphthalene-d8	122719	7.877	133935	7.882	92	50 - 200	-0.0050	+/-0.50	
Acenaphthene-d10	72203	9.6	79119	9.605	91	50 - 200	-0.0050	+/-0.50	
Phenanthrene-d10	126472	11.066	140728	11.071	90	50 - 200	-0.0050	+/-0.50	
Chrysene-d12	93179	14.779	110184	14.787	85	50 - 200	-0.0080	+/-0.50	
Perylene-d12	93328	18.151	112821	18.162	83	50 - 200	-0.0110	+/-0.50	
IN1-101922A-04 (22K0001-04RE1) Lab File ID: E22S314022.D Analyzed: 11/10/22 17:12									
Naphthalene-d8	141732	7.886	133935	7.882	106	50 - 200	0.0040	+/-0.50	
Acenaphthene-d10	85936	9.605	79119	9.605	109	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	152601	11.066	140728	11.071	108	50 - 200	-0.0050	+/-0.50	
Chrysene-d12	107626	14.783	110184	14.787	98	50 - 200	-0.0040	+/-0.50	
Perylene-d12	100458	18.155	112821	18.162	89	50 - 200	-0.0070	+/-0.50	
IN1-101922A-04 (22K0001-04RE2) Lab File ID: E22S314023.D Analyzed: 11/10/22 17:40									
Naphthalene-d8	127301	7.877	133935	7.882	95	50 - 200	-0.0050	+/-0.50	
Acenaphthene-d10	73619	9.6	79119	9.605	93	50 - 200	-0.0050	+/-0.50	
Phenanthrene-d10	129425	11.066	140728	11.071	92	50 - 200	-0.0050	+/-0.50	
Chrysene-d12	92818	14.779	110184	14.787	84	50 - 200	-0.0080	+/-0.50	
Perylene-d12	88855	18.154	112821	18.162	79	50 - 200	-0.0080	+/-0.50	

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CONTINUING CALIBRATION CHECK

COMPOUND	TYPE			RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-13A in Air</i>	
Acenaphthene	AIHA,NJ,NY,NH
Acenaphthylene	AIHA,NJ,NY,NH
Anthracene	AIHA,NJ,NY,NH
Benzo(a)anthracene	AIHA,NJ,NY,NH
Benzo(a)pyrene	AIHA,NJ,NY,FL,NH
Benzo(b)fluoranthene	AIHA,NJ,NY,NH
Benzo(e)pyrene	AIHA,NJ
Benzo(g,h,i)perylene	AIHA,NJ,NY,NH
Benzo(k)fluoranthene	AIHA,NJ,NY,NH
Chrysene	AIHA,NJ,NY,NH
Dibenz(a,h)anthracene	AIHA,NJ,NY,NH
Fluoranthene	AIHA,NJ,NY,NH
Fluorene	AIHA,NJ,NY,NH
Indeno(1,2,3-cd)pyrene	AIHA,NJ,NY,NH
1-Methylnaphthalene	AIHA
2-Methylnaphthalene	AIHA
Naphthalene	AIHA,NJ,NY,FL,NH
Perylene	AIHA,NJ
Phenanthrene	AIHA,NJ,NY,NH
Pyrene	AIHA,NJ,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO 17025:2017	100033	03/1/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
FL	Florida Department of Health	E871027 NELAP	06/30/2023

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Doc# 278 Rev 7 July 2022

Air Media Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Clean Air

Received By UR Date 11/1 Time 745

How Were the samples received? In Cooler T On Ice T No Ice

Were samples within Temperature Compliance? In Box Ambient Melted Ice

By Gun # 5 Actual Temp - 3.0

By Blank # Actual Temp -

Was Custody Seal In tact? NA Were Samples Tampered with? NA

Was COC Relinquished? T Does Chain Agree With Samples? T

Are there any loose caps/valves on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC Include all Pertinent Information? Client? T Analysis? T Sampler Name? T

Project? T ID's? T Collection Dates/Times? T

Are Sample Labels filled out and legible?

Are there Rushes? F Who was notified?

Samples are received within holding time? T

Proper Media Used? T Individually Certified Cans? F

Are there Trip Blanks? F Is there enough Volume? T

Containers:	#	Size	Regulator	Duration	Accessories:		
Summa Cans					Nut/Ferrule		IC Train
Tedlar Bags					Tubing		
TO-17 Tubes					T-Connector		Shipping Charges
Radiello					Syringe		
Pufs/TO-11s	<u>6</u>	<u>11</u>			Tedlar		

Can #'s					Reg #'s				
Unused Media					Pufs/TO-17's				
					101922A-01	-06			
					-02				
					-03				
					-04				
					-05				

Comments:

December 6, 2022

Tim Rodak
Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275

Project Location: Zuq Island
Client Job Number:
Project Number: 14796 Quote 123244
Laboratory Work Order Number: 22K2213

Enclosed are results of analyses for samples as received by the laboratory on November 15, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Albania Hernandez
Project Manager

Table of Contents

Sample Summary	3
Case Narrative	4
Sample Results	6
Sample Preparation Information	12
QC Data	13
Air Toxics by EPA Compendium Methods	13
B322974	13
Flag/Qualifier Summary	15
Internal standard Area & RT Summary	16
Continuing Calibration Check	19
Certifications	20
Chain of Custody/Sample Receipt	21

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275
ATTN: Tim Rodak

REPORT DATE: 12/6/2022

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 14796 Quote 123244

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22K2213

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Zuq Island

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
VPW3-110222-01	22K2213-01	Air		EPA TO-13A	
IN13-110222-02	22K2213-02	Air		EPA TO-13A	
IN23-110222-03	22K2213-03	Air		EPA TO-13A	
DW13-110222-04	22K2213-04	Air		EPA TO-13A	
DW23-110222-05	22K2213-05	Air		EPA TO-13A	
FB3-110222-06	22K2213-06	Air		EPA TO-13A	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA TO-13A**Qualifications:**

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:**1-Methylnaphthalene**

B322974-BS1

AcenaphtheneB322974-BS1

RL-12

Elevated reporting limit due to matrix interference.

Analyte & Samples(s) Qualified:

22K2213-01[VPW3-110222-01], 22K2213-02[IN13-110222-02], 22K2213-02RE1[IN13-110222-02], 22K2213-03[IN23-110222-03], 22K2213-03RE1[IN23-110222-03], 22K2213-04[DW13-110222-04]

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:**Benzo(a)pyrene-d12**

22K2213-02RE2[IN13-110222-02], 22K2213-03RE2[IN23-110222-03]

Fluoranthene-d10

22K2213-02RE2[IN13-110222-02], 22K2213-03RE2[IN23-110222-03]

Fluorene-d10

22K2213-02RE2[IN13-110222-02], 22K2213-03RE2[IN23-110222-03]

Pyrene-d10

22K2213-02RE2[IN13-110222-02], 22K2213-03RE2[IN23-110222-03]

S-20

Surrogate recovery is outside of control limits. Sample media does not allow for re-extraction.

Analyte & Samples(s) Qualified:**Benzo(a)pyrene-d12**

22K2213-04[DW13-110222-04]

Fluoranthene-d10

22K2213-02[IN13-110222-02]

Fluorene-d10

22K2213-04[DW13-110222-04]

Pyrene-d10

22K2213-04[DW13-110222-04]

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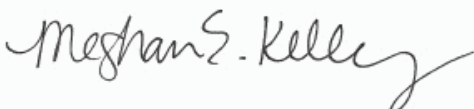
EPA TO-13A

Reported results for air samples are calculated based on client sampling and sampling information provided by the laboratory.

Blank is not subtracted unless otherwise specified.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island

Date Received: 11/15/2022

Field Sample #: VPW3-110222-01
Sample ID: 22K2213-01

Sample Matrix: Air

Sampled: 11/10/2022 14:10

Sample Description/Location:

Sub Description/Location:

Flow Controller ID:

Sample Type:

Work Order: 22K2213
EPA TO-13A

Sample Flags: RL-12

Sample Flags: RL-12		Total µg		Date/Time			
Analyte	Results	RL	Flag/Qual	Dilution	Analyzed	Analyst	
Acenaphthene	3.3	1.0		5	11/28/22 19:45	SPF	
Acenaphthylene	ND	1.0		5	11/28/22 19:45	SPF	
Anthracene	ND	1.0		5	11/28/22 19:45	SPF	
Benzo(a)anthracene	ND	1.0		5	11/28/22 19:45	SPF	
Benzo(a)pyrene	ND	1.0		5	11/28/22 19:45	SPF	
Benzo(b)fluoranthene	ND	1.0		5	11/28/22 19:45	SPF	
Benzo(e)pyrene	ND	1.0		5	11/28/22 19:45	SPF	
Benzo(g,h,i)perylene	ND	1.0		5	11/28/22 19:45	SPF	
Benzo(k)fluoranthene	ND	1.0		5	11/28/22 19:45	SPF	
Chrysene	ND	1.0		5	11/28/22 19:45	SPF	
Dibenz(a,h)anthracene	ND	1.0		5	11/28/22 19:45	SPF	
Fluoranthene	1.9	1.0		5	11/28/22 19:45	SPF	
Fluorene	3.9	1.0		5	11/28/22 19:45	SPF	
Indeno(1,2,3-cd)pyrene	ND	1.0		5	11/28/22 19:45	SPF	
1-Methylnaphthalene	3.2	1.0		5	11/28/22 19:45	SPF	
2-Methylnaphthalene	6.4	1.0		5	11/28/22 19:45	SPF	
Naphthalene	11	2.5		5	11/28/22 19:45	SPF	
Perylene	ND	1.0		5	11/28/22 19:45	SPF	
Phenanthrene	6.4	1.0		5	11/28/22 19:45	SPF	
Pyrene	1.1	1.0		5	11/28/22 19:45	SPF	

Surrogates	% Recovery	% REC Limits	
Benzo(a)pyrene-d12	102	60-120	11/28/22 19:45
Fluoranthene-d10	106	60-120	11/28/22 19:45
Fluorene-d10	101	60-120	11/28/22 19:45
Pyrene-d10	104	60-120	11/28/22 19:45

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
Date Received: 11/15/2022
Field Sample #: IN13-110222-02
Sample ID: 22K2213-02
Sample Matrix: Air
Sampled: 11/10/2022 12:50

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 22K2213
EPA TO-13A

Sample Flags: RL-12

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	10	1.0		5	11/28/22 20:14		SPF
Acenaphthylene	110	10		50	12/1/22 16:35		SPF
Anthracene	29	1.0		5	11/28/22 20:14		SPF
Benzo(a)anthracene	20	1.0		5	11/28/22 20:14		SPF
Benzo(a)pyrene	15	1.0		5	11/28/22 20:14		SPF
Benzo(b)fluoranthene	24	1.0		5	11/28/22 20:14		SPF
Benzo(e)pyrene	12	1.0		5	11/28/22 20:14		SPF
Benzo(g,h,i)perylene	10	1.0		5	11/28/22 20:14		SPF
Benzo(k)fluoranthene	7.9	1.0		5	11/28/22 20:14		SPF
Chrysene	19	1.0		5	11/28/22 20:14		SPF
Dibenz(a,h)anthracene	2.9	1.0		5	11/28/22 20:14		SPF
Fluoranthene	67	10		50	12/1/22 16:35		SPF
Fluorene	71	10		50	12/1/22 16:35		SPF
Indeno(1,2,3-cd)pyrene	12	1.0		5	11/28/22 20:14		SPF
1-Methylnaphthalene	64	10		50	12/1/22 16:35		SPF
2-Methylnaphthalene	160	10		50	12/1/22 16:35		SPF
Naphthalene	2100	200		400	12/2/22 12:33		SPF
Perylene	3.9	1.0		5	11/28/22 20:14		SPF
Phenanthrene	140	10		50	12/1/22 16:35		SPF
Pyrene	45	1.0		5	11/28/22 20:14		SPF

Surrogates	% Recovery		% REC Limits		
Benzo(a)pyrene-d12	*	S-01	60-120		12/2/22 12:33
Benzo(a)pyrene-d12	111		60-120		11/28/22 20:14
Benzo(a)pyrene-d12	95.0		60-120		12/1/22 16:35
Fluoranthene-d10	*	S-01	60-120		12/2/22 12:33
Fluoranthene-d10	121*	S-20	60-120		11/28/22 20:14
Fluoranthene-d10	105		60-120		12/1/22 16:35
Fluorene-d10	*	S-01	60-120		12/2/22 12:33
Fluorene-d10	114		60-120		11/28/22 20:14
Fluorene-d10	105		60-120		12/1/22 16:35
Pyrene-d10	*	S-01	60-120		12/2/22 12:33
Pyrene-d10	104		60-120		11/28/22 20:14
Pyrene-d10	100		60-120		12/1/22 16:35

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
Date Received: 11/15/2022
Field Sample #: IN23-110222-03
Sample ID: 22K2213-03
Sample Matrix: Air
Sampled: 11/10/2022 13:40

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 22K2213
EPA TO-13A

Sample Flags: RL-12

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	3.0	1.0		5	11/28/22 20:42		SPF
Acenaphthylene	33	1.0		5	11/28/22 20:42		SPF
Anthracene	3.2	1.0		5	11/28/22 20:42		SPF
Benzo(a)anthracene	ND	1.0		5	11/28/22 20:42		SPF
Benzo(a)pyrene	ND	1.0		5	11/28/22 20:42		SPF
Benzo(b)fluoranthene	1.2	1.0		5	11/28/22 20:42		SPF
Benzo(e)pyrene	ND	1.0		5	11/28/22 20:42		SPF
Benzo(g,h,i)perylene	ND	1.0		5	11/28/22 20:42		SPF
Benzo(k)fluoranthene	ND	1.0		5	11/28/22 20:42		SPF
Chrysene	1.1	1.0		5	11/28/22 20:42		SPF
Dibenz(a,h)anthracene	ND	1.0		5	11/28/22 20:42		SPF
Fluoranthene	5.4	1.0		5	11/28/22 20:42		SPF
Fluorene	17	1.0		5	11/28/22 20:42		SPF
Indeno(1,2,3-cd)pyrene	ND	1.0		5	11/28/22 20:42		SPF
1-Methylnaphthalene	18	1.0		5	11/28/22 20:42		SPF
2-Methylnaphthalene	45	2.0		10	12/1/22 17:03		SPF
Naphthalene	470	50		100	12/2/22 13:01		SPF
Perylene	ND	1.0		5	11/28/22 20:42		SPF
Phenanthrene	21	1.0		5	11/28/22 20:42		SPF
Pyrene	2.9	1.0		5	11/28/22 20:42		SPF

Surrogates	% Recovery		% REC Limits		
Benzo(a)pyrene-d12	*	S-01	60-120		12/2/22 13:01
Benzo(a)pyrene-d12	97.5		60-120		11/28/22 20:42
Benzo(a)pyrene-d12	82.0		60-120		12/1/22 17:03
Fluoranthene-d10	97.5		60-120		11/28/22 20:42
Fluoranthene-d10	*	S-01	60-120		12/2/22 13:01
Fluoranthene-d10	90.0		60-120		12/1/22 17:03
Fluorene-d10	106		60-120		11/28/22 20:42
Fluorene-d10	95.0		60-120		12/1/22 17:03
Fluorene-d10	*	S-01	60-120		12/2/22 13:01
Pyrene-d10	101		60-120		11/28/22 20:42
Pyrene-d10	*	S-01	60-120		12/2/22 13:01
Pyrene-d10	99.0		60-120		12/1/22 17:03

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
Date Received: 11/15/2022
Field Sample #: DW13-110222-04
Sample ID: 22K2213-04
Sample Matrix: Air
Sampled: 11/10/2022 12:00

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 22K2213
EPA TO-13A

Sample Flags: RL-12

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	0.98	0.40		2	12/1/22 17:32		SPF
Acenaphthylene	ND	0.40		2	12/1/22 17:32		SPF
Anthracene	ND	0.40		2	12/1/22 17:32		SPF
Benzo(a)anthracene	ND	0.40		2	12/1/22 17:32		SPF
Benzo(a)pyrene	ND	0.40		2	12/1/22 17:32		SPF
Benzo(b)fluoranthene	ND	0.40		2	12/1/22 17:32		SPF
Benzo(e)pyrene	ND	0.40		2	12/1/22 17:32		SPF
Benzo(g,h,i)perylene	ND	0.40		2	12/1/22 17:32		SPF
Benzo(k)fluoranthene	ND	0.40		2	12/1/22 17:32		SPF
Chrysene	ND	0.40		2	12/1/22 17:32		SPF
Dibenz(a,h)anthracene	ND	0.40		2	12/1/22 17:32		SPF
Fluoranthene	ND	0.40		2	12/1/22 17:32		SPF
Fluorene	1.0	0.40		2	12/1/22 17:32		SPF
Indeno(1,2,3-cd)pyrene	ND	0.40		2	12/1/22 17:32		SPF
1-Methylnaphthalene	0.94	0.40		2	12/1/22 17:32		SPF
2-Methylnaphthalene	1.7	0.40		2	12/1/22 17:32		SPF
Naphthalene	3.5	1.0		2	12/1/22 17:32		SPF
Perylene	ND	0.40		2	12/1/22 17:32		SPF
Phenanthrene	1.1	0.40		2	12/1/22 17:32		SPF
Pyrene	ND	0.40		2	12/1/22 17:32		SPF

Surrogates	% Recovery		% REC Limits	
Benzo(a)pyrene-d12	59.8*	S-20	60-120	12/1/22 17:32
Fluoranthene-d10	71.0		60-120	12/1/22 17:32
Fluorene-d10	53.8*	S-20	60-120	12/1/22 17:32
Pyrene-d10	54.4*	S-20	60-120	12/1/22 17:32

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island

Date Received: 11/15/2022

Field Sample #: DW23-110222-05
Sample ID: 22K2213-05

Sample Matrix: Air

Sampled: 11/10/2022 11:33

Sample Description/Location:

Sub Description/Location:

Work Order: 22K2213

Flow Controller ID:

Sample Type:

EPA TO-13A

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	1.7	0.20		1	11/28/22 21:40		SPF
Acenaphthylene	ND	0.20		1	11/28/22 21:40		SPF
Anthracene	ND	0.20		1	11/28/22 21:40		SPF
Benzo(a)anthracene	ND	0.20		1	11/28/22 21:40		SPF
Benzo(a)pyrene	ND	0.20		1	11/28/22 21:40		SPF
Benzo(b)fluoranthene	ND	0.20		1	11/28/22 21:40		SPF
Benzo(e)pyrene	ND	0.20		1	11/28/22 21:40		SPF
Benzo(g,h,i)perylene	ND	0.20		1	11/28/22 21:40		SPF
Benzo(k)fluoranthene	ND	0.20		1	11/28/22 21:40		SPF
Chrysene	ND	0.20		1	11/28/22 21:40		SPF
Dibenz(a,h)anthracene	ND	0.20		1	11/28/22 21:40		SPF
Fluoranthene	0.23	0.20		1	11/28/22 21:40		SPF
Fluorene	1.3	0.20		1	11/28/22 21:40		SPF
Indeno(1,2,3-cd)pyrene	ND	0.20		1	11/28/22 21:40		SPF
1-Methylnaphthalene	1.1	0.20		1	11/28/22 21:40		SPF
2-Methylnaphthalene	1.9	0.20		1	11/28/22 21:40		SPF
Naphthalene	2.9	0.50		1	11/28/22 21:40		SPF
Perylene	ND	0.20		1	11/28/22 21:40		SPF
Phenanthrene	1.0	0.20		1	11/28/22 21:40		SPF
Pyrene	ND	0.20		1	11/28/22 21:40		SPF

Surrogates	% Recovery	% REC Limits	
Benzo(a)pyrene-d12	91.3	60-120	11/28/22 21:40
Fluoranthene-d10	90.7	60-120	11/28/22 21:40
Fluorene-d10	116	60-120	11/28/22 21:40
Pyrene-d10	90.7	60-120	11/28/22 21:40

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
Date Received: 11/15/2022
Field Sample #: FB3-110222-06
Sample ID: 22K2213-06
Sample Matrix: Air
Sampled: 11/10/2022 00:00

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 22K2213
EPA TO-13A

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	ND	0.20		1	11/28/22 22:09		SPF
Acenaphthylene	ND	0.20		1	11/28/22 22:09		SPF
Anthracene	ND	0.20		1	11/28/22 22:09		SPF
Benzo(a)anthracene	ND	0.20		1	11/28/22 22:09		SPF
Benzo(a)pyrene	ND	0.20		1	11/28/22 22:09		SPF
Benzo(b)fluoranthene	ND	0.20		1	11/28/22 22:09		SPF
Benzo(e)pyrene	ND	0.20		1	11/28/22 22:09		SPF
Benzo(g,h,i)perylene	ND	0.20		1	11/28/22 22:09		SPF
Benzo(k)fluoranthene	ND	0.20		1	11/28/22 22:09		SPF
Chrysene	ND	0.20		1	11/28/22 22:09		SPF
Dibenz(a,h)anthracene	ND	0.20		1	11/28/22 22:09		SPF
Fluoranthene	ND	0.20		1	11/28/22 22:09		SPF
Fluorene	ND	0.20		1	11/28/22 22:09		SPF
Indeno(1,2,3-cd)pyrene	ND	0.20		1	11/28/22 22:09		SPF
1-Methylnaphthalene	ND	0.20		1	11/28/22 22:09		SPF
2-Methylnaphthalene	ND	0.20		1	11/28/22 22:09		SPF
Naphthalene	ND	0.50		1	11/28/22 22:09		SPF
Perylene	ND	0.20		1	11/28/22 22:09		SPF
Phenanthrene	ND	0.20		1	11/28/22 22:09		SPF
Pyrene	ND	0.20		1	11/28/22 22:09		SPF

Surrogates	% Recovery	% REC Limits	
Benzo(a)pyrene-d12	86.9	60-120	11/28/22 22:09
Fluoranthene-d10	94.2	60-120	11/28/22 22:09
Fluorene-d10	89.7	60-120	11/28/22 22:09
Pyrene-d10	86.9	60-120	11/28/22 22:09

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332**Sample Extraction Data****Prep Method: SW-846 3540C Analytical Method: EPA TO-13A**

Lab Number [Field ID]	Batch	Initial [Cartridge	Final [mL]	Date
22K2213-01 [VPW3-110222-01]	B322974	1.00	1.00	11/14/22
22K2213-02 [IN13-110222-02]	B322974	1.00	1.00	11/14/22
22K2213-02RE1 [IN13-110222-02]	B322974	1.00	1.00	11/14/22
22K2213-02RE2 [IN13-110222-02]	B322974	1.00	1.00	11/14/22
22K2213-03 [IN23-110222-03]	B322974	1.00	1.00	11/14/22
22K2213-03RE1 [IN23-110222-03]	B322974	1.00	1.00	11/14/22
22K2213-03RE2 [IN23-110222-03]	B322974	1.00	1.00	11/14/22
22K2213-04 [DW13-110222-04]	B322974	1.00	1.00	11/14/22
22K2213-05 [DW23-110222-05]	B322974	1.00	1.00	11/14/22
22K2213-06 [FB3-110222-06]	B322974	1.00	1.00	11/14/22

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	Total µg		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	Total µg	Result	%REC	Limits	RPD	Limit	

Batch B322974 - SW-846 3540C
Blank (B322974-BLK1)

Prepared: 11/14/22 Analyzed: 11/28/22

Acenaphthene	ND	0.20									
Acenaphthylene	ND	0.20									
Anthracene	ND	0.20									
Benzo(a)anthracene	ND	0.20									
Benzo(a)pyrene	ND	0.20									
Benzo(b)fluoranthene	ND	0.20									
Benzo(e)pyrene	ND	0.20									
Benzo(g,h,i)perylene	ND	0.20									
Benzo(k)fluoranthene	ND	0.20									
Chrysene	ND	0.20									
Dibenz(a,h)anthracene	ND	0.20									
Fluoranthene	ND	0.20									
Fluorene	ND	0.20									
Indeno(1,2,3-cd)pyrene	ND	0.20									
1-Methylnaphthalene	ND	0.20									
2-Methylnaphthalene	ND	0.20									
Naphthalene	ND	0.50									
Perylene	ND	0.20									
Phenanthrene	ND	0.20									
Pyrene	ND	0.20									
<hr/>											
Surrogate: Fluorene-d10	0.752				1.00		75.2	60-120			
Surrogate: Pyrene-d10	0.758				1.00		75.8	60-120			

LCS (B322974-BS1)

Prepared: 11/14/22 Analyzed: 11/28/22

Acenaphthene	0.271	0.20	1.3	0.500	54.2	*	60-110				L-07
Acenaphthylene	0.312	0.20	1.2	0.500	62.4		60-110				
Anthracene	0.307	0.20	1.5	0.500	61.4		60-110				
Benzo(a)anthracene	0.331	0.20	1.9	0.500	66.2		60-110				
Benzo(a)pyrene	0.342	0.20	2.1	0.500	68.4		60-110				
Benzo(b)fluoranthene	0.375	0.20	2.1	0.500	75.0		60-111				
Benzo(e)pyrene	0.401	0.20	2.1	0.500	80.2		60-118				
Benzo(g,h,i)perylene	0.350	0.20	2.3	0.500	70.0		60-111				
Benzo(k)fluoranthene	0.356	0.20	2.1	0.500	71.2		60-114				
Chrysene	0.331	0.20	1.9	0.500	66.2		60-110				
Dibenz(a,h)anthracene	0.337	0.20	2.3	0.500	67.4		60-113				
Fluoranthene	0.357	0.20	1.7	0.500	71.4		60-110				
Fluorene	0.323	0.20	1.4	0.500	64.6		60-110				
Indeno(1,2,3-cd)pyrene	0.365	0.20	2.3	0.500	73.0		60-110				
1-Methylnaphthalene	0.288	0.20	1.2	0.500	57.6	*	60-110				L-07
2-Methylnaphthalene	0.300	0.20	1.2	0.500	60.0		60-110				
Naphthalene	0.464	0.50	2.6	0.500	92.8		60-118				
Perylene	0.361	0.20	2.1	0.500	72.2		60-110				
Phenanthrene	0.318	0.20	1.5	0.500	63.6		60-110				
Pyrene	0.318	0.20	1.7	0.500	63.6		60-110				
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Surrogate: Fluorene-d10	1.01			1.00	101		60-120				
Surrogate: Pyrene-d10	0.949			1.00	94.9		60-120				

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	Total µg		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	Total µg	Result	%REC	Limits	RPD	Limit	
Batch B322974 - SW-846 3540C											
LCS Dup (B322974-BSD1)					Prepared: 11/14/22 Analyzed: 11/28/22						
Acenaphthene	0.303	0.20		1.3	0.500		60.6	60-110	11.1	29.8	
Acenaphthylene	0.341	0.20		1.2	0.500		68.2	60-110	8.88	50	
Anthracene	0.325	0.20		1.5	0.500		65.0	60-110	5.70	35.8	
Benzo(a)anthracene	0.424	0.20		1.9	0.500		84.8	60-110	24.6	27.3	
Benzo(a)pyrene	0.391	0.20		2.1	0.500		78.2	60-110	13.4	27.3	
Benzo(b)fluoranthene	0.445	0.20		2.1	0.500		89.0	60-111	17.1	32.7	
Benzo(e)pyrene	0.445	0.20		2.1	0.500		89.0	60-118	10.4	33.6	
Benzo(g,h,i)perylene	0.381	0.20		2.3	0.500		76.2	60-111	8.48	36	
Benzo(k)fluoranthene	0.398	0.20		2.1	0.500		79.6	60-114	11.1	32.5	
Chrysene	0.420	0.20		1.9	0.500		84.0	60-110	23.7	28	
Dibenz(a,h)anthracene	0.363	0.20		2.3	0.500		72.6	60-113	7.43	37.1	
Fluoranthene	0.424	0.20		1.7	0.500		84.8	60-110	17.2	29.5	
Fluorene	0.345	0.20		1.4	0.500		69.0	60-110	6.59	31.1	
Indeno(1,2,3-cd)pyrene	0.406	0.20		2.3	0.500		81.2	60-110	10.6	34	
1-Methylnaphthalene	0.329	0.20		1.2	0.500		65.8	60-110	13.3	28.9	
2-Methylnaphthalene	0.337	0.20		1.2	0.500		67.4	60-110	11.6	28.3	
Naphthalene	0.451	0.50		2.6	0.500		90.2	60-118	2.84	28.3	
Perylene	0.394	0.20		2.1	0.500		78.8	60-110	8.74	25.9	
Phenanthrene	0.332	0.20		1.5	0.500		66.4	60-110	4.31	27.4	
Pyrene	0.379	0.20		1.7	0.500		75.8	60-110	17.5	30.7	
Surrogate: Fluorene-d10	0.866				1.00		86.6	60-120			
Surrogate: Pyrene-d10	0.848				1.00		84.8	60-120			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
RL-12	Elevated reporting limit due to matrix interference.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.
S-20	Surrogate recovery is outside of control limits. Sample media does not allow for re-extraction.

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INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B322974-BLK1) Lab File ID: E22S331006.D Analyzed: 11/28/22 15:00									
Naphthalene-d8	110945	7.721	97007	7.725	114	50 - 200	-0.0040	+/-0.50	
Acenaphthene-d10	70344	9.434	63450	9.434	111	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	140791	10.887	129115	10.887	109	50 - 200	0.0000	+/-0.50	
Chrysene-d12	133539	14.433	115505	14.433	116	50 - 200	0.0000	+/-0.50	
Perylene-d12	127179	17.689	119079	17.689	107	50 - 200	0.0000	+/-0.50	
LCS (B322974-BS1) Lab File ID: E22S331008.D Analyzed: 11/28/22 15:57									
Naphthalene-d8	99001	7.725	97007	7.725	102	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	64367	9.434	63450	9.434	101	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	137951	10.892	129115	10.887	107	50 - 200	0.0050	+/-0.50	
Chrysene-d12	137727	14.441	115505	14.433	119	50 - 200	0.0080	+/-0.50	
Perylene-d12	140470	17.7	119079	17.689	118	50 - 200	0.0110	+/-0.50	
LCS Dup (B322974-BSD1) Lab File ID: E22S331009.D Analyzed: 11/28/22 16:26									
Naphthalene-d8	108689	7.721	97007	7.725	112	50 - 200	-0.0040	+/-0.50	
Acenaphthene-d10	69062	9.434	63450	9.434	109	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	143333	10.887	129115	10.887	111	50 - 200	0.0000	+/-0.50	
Chrysene-d12	140995	14.437	115505	14.433	122	50 - 200	0.0040	+/-0.50	
Perylene-d12	143146	17.697	119079	17.689	120	50 - 200	0.0080	+/-0.50	
VPW3-110222-01 (22K2213-01) Lab File ID: E22S331016.D Analyzed: 11/28/22 19:45									
Naphthalene-d8	107382	7.733	97007	7.725	111	50 - 200	0.0080	+/-0.50	
Acenaphthene-d10	72907	9.446	63450	9.434	115	50 - 200	0.0120	+/-0.50	
Phenanthrene-d10	151025	10.897	129115	10.887	117	50 - 200	0.0100	+/-0.50	
Chrysene-d12	145869	14.45	115505	14.433	126	50 - 200	0.0170	+/-0.50	
Perylene-d12	155623	17.716	119079	17.689	131	50 - 200	0.0270	+/-0.50	
IN13-110222-02 (22K2213-02) Lab File ID: E22S331017.D Analyzed: 11/28/22 20:14									
Naphthalene-d8	120927	7.762	97007	7.725	125	50 - 200	0.0370	+/-0.50	
Acenaphthene-d10	76726	9.446	63450	9.434	121	50 - 200	0.0120	+/-0.50	
Phenanthrene-d10	152157	10.901	129115	10.887	118	50 - 200	0.0140	+/-0.50	
Chrysene-d12	147617	14.458	115505	14.433	128	50 - 200	0.0250	+/-0.50	
Perylene-d12	164362	17.724	119079	17.689	138	50 - 200	0.0350	+/-0.50	
IN23-110222-03 (22K2213-03) Lab File ID: E22S331018.D Analyzed: 11/28/22 20:42									
Naphthalene-d8	123727	7.737	97007	7.725	128	50 - 200	0.0120	+/-0.50	
Acenaphthene-d10	78518	9.442	63450	9.434	124	50 - 200	0.0080	+/-0.50	
Phenanthrene-d10	157531	10.897	129115	10.887	122	50 - 200	0.0100	+/-0.50	
Chrysene-d12	151721	14.454	115505	14.433	131	50 - 200	0.0210	+/-0.50	
Perylene-d12	162400	17.724	119079	17.689	136	50 - 200	0.0350	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DW23-110222-05 (22K2213-05) Lab File ID: E22S331020.D Analyzed: 11/28/22 21:40									
Naphthalene-d8	112908	7.729	97007	7.725	116	50 - 200	0.0040	+/-0.50	
Acenaphthene-d10	77230	9.446	63450	9.434	122	50 - 200	0.0120	+/-0.50	
Phenanthrene-d10	155569	10.901	129115	10.887	120	50 - 200	0.0140	+/-0.50	
Chrysene-d12	147636	14.466	115505	14.433	128	50 - 200	0.0330	+/-0.50	
Perylene-d12	150776	17.731	119079	17.689	127	50 - 200	0.0420	+/-0.50	
FB3-110222-06 (22K2213-06) Lab File ID: E22S331021.D Analyzed: 11/28/22 22:09									
Naphthalene-d8	117381	7.741	97007	7.725	121	50 - 200	0.0160	+/-0.50	
Acenaphthene-d10	74328	9.446	63450	9.434	117	50 - 200	0.0120	+/-0.50	
Phenanthrene-d10	153950	10.897	129115	10.887	119	50 - 200	0.0100	+/-0.50	
Chrysene-d12	151998	14.466	115505	14.433	132	50 - 200	0.0330	+/-0.50	
Perylene-d12	163561	17.739	119079	17.689	137	50 - 200	0.0500	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
IN13-110222-02 (22K2213-02RE1) Lab File ID: E22S335015.D Analyzed: 12/01/22 16:35									
Naphthalene-d8	106884	7.729	99999	7.729	107	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	73115	9.438	68509	9.442	107	50 - 200	-0.0040	+/-0.50	
Phenanthrene-d10	148373	10.892	142575	10.892	104	50 - 200	0.0000	+/-0.50	
Chrysene-d12	141783	14.441	125909	14.441	113	50 - 200	0.0000	+/-0.50	
Perylene-d12	153635	17.708	128110	17.708	120	50 - 200	0.0000	+/-0.50	
IN23-110222-03 (22K2213-03RE1) Lab File ID: E22S335016.D Analyzed: 12/01/22 17:03									
Naphthalene-d8	115410	7.737	99999	7.729	115	50 - 200	0.0080	+/-0.50	
Acenaphthene-d10	73183	9.438	68509	9.442	107	50 - 200	-0.0040	+/-0.50	
Phenanthrene-d10	149608	10.892	142575	10.892	105	50 - 200	0.0000	+/-0.50	
Chrysene-d12	145118	14.441	125909	14.441	115	50 - 200	0.0000	+/-0.50	
Perylene-d12	159458	17.712	128110	17.708	124	50 - 200	0.0040	+/-0.50	
DW13-110222-04 (22K2213-04) Lab File ID: E22S335017.D Analyzed: 12/01/22 17:32									
Naphthalene-d8	112259	7.729	99999	7.729	112	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	75369	9.438	68509	9.442	110	50 - 200	-0.0040	+/-0.50	
Phenanthrene-d10	158735	10.892	142575	10.892	111	50 - 200	0.0000	+/-0.50	
Chrysene-d12	147785	14.442	125909	14.441	117	50 - 200	0.0010	+/-0.50	
Perylene-d12	155649	17.708	128110	17.708	121	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
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INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
IN13-110222-02 (22K2213-02RE2) Lab File ID: E22S336009.D Analyzed: 12/02/22 12:33									
Naphthalene-d8	99558	7.769	124359	7.729	80	50 - 200	0.0400	+/-0.50	
Acenaphthene-d10	62543	9.438	83306	9.442	75	50 - 200	-0.0040	+/-0.50	
Phenanthrene-d10	122630	10.892	175961	10.892	70	50 - 200	0.0000	+/-0.50	
Chrysene-d12	99057	14.441	157775	14.441	63	50 - 200	0.0000	+/-0.50	
Perylene-d12	99315	17.708	157453	17.704	63	50 - 200	0.0040	+/-0.50	
IN23-110222-03 (22K2213-03RE2) Lab File ID: E22S336010.D Analyzed: 12/02/22 13:01									
Naphthalene-d8	98712	7.769	124359	7.729	79	50 - 200	0.0400	+/-0.50	
Acenaphthene-d10	62377	9.438	83306	9.442	75	50 - 200	-0.0040	+/-0.50	
Phenanthrene-d10	121081	10.892	175961	10.892	69	50 - 200	0.0000	+/-0.50	
Chrysene-d12	101362	14.437	157775	14.441	64	50 - 200	-0.0040	+/-0.50	
Perylene-d12	98828	17.7	157453	17.704	63	50 - 200	-0.0040	+/-0.50	

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CONTINUING CALIBRATION CHECK

COMPOUND	TYPE			RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-13A in Air</i>	
Acenaphthene	AIHA,NJ,NY,NH
Acenaphthylene	AIHA,NJ,NY,NH
Anthracene	AIHA,NJ,NY,NH
Benzo(a)anthracene	AIHA,NJ,NY,NH
Benzo(a)pyrene	AIHA,NJ,NY,FL,NH
Benzo(b)fluoranthene	AIHA,NJ,NY,NH
Benzo(e)pyrene	AIHA,NJ
Benzo(g,h,i)perylene	AIHA,NJ,NY,NH
Benzo(k)fluoranthene	AIHA,NJ,NY,NH
Chrysene	AIHA,NJ,NY,NH
Dibenz(a,h)anthracene	AIHA,NJ,NY,NH
Fluoranthene	AIHA,NJ,NY,NH
Fluorene	AIHA,NJ,NY,NH
Indeno(1,2,3-cd)pyrene	AIHA,NJ,NY,NH
1-Methylnaphthalene	AIHA
2-Methylnaphthalene	AIHA
Naphthalene	AIHA,NJ,NY,FL,NH
Perylene	AIHA,NJ
Phenanthrene	AIHA,NJ,NY,NH
Pyrene	AIHA,NJ,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO 17025:2017	100033	03/1/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
FL	Florida Department of Health	E871027 NELAP	06/30/2023

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December 30, 2022

Tim Rodak
Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275

Project Location: Detroit, MI
Client Job Number:
Project Number: 14796
Laboratory Work Order Number: 22L1347

Enclosed are results of analyses for samples as received by the laboratory on December 9, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Albania Hernandez
Project Manager

Table of Contents

Sample Summary	3
Case Narrative	4
Sample Results	6
Sample Preparation Information	12
QC Data	13
Air Toxics by EPA Compendium Methods	13
B325517	13
Flag/Qualifier Summary	15
Internal standard Area & RT Summary	16
Continuing Calibration Check	19
Certifications	20
Chain of Custody/Sample Receipt	21

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275
ATTN: Tim Rodak

REPORT DATE: 12/30/2022

PURCHASE ORDER NUMBER: 00123249 - 14777-TO-13A_TO-15

PROJECT NUMBER: 14796

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22L1347

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Detroit, MI

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
DW24-112922B-01	22L1347-01	Air		EPA TO-13A	
IN14-112922B-02	22L1347-02	Air		EPA TO-13A	
VPW4-112922B-03	22L1347-03	Air		EPA TO-13A	
IN24-112922B-04	22L1347-04	Air		EPA TO-13A	
DW14-112922B-05	22L1347-05	Air		EPA TO-13A	
FB4-112922B-06	22L1347-06	Air		EPA TO-13A	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA TO-13A**Qualifications:**

L-05

Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the high side.

Analyte & Samples(s) Qualified:**Naphthalene**

22L1347-01[DW24-112922B-01], 22L1347-02RE2[IN14-112922B-02], 22L1347-03RE1[VPW4-112922B-03], 22L1347-04RE2[IN24-112922B-04], 22L1347-05RE1[DW14-112922B-05], 22L1347-06[FB4-112922B-06], B325517-BSD1

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:**Benzo(a)pyrene-d12**

22L1347-02RE2[IN14-112922B-02], 22L1347-04RE2[IN24-112922B-04]

Fluoranthene-d10

22L1347-02RE2[IN14-112922B-02], 22L1347-04RE2[IN24-112922B-04]

Fluorene-d10

22L1347-02RE2[IN14-112922B-02], 22L1347-04RE2[IN24-112922B-04]

Pyrene-d10

22L1347-02RE2[IN14-112922B-02], 22L1347-04RE2[IN24-112922B-04]

S-20

Surrogate recovery is outside of control limits. Sample media does not allow for re-extraction.

Analyte & Samples(s) Qualified:**Benzo(a)pyrene-d12**

22L1347-02[IN14-112922B-02]

Fluoranthene-d10

22L1347-02[IN14-112922B-02], 22L1347-02RE1[IN14-112922B-02], 22L1347-04[IN24-112922B-04], 22L1347-06[FB4-112922B-06]

Fluorene-d10

22L1347-02[IN14-112922B-02], 22L1347-02RE1[IN14-112922B-02], 22L1347-04[IN24-112922B-04], B325517-BS1

Pyrene-d10

22L1347-02[IN14-112922B-02], 22L1347-02RE1[IN14-112922B-02], 22L1347-04[IN24-112922B-04], B325517-BS1

S-26

Surrogate outside of control limits.

Analyte & Samples(s) Qualified:**Fluoranthene-d10**

22L1347-05RE1[DW14-112922B-05]

Fluorene-d10

22L1347-05RE1[DW14-112922B-05]

Pyrene-d10

22L1347-05RE1[DW14-112922B-05]

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EPA TO-13A

Reported results for air samples are calculated based on client sampling and sampling information provided by the laboratory.

Blank is not subtracted unless otherwise specified.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

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ANALYTICAL RESULTS

Project Location: Detroit, MI

Date Received: 12/9/2022

Field Sample #: DW24-112922B-01
Sample ID: 22L1347-01

Sample Matrix: Air

Sampled: 12/6/2022 13:55

Sample Description/Location:

Sub Description/Location:

Flow Controller ID:

Sample Type:

Work Order: 22L1347
EPA TO-13A

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	1.5	0.20		1	12/16/22 13:35		SPF
Acenaphthylene	0.48	0.20		1	12/16/22 13:35		SPF
Anthracene	3.7	0.20		1	12/16/22 13:35		SPF
Benzo(a)anthracene	ND	0.20		1	12/16/22 13:35		SPF
Benzo(a)pyrene	ND	0.20		1	12/16/22 13:35		SPF
Benzo(b)fluoranthene	ND	0.20		1	12/16/22 13:35		SPF
Benzo(e)pyrene	ND	0.20		1	12/16/22 13:35		SPF
Benzo(g,h,i)perylene	ND	0.20		1	12/16/22 13:35		SPF
Benzo(k)fluoranthene	ND	0.20		1	12/16/22 13:35		SPF
Chrysene	ND	0.20		1	12/16/22 13:35		SPF
Dibenz(a,h)anthracene	ND	0.20		1	12/16/22 13:35		SPF
Fluoranthene	2.0	0.20		1	12/16/22 13:35		SPF
Fluorene	1.8	0.20		1	12/16/22 13:35		SPF
Indeno(1,2,3-cd)pyrene	ND	0.20		1	12/16/22 13:35		SPF
1-Methylnaphthalene	1.4	0.20		1	12/16/22 13:35		SPF
2-Methylnaphthalene	2.7	0.20		1	12/16/22 13:35		SPF
Naphthalene	7.7	0.50	L-05	1	12/16/22 13:35		SPF
Perylene	ND	0.20		1	12/16/22 13:35		SPF
Phenanthrene	3.3	0.20		1	12/16/22 13:35		SPF
Pyrene	1.1	0.20		1	12/16/22 13:35		SPF

Surrogates	% Recovery	% REC Limits	
Benzo(a)pyrene-d12	100	60-120	12/16/22 13:35
Fluoranthene-d10	118	60-120	12/16/22 13:35
Fluorene-d10	116	60-120	12/16/22 13:35
Pyrene-d10	120	60-120	12/16/22 13:35

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ANALYTICAL RESULTS

Project Location: Detroit, MI

Date Received: 12/9/2022

Field Sample #: IN14-112922B-02
Sample ID: 22L1347-02

Sample Matrix: Air

Sampled: 12/6/2022 14:40

Sample Description/Location:

Sub Description/Location:

Work Order: 22L1347

Flow Controller ID:

Sample Type:

EPA TO-13A

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	6.1	1.0		5	12/16/22 13:59		SPF
Acenaphthylene	100	5.0		25	12/19/22 15:22		SPF
Anthracene	11	1.0		5	12/16/22 13:59		SPF
Benzo(a)anthracene	3.9	1.0		5	12/16/22 13:59		SPF
Benzo(a)pyrene	2.7	1.0		5	12/16/22 13:59		SPF
Benzo(b)fluoranthene	4.9	1.0		5	12/16/22 13:59		SPF
Benzo(e)pyrene	2.3	1.0		5	12/16/22 13:59		SPF
Benzo(g,h,i)perylene	1.8	1.0		5	12/16/22 13:59		SPF
Benzo(k)fluoranthene	1.8	1.0		5	12/16/22 13:59		SPF
Chrysene	4.3	1.0		5	12/16/22 13:59		SPF
Dibenz(a,h)anthracene	ND	1.0		5	12/16/22 13:59		SPF
Fluoranthene	21	1.0		5	12/16/22 13:59		SPF
Fluorene	44	1.0		5	12/16/22 13:59		SPF
Indeno(1,2,3-cd)pyrene	2.1	1.0		5	12/16/22 13:59		SPF
1-Methylnaphthalene	47	1.0		5	12/16/22 13:59		SPF
2-Methylnaphthalene	120	5.0		25	12/19/22 15:22		SPF
Naphthalene	1200	120	L-05	250	12/19/22 15:47		SPF
Perylene	ND	1.0		5	12/16/22 13:59		SPF
Phenanthrene	62	5.0		25	12/19/22 15:22		SPF
Pyrene	13	1.0		5	12/16/22 13:59		SPF

Surrogates	% Recovery		% REC Limits		
Benzo(a)pyrene-d12	133*	S-20	60-120		12/16/22 13:59
Benzo(a)pyrene-d12	*	S-01	60-120		12/19/22 15:47
Benzo(a)pyrene-d12	112		60-120		12/19/22 15:22
Fluoranthene-d10	140*	S-20	60-120		12/16/22 13:59
Fluoranthene-d10	*	S-01	60-120		12/19/22 15:47
Fluoranthene-d10	132*	S-20	60-120		12/19/22 15:22
Fluorene-d10	135*	S-20	60-120		12/16/22 13:59
Fluorene-d10	*	S-01	60-120		12/19/22 15:47
Fluorene-d10	135*	S-20	60-120		12/19/22 15:22
Pyrene-d10	144*	S-20	60-120		12/16/22 13:59
Pyrene-d10	*	S-01	60-120		12/19/22 15:47
Pyrene-d10	132*	S-20	60-120		12/19/22 15:22

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Detroit, MI

Date Received: 12/9/2022

Field Sample #: VPW4-112922B-03

Sample ID: 22L1347-03

Sample Matrix: Air

Sampled: 12/6/2022 15:38

Sample Description/Location:

Sub Description/Location:

Flow Controller ID:

Sample Type:

Work Order: 22L1347

EPA TO-13A

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	2.0	0.20		1	12/16/22 14:23		SPF
Acenaphthylene	0.65	0.20		1	12/16/22 14:23		SPF
Anthracene	2.8	0.20		1	12/16/22 14:23		SPF
Benzo(a)anthracene	ND	0.20		1	12/16/22 14:23		SPF
Benzo(a)pyrene	ND	0.20		1	12/16/22 14:23		SPF
Benzo(b)fluoranthene	ND	0.20		1	12/16/22 14:23		SPF
Benzo(e)pyrene	ND	0.20		1	12/16/22 14:23		SPF
Benzo(g,h,i)perylene	ND	0.20		1	12/16/22 14:23		SPF
Benzo(k)fluoranthene	ND	0.20		1	12/16/22 14:23		SPF
Chrysene	ND	0.20		1	12/16/22 14:23		SPF
Dibenz(a,h)anthracene	ND	0.20		1	12/16/22 14:23		SPF
Fluoranthene	0.77	0.20		1	12/16/22 14:23		SPF
Fluorene	2.0	0.20		1	12/16/22 14:23		SPF
Indeno(1,2,3-cd)pyrene	ND	0.20		1	12/16/22 14:23		SPF
1-Methylnaphthalene	2.5	0.20		1	12/16/22 14:23		SPF
2-Methylnaphthalene	4.7	0.20		1	12/16/22 14:23		SPF
Naphthalene	7.5	0.50	L-05	1	12/30/22 10:25		SPF
Perylene	ND	0.20		1	12/16/22 14:23		SPF
Phenanthrene	2.5	0.20		1	12/16/22 14:23		SPF
Pyrene	0.45	0.20		1	12/16/22 14:23		SPF

Surrogates	% Recovery	% REC Limits	
Benzo(a)pyrene-d12	72.0	60-120	12/30/22 10:25
Benzo(a)pyrene-d12	96.9	60-120	12/16/22 14:23
Fluoranthene-d10	113	60-120	12/16/22 14:23
Fluoranthene-d10	82.5	60-120	12/30/22 10:25
Fluorene-d10	101	60-120	12/16/22 14:23
Fluorene-d10	75.3	60-120	12/30/22 10:25
Pyrene-d10	107	60-120	12/16/22 14:23
Pyrene-d10	89.0	60-120	12/30/22 10:25

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Detroit, MI

Date Received: 12/9/2022

Field Sample #: IN24-112922B-04
Sample ID: 22L1347-04

Sample Matrix: Air

Sampled: 12/6/2022 15:05

Sample Description/Location:

Sub Description/Location:

Work Order: 22L1347

Flow Controller ID:

Sample Type:

EPA TO-13A

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	5.9	1.0		5	12/16/22 14:47		SPF
Acenaphthylene	110	5.0		25	12/19/22 16:12		SPF
Anthracene	15	1.0		5	12/16/22 14:47		SPF
Benzo(a)anthracene	8.0	1.0		5	12/16/22 14:47		SPF
Benzo(a)pyrene	5.4	1.0		5	12/16/22 14:47		SPF
Benzo(b)fluoranthene	7.0	1.0		5	12/16/22 14:47		SPF
Benzo(e)pyrene	3.3	1.0		5	12/16/22 14:47		SPF
Benzo(g,h,i)perylene	2.9	1.0		5	12/16/22 14:47		SPF
Benzo(k)fluoranthene	2.8	1.0		5	12/16/22 14:47		SPF
Chrysene	6.6	1.0		5	12/16/22 14:47		SPF
Dibenz(a,h)anthracene	ND	1.0		5	12/16/22 14:47		SPF
Fluoranthene	23	1.0		5	12/16/22 14:47		SPF
Fluorene	42	1.0		5	12/16/22 14:47		SPF
Indeno(1,2,3-cd)pyrene	3.3	1.0		5	12/16/22 14:47		SPF
1-Methylnaphthalene	38	1.0		5	12/16/22 14:47		SPF
2-Methylnaphthalene	82	5.0		25	12/19/22 16:12		SPF
Naphthalene	730	50	L-05	100	12/19/22 16:36		SPF
Perylene	1.3	1.0		5	12/16/22 14:47		SPF
Phenanthrene	52	5.0		25	12/19/22 16:12		SPF
Pyrene	13	1.0		5	12/16/22 14:47		SPF

Surrogates	% Recovery		% REC Limits		
Benzo(a)pyrene-d12	118		60-120		12/16/22 14:47
Benzo(a)pyrene-d12	*	S-01	60-120		12/19/22 16:36
Benzo(a)pyrene-d12	102		60-120		12/19/22 16:12
Fluoranthene-d10	*	S-01	60-120		12/19/22 16:36
Fluoranthene-d10	118		60-120		12/19/22 16:12
Fluoranthene-d10	137*	S-20	60-120		12/16/22 14:47
Fluorene-d10	120		60-120		12/19/22 16:12
Fluorene-d10	126*	S-20	60-120		12/16/22 14:47
Fluorene-d10	*	S-01	60-120		12/19/22 16:36
Pyrene-d10	*	S-01	60-120		12/19/22 16:36
Pyrene-d10	120		60-120		12/19/22 16:12
Pyrene-d10	124*	S-20	60-120		12/16/22 14:47

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Detroit, MI

Date Received: 12/9/2022

Field Sample #: DW14-112922B-05
Sample ID: 22L1347-05

Sample Matrix: Air

Sampled: 12/6/2022 14:15

Sample Description/Location:

Sub Description/Location:

Work Order: 22L1347

Flow Controller ID:

Sample Type:

EPA TO-13A

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	1.6	0.20		1	12/16/22 15:11		SPF
Acenaphthylene	1.2	0.20		1	12/16/22 15:11		SPF
Anthracene	0.48	0.20		1	12/16/22 15:11		SPF
Benzo(a)anthracene	ND	0.20		1	12/16/22 15:11		SPF
Benzo(a)pyrene	ND	0.20		1	12/16/22 15:11		SPF
Benzo(b)fluoranthene	0.24	0.20		1	12/16/22 15:11		SPF
Benzo(e)pyrene	ND	0.20		1	12/16/22 15:11		SPF
Benzo(g,h,i)perylene	ND	0.20		1	12/16/22 15:11		SPF
Benzo(k)fluoranthene	ND	0.20		1	12/16/22 15:11		SPF
Chrysene	0.24	0.20		1	12/16/22 15:11		SPF
Dibenz(a,h)anthracene	ND	0.20		1	12/16/22 15:11		SPF
Fluoranthene	1.7	0.20		1	12/16/22 15:11		SPF
Fluorene	2.7	0.20		1	12/16/22 15:11		SPF
Indeno(1,2,3-cd)pyrene	ND	0.20		1	12/16/22 15:11		SPF
1-Methylnaphthalene	1.8	0.20		1	12/16/22 15:11		SPF
2-Methylnaphthalene	3.5	0.20		1	12/16/22 15:11		SPF
Naphthalene	18	2.5	L-05	5	12/21/22 15:16		SPF
Perylene	ND	0.20		1	12/16/22 15:11		SPF
Phenanthrene	5.8	0.20		1	12/16/22 15:11		SPF
Pyrene	0.85	0.20		1	12/16/22 15:11		SPF

Surrogates	% Recovery		% REC Limits		
Benzo(a)pyrene-d12	114		60-120		12/21/22 15:16
Benzo(a)pyrene-d12	99.8		60-120		12/16/22 15:11
Fluoranthene-d10	139*	S-26	60-120		12/21/22 15:16
Fluoranthene-d10	120		60-120		12/16/22 15:11
Fluorene-d10	135*	S-26	60-120		12/21/22 15:16
Fluorene-d10	102		60-120		12/16/22 15:11
Pyrene-d10	139*	S-26	60-120		12/21/22 15:16
Pyrene-d10	115		60-120		12/16/22 15:11

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Detroit, MI

Date Received: 12/9/2022

Field Sample #: FB4-112922B-06

Sample ID: 22L1347-06

Sample Matrix: Air

Sampled: 12/6/2022 00:00

Sample Description/Location:

Sub Description/Location:

Work Order: 22L1347

Flow Controller ID:

Sample Type:

EPA TO-13A

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	ND	0.20		1	12/16/22 15:34		SPF
Acenaphthylene	ND	0.20		1	12/16/22 15:34		SPF
Anthracene	ND	0.20		1	12/16/22 15:34		SPF
Benzo(a)anthracene	ND	0.20		1	12/16/22 15:34		SPF
Benzo(a)pyrene	ND	0.20		1	12/16/22 15:34		SPF
Benzo(b)fluoranthene	ND	0.20		1	12/16/22 15:34		SPF
Benzo(e)pyrene	ND	0.20		1	12/16/22 15:34		SPF
Benzo(g,h,i)perylene	ND	0.20		1	12/16/22 15:34		SPF
Benzo(k)fluoranthene	ND	0.20		1	12/16/22 15:34		SPF
Chrysene	ND	0.20		1	12/16/22 15:34		SPF
Dibenz(a,h)anthracene	ND	0.20		1	12/16/22 15:34		SPF
Fluoranthene	ND	0.20		1	12/16/22 15:34		SPF
Fluorene	ND	0.20		1	12/16/22 15:34		SPF
Indeno(1,2,3-cd)pyrene	ND	0.20		1	12/16/22 15:34		SPF
1-Methylnaphthalene	ND	0.20		1	12/16/22 15:34		SPF
2-Methylnaphthalene	ND	0.20		1	12/16/22 15:34		SPF
Naphthalene	0.68	0.50	L-05	1	12/16/22 15:34		SPF
Perylene	ND	0.20		1	12/16/22 15:34		SPF
Phenanthrene	ND	0.20		1	12/16/22 15:34		SPF
Pyrene	ND	0.20		1	12/16/22 15:34		SPF

Surrogates	% Recovery	% REC Limits		
Benzo(a)pyrene-d12	99.0	60-120		12/16/22 15:34
Fluoranthene-d10	122*	S-20	60-120	12/16/22 15:34
Fluorene-d10	114		60-120	12/16/22 15:34
Pyrene-d10	115		60-120	12/16/22 15:34

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332**Sample Extraction Data****Prep Method: SW-846 3540C Analytical Method: EPA TO-13A**

Lab Number [Field ID]	Batch	Initial [Cartridge	Final [mL]	Date
22L1347-01 [DW24-112922B-01]	B325517	1.00	1.00	12/12/22
22L1347-02 [IN14-112922B-02]	B325517	1.00	1.00	12/12/22
22L1347-02RE1 [IN14-112922B-02]	B325517	1.00	1.00	12/12/22
22L1347-02RE2 [IN14-112922B-02]	B325517	1.00	1.00	12/12/22
22L1347-03 [VPW4-112922B-03]	B325517	1.00	1.00	12/12/22
22L1347-03RE1 [VPW4-112922B-03]	B325517	1.00	1.00	12/12/22
22L1347-04 [IN24-112922B-04]	B325517	1.00	1.00	12/12/22
22L1347-04RE1 [IN24-112922B-04]	B325517	1.00	1.00	12/12/22
22L1347-04RE2 [IN24-112922B-04]	B325517	1.00	1.00	12/12/22
22L1347-05 [DW14-112922B-05]	B325517	1.00	1.00	12/12/22
22L1347-05RE1 [DW14-112922B-05]	B325517	1.00	1.00	12/12/22
22L1347-06 [FB4-112922B-06]	B325517	1.00	1.00	12/12/22

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	Total µg		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	Total µg	Result	%REC	Limits	RPD	Limit	

Batch B325517 - SW-846 3540C
Blank (B325517-BLK1)

Prepared: 12/12/22 Analyzed: 12/16/22

Acenaphthene	ND	0.20
Acenaphthylene	ND	0.20
Anthracene	ND	0.20
Benzo(a)anthracene	ND	0.20
Benzo(a)pyrene	ND	0.20
Benzo(b)fluoranthene	ND	0.20
Benzo(e)pyrene	ND	0.20
Benzo(g,h,i)perylene	ND	0.20
Benzo(k)fluoranthene	ND	0.20
Chrysene	ND	0.20
Dibenz(a,h)anthracene	ND	0.20
Fluoranthene	ND	0.20
Fluorene	ND	0.20
Indeno(1,2,3-cd)pyrene	ND	0.20
1-Methylnaphthalene	ND	0.20
2-Methylnaphthalene	ND	0.20
Naphthalene	ND	0.50
Perylene	ND	0.20
Phenanthrene	ND	0.20
Pyrene	ND	0.20

Surrogate: Fluorene-d10

1.08

1.00

108

60-120

Surrogate: Pyrene-d10

1.03

1.00

103

60-120

LCS (B325517-BS1)

Prepared: 12/12/22 Analyzed: 12/16/22

Acenaphthene	0.358	0.20	1.3	0.500	71.6	60-110
Acenaphthylene	0.392	0.20	1.2	0.500	78.4	60-110
Anthracene	0.378	0.20	1.5	0.500	75.6	60-110
Benzo(a)anthracene	0.409	0.20	1.9	0.500	81.8	60-110
Benzo(a)pyrene	0.391	0.20	2.1	0.500	78.2	60-110
Benzo(b)fluoranthene	0.389	0.20	2.1	0.500	77.8	60-111
Benzo(e)pyrene	0.405	0.20	2.1	0.500	81.0	60-118
Benzo(g,h,i)perylene	0.351	0.20	2.3	0.500	70.2	60-111
Benzo(k)fluoranthene	0.404	0.20	2.1	0.500	80.8	60-114
Chrysene	0.392	0.20	1.9	0.500	78.4	60-110
Dibenz(a,h)anthracene	0.357	0.20	2.3	0.500	71.4	60-113
Fluoranthene	0.406	0.20	1.7	0.500	81.2	60-110
Fluorene	0.394	0.20	1.4	0.500	78.8	60-110
Indeno(1,2,3-cd)pyrene	0.371	0.20	2.3	0.500	74.2	60-110
1-Methylnaphthalene	0.363	0.20	1.2	0.500	72.6	60-110
2-Methylnaphthalene	0.359	0.20	1.2	0.500	71.8	60-110
Naphthalene	0.544	0.50	2.6	0.500	109	60-118
Perylene	0.414	0.20	2.1	0.500	82.8	60-110
Phenanthrene	0.397	0.20	1.5	0.500	79.4	60-110
Pyrene	0.382	0.20	1.7	0.500	76.4	60-110

Surrogate: Fluorene-d10

1.24

1.00

124

*

60-120

S-20

Surrogate: Pyrene-d10

1.25

1.00

125

*

60-120

S-20

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	Total µg		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	Total µg	Result	%REC	Limits	RPD	Limit	
Batch B325517 - SW-846 3540C											
LCS Dup (B325517-BSD1)											
Prepared: 12/12/22 Analyzed: 12/16/22											
Acenaphthene	0.406	0.20		1.3	0.500		81.2	60-110	12.6	29.8	
Acenaphthylene	0.446	0.20		1.2	0.500		89.2	60-110	12.9	50	
Anthracene	0.440	0.20		1.5	0.500		88.0	60-110	15.2	35.8	
Benzo(a)anthracene	0.463	0.20		1.9	0.500		92.6	60-110	12.4	27.3	
Benzo(a)pyrene	0.430	0.20		2.1	0.500		86.0	60-110	9.50	27.3	
Benzo(b)fluoranthene	0.433	0.20		2.1	0.500		86.6	60-111	10.7	32.7	
Benzo(e)pyrene	0.448	0.20		2.1	0.500		89.6	60-118	10.1	33.6	
Benzo(g,h,i)perylene	0.404	0.20		2.3	0.500		80.8	60-111	14.0	36	
Benzo(k)fluoranthene	0.443	0.20		2.1	0.500		88.6	60-114	9.21	32.5	
Chrysene	0.436	0.20		1.9	0.500		87.2	60-110	10.6	28	
Dibenz(a,h)anthracene	0.397	0.20		2.3	0.500		79.4	60-113	10.6	37.1	
Fluoranthene	0.465	0.20		1.7	0.500		93.0	60-110	13.5	29.5	
Fluorene	0.449	0.20		1.4	0.500		89.8	60-110	13.0	31.1	
Indeno(1,2,3-cd)pyrene	0.425	0.20		2.3	0.500		85.0	60-110	13.6	34	
1-Methylnaphthalene	0.400	0.20		1.2	0.500		80.0	60-110	9.70	28.9	
2-Methylnaphthalene	0.401	0.20		1.2	0.500		80.2	60-110	11.1	28.3	
Naphthalene	0.622	0.50		2.6	0.500		124	* 60-118	13.4	28.3	L-05
Perylene	0.462	0.20		2.1	0.500		92.4	60-110	11.0	25.9	
Phenanthrene	0.453	0.20		1.5	0.500		90.6	60-110	13.2	27.4	
Pyrene	0.432	0.20		1.7	0.500		86.4	60-110	12.3	30.7	
Surrogate: Fluorene-d10	1.09				1.00		109	60-120			
Surrogate: Pyrene-d10	1.13				1.00		113	60-120			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
L-05	Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the high side.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.
S-20	Surrogate recovery is outside of control limits. Sample media does not allow for re-extraction.
S-26	Surrogate outside of control limits.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B325517-BLK1) Lab File ID: H22S350007.D Analyzed: 12/16/22 11:57									
Naphthalene-d8	28850	4.933	43114	4.931	67	50 - 200	0.0020	+/-0.50	
Acenaphthene-d10	16500	6.631	23554	6.63	70	50 - 200	0.0010	+/-0.50	
Phenanthrene-d10	33141	8.099	43976	8.095	75	50 - 200	0.0040	+/-0.50	
Chrysene-d12	29463	11.029	40342	11.025	73	50 - 200	0.0040	+/-0.50	
Perylene-d12	29299	13.58	36406	13.576	80	50 - 200	0.0040	+/-0.50	
LCS (B325517-BS1) Lab File ID: H22S350009.D Analyzed: 12/16/22 12:46									
Naphthalene-d8	31070	4.933	43114	4.931	72	50 - 200	0.0020	+/-0.50	
Acenaphthene-d10	17532	6.632	23554	6.63	74	50 - 200	0.0020	+/-0.50	
Phenanthrene-d10	34481	8.099	43976	8.095	78	50 - 200	0.0040	+/-0.50	
Chrysene-d12	30959	11.032	40342	11.025	77	50 - 200	0.0070	+/-0.50	
Perylene-d12	34347	13.583	36406	13.576	94	50 - 200	0.0070	+/-0.50	
LCS Dup (B325517-BSD1) Lab File ID: H22S350010.D Analyzed: 12/16/22 13:11									
Naphthalene-d8	31205	4.933	43114	4.931	72	50 - 200	0.0020	+/-0.50	
Acenaphthene-d10	17546	6.632	23554	6.63	74	50 - 200	0.0020	+/-0.50	
Phenanthrene-d10	34193	8.098	43976	8.095	78	50 - 200	0.0030	+/-0.50	
Chrysene-d12	31119	11.031	40342	11.025	77	50 - 200	0.0060	+/-0.50	
Perylene-d12	32209	13.582	36406	13.576	88	50 - 200	0.0060	+/-0.50	
DW24-112922B-01 (22L1347-01) Lab File ID: H22S350011.D Analyzed: 12/16/22 13:35									
Naphthalene-d8	32841	4.933	43114	4.931	76	50 - 200	0.0020	+/-0.50	
Acenaphthene-d10	19854	6.632	23554	6.63	84	50 - 200	0.0020	+/-0.50	
Phenanthrene-d10	37990	8.099	43976	8.095	86	50 - 200	0.0040	+/-0.50	
Chrysene-d12	33516	11.035	40342	11.025	83	50 - 200	0.0100	+/-0.50	
Perylene-d12	37056	13.588	36406	13.576	102	50 - 200	0.0120	+/-0.50	
IN14-112922B-02 (22L1347-02) Lab File ID: H22S350012.D Analyzed: 12/16/22 13:59									
Naphthalene-d8	32622	4.936	43114	4.931	76	50 - 200	0.0050	+/-0.50	
Acenaphthene-d10	20219	6.632	23554	6.63	86	50 - 200	0.0020	+/-0.50	
Phenanthrene-d10	38261	8.099	43976	8.095	87	50 - 200	0.0040	+/-0.50	
Chrysene-d12	33031	11.029	40342	11.025	82	50 - 200	0.0040	+/-0.50	
Perylene-d12	35087	13.583	36406	13.576	96	50 - 200	0.0070	+/-0.50	
VPW4-112922B-03 (22L1347-03) Lab File ID: H22S350013.D Analyzed: 12/16/22 14:23									
Naphthalene-d8	31635	4.936	43114	4.931	73	50 - 200	0.0050	+/-0.50	
Acenaphthene-d10	20031	6.635	23554	6.63	85	50 - 200	0.0050	+/-0.50	
Phenanthrene-d10	37877	8.099	43976	8.095	86	50 - 200	0.0040	+/-0.50	
Chrysene-d12	35332	11.036	40342	11.025	88	50 - 200	0.0110	+/-0.50	
Perylene-d12	37394	13.589	36406	13.576	103	50 - 200	0.0130	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
IN24-112922B-04 (22L1347-04) Lab File ID: H22S350014.D Analyzed: 12/16/22 14:47									
Naphthalene-d8	33150	4.936	43114	4.931	77	50 - 200	0.0050	+/-0.50	
Acenaphthene-d10	20797	6.632	23554	6.63	88	50 - 200	0.0020	+/-0.50	
Phenanthrene-d10	39287	8.099	43976	8.095	89	50 - 200	0.0040	+/-0.50	
Chrysene-d12	38633	11.029	40342	11.025	96	50 - 200	0.0040	+/-0.50	
Perylene-d12	39238	13.585	36406	13.576	108	50 - 200	0.0090	+/-0.50	
DW14-112922B-05 (22L1347-05) Lab File ID: H22S350015.D Analyzed: 12/16/22 15:11									
Naphthalene-d8	30692	4.936	43114	4.931	71	50 - 200	0.0050	+/-0.50	
Acenaphthene-d10	18734	6.632	23554	6.63	80	50 - 200	0.0020	+/-0.50	
Phenanthrene-d10	36512	8.099	43976	8.095	83	50 - 200	0.0040	+/-0.50	
Chrysene-d12	34507	11.029	40342	11.025	86	50 - 200	0.0040	+/-0.50	
Perylene-d12	35894	13.583	36406	13.576	99	50 - 200	0.0070	+/-0.50	
FB4-112922B-06 (22L1347-06) Lab File ID: H22S350016.D Analyzed: 12/16/22 15:34									
Naphthalene-d8	29897	4.936	43114	4.931	69	50 - 200	0.0050	+/-0.50	
Acenaphthene-d10	17570	6.631	23554	6.63	75	50 - 200	0.0010	+/-0.50	
Phenanthrene-d10	36431	8.099	43976	8.095	83	50 - 200	0.0040	+/-0.50	
Chrysene-d12	35495	11.032	40342	11.025	88	50 - 200	0.0070	+/-0.50	
Perylene-d12	36691	13.583	36406	13.576	101	50 - 200	0.0070	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
IN14-112922B-02 (22L1347-02RE1) Lab File ID: H22S353010.D Analyzed: 12/19/22 15:22									
Naphthalene-d8	30305	4.923	38916	4.923	78	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	17674	6.622	21640	6.622	82	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	34261	8.087	38224	8.087	90	50 - 200	0.0000	+/-0.50	
Chrysene-d12	30372	11.013	29165	11.016	104	50 - 200	-0.0030	+/-0.50	
Perylene-d12	31169	13.56	29345	13.56	106	50 - 200	0.0000	+/-0.50	
IN14-112922B-02 (22L1347-02RE2) Lab File ID: H22S353011.D Analyzed: 12/19/22 15:47									
Naphthalene-d8	30880	4.92	38916	4.923	79	50 - 200	-0.0030	+/-0.50	
Acenaphthene-d10	17660	6.619	21640	6.622	82	50 - 200	-0.0030	+/-0.50	
Phenanthrene-d10	33950	8.087	38224	8.087	89	50 - 200	0.0000	+/-0.50	
Chrysene-d12	29377	11.013	29165	11.016	101	50 - 200	-0.0030	+/-0.50	
Perylene-d12	29261	13.557	29345	13.56	100	50 - 200	-0.0030	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
IN24-112922B-04 (22L1347-04RE1) Lab File ID: H22S353012.D Analyzed: 12/19/22 16:12									
Naphthalene-d8	29999	4.923	38916	4.923	77	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	17081	6.622	21640	6.622	79	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	32149	8.087	38224	8.087	84	50 - 200	0.0000	+/-0.50	
Chrysene-d12	27859	11.013	29165	11.016	96	50 - 200	-0.0030	+/-0.50	
Perylene-d12	28399	13.558	29345	13.56	97	50 - 200	-0.0020	+/-0.50	
IN24-112922B-04 (22L1347-04RE2) Lab File ID: H22S353013.D Analyzed: 12/19/22 16:36									
Naphthalene-d8	29781	4.92	38916	4.923	77	50 - 200	-0.0030	+/-0.50	
Acenaphthene-d10	16504	6.622	21640	6.622	76	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	30644	8.087	38224	8.087	80	50 - 200	0.0000	+/-0.50	
Chrysene-d12	27926	11.013	29165	11.016	96	50 - 200	-0.0030	+/-0.50	
Perylene-d12	26889	13.56	29345	13.56	92	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DW14-112922B-05 (22L1347-05RE1) Lab File ID: H22S355015.D Analyzed: 12/21/22 15:16									
Naphthalene-d8	33027	4.914	28986	4.914	114	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	19484	6.613	17386	6.61	112	50 - 200	0.0030	+/-0.50	
Phenanthrene-d10	37478	8.078	35043	8.078	107	50 - 200	0.0000	+/-0.50	
Chrysene-d12	33948	11.001	28044	11.001	121	50 - 200	0.0000	+/-0.50	
Perylene-d12	33713	13.544	27420	13.538	123	50 - 200	0.0060	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
VPW4-112922B-03 (22L1347-03RE1) Lab File ID: H22S364004.D Analyzed: 12/30/22 10:25									
Naphthalene-d8	31871	4.861	28925	4.861	110	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	20206	6.557	17464	6.557	116	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	37618	8.022	34875	8.022	108	50 - 200	0.0000	+/-0.50	
Chrysene-d12	30719	10.919	27930	10.919	110	50 - 200	0.0000	+/-0.50	
Perylene-d12	29925	13.426	27490	13.424	109	50 - 200	0.0020	+/-0.50	

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COMPOUND	TYPE			RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-13A in Air</i>	
Acenaphthene	AIHA,NJ,NY,NH
Acenaphthylene	AIHA,NJ,NY,NH
Anthracene	AIHA,NJ,NY,NH
Benzo(a)anthracene	AIHA,NJ,NY,NH
Benzo(a)pyrene	AIHA,NJ,NY,FL,NH
Benzo(b)fluoranthene	AIHA,NJ,NY,NH
Benzo(e)pyrene	AIHA,NJ
Benzo(g,h,i)perylene	AIHA,NJ,NY,NH
Benzo(k)fluoranthene	AIHA,NJ,NY,NH
Chrysene	AIHA,NJ,NY,NH
Dibenz(a,h)anthracene	AIHA,NJ,NY,NH
Fluoranthene	AIHA,NJ,NY,NH
Fluorene	AIHA,NJ,NY,NH
Indeno(1,2,3-cd)pyrene	AIHA,NJ,NY,NH
1-Methylnaphthalene	AIHA
2-Methylnaphthalene	AIHA
Naphthalene	AIHA,NJ,NY,FL,NH
Perylene	AIHA,NJ
Phenanthrene	AIHA,NJ,NY,NH
Pyrene	AIHA,NJ,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO 17025:2017	100033	03/1/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
FL	Florida Department of Health	E871027 NELAP	06/30/2023

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Doc# 278 Rev 7 July 2022

Air Media Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Green Air

Individually Certified Cans?

January 12, 2023

Tim Rodak
Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275

Project Location: Detroit, MI
Client Job Number:
Project Number: 14796 Quote 123244
Laboratory Work Order Number: 22L3512

Enclosed are results of analyses for samples as received by the laboratory on December 28, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

DRAFT REPORT
Project Manager

Table of Contents

Sample Summary	3
Case Narrative	4
Sample Results	7
Sample Preparation Information	15
QC Data	16
Air Toxics by EPA Compendium Methods	16
B327079	16
Flag/Qualifier Summary	18
Internal standard Area & RT Summary	19
Continuing Calibration Check	23
Certifications	24
Chain of Custody/Sample Receipt	25

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Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275
ATTN: Tim Rodak

REPORT DATE: 1/12/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 14796 Quote 123244

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22L3512

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Detroit, MI

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
DW1-121222-02	22L3512-01	Air		- EPA TO-13A	
IN1-121222-03	22L3512-02	Air		- EPA TO-13A	
IN2-121222-04	22L3512-03	Air		- EPA TO-13A	
DW2-121222-05	22L3512-04	Air		- EPA TO-13A	
FB-121222-06	22L3512-05	Air		- EPA TO-13A	
VPW-121222-01	22L3512-06	Air		- EPA TO-13A	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

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EPA TO-13A**Qualifications:****B**

Analyte is found in the associated laboratory blank as well as in the sample.

Analyte & Samples(s) Qualified:**Naphthalene**

22L3512-01RE1[DW1-121222-02], 22L3512-02RE4[IN1-121222-03], 22L3512-03RE3[IN2-121222-04], 22L3512-04RE2[DW2-121222-05], 22L3512-05[FB-121222-06], 22L3512-06RE1[VPW-121222-01], B327079-BLK1, B327079-BS1, B327079-BSD1

B-07

Data is not affected by elevated level in laboratory blank since sample result is >10x level found in the blank.

Analyte & Samples(s) Qualified:**Naphthalene**

22L3512-01RE1[DW1-121222-02], 22L3512-02RE4[IN1-121222-03], 22L3512-03RE3[IN2-121222-04], 22L3512-04RE2[DW2-121222-05], 22L3512-06RE1[VPW-121222-01]

H-06

Sample was extracted past the recommended holding time.

Analyte & Samples(s) Qualified:

22L3512-01[DW1-121222-02], 22L3512-01RE1[DW1-121222-02], 22L3512-02[IN1-121222-03], 22L3512-02RE1[IN1-121222-03], 22L3512-02RE2[IN1-121222-03], 22L3512-02RE4[IN1-121222-03], 22L3512-03[IN2-121222-04], 22L3512-03RE1[IN2-121222-04], 22L3512-03RE2[IN2-121222-04], 22L3512-03RE3[IN2-121222-04], 22L3512-04[DW2-121222-05], 22L3512-04RE1[DW2-121222-05], 22L3512-04RE2[DW2-121222-05], 22L3512-05[FB-121222-06], 22L3512-06[VPW-121222-01], 22L3512-06RE1[VPW-121222-01]

L-06

Laboratory fortified blank/laboratory control sample recovery and/or duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the high side.

Analyte & Samples(s) Qualified:**Naphthalene**

22L3512-01RE1[DW1-121222-02], 22L3512-02RE4[IN1-121222-03], 22L3512-03RE3[IN2-121222-04], 22L3512-04RE2[DW2-121222-05], 22L3512-05[FB-121222-06], 22L3512-06RE1[VPW-121222-01], B327079-BS1, B327079-BSD1

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:**Benzo(a)pyrene-d12**

22L3512-02RE2[IN1-121222-03], 22L3512-02RE4[IN1-121222-03], 22L3512-03RE2[IN2-121222-04], 22L3512-03RE3[IN2-121222-04]

Fluoranthene-d10

22L3512-02RE2[IN1-121222-03], 22L3512-02RE4[IN1-121222-03], 22L3512-03RE2[IN2-121222-04], 22L3512-03RE3[IN2-121222-04]

Fluorene-d10

22L3512-02RE2[IN1-121222-03], 22L3512-02RE4[IN1-121222-03], 22L3512-03RE2[IN2-121222-04], 22L3512-03RE3[IN2-121222-04]

Pyrene-d10

22L3512-02RE2[IN1-121222-03], 22L3512-02RE4[IN1-121222-03], 22L3512-03RE2[IN2-121222-04], 22L3512-03RE3[IN2-121222-04]

S-26

Surrogate outside of control limits.

Analyte & Samples(s) Qualified:**Fluorene-d10**

B327079-BS1

Pyrene-d10

B327079-BS1

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EPA TO-13A

Reported results for air samples are calculated based on client sampling and sampling information provided by the laboratory.

Blank is not subtracted unless otherwise specified.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Detroit, MI

Date Received: 12/28/2022

Field Sample #: DW1-121222-02
Sample ID: 22L3512-01

Sample Matrix: Air

Sampled: 12/21/2022 19:30

Sample Description/Location:

Sub Description/Location:

Flow Controller ID:

Sample Type:

Work Order: 22L3512
EPA TO-13A

Sample Flags: H-06

Sample Flags: H-06		Total µg		Date/Time			
Analyte	Results	RL	Flag/Qual	Dilution	Analyzed	Analyst	
Acenaphthene	1.3	0.20	B-07, L-06, B	1	12/30/22 23:25	SPF	
Acenaphthylene	5.9	0.20		1	12/30/22 23:25	SPF	
Anthracene	2.4	0.20		1	12/30/22 23:25	SPF	
Benzo(a)anthracene	1.5	0.20		1	12/30/22 23:25	SPF	
Benzo(a)pyrene	1.0	0.20		1	12/30/22 23:25	SPF	
Benzo(b)fluoranthene	1.6	0.20		1	12/30/22 23:25	SPF	
Benzo(e)pyrene	0.77	0.20		1	12/30/22 23:25	SPF	
Benzo(g,h,i)perylene	0.67	0.20		1	12/30/22 23:25	SPF	
Benzo(k)fluoranthene	0.58	0.20		1	12/30/22 23:25	SPF	
Chrysene	1.5	0.20		1	12/30/22 23:25	SPF	
Dibenz(a,h)anthracene	ND	0.20		1	12/30/22 23:25	SPF	
Fluoranthene	5.2	0.20		1	12/30/22 23:25	SPF	
Fluorene	3.5	0.20		1	12/30/22 23:25	SPF	
Indeno(1,2,3-cd)pyrene	0.78	0.20		1	12/30/22 23:25	SPF	
1-Methylnaphthalene	5.8	0.20		1	12/30/22 23:25	SPF	
2-Methylnaphthalene	10	2.0		10	12/31/22 18:19	SPF	
Naphthalene	79	5.0		10	12/31/22 18:19	SPF	
Perylene	0.28	0.20		1	12/30/22 23:25	SPF	
Phenanthrene	10	2.0		10	12/31/22 18:19	SPF	
Pyrene	3.5	0.20		1	12/30/22 23:25	SPF	

Surrogates	% Recovery	% REC Limits	
Benzo(a)pyrene-d12	89.0	60-120	12/31/22 18:19
Benzo(a)pyrene-d12	93.4	60-120	12/30/22 23:25
Fluoranthene-d10	96.0	60-120	12/31/22 18:19
Fluoranthene-d10	105	60-120	12/30/22 23:25
Fluorene-d10	101	60-120	12/31/22 18:19
Fluorene-d10	105	60-120	12/30/22 23:25
Pyrene-d10	109	60-120	12/31/22 18:19
Pyrene-d10	114	60-120	12/30/22 23:25

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ANALYTICAL RESULTS

Project Location: Detroit, MI
Date Received: 12/28/2022
Field Sample #: IN1-121222-03
Sample ID: 22L3512-02
Sample Matrix: Air
Sampled: 12/21/2022 10:58

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 22L3512
EPA TO-13A

Sample Flags: H-06

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	14	0.40		2	12/30/22 23:48		SPF
Acenaphthylene	610	20		100	12/31/22 19:07		SPF
Anthracene	31	2.0		10	12/31/22 18:43		SPF
Benzo(a)anthracene	2.9	0.40		2	12/30/22 23:48		SPF
Benzo(a)pyrene	1.4	0.40		2	12/30/22 23:48		SPF
Benzo(b)fluoranthene	2.2	0.40		2	12/30/22 23:48		SPF
Benzo(e)pyrene	1.1	0.40		2	12/30/22 23:48		SPF
Benzo(g,h,i)perylene	0.88	0.40		2	12/30/22 23:48		SPF
Benzo(k)fluoranthene	0.85	0.40		2	12/30/22 23:48		SPF
Chrysene	2.7	0.40		2	12/30/22 23:48		SPF
Dibenz(a,h)anthracene	ND	0.40		2	12/30/22 23:48		SPF
Fluoranthene	26	2.0		10	12/31/22 18:43		SPF
Fluorene	140	20		100	12/31/22 19:07		SPF
Indeno(1,2,3-cd)pyrene	1.0	0.40		2	12/30/22 23:48		SPF
1-Methylnaphthalene	250	20		100	12/31/22 19:07		SPF
2-Methylnaphthalene	640	20		100	12/31/22 19:07		SPF
Naphthalene	16000	2500	B-07, B, L-06	5000	1/5/23 13:17		CJM
Perylene	0.41	0.40		2	12/30/22 23:48		SPF
Phenanthrene	120	20		100	12/31/22 19:07		SPF
Pyrene	16	0.40		2	12/30/22 23:48		SPF

Surrogates	% Recovery		% REC Limits		
Benzo(a)pyrene-d12	92.4		60-120		12/30/22 23:48
Benzo(a)pyrene-d12	*	S-01	60-120		1/5/23 13:17
Benzo(a)pyrene-d12	83.0		60-120		12/31/22 18:43
Benzo(a)pyrene-d12	*	S-01	60-120		12/31/22 19:07
Fluoranthene-d10	*	S-01	60-120		1/5/23 13:17
Fluoranthene-d10	105		60-120		12/30/22 23:48
Fluoranthene-d10	*	S-01	60-120		12/31/22 19:07
Fluoranthene-d10	94.0		60-120		12/31/22 18:43
Fluorene-d10	*	S-01	60-120		1/5/23 13:17
Fluorene-d10	84.8		60-120		12/30/22 23:48
Fluorene-d10	*	S-01	60-120		12/31/22 19:07
Fluorene-d10	95.0		60-120		12/31/22 18:43
Pyrene-d10	*	S-01	60-120		1/5/23 13:17
Pyrene-d10	118		60-120		12/30/22 23:48
Pyrene-d10	112		60-120		12/31/22 18:43

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Detroit, MI
Date Received: 12/28/2022
Field Sample #: IN1-121222-03
Sample ID: 22L3512-02
Sample Matrix: Air
Sampled: 12/21/2022 10:58

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 22L3512
EPA TO-13A

Sample Flags: H-06

Sample Flags: H-06		Total µg			Date/Time	
Analyte	Results	RL	Flag/Qual	Dilution	Analyzed	Analyst
Surrogates	% Recovery		% REC Limits			
Pyrene-d10		*	S-01	60-120	12/31/22 19:07	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Detroit, MI
Date Received: 12/28/2022
Field Sample #: IN2-121222-04
Sample ID: 22L3512-03
Sample Matrix: Air
Sampled: 12/21/2022 11:15

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 22L3512
EPA TO-13A

Sample Flags: H-06

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	4.8	0.20		1	12/31/22 0:12		SPF
Acenaphthylene	210	20		100	12/31/22 20:20		SPF
Anthracene	9.5	0.20		1	12/31/22 0:12		SPF
Benzo(a)anthracene	0.50	0.20		1	12/31/22 0:12		SPF
Benzo(a)pyrene	0.34	0.20		1	12/31/22 0:12		SPF
Benzo(b)fluoranthene	0.52	0.20		1	12/31/22 0:12		SPF
Benzo(e)pyrene	0.28	0.20		1	12/31/22 0:12		SPF
Benzo(g,h,i)perylene	0.27	0.20		1	12/31/22 0:12		SPF
Benzo(k)fluoranthene	ND	0.20		1	12/31/22 0:12		SPF
Chrysene	0.57	0.20		1	12/31/22 0:12		SPF
Dibenz(a,h)anthracene	ND	0.20		1	12/31/22 0:12		SPF
Fluoranthene	5.7	0.20		1	12/31/22 0:12		SPF
Fluorene	45	2.0		10	12/31/22 19:56		SPF
Indeno(1,2,3-cd)pyrene	0.28	0.20		1	12/31/22 0:12		SPF
1-Methylnaphthalene	62	2.0		10	12/31/22 19:56		SPF
2-Methylnaphthalene	150	20		100	12/31/22 20:20		SPF
Naphthalene	2600	500	B, B-07, L-06	1000	12/31/22 20:44		SPF
Perylene	ND	0.20		1	12/31/22 0:12		SPF
Phenanthrene	44	2.0		10	12/31/22 19:56		SPF
Pyrene	3.4	0.20		1	12/31/22 0:12		SPF

Surrogates	% Recovery		% REC Limits		
Benzo(a)pyrene-d12	89.0		60-120		12/31/22 19:56
Benzo(a)pyrene-d12	90.8		60-120		12/31/22 0:12
Benzo(a)pyrene-d12	*	S-01	60-120		12/31/22 20:44
Benzo(a)pyrene-d12	*	S-01	60-120		12/31/22 20:20
Fluoranthene-d10	97.0		60-120		12/31/22 19:56
Fluoranthene-d10	103		60-120		12/31/22 0:12
Fluoranthene-d10	*	S-01	60-120		12/31/22 20:44
Fluoranthene-d10	*	S-01	60-120		12/31/22 20:20
Fluorene-d10	91.2		60-120		12/31/22 0:12
Fluorene-d10	100		60-120		12/31/22 19:56
Fluorene-d10	*	S-01	60-120		12/31/22 20:44
Fluorene-d10	*	S-01	60-120		12/31/22 20:20
Pyrene-d10	114		60-120		12/31/22 0:12
Pyrene-d10	115		60-120		12/31/22 19:56
Pyrene-d10	*	S-01	60-120		12/31/22 20:44

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Detroit, MI
 Date Received: 12/28/2022
Field Sample #: IN2-121222-04
Sample ID: 22L3512-03
 Sample Matrix: Air
 Sampled: 12/21/2022 11:15

Sample Description/Location:
 Sub Description/Location:

 Flow Controller ID:
 Sample Type:

Work Order: 22L3512

EPA TO-13A

Sample Flags: H-06

Sample Flags: H-06		Total µg		Date/Time		
Analyte	Results	RL	Flag/Qual	Dilution	Analyzed	Analyst
Surrogates	% Recovery		% REC Limits			
Pyrene-d10		*	S-01	60-120	12/31/22 20:20	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Detroit, MI

Date Received: 12/28/2022

Field Sample #: DW2-121222-05
Sample ID: 22L3512-04

Sample Matrix: Air

Sampled: 12/21/2022 10:05

Sample Description/Location:

Sub Description/Location:

Work Order: 22L3512

Flow Controller ID:

Sample Type:

EPA TO-13A

Sample Flags: H-06

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	1.7	0.20		1	12/31/22 0:36		SPF
Acenaphthylene	7.9	0.20		1	12/31/22 0:36		SPF
Anthracene	2.2	0.20		1	12/31/22 0:36		SPF
Benzo(a)anthracene	1.4	0.20		1	12/31/22 0:36		SPF
Benzo(a)pyrene	0.89	0.20		1	12/31/22 0:36		SPF
Benzo(b)fluoranthene	1.5	0.20		1	12/31/22 0:36		SPF
Benzo(e)pyrene	0.74	0.20		1	12/31/22 0:36		SPF
Benzo(g,h,i)perylene	0.63	0.20		1	12/31/22 0:36		SPF
Benzo(k)fluoranthene	0.53	0.20		1	12/31/22 0:36		SPF
Chrysene	1.4	0.20		1	12/31/22 0:36		SPF
Dibenz(a,h)anthracene	ND	0.20		1	12/31/22 0:36		SPF
Fluoranthene	4.9	0.20		1	12/31/22 0:36		SPF
Fluorene	4.0	0.20		1	12/31/22 0:36		SPF
Indeno(1,2,3-cd)pyrene	0.73	0.20		1	12/31/22 0:36		SPF
1-Methylnaphthalene	6.8	0.20		1	12/31/22 0:36		SPF
2-Methylnaphthalene	14	0.40		2	12/31/22 21:08		SPF
Naphthalene	150	12	B, B-07, L-06	25	12/31/22 21:32		SPF
Perylene	0.24	0.20		1	12/31/22 0:36		SPF
Phenanthrene	10	0.40		2	12/31/22 21:08		SPF
Pyrene	3.3	0.20		1	12/31/22 0:36		SPF

Surrogates	% Recovery	% REC Limits	
Benzo(a)pyrene-d12	86.5	60-120	12/31/22 0:36
Benzo(a)pyrene-d12	90.4	60-120	12/31/22 21:08
Benzo(a)pyrene-d12	85.0	60-120	12/31/22 21:32
Fluoranthene-d10	100	60-120	12/31/22 21:32
Fluoranthene-d10	103	60-120	12/31/22 21:08
Fluoranthene-d10	99.9	60-120	12/31/22 0:36
Fluorene-d10	110	60-120	12/31/22 21:32
Fluorene-d10	99.8	60-120	12/31/22 0:36
Fluorene-d10	106	60-120	12/31/22 21:08
Pyrene-d10	115	60-120	12/31/22 21:32
Pyrene-d10	117	60-120	12/31/22 21:08
Pyrene-d10	110	60-120	12/31/22 0:36

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Detroit, MI
Date Received: 12/28/2022
Field Sample #: FB-121222-06
Sample ID: 22L3512-05
Sample Matrix: Air
Sampled: 12/21/2022 00:00

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 22L3512
EPA TO-13A

Sample Flags: H-06

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	ND	0.20		1	12/31/22 1:00		SPF
Acenaphthylene	ND	0.20		1	12/31/22 1:00		SPF
Anthracene	ND	0.20		1	12/31/22 1:00		SPF
Benzo(a)anthracene	ND	0.20		1	12/31/22 1:00		SPF
Benzo(a)pyrene	ND	0.20		1	12/31/22 1:00		SPF
Benzo(b)fluoranthene	ND	0.20		1	12/31/22 1:00		SPF
Benzo(e)pyrene	ND	0.20		1	12/31/22 1:00		SPF
Benzo(g,h,i)perylene	ND	0.20		1	12/31/22 1:00		SPF
Benzo(k)fluoranthene	ND	0.20		1	12/31/22 1:00		SPF
Chrysene	ND	0.20		1	12/31/22 1:00		SPF
Dibenz(a,h)anthracene	ND	0.20		1	12/31/22 1:00		SPF
Fluoranthene	ND	0.20		1	12/31/22 1:00		SPF
Fluorene	ND	0.20		1	12/31/22 1:00		SPF
Indeno(1,2,3-cd)pyrene	ND	0.20		1	12/31/22 1:00		SPF
1-Methylnaphthalene	ND	0.20		1	12/31/22 1:00		SPF
2-Methylnaphthalene	ND	0.20		1	12/31/22 1:00		SPF
Naphthalene	1.8	0.50	B, L-06	1	12/31/22 1:00		SPF
Perylene	ND	0.20		1	12/31/22 1:00		SPF
Phenanthrene	ND	0.20		1	12/31/22 1:00		SPF
Pyrene	ND	0.20		1	12/31/22 1:00		SPF

Surrogates	% Recovery	% REC Limits		
Benzo(a)pyrene-d12	92.9	60-120	12/31/22 1:00	
Fluoranthene-d10	102	60-120	12/31/22 1:00	
Fluorene-d10	106	60-120	12/31/22 1:00	
Pyrene-d10	114	60-120	12/31/22 1:00	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Detroit, MI

Date Received: 12/28/2022

Field Sample #: VPW-121222-01

Sample ID: 22L3512-06

Sample Matrix: Air

Sampled: 12/21/2022 12:10

Sample Description/Location:

Sub Description/Location:

Flow Controller ID:

Sample Type:

Work Order: 22L3512
EPA TO-13A

Sample Flags: H-06

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	1.1	0.20		1	12/31/22 1:23		SPF
Acenaphthylene	0.85	0.20		1	12/31/22 1:23		SPF
Anthracene	ND	0.20		1	12/31/22 1:23		SPF
Benzo(a)anthracene	ND	0.20		1	12/31/22 1:23		SPF
Benzo(a)pyrene	ND	0.20		1	12/31/22 1:23		SPF
Benzo(b)fluoranthene	0.22	0.20		1	12/31/22 1:23		SPF
Benzo(e)pyrene	ND	0.20		1	12/31/22 1:23		SPF
Benzo(g,h,i)perylene	ND	0.20		1	12/31/22 1:23		SPF
Benzo(k)fluoranthene	ND	0.20		1	12/31/22 1:23		SPF
Chrysene	ND	0.20		1	12/31/22 1:23		SPF
Dibenz(a,h)anthracene	ND	0.20		1	12/31/22 1:23		SPF
Fluoranthene	0.56	0.20		1	12/31/22 1:23		SPF
Fluorene	1.0	0.20		1	12/31/22 1:23		SPF
Indeno(1,2,3-cd)pyrene	ND	0.20		1	12/31/22 1:23		SPF
1-Methylnaphthalene	4.5	0.20		1	12/31/22 1:23		SPF
2-Methylnaphthalene	7.7	0.20		1	12/31/22 1:23		SPF
Naphthalene	24	2.5	B, B-07, L-06	5	12/31/22 21:56		SPF
Perylene	ND	0.20		1	12/31/22 1:23		SPF
Phenanthrene	1.9	0.20		1	12/31/22 1:23		SPF
Pyrene	0.43	0.20		1	12/31/22 1:23		SPF

Surrogates	% Recovery	% REC Limits	
Benzo(a)pyrene-d12	110	60-120	12/31/22 21:56
Benzo(a)pyrene-d12	94.7	60-120	12/31/22 1:23
Fluoranthene-d10	105	60-120	12/31/22 1:23
Fluoranthene-d10	122*	60-120	12/31/22 21:56
Fluorene-d10	106	60-120	12/31/22 1:23
Fluorene-d10	129*	60-120	12/31/22 21:56
Pyrene-d10	114	60-120	12/31/22 1:23
Pyrene-d10	140*	60-120	12/31/22 21:56

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332**Sample Extraction Data****Prep Method: SW-846 3540C Analytical Method: EPA TO-13A**

Lab Number [Field ID]	Batch	Initial [Cartridge	Final [mL]	Date
22L3512-01 [DW1-121222-02]	B327079	1.00	1.00	12/29/22
22L3512-01RE1 [DW1-121222-02]	B327079	1.00	1.00	12/29/22
22L3512-02 [IN1-121222-03]	B327079	1.00	1.00	12/29/22
22L3512-02RE1 [IN1-121222-03]	B327079	1.00	1.00	12/29/22
22L3512-02RE2 [IN1-121222-03]	B327079	1.00	1.00	12/29/22
22L3512-02RE4 [IN1-121222-03]	B327079	1.00	1.00	12/29/22
22L3512-03 [IN2-121222-04]	B327079	1.00	1.00	12/29/22
22L3512-03RE1 [IN2-121222-04]	B327079	1.00	1.00	12/29/22
22L3512-03RE2 [IN2-121222-04]	B327079	1.00	1.00	12/29/22
22L3512-03RE3 [IN2-121222-04]	B327079	1.00	1.00	12/29/22
22L3512-04 [DW2-121222-05]	B327079	1.00	1.00	12/29/22
22L3512-04RE1 [DW2-121222-05]	B327079	1.00	1.00	12/29/22
22L3512-04RE2 [DW2-121222-05]	B327079	1.00	1.00	12/29/22
22L3512-05 [FB-121222-06]	B327079	1.00	1.00	12/29/22
22L3512-06 [VPW-121222-01]	B327079	1.00	1.00	12/29/22
22L3512-06RE1 [VPW-121222-01]	B327079	1.00	1.00	12/29/22

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	Total µg		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	Total µg	Result	%REC	Limits	RPD	Limit	

Batch B327079 - SW-846 3540C
Blank (B327079-BLK1)

Prepared: 12/29/22 Analyzed: 12/30/22

Acenaphthene	ND	0.20									
Acenaphthylene	ND	0.20									
Anthracene	ND	0.20									
Benzo(a)anthracene	ND	0.20									
Benzo(a)pyrene	ND	0.20									
Benzo(b)fluoranthene	ND	0.20									
Benzo(e)pyrene	ND	0.20									
Benzo(g,h,i)perylene	ND	0.20									
Benzo(k)fluoranthene	ND	0.20									
Chrysene	ND	0.20									
Dibenz(a,h)anthracene	ND	0.20									
Fluoranthene	ND	0.20									
Fluorene	ND	0.20									
Indeno(1,2,3-cd)pyrene	ND	0.20									
1-Methylnaphthalene	ND	0.20									
2-Methylnaphthalene	ND	0.20									
Naphthalene	1.3	0.50									B
Perylene	ND	0.20									
Phenanthrene	ND	0.20									
Pyrene	ND	0.20									
<hr/>											
Surrogate: Fluorene-d10	0.970				1.00		97.0	60-120			
Surrogate: Pyrene-d10	1.08				1.00		108	60-120			

LCS (B327079-BS1)

Prepared: 12/29/22 Analyzed: 12/30/22

Acenaphthene	0.355	0.20	1.3	0.500		71.0	60-110				
Acenaphthylene	0.389	0.20	1.2	0.500		77.8	60-110				
Anthracene	0.375	0.20	1.5	0.500		75.0	60-110				
Benzo(a)anthracene	0.398	0.20	1.9	0.500		79.6	60-110				
Benzo(a)pyrene	0.372	0.20	2.1	0.500		74.4	60-110				
Benzo(b)fluoranthene	0.378	0.20	2.1	0.500		75.6	60-111				
Benzo(e)pyrene	0.395	0.20	2.1	0.500		79.0	60-118				
Benzo(g,h,i)perylene	0.363	0.20	2.3	0.500		72.6	60-111				
Benzo(k)fluoranthene	0.386	0.20	2.1	0.500		77.2	60-114				
Chrysene	0.368	0.20	1.9	0.500		73.6	60-110				
Dibenz(a,h)anthracene	0.371	0.20	2.3	0.500		74.2	60-113				
Fluoranthene	0.375	0.20	1.7	0.500		75.0	60-110				
Fluorene	0.389	0.20	1.4	0.500		77.8	60-110				
Indeno(1,2,3-cd)pyrene	0.387	0.20	2.3	0.500		77.4	60-110				
1-Methylnaphthalene	0.355	0.20	1.2	0.500		71.0	60-110				
2-Methylnaphthalene	0.370	0.20	1.2	0.500		74.0	60-110				
Naphthalene	1.63	0.50	2.6	0.500		326 *	60-118				L-06, B
Perylene	0.399	0.20	2.1	0.500		79.8	60-110				
Phenanthrene	0.391	0.20	1.5	0.500		78.2	60-110				
Pyrene	0.378	0.20	1.7	0.500		75.6	60-110				
<hr/>											
Surrogate: Fluorene-d10	2.28			1.00		228 *	60-120				S-26
Surrogate: Pyrene-d10	2.41			1.00		241 *	60-120				S-26

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	Total µg		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	Total µg	Result	%REC	Limits	RPD	Limit	
Batch B327079 - SW-846 3540C											
LCS Dup (B327079-BSD1)											
Prepared: 12/29/22 Analyzed: 12/30/22											
Acenaphthene	0.392	0.20		1.3	0.500		78.4	60-110	9.91	29.8	
Acenaphthylene	0.434	0.20		1.2	0.500		86.8	60-110	10.9	50	
Anthracene	0.418	0.20		1.5	0.500		83.6	60-110	10.8	35.8	
Benzo(a)anthracene	0.443	0.20		1.9	0.500		88.6	60-110	10.7	27.3	
Benzo(a)pyrene	0.422	0.20		2.1	0.500		84.4	60-110	12.6	27.3	
Benzo(b)fluoranthene	0.426	0.20		2.1	0.500		85.2	60-111	11.9	32.7	
Benzo(e)pyrene	0.447	0.20		2.1	0.500		89.4	60-118	12.4	33.6	
Benzo(g,h,i)perylene	0.411	0.20		2.3	0.500		82.2	60-111	12.4	36	
Benzo(k)fluoranthene	0.440	0.20		2.1	0.500		88.0	60-114	13.1	32.5	
Chrysene	0.413	0.20		1.9	0.500		82.6	60-110	11.5	28	
Dibenz(a,h)anthracene	0.419	0.20		2.3	0.500		83.8	60-113	12.2	37.1	
Fluoranthene	0.407	0.20		1.7	0.500		81.4	60-110	8.18	29.5	
Fluorene	0.421	0.20		1.4	0.500		84.2	60-110	7.90	31.1	
Indeno(1,2,3-cd)pyrene	0.438	0.20		2.3	0.500		87.6	60-110	12.4	34	
1-Methylnaphthalene	0.411	0.20		1.2	0.500		82.2	60-110	14.6	28.9	
2-Methylnaphthalene	0.429	0.20		1.2	0.500		85.8	60-110	14.8	28.3	
Naphthalene	1.71	0.50		2.6	0.500		342	* 60-118	4.85	28.3	L-06, B
Perylene	0.451	0.20		2.1	0.500		90.2	60-110	12.2	25.9	
Phenanthrene	0.430	0.20		1.5	0.500		86.0	60-110	9.50	27.4	
Pyrene	0.426	0.20		1.7	0.500		85.2	60-110	11.9	30.7	
Surrogate: Fluorene-d10	1.06				1.00		106	60-120			
Surrogate: Pvrene-d10	1.18				1.00		118	60-120			

L-06, B

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
B	Analyte is found in the associated laboratory blank as well as in the sample.
B-07	Data is not affected by elevated level in laboratory blank since sample result is >10x level found in the blank.
H-06	Sample was extracted past the recommended holding time.
L-06	Laboratory fortified blank/laboratory control sample recovery and/or duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the high side.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.
S-26	Surrogate outside of control limits.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B327079-BLK1)									
Lab File ID: H22S364032.D					Analyzed: 12/30/22 21:50				
Naphthalene-d8	33140	4.861	36964	4.861	90	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	19834	6.56	21490	6.56	92	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	38568	8.025	41834	8.025	92	50 - 200	0.0000	+/-0.50	
Chrysene-d12	30479	10.922	33048	10.922	92	50 - 200	0.0000	+/-0.50	
Perylene-d12	29402	13.433	31518	13.427	93	50 - 200	0.0060	+/-0.50	
LCS (B327079-BS1)									
Lab File ID: H22S364034.D					Analyzed: 12/30/22 22:38				
Naphthalene-d8	32852	4.861	36964	4.861	89	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	19314	6.56	21490	6.56	90	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	37896	8.025	41834	8.025	91	50 - 200	0.0000	+/-0.50	
Chrysene-d12	30825	10.922	33048	10.922	93	50 - 200	0.0000	+/-0.50	
Perylene-d12	31433	13.43	31518	13.427	100	50 - 200	0.0030	+/-0.50	
LCS Dup (B327079-BSD1)									
Lab File ID: H22S364035.D					Analyzed: 12/30/22 23:01				
Naphthalene-d8	34610	4.861	36964	4.861	94	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	20446	6.56	21490	6.56	95	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	37881	8.025	41834	8.025	91	50 - 200	0.0000	+/-0.50	
Chrysene-d12	29402	10.922	33048	10.922	89	50 - 200	0.0000	+/-0.50	
Perylene-d12	29662	13.433	31518	13.427	94	50 - 200	0.0060	+/-0.50	
DW1-121222-02 (22L3512-01)									
Lab File ID: H22S364036.D					Analyzed: 12/30/22 23:25				
Naphthalene-d8	30035	4.864	36964	4.861	81	50 - 200	0.0030	+/-0.50	
Acenaphthene-d10	18812	6.56	21490	6.56	88	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	34815	8.025	41834	8.025	83	50 - 200	0.0000	+/-0.50	
Chrysene-d12	28415	10.925	33048	10.922	86	50 - 200	0.0030	+/-0.50	
Perylene-d12	30620	13.432	31518	13.427	97	50 - 200	0.0050	+/-0.50	
IN1-121222-03 (22L3512-02)									
Lab File ID: H22S364037.D					Analyzed: 12/30/22 23:48				
Naphthalene-d8	21964	4.917	36964	4.861	59	50 - 200	0.0560	+/-0.50	
Acenaphthene-d10	24388	6.56	21490	6.56	113	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	34289	8.025	41834	8.025	82	50 - 200	0.0000	+/-0.50	
Chrysene-d12	27888	10.922	33048	10.922	84	50 - 200	0.0000	+/-0.50	
Perylene-d12	31398	13.43	31518	13.427	100	50 - 200	0.0030	+/-0.50	
IN2-121222-04 (22L3512-03)									
Lab File ID: H22S364038.D					Analyzed: 12/31/22 00:12				
Naphthalene-d8	26926	4.895	36964	4.861	73	50 - 200	0.0340	+/-0.50	
Acenaphthene-d10	21203	6.563	21490	6.56	99	50 - 200	0.0030	+/-0.50	
Phenanthrene-d10	34401	8.028	41834	8.025	82	50 - 200	0.0030	+/-0.50	
Chrysene-d12	28221	10.921	33048	10.922	85	50 - 200	-0.0010	+/-0.50	
Perylene-d12	30719	13.432	31518	13.427	97	50 - 200	0.0050	+/-0.50	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DW2-121222-05 (22L3512-04) Lab File ID: H22S364039.D Analyzed: 12/31/22 00:36									
Naphthalene-d8	30657	4.867	36964	4.861	83	50 - 200	0.0060	+/-0.50	
Acenaphthene-d10	18753	6.56	21490	6.56	87	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	32608	8.025	41834	8.025	78	50 - 200	0.0000	+/-0.50	
Chrysene-d12	27111	10.926	33048	10.922	82	50 - 200	0.0040	+/-0.50	
Perylene-d12	29836	13.436	31518	13.427	95	50 - 200	0.0090	+/-0.50	
FB-121222-06 (22L3512-05) Lab File ID: H22S364040.D Analyzed: 12/31/22 01:00									
Naphthalene-d8	32784	4.864	36964	4.861	89	50 - 200	0.0030	+/-0.50	
Acenaphthene-d10	19452	6.56	21490	6.56	91	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	35972	8.026	41834	8.025	86	50 - 200	0.0010	+/-0.50	
Chrysene-d12	28900	10.926	33048	10.922	87	50 - 200	0.0040	+/-0.50	
Perylene-d12	30982	13.433	31518	13.427	98	50 - 200	0.0060	+/-0.50	
VPW-121222-01 (22L3512-06) Lab File ID: H22S364041.D Analyzed: 12/31/22 01:23									
Naphthalene-d8	30672	4.864	36964	4.861	83	50 - 200	0.0030	+/-0.50	
Acenaphthene-d10	18596	6.56	21490	6.56	87	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	33398	8.025	41834	8.025	80	50 - 200	0.0000	+/-0.50	
Chrysene-d12	28058	10.926	33048	10.922	85	50 - 200	0.0040	+/-0.50	
Perylene-d12	30546	13.435	31518	13.427	97	50 - 200	0.0080	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DW1-121222-02 (22L3512-01RE1) Lab File ID: H22S365024.D Analyzed: 12/31/22 18:19									
Naphthalene-d8	29124	4.87	55269	4.87	53	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	17168	6.57	32113	6.566	53	50 - 200	0.0040	+/-0.50	
Phenanthrene-d10	30980	8.032	60813	8.032	51	50 - 200	0.0000	+/-0.50	
Chrysene-d12	24877	10.935	49015	10.932	51	50 - 200	0.0030	+/-0.50	
Perylene-d12	27032	13.447	51795	13.447	52	50 - 200	0.0000	+/-0.50	
IN1-121222-03 (22L3512-02RE1) Lab File ID: H22S365025.D Analyzed: 12/31/22 18:43									
Naphthalene-d8	32542	4.889	55269	4.87	59	50 - 200	0.0190	+/-0.50	
Acenaphthene-d10	22516	6.566	32113	6.566	70	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	39653	8.032	60813	8.032	65	50 - 200	0.0000	+/-0.50	
Chrysene-d12	30198	10.935	49015	10.932	62	50 - 200	0.0030	+/-0.50	
Perylene-d12	31464	13.447	51795	13.447	61	50 - 200	0.0000	+/-0.50	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
IN1-121222-03 (22L3512-02RE2) Lab File ID: H22S365026.D Analyzed: 12/31/22 19:07									
Naphthalene-d8	28295	4.873	55269	4.87	51	50 - 200	0.0030	+/-0.50	
Acenaphthene-d10	16828	6.569	32113	6.566	52	50 - 200	0.0030	+/-0.50	
Phenanthrene-d10	31167	8.032	60813	8.032	51	50 - 200	0.0000	+/-0.50	
Chrysene-d12	25259	10.935	49015	10.932	52	50 - 200	0.0030	+/-0.50	
Perylene-d12	26637	13.45	51795	13.447	51	50 - 200	0.0030	+/-0.50	
IN2-121222-04 (22L3512-03RE1) Lab File ID: H22S365028.D Analyzed: 12/31/22 19:56									
Naphthalene-d8	32142	4.876	55269	4.87	58	50 - 200	0.0060	+/-0.50	
Acenaphthene-d10	19355	6.57	32113	6.566	60	50 - 200	0.0040	+/-0.50	
Phenanthrene-d10	34523	8.035	60813	8.032	57	50 - 200	0.0030	+/-0.50	
Chrysene-d12	26600	10.935	49015	10.932	54	50 - 200	0.0030	+/-0.50	
Perylene-d12	28285	13.449	51795	13.447	55	50 - 200	0.0020	+/-0.50	
IN2-121222-04 (22L3512-03RE2) Lab File ID: H22S365029.D Analyzed: 12/31/22 20:20									
Naphthalene-d8	30271	4.873	55269	4.87	55	50 - 200	0.0030	+/-0.50	
Acenaphthene-d10	17489	6.569	32113	6.566	54	50 - 200	0.0030	+/-0.50	
Phenanthrene-d10	32038	8.034	60813	8.032	53	50 - 200	0.0020	+/-0.50	
Chrysene-d12	25572	10.937	49015	10.932	52	50 - 200	0.0050	+/-0.50	
Perylene-d12	27335	13.451	51795	13.447	53	50 - 200	0.0040	+/-0.50	
IN2-121222-04 (22L3512-03RE3) Lab File ID: H22S365030.D Analyzed: 12/31/22 20:44									
Naphthalene-d8	28869	4.873	55269	4.87	52	50 - 200	0.0030	+/-0.50	
Acenaphthene-d10	16574	6.569	32113	6.566	52	50 - 200	0.0030	+/-0.50	
Phenanthrene-d10	30621	8.034	60813	8.032	50	50 - 200	0.0020	+/-0.50	
Chrysene-d12	24776	10.938	49015	10.932	51	50 - 200	0.0060	+/-0.50	
Perylene-d12	25896	13.449	51795	13.447	50	50 - 200	0.0020	+/-0.50	
DW2-121222-05 (22L3512-04RE1) Lab File ID: H22S365031.D Analyzed: 12/31/22 21:08									
Naphthalene-d8	29521	4.873	55269	4.87	53	50 - 200	0.0030	+/-0.50	
Acenaphthene-d10	18003	6.57	32113	6.566	56	50 - 200	0.0040	+/-0.50	
Phenanthrene-d10	32232	8.035	60813	8.032	53	50 - 200	0.0030	+/-0.50	
Chrysene-d12	26444	10.935	49015	10.932	54	50 - 200	0.0030	+/-0.50	
Perylene-d12	28786	13.452	51795	13.447	56	50 - 200	0.0050	+/-0.50	
DW2-121222-05 (22L3512-04RE2) Lab File ID: H22S365032.D Analyzed: 12/31/22 21:32									
Naphthalene-d8	33098	4.873	55269	4.87	60	50 - 200	0.0030	+/-0.50	
Acenaphthene-d10	19514	6.57	32113	6.566	61	50 - 200	0.0040	+/-0.50	
Phenanthrene-d10	35423	8.035	60813	8.032	58	50 - 200	0.0030	+/-0.50	
Chrysene-d12	28105	10.937	49015	10.932	57	50 - 200	0.0050	+/-0.50	
Perylene-d12	30338	13.452	51795	13.447	59	50 - 200	0.0050	+/-0.50	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
VPW-121222-01 (22L3512-06RE1) Lab File ID: H22S365033.D Analyzed: 12/31/22 21:56									
Naphthalene-d8	31144	4.873	55269	4.87	56	50 - 200	0.0030	+/-0.50	
Acenaphthene-d10	18651	6.569	32113	6.566	58	50 - 200	0.0030	+/-0.50	
Phenanthrene-d10	33635	8.035	60813	8.032	55	50 - 200	0.0030	+/-0.50	
Chrysene-d12	26863	10.938	49015	10.932	55	50 - 200	0.0060	+/-0.50	
Perylene-d12	28691	13.452	51795	13.447	55	50 - 200	0.0050	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
IN1-121222-03 (22L3512-02RE4) Lab File ID: H23S005010.D Analyzed: 01/05/23 13:17									
Naphthalene-d8	33797	4.867	37800	4.867	89	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	18256	6.563	21280	6.563	86	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	31212	8.028	37478	8.025	83	50 - 200	0.0030	+/-0.50	
Chrysene-d12	21515	10.929	26058	10.926	83	50 - 200	0.0030	+/-0.50	
Perylene-d12	20708	13.441	26361	13.438	79	50 - 200	0.0030	+/-0.50	

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CONTINUING CALIBRATION CHECK

COMPOUND	TYPE			RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-13A in Air</i>	
Acenaphthene	AIHA,NJ,NY,NH
Acenaphthylene	AIHA,NJ,NY,NH
Anthracene	AIHA,NJ,NY,NH
Benzo(a)anthracene	AIHA,NJ,NY,NH
Benzo(a)pyrene	AIHA,NJ,NY,FL,NH
Benzo(b)fluoranthene	AIHA,NJ,NY,NH
Benzo(e)pyrene	AIHA,NJ
Benzo(g,h,i)perylene	AIHA,NJ,NY,NH
Benzo(k)fluoranthene	AIHA,NJ,NY,NH
Chrysene	AIHA,NJ,NY,NH
Dibenz(a,h)anthracene	AIHA,NJ,NY,NH
Fluoranthene	AIHA,NJ,NY,NH
Fluorene	AIHA,NJ,NY,NH
Indeno(1,2,3-cd)pyrene	AIHA,NJ,NY,NH
1-Methylnaphthalene	AIHA
2-Methylnaphthalene	AIHA
Naphthalene	AIHA,NJ,NY,FL,NH
Perylene	AIHA,NJ
Phenanthrene	AIHA,NJ,NY,NH
Pyrene	AIHA,NJ,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO 17025:2017	100033	03/1/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
FL	Florida Department of Health	E871027 NELAP	06/30/2023



Company Name: **CleanAir Engineering**
 Address: **110 Technology Dr., Lynn, MA 01902**
 Phone: **413-370-2011**
 Project Name: **FES COKE**
 Project Location: **Detroit, MI**
 Project Number: **177910**
 Project Manager: **Tim Rodak**
 Con-Test Quote Name/Number: **123244**
 Invoice Recipient: **Tim Rodak**
 Sampled By: **Tim Rodak**

Requested Turnaround Time: ☒ 7-Day ☐ 10-Day ☐ Due Date: _____

Rush Approval Required: ☐ 1-Day ☐ 3-Day ☐ 2-Day ☐ 4-Day

Data Delivery: ☒ EXCEL ☐ PDF ☐ Other: _____

CLP Like Data Pkg Required: ☐ Email To: **tradak@cleanair.com** Fax To #: _____

Lab Use	Con-Test Work Order #	Client Use	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Duration Total Minutes Sampled	Flow Rate m ³ /min L/min	Matrix Code	Volume Liters m ³	ANALYSIS REQUESTED				Please fill out completely, sign, date and retain the yellow copy for your records
										Initial Pressure	Final Pressure	Lab Receipt Pressure	" Hg	
			UPW-205900-01	12/20/14	12/21/14									
			DW1-121222-02	12/20/14	12/21/14									
			IN1-121222-03	12/20/14	12/21/14									
			IN2-121222-04	12/20/14	12/21/14									
			DW2-121222-05	12/20/14	12/21/14									
			FB-121222-06	12/20/14	12/21/14									
			UPW-121222-01	12/20/14	12/21/14									

Comments:

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
 H - High; M - Medium; L - Low; C - Clean; U - Unknown

Matrix Codes:

SG = SOIL GAS
 IA = INDOOR AIR
 AMB = AMBIENT
 SS = SUB SLAB
 D = DUP
 BL = BLANK
 O = Other _____



Relinquished by: (signature) **Tim Rodak** Date/Time: **12/20/14**

Received by: (signature) **3.9** Date/Time: **12/23/13**

Relinquished by: (signature) _____ Date/Time: _____

Received by: (signature) _____ Date/Time: _____

Relinquished by: (signature) _____ Date/Time: _____

Received by: (signature) _____ Date/Time: _____

Project Entity: ☐ Government ☐ Federal ☐ City ☐ Municipality ☐ 21 J ☐ Brownfield ☐ MWRA ☐ School ☐ MBTA ☐ WRTA ☐ Chromatogram ☐ AIHA-LAP, LLC

PCB ONLY: ☐ Soxhlet ☐ Non Soxhlet

Other: ☐ NELAC and AIHA-LAP, LLC Accredited

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Doc# 278 Rev 7 July 2022

Air Media Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False

Statement will be brought to the attention of the Client - State True or False

Client Clean Air Engineering

Received By AAM Date 12-28-22 Time 10:43

How Were the samples received? In Cooler T On Ice T No Ice

In Box Ambient Melted Ice

Were samples within Temperature Compliance? Within 2-6°C T By Gun # 5 Actual Temp - 3.9

By Blank # Actual Temp -

Was Custody Seal In tact? N/A Were Samples Tampered with? F

Was COC Relinquished? T Does Chain Agree With Samples? T

Are there any loose caps/valves on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC Include all Pertinent Information? Client? T Analysis? T Sampler Name? T

Project? T ID's? T Collection Dates/Times? T

Are Sample Labels filled out and legible? T

Are there Rushes? AAM F Who was notified? N/A

Samples are received within holding time? T

Proper Media Used? T Individually Certified Cans? N/A F

Are there Trip Blanks? F Is there enough Volume? T

Containers:	#	Size	Regulator	Duration	Accessories:		
Summa Cans					Nut/Ferrule		IC Train
Tedlar Bags					Tubing		
TO-17 Tubes					T-Connector		Shipping Charges
Radiello					Syringe		
Pufs/TO-11s	<u>6</u>				Tedlar		

Can #'s					Reg #'s			
Unused Media					Pufs/TO-17's			
					<u>12/22</u>	<u>02</u>	<u>01</u>	
						<u>03</u>		
						<u>04</u>		
						<u>05</u>		
						<u>06</u>		

Comments:

January 16, 2023

Tim Rodak
Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275

Project Location: River Rouge, MI
Client Job Number:
Project Number: 14796 Quote 123244
Laboratory Work Order Number: 23A0778

Enclosed are results of analyses for samples as received by the laboratory on January 10, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

DRAFT REPORT
Project Manager

Table of Contents

Sample Summary	3
Case Narrative	4
Sample Results	7
Sample Preparation Information	13
QC Data	14
Air Toxics by EPA Compendium Methods	14
B328159	14
Flag/Qualifier Summary	16
Internal standard Area & RT Summary	17
Continuing Calibration Check	20
Certifications	21
Chain of Custody/Sample Receipt	22

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275
ATTN: Tim Rodak

REPORT DATE: 1/16/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 14796 Quote 123244

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23A0778

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: River Rouge, MI

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
DW2-010423-01	23A0778-01	Air		EPA TO-13A	
DW1-010423-02	23A0778-02	Air		EPA TO-13A	
UPW-010423-03	23A0778-03	Air		EPA TO-13A	
IN2-010423-04	23A0778-04	Air		EPA TO-13A	
IN1-010423-05	23A0778-05	Air		EPA TO-13A	
FB-010423-06	23A0778-06	Air		EPA TO-13A	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

EPA TO-13A**Qualifications:****L-04**

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**Dibenz(a,h)anthracene**

23A0778-01[DW2-010423-01], 23A0778-02[DW1-010423-02], 23A0778-03[UPW-010423-03], 23A0778-04[IN2-010423-04], 23A0778-05[IN1-010423-05], 23A0778-06[FB-010423-06], B328159-BS1, B328159-BSD1

Indeno(1,2,3-cd)pyrene

23A0778-01[DW2-010423-01], 23A0778-02[DW1-010423-02], 23A0778-03[UPW-010423-03], 23A0778-04[IN2-010423-04], 23A0778-05[IN1-010423-05], 23A0778-06[FB-010423-06], B328159-BS1, B328159-BSD1

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:**1-Methylnaphthalene**

B328159-BS1

2-Methylnaphthalene

B328159-BS1

Acenaphthene

B328159-BS1

Acenaphthylene

B328159-BS1

Anthracene

B328159-BS1

Benzo(a)anthracene

B328159-BS1

Benzo(a)pyrene

B328159-BS1

Benzo(g,h,i)perylene

B328159-BS1

RL-12

Elevated reporting limit due to matrix interference.

Analyte & Samples(s) Qualified:

23A0778-01[DW2-010423-01], 23A0778-02[DW1-010423-02], 23A0778-03[UPW-010423-03], 23A0778-04[IN2-010423-04], 23A0778-05[IN1-010423-05]

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:**Benzo(a)pyrene-d12**

23A0778-04RE2[IN2-010423-04], 23A0778-05RE2[IN1-010423-05]

Fluoranthene-d10

23A0778-04RE2[IN2-010423-04], 23A0778-05RE2[IN1-010423-05]

Fluorene-d10

23A0778-04RE2[IN2-010423-04], 23A0778-05RE2[IN1-010423-05]

Pyrene-d10

23A0778-04RE2[IN2-010423-04], 23A0778-05RE2[IN1-010423-05]

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EPA TO-13A

Reported results for air samples are calculated based on client sampling and sampling information provided by the laboratory.

Blank is not subtracted unless otherwise specified.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: River Rouge, MI
Date Received: 1/10/2023
Field Sample #: DW2-010423-01
Sample ID: 23A0778-01
Sample Matrix: Air
Sampled: 1/5/2023 14:18

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 23A0778

EPA TO-13A						
Sample Flags: RL-12						
Analyte	Total µg		Flag/Qual	Date/Time		Analyst
	Results	RL		Dilution	Analyzed	
Acenaphthene	2.0	2.0		10	1/13/23 12:39	SPF
Acenaphthylene	7.6	2.0		10	1/13/23 12:39	SPF
Anthracene	5.5	2.0		10	1/13/23 12:39	SPF
Benzo(a)anthracene	3.7	2.0		10	1/13/23 12:39	SPF
Benzo(a)pyrene	2.6	2.0		10	1/13/23 12:39	SPF
Benzo(b)fluoranthene	4.1	2.0		10	1/13/23 12:39	SPF
Benzo(e)pyrene	ND	2.0		10	1/13/23 12:39	SPF
Benzo(g,h,i)perylene	ND	2.0		10	1/13/23 12:39	SPF
Benzo(k)fluoranthene	ND	2.0		10	1/13/23 12:39	SPF
Chrysene	3.7	2.0		10	1/13/23 12:39	SPF
Dibenz(a,h)anthracene	ND	2.0	L-04	10	1/13/23 12:39	SPF
Fluoranthene	12	2.0		10	1/13/23 12:39	SPF
Fluorene	8.7	2.0		10	1/13/23 12:39	SPF
Indeno(1,2,3-cd)pyrene	ND	2.0	L-04	10	1/13/23 12:39	SPF
1-Methylnaphthalene	7.5	2.0		10	1/13/23 12:39	SPF
2-Methylnaphthalene	16	2.0		10	1/13/23 12:39	SPF
Naphthalene	180	12		25	1/13/23 15:31	SPF
Perylene	ND	2.0		10	1/13/23 12:39	SPF
Phenanthrene	21	2.0		10	1/13/23 12:39	SPF
Pyrene	8.1	2.0		10	1/13/23 12:39	SPF

Surrogates	% Recovery	% REC Limits	
Benzo(a)pyrene-d12	72.5	60-120	1/13/23 15:31
Benzo(a)pyrene-d12	73.0	60-120	1/13/23 12:39
Fluoranthene-d10	77.5	60-120	1/13/23 15:31
Fluoranthene-d10	77.0	60-120	1/13/23 12:39
Fluorene-d10	77.5	60-120	1/13/23 15:31
Fluorene-d10	73.0	60-120	1/13/23 12:39
Pyrene-d10	72.5	60-120	1/13/23 15:31
Pyrene-d10	73.0	60-120	1/13/23 12:39

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ANALYTICAL RESULTS

Project Location: River Rouge, MI
Date Received: 1/10/2023
Field Sample #: DW1-010423-02
Sample ID: 23A0778-02
Sample Matrix: Air
Sampled: 1/5/2023 15:10

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 23A0778
EPA TO-13A

Sample Flags: RL-12

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	2.8	2.0		10	1/13/23 13:08		SPF
Acenaphthylene	16	2.0		10	1/13/23 13:08		SPF
Anthracene	12	2.0		10	1/13/23 13:08		SPF
Benzo(a)anthracene	7.6	2.0		10	1/13/23 13:08		SPF
Benzo(a)pyrene	5.2	2.0		10	1/13/23 13:08		SPF
Benzo(b)fluoranthene	9.0	2.0		10	1/13/23 13:08		SPF
Benzo(e)pyrene	4.3	2.0		10	1/13/23 13:08		SPF
Benzo(g,h,i)perylene	3.5	2.0		10	1/13/23 13:08		SPF
Benzo(k)fluoranthene	3.2	2.0		10	1/13/23 13:08		SPF
Chrysene	8.0	2.0		10	1/13/23 13:08		SPF
Dibenz(a,h)anthracene	ND	2.0	L-04	10	1/13/23 13:08		SPF
Fluoranthene	28	2.0		10	1/13/23 13:08		SPF
Fluorene	19	2.0		10	1/13/23 13:08		SPF
Indeno(1,2,3-cd)pyrene	3.9	2.0	L-04	10	1/13/23 13:08		SPF
1-Methylnaphthalene	11	2.0		10	1/13/23 13:08		SPF
2-Methylnaphthalene	25	2.0		10	1/13/23 13:08		SPF
Naphthalene	190	25		50	1/13/23 15:59		SPF
Perylene	ND	2.0		10	1/13/23 13:08		SPF
Phenanthrene	47	2.0		10	1/13/23 13:08		SPF
Pyrene	18	2.0		10	1/13/23 13:08		SPF

Surrogates	% Recovery	% REC Limits	
Benzo(a)pyrene-d12	70.0	60-120	1/13/23 15:59
Benzo(a)pyrene-d12	83.0	60-120	1/13/23 13:08
Fluoranthene-d10	75.0	60-120	1/13/23 15:59
Fluoranthene-d10	96.0	60-120	1/13/23 13:08
Fluorene-d10	87.0	60-120	1/13/23 13:08
Fluorene-d10	75.0	60-120	1/13/23 15:59
Pyrene-d10	70.0	60-120	1/13/23 15:59
Pyrene-d10	81.0	60-120	1/13/23 13:08

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ANALYTICAL RESULTS

Project Location: River Rouge, MI
Date Received: 1/10/2023
Field Sample #: UPW-010423-03
Sample ID: 23A0778-03
Sample Matrix: Air
Sampled: 1/5/2023 16:55

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 23A0778
EPA TO-13A

Sample Flags: RL-12

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	1.2	1.0		5	1/13/23 13:37		SPF
Acenaphthylene	ND	1.0		5	1/13/23 13:37		SPF
Anthracene	ND	1.0		5	1/13/23 13:37		SPF
Benzo(a)anthracene	ND	1.0		5	1/13/23 13:37		SPF
Benzo(a)pyrene	ND	1.0		5	1/13/23 13:37		SPF
Benzo(b)fluoranthene	ND	1.0		5	1/13/23 13:37		SPF
Benzo(e)pyrene	ND	1.0		5	1/13/23 13:37		SPF
Benzo(g,h,i)perylene	ND	1.0		5	1/13/23 13:37		SPF
Benzo(k)fluoranthene	ND	1.0		5	1/13/23 13:37		SPF
Chrysene	ND	1.0		5	1/13/23 13:37		SPF
Dibenz(a,h)anthracene	ND	1.0	L-04	5	1/13/23 13:37		SPF
Fluoranthene	1.1	1.0		5	1/13/23 13:37		SPF
Fluorene	1.5	1.0		5	1/13/23 13:37		SPF
Indeno(1,2,3-cd)pyrene	ND	1.0	L-04	5	1/13/23 13:37		SPF
1-Methylnaphthalene	1.7	1.0		5	1/13/23 13:37		SPF
2-Methylnaphthalene	3.2	1.0		5	1/13/23 13:37		SPF
Naphthalene	17	2.5		5	1/13/23 13:37		SPF
Perylene	ND	1.0		5	1/13/23 13:37		SPF
Phenanthrene	3.6	1.0		5	1/13/23 13:37		SPF
Pyrene	ND	1.0		5	1/13/23 13:37		SPF

Surrogates	% Recovery	% REC Limits	
Benzo(a)pyrene-d12	88.0	60-120	1/13/23 13:37
Fluoranthene-d10	100	60-120	1/13/23 13:37
Fluorene-d10	90.0	60-120	1/13/23 13:37
Pyrene-d10	92.5	60-120	1/13/23 13:37

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ANALYTICAL RESULTS

Project Location: River Rouge, MI
Date Received: 1/10/2023
Field Sample #: IN2-010423-04
Sample ID: 23A0778-04
Sample Matrix: Air
Sampled: 1/5/2023 16:17

Sample Description/Location:
Sub Description/Location:

Flow Controller ID:
Sample Type:

Work Order: 23A0778
EPA TO-13A

Sample Flags: RL-12

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	4.1	1.0		5	1/13/23 14:05		SPF
Acenaphthylene	60	4.0		20	1/13/23 16:28		SPF
Anthracene	8.2	1.0		5	1/13/23 14:05		SPF
Benzo(a)anthracene	ND	1.0		5	1/13/23 14:05		SPF
Benzo(a)pyrene	ND	1.0		5	1/13/23 14:05		SPF
Benzo(b)fluoranthene	ND	1.0		5	1/13/23 14:05		SPF
Benzo(e)pyrene	ND	1.0		5	1/13/23 14:05		SPF
Benzo(g,h,i)perylene	ND	1.0		5	1/13/23 14:05		SPF
Benzo(k)fluoranthene	ND	1.0		5	1/13/23 14:05		SPF
Chrysene	ND	1.0		5	1/13/23 14:05		SPF
Dibenz(a,h)anthracene	ND	1.0	L-04	5	1/13/23 14:05		SPF
Fluoranthene	5.6	1.0		5	1/13/23 14:05		SPF
Fluorene	46	1.0		5	1/13/23 14:05		SPF
Indeno(1,2,3-cd)pyrene	ND	1.0	L-04	5	1/13/23 14:05		SPF
1-Methylnaphthalene	34	1.0		5	1/13/23 14:05		SPF
2-Methylnaphthalene	70	4.0		20	1/13/23 16:28		SPF
Naphthalene	700	50		100	1/13/23 16:57		SPF
Perylene	ND	1.0		5	1/13/23 14:05		SPF
Phenanthrene	43	1.0		5	1/13/23 14:05		SPF
Pyrene	3.3	1.0		5	1/13/23 14:05		SPF

Surrogates	% Recovery		% REC Limits		
Benzo(a)pyrene-d12	87.0		60-120		1/13/23 14:05
Benzo(a)pyrene-d12	*	S-01	60-120		1/13/23 16:57
Benzo(a)pyrene-d12	68.0		60-120		1/13/23 16:28
Fluoranthene-d10	*	S-01	60-120		1/13/23 16:57
Fluoranthene-d10	74.0		60-120		1/13/23 16:28
Fluoranthene-d10	92.5		60-120		1/13/23 14:05
Fluorene-d10	*	S-01	60-120		1/13/23 16:57
Fluorene-d10	74.0		60-120		1/13/23 16:28
Fluorene-d10	87.5		60-120		1/13/23 14:05
Pyrene-d10	*	S-01	60-120		1/13/23 16:57
Pyrene-d10	70.0		60-120		1/13/23 16:28
Pyrene-d10	89.5		60-120		1/13/23 14:05

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ANALYTICAL RESULTS

Project Location: River Rouge, MI

Date Received: 1/10/2023

Field Sample #: IN1-010423-05
Sample ID: 23A0778-05

Sample Matrix: Air

Sampled: 1/5/2023 15:46

Sample Description/Location:

Sub Description/Location:

Work Order: 23A0778

Flow Controller ID:

Sample Type:

EPA TO-13A

Sample Flags: RL-12

Sample Flags: RL-12		Total µg		Date/Time			
Analyte	Results	RL	Flag/Qual	Dilution	Analyzed	Analyst	
Acenaphthene	3.9	2.0		10	1/13/23 14:34	SPF	
Acenaphthylene	82	2.0		10	1/13/23 14:34	SPF	
Anthracene	7.5	2.0		10	1/13/23 14:34	SPF	
Benzo(a)anthracene	ND	2.0		10	1/13/23 14:34	SPF	
Benzo(a)pyrene	ND	2.0		10	1/13/23 14:34	SPF	
Benzo(b)fluoranthene	ND	2.0		10	1/13/23 14:34	SPF	
Benzo(e)pyrene	ND	2.0		10	1/13/23 14:34	SPF	
Benzo(g,h,i)perylene	ND	2.0		10	1/13/23 14:34	SPF	
Benzo(k)fluoranthene	ND	2.0		10	1/13/23 14:34	SPF	
Chrysene	ND	2.0		10	1/13/23 14:34	SPF	
Dibenz(a,h)anthracene	ND	2.0	L-04	10	1/13/23 14:34	SPF	
Fluoranthene	8.3	2.0		10	1/13/23 14:34	SPF	
Fluorene	41	2.0		10	1/13/23 14:34	SPF	
Indeno(1,2,3-cd)pyrene	ND	2.0	L-04	10	1/13/23 14:34	SPF	
1-Methylnaphthalene	38	2.0		10	1/13/23 14:34	SPF	
2-Methylnaphthalene	96	40		200	1/13/23 17:54	SPF	
Naphthalene	1200	100		200	1/13/23 17:54	SPF	
Perylene	ND	2.0		10	1/13/23 14:34	SPF	
Phenanthrene	44	2.0		10	1/13/23 14:34	SPF	
Pyrene	5.2	2.0		10	1/13/23 14:34	SPF	

Surrogates	% Recovery		% REC Limits		
Benzo(a)pyrene-d12	*	S-01	60-120		1/13/23 17:54
Benzo(a)pyrene-d12	76.0		60-120		1/13/23 14:34
Fluoranthene-d10	*	S-01	60-120		1/13/23 17:54
Fluoranthene-d10	81.0		60-120		1/13/23 14:34
Fluorene-d10	*	S-01	60-120		1/13/23 17:54
Fluorene-d10	76.0		60-120		1/13/23 14:34
Pyrene-d10	*	S-01	60-120		1/13/23 17:54
Pyrene-d10	76.0		60-120		1/13/23 14:34

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: River Rouge, MI

Date Received: 1/10/2023

Field Sample #: FB-010423-06

Sample ID: 23A0778-06

Sample Matrix: Air

Sampled: 1/5/2023 00:00

Sample Description/Location:

Sub Description/Location:

Work Order: 23A0778

Flow Controller ID:

Sample Type:

EPA TO-13A

Analyte	Total µg		Flag/Qual	Dilution	Date/Time		Analyst
	Results	RL			Analyzed		
Acenaphthene	ND	0.20		1	1/13/23 18:22		SPF
Acenaphthylene	ND	0.20		1	1/13/23 18:22		SPF
Anthracene	ND	0.20		1	1/13/23 18:22		SPF
Benzo(a)anthracene	ND	0.20		1	1/13/23 18:22		SPF
Benzo(a)pyrene	ND	0.20		1	1/13/23 18:22		SPF
Benzo(b)fluoranthene	ND	0.20		1	1/13/23 18:22		SPF
Benzo(e)pyrene	ND	0.20		1	1/13/23 18:22		SPF
Benzo(g,h,i)perylene	ND	0.20		1	1/13/23 18:22		SPF
Benzo(k)fluoranthene	ND	0.20		1	1/13/23 18:22		SPF
Chrysene	ND	0.20		1	1/13/23 18:22		SPF
Dibenz(a,h)anthracene	ND	0.20	L-04	1	1/13/23 18:22		SPF
Fluoranthene	ND	0.20		1	1/13/23 18:22		SPF
Fluorene	ND	0.20		1	1/13/23 18:22		SPF
Indeno(1,2,3-cd)pyrene	ND	0.20	L-04	1	1/13/23 18:22		SPF
1-Methylnaphthalene	ND	0.20		1	1/13/23 18:22		SPF
2-Methylnaphthalene	ND	0.20		1	1/13/23 18:22		SPF
Naphthalene	0.51	0.50		1	1/13/23 18:22		SPF
Perylene	ND	0.20		1	1/13/23 18:22		SPF
Phenanthrene	ND	0.20		1	1/13/23 18:22		SPF
Pyrene	ND	0.20		1	1/13/23 18:22		SPF

Surrogates	% Recovery	% REC Limits	
Benzo(a)pyrene-d12	69.7	60-120	1/13/23 18:22
Fluoranthene-d10	86.2	60-120	1/13/23 18:22
Fluorene-d10	73.6	60-120	1/13/23 18:22
Pyrene-d10	74.7	60-120	1/13/23 18:22

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data**Prep Method: SW-846 3540C Analytical Method: EPA TO-13A**

Lab Number [Field ID]	Batch	Initial [Cartridge	Final [mL]	Date
23A0778-01 [DW2-010423-01]	B328159	1.00	1.00	01/11/23
23A0778-01RE1 [DW2-010423-01]	B328159	1.00	1.00	01/11/23
23A0778-02 [DW1-010423-02]	B328159	1.00	1.00	01/11/23
23A0778-02RE1 [DW1-010423-02]	B328159	1.00	1.00	01/11/23
23A0778-03 [UPW-010423-03]	B328159	1.00	1.00	01/11/23
23A0778-04 [IN2-010423-04]	B328159	1.00	1.00	01/11/23
23A0778-04RE1 [IN2-010423-04]	B328159	1.00	1.00	01/11/23
23A0778-04RE2 [IN2-010423-04]	B328159	1.00	1.00	01/11/23
23A0778-05 [IN1-010423-05]	B328159	1.00	1.00	01/11/23
23A0778-05RE2 [IN1-010423-05]	B328159	1.00	1.00	01/11/23
23A0778-06 [FB-010423-06]	B328159	1.00	1.00	01/11/23

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	Total µg		ug/m3		Spike Level	Source	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
	Results	RL	Results	RL	Total µg	Result					

Batch B328159 - SW-846 3540C
Blank (B328159-BLK1)

Prepared: 01/10/23 Analyzed: 01/13/23

Acenaphthene	ND	0.20
Acenaphthylene	ND	0.20
Anthracene	ND	0.20
Benzo(a)anthracene	ND	0.20
Benzo(a)pyrene	ND	0.20
Benzo(b)fluoranthene	ND	0.20
Benzo(e)pyrene	ND	0.20
Benzo(g,h,i)perylene	ND	0.20
Benzo(k)fluoranthene	ND	0.20
Chrysene	ND	0.20
Dibenz(a,h)anthracene	ND	0.20
Fluoranthene	ND	0.20
Fluorene	ND	0.20
Indeno(1,2,3-cd)pyrene	ND	0.20
1-Methylnaphthalene	ND	0.20
2-Methylnaphthalene	ND	0.20
Naphthalene	ND	0.50
Perylene	ND	0.20
Phenanthrene	ND	0.20
Pyrene	ND	0.20

Surrogate: Fluorene-d10	0.662				1.00		66.2	60-120		
Surrogate: Pyrene-d10	0.691				1.00		69.1	60-120		

LCS (B328159-BS1)

Prepared: 01/10/23 Analyzed: 01/13/23

Acenaphthene	0.290	0.20	1.3	0.500		58.0	*	60-110		L-07
Acenaphthylene	0.295	0.20	1.2	0.500		59.0	*	60-110		L-07
Anthracene	0.295	0.20	1.5	0.500		59.0	*	60-110		L-07
Benzo(a)anthracene	0.299	0.20	1.9	0.500		59.8	*	60-110		L-07
Benzo(a)pyrene	0.291	0.20	2.1	0.500		58.2	*	60-110		L-07
Benzo(b)fluoranthene	0.324	0.20	2.1	0.500		64.8		60-111		
Benzo(e)pyrene	0.341	0.20	2.1	0.500		68.2		60-118		
Benzo(g,h,i)perylene	0.287	0.20	2.3	0.500		57.4	*	60-111		L-07
Benzo(k)fluoranthene	0.337	0.20	2.1	0.500		67.4		60-114		
Chrysene	0.312	0.20	1.9	0.500		62.4		60-110		
Dibenz(a,h)anthracene	0.275	0.20	2.3	0.500		55.0	*	60-113		L-04
Fluoranthene	0.323	0.20	1.7	0.500		64.6		60-110		
Fluorene	0.321	0.20	1.4	0.500		64.2		60-110		
Indeno(1,2,3-cd)pyrene	0.283	0.20	2.3	0.500		56.6	*	60-110		L-04
1-Methylnaphthalene	0.291	0.20	1.2	0.500		58.2	*	60-110		L-07
2-Methylnaphthalene	0.286	0.20	1.2	0.500		57.2	*	60-110		L-07
Naphthalene	0.405	0.50	2.6	0.500		81.0		60-118		
Perylene	0.324	0.20	2.1	0.500		64.8		60-110		
Phenanthrene	0.311	0.20	1.5	0.500		62.2		60-110		
Pyrene	0.312	0.20	1.7	0.500		62.4		60-110		

Surrogate: Fluorene-d10	0.792				1.00		79.2	60-120		
Surrogate: Pyrene-d10	0.829				1.00		82.9	60-120		

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	Total µg		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	Total µg	Result	%REC	Limits	RPD	Limit	
Batch B328159 - SW-846 3540C											
LCS Dup (B328159-BSD1)					Prepared: 01/10/23 Analyzed: 01/13/23						
Acenaphthene	0.320	0.20		1.3	0.500		64.0	60-110	9.84	29.8	
Acenaphthylene	0.340	0.20		1.2	0.500		68.0	60-110	14.2	50	
Anthracene	0.334	0.20		1.5	0.500		66.8	60-110	12.4	35.8	
Benzo(a)anthracene	0.331	0.20		1.9	0.500		66.2	60-110	10.2	27.3	
Benzo(a)pyrene	0.323	0.20		2.1	0.500		64.6	60-110	10.4	27.3	
Benzo(b)fluoranthene	0.344	0.20		2.1	0.500		68.8	60-111	5.99	32.7	
Benzo(e)pyrene	0.361	0.20		2.1	0.500		72.2	60-118	5.70	33.6	
Benzo(g,h,i)perylene	0.301	0.20		2.3	0.500		60.2	60-111	4.76	36	
Benzo(k)fluoranthene	0.358	0.20		2.1	0.500		71.6	60-114	6.04	32.5	
Chrysene	0.342	0.20		1.9	0.500		68.4	60-110	9.17	28	
Dibenz(a,h)anthracene	0.289	0.20		2.3	0.500		57.8	* 60-113	4.96	37.1	L-04
Fluoranthene	0.354	0.20		1.7	0.500		70.8	60-110	9.16	29.5	
Fluorene	0.349	0.20		1.4	0.500		69.8	60-110	8.36	31.1	
Indeno(1,2,3-cd)pyrene	0.298	0.20		2.3	0.500		59.6	* 60-110	5.16	34	L-04
1-Methylnaphthalene	0.323	0.20		1.2	0.500		64.6	60-110	10.4	28.9	
2-Methylnaphthalene	0.317	0.20		1.2	0.500		63.4	60-110	10.3	28.3	
Naphthalene	0.468	0.50		2.6	0.500		93.6	60-118	14.4	28.3	
Perylene	0.355	0.20		2.1	0.500		71.0	60-110	9.13	25.9	
Phenanthrene	0.339	0.20		1.5	0.500		67.8	60-110	8.62	27.4	
Pyrene	0.344	0.20		1.7	0.500		68.8	60-110	9.76	30.7	
Surrogate: Fluorene-d10	0.725				1.00		72.5	60-120			
Surrogate: Pyrene-d10	0.768				1.00		76.8	60-120			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
RL-12	Elevated reporting limit due to matrix interference.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B328159-BLK1)									
Lab File ID: E23S013004.D					Analyzed: 01/13/23 10:16				
Naphthalene-d8	119949	7.629	113295	7.636	106	50 - 200	-0.0070	+/-0.50	
Acenaphthene-d10	77431	9.342	69907	9.342	111	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	173130	10.793	162558	10.792	107	50 - 200	0.0010	+/-0.50	
Chrysene-d12	175456	14.272	167859	14.264	105	50 - 200	0.0080	+/-0.50	
Perylene-d12	178855	17.478	180783	17.477	99	50 - 200	0.0010	+/-0.50	
LCS (B328159-BS1)									
Lab File ID: E23S013006.D					Analyzed: 01/13/23 11:14				
Naphthalene-d8	140151	7.632	113295	7.636	124	50 - 200	-0.0040	+/-0.50	
Acenaphthene-d10	90012	9.342	69907	9.342	129	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	195515	10.797	162558	10.792	120	50 - 200	0.0050	+/-0.50	
Chrysene-d12	195917	14.276	167859	14.264	117	50 - 200	0.0120	+/-0.50	
Perylene-d12	192793	17.481	180783	17.477	107	50 - 200	0.0040	+/-0.50	
LCS Dup (B328159-BSD1)									
Lab File ID: E23S013007.D					Analyzed: 01/13/23 11:42				
Naphthalene-d8	143641	7.632	113295	7.636	127	50 - 200	-0.0040	+/-0.50	
Acenaphthene-d10	91883	9.346	69907	9.342	131	50 - 200	0.0040	+/-0.50	
Phenanthrene-d10	195580	10.797	162558	10.792	120	50 - 200	0.0050	+/-0.50	
Chrysene-d12	192375	14.276	167859	14.264	115	50 - 200	0.0120	+/-0.50	
Perylene-d12	193492	17.485	180783	17.477	107	50 - 200	0.0080	+/-0.50	
DW2-010423-01 (23A0778-01)									
Lab File ID: E23S013008.D					Analyzed: 01/13/23 12:39				
Naphthalene-d8	142640	7.641	113295	7.636	126	50 - 200	0.0050	+/-0.50	
Acenaphthene-d10	94820	9.346	69907	9.342	136	50 - 200	0.0040	+/-0.50	
Phenanthrene-d10	196141	10.793	162558	10.792	121	50 - 200	0.0010	+/-0.50	
Chrysene-d12	189288	14.268	167859	14.264	113	50 - 200	0.0040	+/-0.50	
Perylene-d12	206582	17.481	180783	17.477	114	50 - 200	0.0040	+/-0.50	
DW1-010423-02 (23A0778-02)									
Lab File ID: E23S013009.D					Analyzed: 01/13/23 13:08				
Naphthalene-d8	111595	7.64	113295	7.636	98	50 - 200	0.0040	+/-0.50	
Acenaphthene-d10	73602	9.346	69907	9.342	105	50 - 200	0.0040	+/-0.50	
Phenanthrene-d10	168967	10.797	162558	10.792	104	50 - 200	0.0050	+/-0.50	
Chrysene-d12	170513	14.272	167859	14.264	102	50 - 200	0.0080	+/-0.50	
Perylene-d12	185733	17.485	180783	17.477	103	50 - 200	0.0080	+/-0.50	
UPW-010423-03 (23A0778-03)									
Lab File ID: E23S013010.D					Analyzed: 01/13/23 13:37				
Naphthalene-d8	124319	7.637	113295	7.636	110	50 - 200	0.0010	+/-0.50	
Acenaphthene-d10	86951	9.346	69907	9.342	124	50 - 200	0.0040	+/-0.50	
Phenanthrene-d10	188231	10.793	162558	10.792	116	50 - 200	0.0010	+/-0.50	
Chrysene-d12	182167	14.272	167859	14.264	109	50 - 200	0.0080	+/-0.50	
Perylene-d12	192503	17.481	180783	17.477	106	50 - 200	0.0040	+/-0.50	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
IN2-010423-04 (23A0778-04) Lab File ID: E23S013011.D Analyzed: 01/13/23 14:05									
Naphthalene-d8	150011	7.653	113295	7.636	132	50 - 200	0.0170	+/-0.50	
Acenaphthene-d10	94347	9.346	69907	9.342	135	50 - 200	0.0040	+/-0.50	
Phenanthrene-d10	193520	10.797	162558	10.792	119	50 - 200	0.0050	+/-0.50	
Chrysene-d12	180498	14.272	167859	14.264	108	50 - 200	0.0080	+/-0.50	
Perylene-d12	187946	17.481	180783	17.477	104	50 - 200	0.0040	+/-0.50	
IN1-010423-05 (23A0778-05) Lab File ID: E23S013012.D Analyzed: 01/13/23 14:34									
Naphthalene-d8	154287	7.649	113295	7.636	136	50 - 200	0.0130	+/-0.50	
Acenaphthene-d10	97272	9.346	69907	9.342	139	50 - 200	0.0040	+/-0.50	
Phenanthrene-d10	199946	10.797	162558	10.792	123	50 - 200	0.0050	+/-0.50	
Chrysene-d12	182931	14.272	167859	14.264	109	50 - 200	0.0080	+/-0.50	
Perylene-d12	196672	17.477	180783	17.477	109	50 - 200	0.0000	+/-0.50	
DW2-010423-01 (23A0778-01RE1) Lab File ID: E23S013015.D Analyzed: 01/13/23 15:31									
Naphthalene-d8	131247	7.636	113295	7.636	116	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	89517	9.346	69907	9.342	128	50 - 200	0.0040	+/-0.50	
Phenanthrene-d10	184285	10.792	162558	10.792	113	50 - 200	0.0000	+/-0.50	
Chrysene-d12	169945	14.268	167859	14.264	101	50 - 200	0.0040	+/-0.50	
Perylene-d12	184560	17.481	180783	17.477	102	50 - 200	0.0040	+/-0.50	
DW1-010423-02 (23A0778-02RE1) Lab File ID: E23S013016.D Analyzed: 01/13/23 15:59									
Naphthalene-d8	139613	7.636	113295	7.636	123	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	91614	9.342	69907	9.342	131	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	182423	10.792	162558	10.792	112	50 - 200	0.0000	+/-0.50	
Chrysene-d12	166907	14.268	167859	14.264	99	50 - 200	0.0040	+/-0.50	
Perylene-d12	179962	17.477	180783	17.477	100	50 - 200	0.0000	+/-0.50	
IN2-010423-04 (23A0778-04RE1) Lab File ID: E23S013017.D Analyzed: 01/13/23 16:28									
Naphthalene-d8	133024	7.641	113295	7.636	117	50 - 200	0.0050	+/-0.50	
Acenaphthene-d10	90517	9.342	69907	9.342	129	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	188222	10.793	162558	10.792	116	50 - 200	0.0010	+/-0.50	
Chrysene-d12	175658	14.268	167859	14.264	105	50 - 200	0.0040	+/-0.50	
Perylene-d12	177738	17.477	180783	17.477	98	50 - 200	0.0000	+/-0.50	
IN2-010423-04 (23A0778-04RE2) Lab File ID: E23S013018.D Analyzed: 01/13/23 16:57									
Naphthalene-d8	136090	7.636	113295	7.636	120	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	81593	9.342	69907	9.342	117	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	204625	10.793	162558	10.792	126	50 - 200	0.0010	+/-0.50	
Chrysene-d12	188173	14.268	167859	14.264	112	50 - 200	0.0040	+/-0.50	
Perylene-d12	200128	17.477	180783	17.477	111	50 - 200	0.0000	+/-0.50	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-13A

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
IN1-010423-05 (23A0778-05RE2) Lab File ID: E23S013020.D Analyzed: 01/13/23 17:54									
Naphthalene-d8	125486	7.636	113295	7.636	111	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	86159	9.346	69907	9.342	123	50 - 200	0.0040	+/-0.50	
Phenanthrene-d10	176330	10.792	162558	10.792	108	50 - 200	0.0000	+/-0.50	
Chrysene-d12	154446	14.268	167859	14.264	92	50 - 200	0.0040	+/-0.50	
Perylene-d12	170253	17.477	180783	17.477	94	50 - 200	0.0000	+/-0.50	
FB-010423-06 (23A0778-06) Lab File ID: E23S013021.D Analyzed: 01/13/23 18:22									
Naphthalene-d8	124921	7.636	113295	7.636	110	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	81590	9.342	69907	9.342	117	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	184329	10.797	162558	10.792	113	50 - 200	0.0050	+/-0.50	
Chrysene-d12	194057	14.28	167859	14.264	116	50 - 200	0.0160	+/-0.50	
Perylene-d12	205509	17.489	180783	17.477	114	50 - 200	0.0120	+/-0.50	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CONTINUING CALIBRATION CHECK

COMPOUND	TYPE			RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-13A in Air</i>	
Acenaphthene	AIHA,NJ,NY,NH
Acenaphthylene	AIHA,NJ,NY,NH
Anthracene	AIHA,NJ,NY,NH
Benzo(a)anthracene	AIHA,NJ,NY,NH
Benzo(a)pyrene	AIHA,NJ,NY,FL,NH
Benzo(b)fluoranthene	AIHA,NJ,NY,NH
Benzo(e)pyrene	AIHA,NJ
Benzo(g,h,i)perylene	AIHA,NJ,NY,NH
Benzo(k)fluoranthene	AIHA,NJ,NY,NH
Chrysene	AIHA,NJ,NY,NH
Dibenz(a,h)anthracene	AIHA,NJ,NY,NH
Fluoranthene	AIHA,NJ,NY,NH
Fluorene	AIHA,NJ,NY,NH
Indeno(1,2,3-cd)pyrene	AIHA,NJ,NY,NH
1-Methylnaphthalene	AIHA
2-Methylnaphthalene	AIHA
Naphthalene	AIHA,NJ,NY,FL,NH
Perylene	AIHA,NJ
Phenanthrene	AIHA,NJ,NY,NH
Pyrene	AIHA,NJ,NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO 17025:2017	100033	03/1/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
FL	Florida Department of Health	E871027 NELAP	06/30/2023



Company Name: Clean Air Engineering
 Address: 110 Technology Drive, Pgh, PA 15225
 Phone: 412-370-2011
 Project Name: BES COKE
 Project Location: River Rouge, MI
 Project Number: 14796
 Project Manager: Tim Rodak
 Con-Test Quote Name/Number: 123244
 Invoice Recipient: Tim Rodak
 Sampled By: Tim Rodak

Requested Turnaround Time: ☐ 7-Day ☐ 10-Day ☒
 Due Date:
 Rush Approval Required: ☐ 1-Day ☐ 3-Day ☐ 2-Day ☐ 4-Day ☐
 Data Delivery: ☒ EXCEL ☐
 Format: PDF ☒ EXCEL ☐
 Other:
 CLP Like Data Pkg Required: ☐
 Email To: tradak@cleanair.com
 Fax To #:

ANALYSIS REQUESTED

Lab Use	Con-Test Work Order#	Client Use	Collection Data		Duration	Flow Rate	Matrix	Volume	Lab Receipt Pressure			Please fill out completely, sign, date and retain the yellow copy for your records
			Beginning Date/Time	Ending Date/Time		Total Minutes Sampled	m ³ /min L/min	Liters m ³	Initial Pressure	Final Pressure	" Hg	
1	DWZ-010423-01		01/04 1551	01/03 1410								Summa canisters and flow controllers must be returned within 15 days of receipt or rental fees will apply
2	DW1-010423-02		01/04 1705	01/03 1510								
3	UPW-010423-03		01/04 1835	01/03 1655								
4	IN2-010423-04		01/04 1800	01/03 1617								
5	IN1-010423-05		01/04 1737	01/03 1740								
6	FB-010423-06		01/04 1705	01/03 1540								
												For summa canister and flow controller information please refer to Con-Test's Air Media Agreement
												Summa Can ID
												Flow Controller ID

Comments:

01-06 correspond to numbered valve on sample container

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Matrix Codes:

SG = SOIL GAS
 IA = INDOOR AIR
 AMB = AMBIENT
 SS = SUB SLAB
 D = DUP
 BL = BLANK
 O = Other

Relinquished by: (signature) Tim Rodak Date/Time: 1/9/23 1345
 Received by: (signature) 30 Date/Time: 1/10/23 750
 Relinquished by: (signature) 30 Date/Time: 1/10/23 750
 Received by: (signature) 30 Date/Time: 1/10/23 750
 Relinquished by: (signature) 30 Date/Time: 1/10/23 750
 Received by: (signature) 30 Date/Time: 1/10/23 750



NELAP and AIHA-LAP, LLC Accredited

Project Entity: ☐ Government ☐ Municipality ☐ MWRA ☐ WRTA ☐ Other ☐ Chromatogram ☐ Soxhlet

☐ Federal ☐ 21 J ☐ School ☐ MBTA ☐ AIHA-LAP, LLC ☐ Non Soxhlet

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Doc# 278 Rev 7 July 2022

Air Media Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False

Statement will be brought to the attention of the Client - State True or False

Client Clean Air Engineering

Received By LP Date 11/10/23 Time 7:50

How Were the samples received? In Cooler T On Ice T No Ice

In Box Ambient Melted Ice

Were samples within Temperature Compliance? Within T By Gun # Actual Temp

2-6°C By Blank # Actual Temp

Was Custody Seal In tact? N/A Were Samples Tampered with? F

Was COC Relinquished? T Does Chain Agree With Samples? T

Are there any loose caps/valves on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC Include all Pertinent Information? Client? T Analysis? T Sampler Name? T

Project? T ID's? T Collection Dates/Times? T

Are Sample Labels filled out and legible?

Are there Rushes? F Who was notified?

Samples are received within holding time? T

Proper Media Used? T Individually Certified Cans? MA

Are there Trip Blanks? F Is there enough Volume? T

Containers:	#	Size	Regulator	Duration	Accessories:		
Summa Cans					Nut/Ferrule		IC Train
Tedlar Bags					Tubing		
TO-17 Tubes					T-Connector		Shipping Charges
Radiello					Syringe		
Puffs/TO-11s	6				Tedlar		

Can #'s					Reg #'s				
Unused Media					Puffs/TO-17's				

Comments:

November 16, 2022

Tim Rodak
Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275

Project Location: 110 Technology Drive
Client Job Number:
Project Number: 14796 Quote 123244
Laboratory Work Order Number: 22K0833

Enclosed are results of analyses for samples as received by the laboratory on November 2, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Albania Hernandez
Project Manager

Table of Contents

Sample Summary	3
Case Narrative	4
Sample Results	5
Sample Preparation Information	17
QC Data	18
Air Toxics by EPA Compendium Methods	18
B323032	18
Flag/Qualifier Summary	23
Internal standard Area & RT Summary	24
Continuing Calibration Check	26
Certifications	28
Chain of Custody/Sample Receipt	30

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275
ATTN: Tim Rodak

REPORT DATE: 11/16/2022

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 14796 Quote 123244

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22K0833

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 110 Technology Drive

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
UPW-1025-1	22K0833-01	Air		EPA TO-15	
IN1-1025-1	22K0833-02	Air		EPA TO-15	
IN2-1025-1	22K0833-03	Air		EPA TO-15	
DW1-1025-1A	22K0833-04	Air		EPA TO-15	
DW1-1025-1B	22K0833-05	Air		EPA TO-15	
DW2-1025-1	22K0833-06	Air		EPA TO-15	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA TO-15

Qualifications:

L-03

Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Ethanol

B323032-BLK1, B323032-BS1

R-01

Duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result.

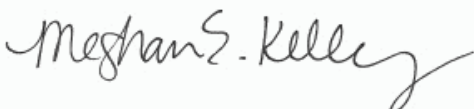
Analyte & Samples(s) Qualified:

Dichlorodifluoromethane (Freon 12)

B323032-DUP1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 110 Technology Drive
Date Received: 11/2/2022
Field Sample #: UPW-1025-1
Sample ID: 22K0833-01
Sample Matrix: Air
Sampled: 10/26/2022 13:00

Sample Description/Location:
Sub Description/Location:
Canister ID: 1876
Canister Size: 6 liter
Flow Controller ID: 3690
Sample Type: 24 hr

Work Order: 22K0833
Initial Vacuum(in Hg): -28.5
Final Vacuum(in Hg): -9
Receipt Vacuum(in Hg): -9.7
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		
	Results	RL		Results	RL		Analyzed	Analyst	
Acetone	6.1	1.4		15	3.3	0.702	11/12/22	5:44	CMR
Benzene	0.45	0.035		1.4	0.11	0.702	11/12/22	5:44	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	11/12/22	5:44	CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	11/12/22	5:44	CMR
Bromoform	ND	0.035		ND	0.36	0.702	11/12/22	5:44	CMR
Bromomethane	ND	0.035		ND	0.14	0.702	11/12/22	5:44	CMR
1,3-Butadiene	ND	0.035		ND	0.078	0.702	11/12/22	5:44	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	11/12/22	5:44	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	11/12/22	5:44	CMR
Carbon Tetrachloride	0.069	0.035		0.44	0.22	0.702	11/12/22	5:44	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	11/12/22	5:44	CMR
Chloroethane	ND	0.035		ND	0.093	0.702	11/12/22	5:44	CMR
Chloroform	ND	0.035		ND	0.17	0.702	11/12/22	5:44	CMR
Chloromethane	0.46	0.070		0.95	0.14	0.702	11/12/22	5:44	CMR
Cyclohexane	0.042	0.035		0.14	0.12	0.702	11/12/22	5:44	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	11/12/22	5:44	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	11/12/22	5:44	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/12/22	5:44	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/12/22	5:44	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/12/22	5:44	CMR
Dichlorodifluoromethane (Freon 12)	0.20	0.035		0.98	0.17	0.702	11/12/22	5:44	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	11/12/22	5:44	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	11/12/22	5:44	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/12/22	5:44	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/12/22	5:44	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/12/22	5:44	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	11/12/22	5:44	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/12/22	5:44	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/12/22	5:44	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	11/12/22	5:44	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	11/12/22	5:44	CMR
Ethanol	3.7	1.4		6.9	2.6	0.702	11/12/22	5:44	CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.702	11/12/22	5:44	CMR
Ethylbenzene	0.036	0.035		0.16	0.15	0.702	11/12/22	5:44	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	11/12/22	5:44	CMR
Heptane	0.076	0.035		0.31	0.14	0.702	11/12/22	5:44	CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	11/12/22	5:44	CMR

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ANALYTICAL RESULTS

Project Location: 110 Technology Drive
 Date Received: 11/2/2022
Field Sample #: UPW-1025-1
Sample ID: 22K0833-01
 Sample Matrix: Air
 Sampled: 10/26/2022 13:00

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1876
 Canister Size: 6 liter
 Flow Controller ID: 3690
 Sample Type: 24 hr

Work Order: 22K0833
 Initial Vacuum(in Hg): -28.5
 Final Vacuum(in Hg): -9
 Receipt Vacuum(in Hg): -9.7
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	1.9	1.4		6.6	4.9	0.702	11/12/22	5:44	CMR
2-Hexanone (MBK)	0.069	0.035		0.28	0.14	0.702	11/12/22	5:44	CMR
Isopropanol	ND	1.4		ND	3.4	0.702	11/12/22	5:44	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	11/12/22	5:44	CMR
Methylene Chloride	ND	0.35		ND	1.2	0.702	11/12/22	5:44	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.702	11/12/22	5:44	CMR
Naphthalene	0.082	0.035		0.43	0.18	0.702	11/12/22	5:44	CMR
Propene	ND	1.4		ND	2.4	0.702	11/12/22	5:44	CMR
Styrene	ND	0.035		ND	0.15	0.702	11/12/22	5:44	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	11/12/22	5:44	CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.702	11/12/22	5:44	CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.702	11/12/22	5:44	CMR
Toluene	0.20	0.035		0.76	0.13	0.702	11/12/22	5:44	CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.702	11/12/22	5:44	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	11/12/22	5:44	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	11/12/22	5:44	CMR
Trichloroethylene	ND	0.035		ND	0.19	0.702	11/12/22	5:44	CMR
Trichlorofluoromethane (Freon 11)	0.20	0.14		1.1	0.79	0.702	11/12/22	5:44	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.702	11/12/22	5:44	CMR
1,2,4-Trimethylbenzene	0.042	0.035		0.21	0.17	0.702	11/12/22	5:44	CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.702	11/12/22	5:44	CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.702	11/12/22	5:44	CMR
Vinyl Chloride	ND	0.035		ND	0.090	0.702	11/12/22	5:44	CMR
m&p-Xylene	0.12	0.070		0.51	0.30	0.702	11/12/22	5:44	CMR
o-Xylene	0.047	0.035		0.20	0.15	0.702	11/12/22	5:44	CMR

Surrogates	% Recovery	% REC Limits		
4-Bromofluorobenzene (1)	99.0	70-130	11/12/22	5:44

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ANALYTICAL RESULTS

Project Location: 110 Technology Drive
 Date Received: 11/2/2022
Field Sample #: IN1-1025-1
Sample ID: 22K0833-02
 Sample Matrix: Air
 Sampled: 10/26/2022 11:40

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1700
 Canister Size: 6 liter
 Flow Controller ID: 3193
 Sample Type: 24 hr

Work Order: 22K0833
 Initial Vacuum(in Hg): -28
 Final Vacuum(in Hg): -6
 Receipt Vacuum(in Hg): -8.3
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	5.2	1.4		12	3.3	0.702	11/12/22 6:33		CMR
Benzene	14	0.035		45	0.11	0.702	11/12/22 6:33		CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	11/12/22 6:33		CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	11/12/22 6:33		CMR
Bromoform	ND	0.035		ND	0.36	0.702	11/12/22 6:33		CMR
Bromomethane	ND	0.035		ND	0.14	0.702	11/12/22 6:33		CMR
1,3-Butadiene	0.27	0.035		0.60	0.078	0.702	11/12/22 6:33		CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	11/12/22 6:33		CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	11/12/22 6:33		CMR
Carbon Tetrachloride	0.074	0.035		0.46	0.22	0.702	11/12/22 6:33		CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	11/12/22 6:33		CMR
Chloroethane	ND	0.035		ND	0.093	0.702	11/12/22 6:33		CMR
Chloroform	ND	0.035		ND	0.17	0.702	11/12/22 6:33		CMR
Chloromethane	0.46	0.070		0.94	0.14	0.702	11/12/22 6:33		CMR
Cyclohexane	0.069	0.035		0.24	0.12	0.702	11/12/22 6:33		CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	11/12/22 6:33		CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	11/12/22 6:33		CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/12/22 6:33		CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/12/22 6:33		CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/12/22 6:33		CMR
Dichlorodifluoromethane (Freon 12)	0.21	0.035		1.0	0.17	0.702	11/12/22 6:33		CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	11/12/22 6:33		CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	11/12/22 6:33		CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/12/22 6:33		CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/12/22 6:33		CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/12/22 6:33		CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	11/12/22 6:33		CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/12/22 6:33		CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/12/22 6:33		CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	11/12/22 6:33		CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	11/12/22 6:33		CMR
Ethanol	4.1	1.4		7.7	2.6	0.702	11/12/22 6:33		CMR
Ethyl Acetate	1.2	0.35		4.2	1.3	0.702	11/12/22 6:33		CMR
Ethylbenzene	0.052	0.035		0.23	0.15	0.702	11/12/22 6:33		CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	11/12/22 6:33		CMR
Heptane	0.081	0.035		0.33	0.14	0.702	11/12/22 6:33		CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	11/12/22 6:33		CMR

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ANALYTICAL RESULTS

Project Location: 110 Technology Drive
Date Received: 11/2/2022
Field Sample #: IN1-1025-1
Sample ID: 22K0833-02
Sample Matrix: Air
Sampled: 10/26/2022 11:40

Sample Description/Location:
Sub Description/Location:
Canister ID: 1700
Canister Size: 6 liter
Flow Controller ID: 3193
Sample Type: 24 hr

Work Order: 22K0833
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -8.3
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	2.0	1.4		7.1	4.9	0.702	11/12/22 6:33		CMR
2-Hexanone (MBK)	0.066	0.035		0.27	0.14	0.702	11/12/22 6:33		CMR
Isopropanol	ND	1.4		ND	3.4	0.702	11/12/22 6:33		CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	11/12/22 6:33		CMR
Methylene Chloride	ND	0.35		ND	1.2	0.702	11/12/22 6:33		CMR
4-Methyl-2-pentanone (MIBK)	0.046	0.035		0.19	0.14	0.702	11/12/22 6:33		CMR
Naphthalene	9.8	0.035		52	0.18	0.702	11/12/22 6:33		CMR
Propene	3.1	1.4		5.3	2.4	0.702	11/12/22 6:33		CMR
Styrene	0.43	0.035		1.8	0.15	0.702	11/12/22 6:33		CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	11/12/22 6:33		CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.702	11/12/22 6:33		CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.702	11/12/22 6:33		CMR
Toluene	2.9	0.035		11	0.13	0.702	11/12/22 6:33		CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.702	11/12/22 6:33		CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	11/12/22 6:33		CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	11/12/22 6:33		CMR
Trichloroethylene	ND	0.035		ND	0.19	0.702	11/12/22 6:33		CMR
Trichlorofluoromethane (Freon 11)	0.20	0.14		1.1	0.79	0.702	11/12/22 6:33		CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.702	11/12/22 6:33		CMR
1,2,4-Trimethylbenzene	0.14	0.035		0.71	0.17	0.702	11/12/22 6:33		CMR
1,3,5-Trimethylbenzene	0.069	0.035		0.34	0.17	0.702	11/12/22 6:33		CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.702	11/12/22 6:33		CMR
Vinyl Chloride	ND	0.035		ND	0.090	0.702	11/12/22 6:33		CMR
m&p-Xylene	0.80	0.070		3.5	0.30	0.702	11/12/22 6:33		CMR
o-Xylene	0.20	0.035		0.86	0.15	0.702	11/12/22 6:33		CMR
Surrogates	% Recovery			% REC Limits					
4-Bromofluorobenzene (1)	99.6			70-130			11/12/22 6:33		

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 110 Technology Drive
 Date Received: 11/2/2022
Field Sample #: IN2-1025-1
Sample ID: 22K0833-03
 Sample Matrix: Air
 Sampled: 10/26/2022 11:51

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1649
 Canister Size: 6 liter
 Flow Controller ID: 3472
 Sample Type: 24 hr

Work Order: 22K0833
 Initial Vacuum(in Hg): -28.5
 Final Vacuum(in Hg): -8
 Receipt Vacuum(in Hg): -8.2
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	4.0	1.4		9.5	3.3	0.702	11/12/22 7:23		CMR
Benzene	0.53	0.035		1.7	0.11	0.702	11/12/22 7:23		CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	11/12/22 7:23		CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	11/12/22 7:23		CMR
Bromoform	ND	0.035		ND	0.36	0.702	11/12/22 7:23		CMR
Bromomethane	ND	0.035		ND	0.14	0.702	11/12/22 7:23		CMR
1,3-Butadiene	ND	0.035		ND	0.078	0.702	11/12/22 7:23		CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	11/12/22 7:23		CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	11/12/22 7:23		CMR
Carbon Tetrachloride	0.074	0.035		0.47	0.22	0.702	11/12/22 7:23		CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	11/12/22 7:23		CMR
Chloroethane	ND	0.035		ND	0.093	0.702	11/12/22 7:23		CMR
Chloroform	ND	0.035		ND	0.17	0.702	11/12/22 7:23		CMR
Chloromethane	0.41	0.070		0.85	0.14	0.702	11/12/22 7:23		CMR
Cyclohexane	0.041	0.035		0.14	0.12	0.702	11/12/22 7:23		CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	11/12/22 7:23		CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	11/12/22 7:23		CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/12/22 7:23		CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/12/22 7:23		CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/12/22 7:23		CMR
Dichlorodifluoromethane (Freon 12)	0.21	0.035		1.0	0.17	0.702	11/12/22 7:23		CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	11/12/22 7:23		CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	11/12/22 7:23		CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/12/22 7:23		CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/12/22 7:23		CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/12/22 7:23		CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	11/12/22 7:23		CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/12/22 7:23		CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/12/22 7:23		CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	11/12/22 7:23		CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	11/12/22 7:23		CMR
Ethanol	4.2	1.4		8.0	2.6	0.702	11/12/22 7:23		CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.702	11/12/22 7:23		CMR
Ethylbenzene	ND	0.035		ND	0.15	0.702	11/12/22 7:23		CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	11/12/22 7:23		CMR
Heptane	0.055	0.035		0.23	0.14	0.702	11/12/22 7:23		CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	11/12/22 7:23		CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 110 Technology Drive
 Date Received: 11/2/2022
Field Sample #: IN2-1025-1
Sample ID: 22K0833-03
 Sample Matrix: Air
 Sampled: 10/26/2022 11:51

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1649
 Canister Size: 6 liter
 Flow Controller ID: 3472
 Sample Type: 24 hr

Work Order: 22K0833
 Initial Vacuum(in Hg): -28.5
 Final Vacuum(in Hg): -8
 Receipt Vacuum(in Hg): -8.2
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	2.7	1.4		9.5	4.9	0.702	11/12/22 7:23		CMR
2-Hexanone (MBK)	ND	0.035		ND	0.14	0.702	11/12/22 7:23		CMR
Isopropanol	ND	1.4		ND	3.4	0.702	11/12/22 7:23		CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	11/12/22 7:23		CMR
Methylene Chloride	ND	0.35		ND	1.2	0.702	11/12/22 7:23		CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.702	11/12/22 7:23		CMR
Naphthalene	1.8	0.035		9.6	0.18	0.702	11/12/22 7:23		CMR
Propene	ND	1.4		ND	2.4	0.702	11/12/22 7:23		CMR
Styrene	ND	0.035		ND	0.15	0.702	11/12/22 7:23		CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	11/12/22 7:23		CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.702	11/12/22 7:23		CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.702	11/12/22 7:23		CMR
Toluene	0.22	0.035		0.81	0.13	0.702	11/12/22 7:23		CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.702	11/12/22 7:23		CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	11/12/22 7:23		CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	11/12/22 7:23		CMR
Trichloroethylene	ND	0.035		ND	0.19	0.702	11/12/22 7:23		CMR
Trichlorofluoromethane (Freon 11)	0.20	0.14		1.1	0.79	0.702	11/12/22 7:23		CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.702	11/12/22 7:23		CMR
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17	0.702	11/12/22 7:23		CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.702	11/12/22 7:23		CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.702	11/12/22 7:23		CMR
Vinyl Chloride	ND	0.035		ND	0.090	0.702	11/12/22 7:23		CMR
m&p-Xylene	ND	0.070		ND	0.30	0.702	11/12/22 7:23		CMR
o-Xylene	ND	0.035		ND	0.15	0.702	11/12/22 7:23		CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	98.2	70-130	11/12/22 7:23

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 110 Technology Drive
Date Received: 11/2/2022
Field Sample #: DW1-1025-1A
Sample ID: 22K0833-04
Sample Matrix: Air
Sampled: 10/26/2022 11:00

Sample Description/Location:
Sub Description/Location:
Canister ID: 1691
Canister Size: 6 liter
Flow Controller ID: 3172
Sample Type: 24 hr

Work Order: 22K0833
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -4
Receipt Vacuum(in Hg): -6.9
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	5.0	1.4		12	3.3	0.702	11/12/22 8:13		CMR
Benzene	0.15	0.035		0.49	0.11	0.702	11/12/22 8:13		CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	11/12/22 8:13		CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	11/12/22 8:13		CMR
Bromoform	ND	0.035		ND	0.36	0.702	11/12/22 8:13		CMR
Bromomethane	ND	0.035		ND	0.14	0.702	11/12/22 8:13		CMR
1,3-Butadiene	ND	0.035		ND	0.078	0.702	11/12/22 8:13		CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	11/12/22 8:13		CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	11/12/22 8:13		CMR
Carbon Tetrachloride	0.068	0.035		0.43	0.22	0.702	11/12/22 8:13		CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	11/12/22 8:13		CMR
Chloroethane	ND	0.035		ND	0.093	0.702	11/12/22 8:13		CMR
Chloroform	ND	0.035		ND	0.17	0.702	11/12/22 8:13		CMR
Chloromethane	0.43	0.070		0.89	0.14	0.702	11/12/22 8:13		CMR
Cyclohexane	ND	0.035		ND	0.12	0.702	11/12/22 8:13		CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	11/12/22 8:13		CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	11/12/22 8:13		CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/12/22 8:13		CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/12/22 8:13		CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/12/22 8:13		CMR
Dichlorodifluoromethane (Freon 12)	0.24	0.035		1.2	0.17	0.702	11/12/22 8:13		CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	11/12/22 8:13		CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	11/12/22 8:13		CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/12/22 8:13		CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/12/22 8:13		CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/12/22 8:13		CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	11/12/22 8:13		CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/12/22 8:13		CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/12/22 8:13		CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	11/12/22 8:13		CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	11/12/22 8:13		CMR
Ethanol	3.6	1.4		6.8	2.6	0.702	11/12/22 8:13		CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.702	11/12/22 8:13		CMR
Ethylbenzene	ND	0.035		ND	0.15	0.702	11/12/22 8:13		CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	11/12/22 8:13		CMR
Heptane	0.037	0.035		0.15	0.14	0.702	11/12/22 8:13		CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	11/12/22 8:13		CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 110 Technology Drive
 Date Received: 11/2/2022
Field Sample #: DW1-1025-1A
Sample ID: 22K0833-04
 Sample Matrix: Air
 Sampled: 10/26/2022 11:00

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1691
 Canister Size: 6 liter
 Flow Controller ID: 3172
 Sample Type: 24 hr

Work Order: 22K0833
 Initial Vacuum(in Hg): -28
 Final Vacuum(in Hg): -4
 Receipt Vacuum(in Hg): -6.9
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	1.7	1.4		6.0	4.9	0.702	11/12/22	8:13	CMR
2-Hexanone (MBK)	0.053	0.035		0.22	0.14	0.702	11/12/22	8:13	CMR
Isopropanol	ND	1.4		ND	3.4	0.702	11/12/22	8:13	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	11/12/22	8:13	CMR
Methylene Chloride	ND	0.35		ND	1.2	0.702	11/12/22	8:13	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.702	11/12/22	8:13	CMR
Naphthalene	ND	0.035		ND	0.18	0.702	11/12/22	8:13	CMR
Propene	ND	1.4		ND	2.4	0.702	11/12/22	8:13	CMR
Styrene	ND	0.035		ND	0.15	0.702	11/12/22	8:13	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	11/12/22	8:13	CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.702	11/12/22	8:13	CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.702	11/12/22	8:13	CMR
Toluene	0.11	0.035		0.42	0.13	0.702	11/12/22	8:13	CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.702	11/12/22	8:13	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	11/12/22	8:13	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	11/12/22	8:13	CMR
Trichloroethylene	ND	0.035		ND	0.19	0.702	11/12/22	8:13	CMR
Trichlorofluoromethane (Freon 11)	0.21	0.14		1.2	0.79	0.702	11/12/22	8:13	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.702	11/12/22	8:13	CMR
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17	0.702	11/12/22	8:13	CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.702	11/12/22	8:13	CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.702	11/12/22	8:13	CMR
Vinyl Chloride	ND	0.035		ND	0.090	0.702	11/12/22	8:13	CMR
m&p-Xylene	ND	0.070		ND	0.30	0.702	11/12/22	8:13	CMR
o-Xylene	ND	0.035		ND	0.15	0.702	11/12/22	8:13	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	102	70-130	11/12/22 8:13

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 110 Technology Drive
Date Received: 11/2/2022
Field Sample #: DW1-1025-1B
Sample ID: 22K0833-05
Sample Matrix: Air
Sampled: 10/26/2022 11:00

Sample Description/Location:
Sub Description/Location:
Canister ID: 1837
Canister Size: 6 liter
Flow Controller ID: 3681
Sample Type: 24 hr

Work Order: 22K0833
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -9.5
Receipt Vacuum(in Hg): -10.5
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	5.0	1.4		12	3.3	0.696	11/12/22 9:03		CMR
Benzene	0.14	0.035		0.43	0.11	0.696	11/12/22 9:03		CMR
Benzyl chloride	ND	0.035		ND	0.18	0.696	11/12/22 9:03		CMR
Bromodichloromethane	ND	0.035		ND	0.23	0.696	11/12/22 9:03		CMR
Bromoform	ND	0.035		ND	0.36	0.696	11/12/22 9:03		CMR
Bromomethane	ND	0.035		ND	0.14	0.696	11/12/22 9:03		CMR
1,3-Butadiene	ND	0.035		ND	0.077	0.696	11/12/22 9:03		CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.696	11/12/22 9:03		CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.696	11/12/22 9:03		CMR
Carbon Tetrachloride	0.074	0.035		0.46	0.22	0.696	11/12/22 9:03		CMR
Chlorobenzene	ND	0.035		ND	0.16	0.696	11/12/22 9:03		CMR
Chloroethane	ND	0.035		ND	0.092	0.696	11/12/22 9:03		CMR
Chloroform	ND	0.035		ND	0.17	0.696	11/12/22 9:03		CMR
Chloromethane	0.49	0.070		1.0	0.14	0.696	11/12/22 9:03		CMR
Cyclohexane	0.093	0.035		0.32	0.12	0.696	11/12/22 9:03		CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.696	11/12/22 9:03		CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.696	11/12/22 9:03		CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.696	11/12/22 9:03		CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.696	11/12/22 9:03		CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.696	11/12/22 9:03		CMR
Dichlorodifluoromethane (Freon 12)	0.22	0.035		1.1	0.17	0.696	11/12/22 9:03		CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.696	11/12/22 9:03		CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.696	11/12/22 9:03		CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.696	11/12/22 9:03		CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.696	11/12/22 9:03		CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.696	11/12/22 9:03		CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.696	11/12/22 9:03		CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.696	11/12/22 9:03		CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.696	11/12/22 9:03		CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.24	0.696	11/12/22 9:03		CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.696	11/12/22 9:03		CMR
Ethanol	3.5	1.4		6.5	2.6	0.696	11/12/22 9:03		CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.696	11/12/22 9:03		CMR
Ethylbenzene	ND	0.035		ND	0.15	0.696	11/12/22 9:03		CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.696	11/12/22 9:03		CMR
Heptane	0.040	0.035		0.16	0.14	0.696	11/12/22 9:03		CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.696	11/12/22 9:03		CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 110 Technology Drive
 Date Received: 11/2/2022
Field Sample #: DW1-1025-1B
Sample ID: 22K0833-05
 Sample Matrix: Air
 Sampled: 10/26/2022 11:00

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1837
 Canister Size: 6 liter
 Flow Controller ID: 3681
 Sample Type: 24 hr

Work Order: 22K0833
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -9.5
 Receipt Vacuum(in Hg): -10.5
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	1.7	1.4		5.9	4.9	0.696	11/12/22 9:03		CMR
2-Hexanone (MBK)	0.043	0.035		0.18	0.14	0.696	11/12/22 9:03		CMR
Isopropanol	ND	1.4		ND	3.4	0.696	11/12/22 9:03		CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.696	11/12/22 9:03		CMR
Methylene Chloride	ND	0.35		ND	1.2	0.696	11/12/22 9:03		CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.696	11/12/22 9:03		CMR
Naphthalene	ND	0.035		ND	0.18	0.696	11/12/22 9:03		CMR
Propene	ND	1.4		ND	2.4	0.696	11/12/22 9:03		CMR
Styrene	ND	0.035		ND	0.15	0.696	11/12/22 9:03		CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.696	11/12/22 9:03		CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.696	11/12/22 9:03		CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.696	11/12/22 9:03		CMR
Toluene	0.11	0.035		0.42	0.13	0.696	11/12/22 9:03		CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.696	11/12/22 9:03		CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.696	11/12/22 9:03		CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.696	11/12/22 9:03		CMR
Trichloroethylene	ND	0.035		ND	0.19	0.696	11/12/22 9:03		CMR
Trichlorofluoromethane (Freon 11)	0.20	0.14		1.1	0.78	0.696	11/12/22 9:03		CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.696	11/12/22 9:03		CMR
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17	0.696	11/12/22 9:03		CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.696	11/12/22 9:03		CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.696	11/12/22 9:03		CMR
Vinyl Chloride	ND	0.035		ND	0.089	0.696	11/12/22 9:03		CMR
m&p-Xylene	ND	0.070		ND	0.30	0.696	11/12/22 9:03		CMR
o-Xylene	ND	0.035		ND	0.15	0.696	11/12/22 9:03		CMR

Surrogates	% Recovery	% REC Limits		
4-Bromofluorobenzene (1)	100	70-130	11/12/22 9:03	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 110 Technology Drive
Date Received: 11/2/2022
Field Sample #: DW2-1025-1
Sample ID: 22K0833-06
Sample Matrix: Air
Sampled: 10/26/2022 10:35

Sample Description/Location:
Sub Description/Location:
Canister ID: 1999
Canister Size: 6 liter
Flow Controller ID: 3517
Sample Type: 24 hr

Work Order: 22K0833
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -8
Receipt Vacuum(in Hg): -8.3
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	7.3	1.4		17	3.3	0.702	11/12/22	9:51	CMR
Benzene	0.22	0.035		0.69	0.11	0.702	11/12/22	9:51	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	11/12/22	9:51	CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	11/12/22	9:51	CMR
Bromoform	ND	0.035		ND	0.36	0.702	11/12/22	9:51	CMR
Bromomethane	ND	0.035		ND	0.14	0.702	11/12/22	9:51	CMR
1,3-Butadiene	ND	0.035		ND	0.078	0.702	11/12/22	9:51	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	11/12/22	9:51	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	11/12/22	9:51	CMR
Carbon Tetrachloride	0.069	0.035		0.43	0.22	0.702	11/12/22	9:51	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	11/12/22	9:51	CMR
Chloroethane	ND	0.035		ND	0.093	0.702	11/12/22	9:51	CMR
Chloroform	ND	0.035		ND	0.17	0.702	11/12/22	9:51	CMR
Chloromethane	0.44	0.070		0.90	0.14	0.702	11/12/22	9:51	CMR
Cyclohexane	ND	0.035		ND	0.12	0.702	11/12/22	9:51	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	11/12/22	9:51	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	11/12/22	9:51	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/12/22	9:51	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/12/22	9:51	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/12/22	9:51	CMR
Dichlorodifluoromethane (Freon 12)	0.25	0.035		1.2	0.17	0.702	11/12/22	9:51	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	11/12/22	9:51	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	11/12/22	9:51	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/12/22	9:51	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/12/22	9:51	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/12/22	9:51	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	11/12/22	9:51	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/12/22	9:51	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/12/22	9:51	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	11/12/22	9:51	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	11/12/22	9:51	CMR
Ethanol	4.9	1.4		9.2	2.6	0.702	11/12/22	9:51	CMR
Ethyl Acetate	0.40	0.35		1.4	1.3	0.702	11/12/22	9:51	CMR
Ethylbenzene	ND	0.035		ND	0.15	0.702	11/12/22	9:51	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	11/12/22	9:51	CMR
Heptane	0.039	0.035		0.16	0.14	0.702	11/12/22	9:51	CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	11/12/22	9:51	CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: 110 Technology Drive
 Date Received: 11/2/2022
Field Sample #: DW2-1025-1
Sample ID: 22K0833-06
 Sample Matrix: Air
 Sampled: 10/26/2022 10:35

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1999
 Canister Size: 6 liter
 Flow Controller ID: 3517
 Sample Type: 24 hr

Work Order: 22K0833
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -8
 Receipt Vacuum(in Hg): -8.3
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4		ND	4.9	0.702	11/12/22	9:51	CMR
2-Hexanone (MBK)	0.057	0.035		0.23	0.14	0.702	11/12/22	9:51	CMR
Isopropanol	ND	1.4		ND	3.4	0.702	11/12/22	9:51	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	11/12/22	9:51	CMR
Methylene Chloride	ND	0.35		ND	1.2	0.702	11/12/22	9:51	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.702	11/12/22	9:51	CMR
Naphthalene	ND	0.035		ND	0.18	0.702	11/12/22	9:51	CMR
Propene	ND	1.4		ND	2.4	0.702	11/12/22	9:51	CMR
Styrene	ND	0.035		ND	0.15	0.702	11/12/22	9:51	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	11/12/22	9:51	CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.702	11/12/22	9:51	CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.702	11/12/22	9:51	CMR
Toluene	0.19	0.035		0.71	0.13	0.702	11/12/22	9:51	CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.702	11/12/22	9:51	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	11/12/22	9:51	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	11/12/22	9:51	CMR
Trichloroethylene	ND	0.035		ND	0.19	0.702	11/12/22	9:51	CMR
Trichlorofluoromethane (Freon 11)	0.21	0.14		1.2	0.79	0.702	11/12/22	9:51	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.702	11/12/22	9:51	CMR
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17	0.702	11/12/22	9:51	CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.702	11/12/22	9:51	CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.702	11/12/22	9:51	CMR
Vinyl Chloride	ND	0.035		ND	0.090	0.702	11/12/22	9:51	CMR
m&p-Xylene	0.11	0.070		0.49	0.30	0.702	11/12/22	9:51	CMR
o-Xylene	0.036	0.035		0.16	0.15	0.702	11/12/22	9:51	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	103	70-130	11/12/22 9:51

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: TO-15 Prep

Analytical Method: EP

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
22K0833-01 [UPW-1025-1]	B323032	1.5	1	N/A	1000	400	855	11/11/22
22K0833-02 [IN1-1025-1]	B323032	1.5	1	N/A	1000	400	855	11/11/22
22K0833-03 [IN2-1025-1]	B323032	1.5	1	N/A	1000	400	855	11/11/22
22K0833-04 [DW1-1025-1A]	B323032	1.5	1	N/A	1000	400	855	11/11/22
22K0833-05 [DW1-1025-1B]	B323032	1.74	1	N/A	1000	400	1000	11/11/22
22K0833-06 [DW2-1025-1]	B323032	1.5	1	N/A	1000	400	855	11/11/22

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result		Limits		Limit	
Batch B323032 - TO-15 Prep											
Blank (B323032-BLK1)					Prepared & Analyzed: 11/11/22						
Acetone	ND	1.4									
Benzene	ND	0.035									
Benzyl chloride	ND	0.035									
Bromodichloromethane	ND	0.035									
Bromoform	ND	0.035									
Bromomethane	ND	0.035									
1,3-Butadiene	ND	0.035									
2-Butanone (MEK)	ND	1.4									
Carbon Disulfide	ND	0.35									
Carbon Tetrachloride	ND	0.035									
Chlorobenzene	ND	0.035									
Chloroethane	ND	0.035									
Chloroform	ND	0.035									
Chloromethane	ND	0.070									
Cyclohexane	ND	0.035									
Dibromochloromethane	ND	0.035									
1,2-Dibromoethane (EDB)	ND	0.035									
1,2-Dichlorobenzene	ND	0.035									
1,3-Dichlorobenzene	ND	0.035									
1,4-Dichlorobenzene	ND	0.035									
Dichlorodifluoromethane (Freon 12)	ND	0.035									
1,1-Dichloroethane	ND	0.035									
1,2-Dichloroethane	ND	0.035									
1,1-Dichloroethylene	ND	0.035									
cis-1,2-Dichloroethylene	ND	0.035									
trans-1,2-Dichloroethylene	ND	0.035									
1,2-Dichloropropane	ND	0.035									
cis-1,3-Dichloropropene	ND	0.035									
trans-1,3-Dichloropropene	ND	0.035									
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035									
1,4-Dioxane	ND	0.35									
Ethanol	ND	1.4									L-0
Ethyl Acetate	ND	0.35									
Ethylbenzene	ND	0.035									
4-Ethyltoluene	ND	0.035									
Heptane	ND	0.035									
Hexachlorobutadiene	ND	0.035									
Hexane	ND	1.4									
2-Hexanone (MBK)	ND	0.035									
Isopropanol	ND	1.4									
Methyl tert-Butyl Ether (MTBE)	ND	0.035									
Methylene Chloride	ND	0.35									
4-Methyl-2-pentanone (MIBK)	ND	0.035									
Naphthalene	ND	0.035									
Propene	ND	1.4									
Styrene	ND	0.035									

L-03

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	Limits	RPD	Limit	

Batch B323032 - TO-15 Prep
Blank (B323032-BLK1)

Prepared & Analyzed: 11/11/22

1,1,2,2-Tetrachloroethane	ND	0.035
Tetrachloroethylene	ND	0.035
Tetrahydrofuran	ND	0.35
Toluene	ND	0.035
1,2,4-Trichlorobenzene	ND	0.035
1,1,1-Trichloroethane	ND	0.035
1,1,2-Trichloroethane	ND	0.035
Trichloroethylene	ND	0.035
Trichlorofluoromethane (Freon 11)	ND	0.14
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14
1,2,4-Trimethylbenzene	ND	0.035
1,3,5-Trimethylbenzene	ND	0.035
Vinyl Acetate	ND	0.70
Vinyl Chloride	ND	0.035
m&p-Xylene	ND	0.070
o-Xylene	ND	0.035

<i>Surrogate: 4-Bromofluorobenzene (1)</i>	<i>7.91</i>	<i>8.00</i>	<i>98.9</i>	<i>70-130</i>
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LCS (B323032-BS1)

Prepared & Analyzed: 11/11/22

Acetone	5.20	5.00	104	70-130
Benzene	5.45	5.00	109	70-130
Benzyl chloride	6.01	5.00	120	70-130
Bromodichloromethane	5.36	5.00	107	70-130
Bromoform	5.34	5.00	107	70-130
Bromomethane	4.38	5.00	87.6	70-130
1,3-Butadiene	4.22	5.00	84.5	70-130
2-Butanone (MEK)	5.04	5.00	101	70-130
Carbon Disulfide	5.19	5.00	104	70-130
Carbon Tetrachloride	5.44	5.00	109	70-130
Chlorobenzene	4.92	5.00	98.5	70-130
Chloroethane	4.74	5.00	94.9	70-130
Chloroform	4.88	5.00	97.7	70-130
Chloromethane	4.17	5.00	83.4	70-130
Cyclohexane	5.35	5.00	107	70-130
Dibromochloromethane	5.34	5.00	107	70-130
1,2-Dibromoethane (EDB)	4.97	5.00	99.4	70-130
1,2-Dichlorobenzene	5.03	5.00	101	70-130
1,3-Dichlorobenzene	5.24	5.00	105	70-130
1,4-Dichlorobenzene	5.19	5.00	104	70-130
Dichlorodifluoromethane (Freon 12)	4.86	5.00	97.2	70-130
1,1-Dichloroethane	5.24	5.00	105	70-130
1,2-Dichloroethane	5.14	5.00	103	70-130
1,1-Dichloroethylene	5.18	5.00	104	70-130
cis-1,2-Dichloroethylene	4.97	5.00	99.5	70-130
trans-1,2-Dichloroethylene	5.08	5.00	102	70-130
1,2-Dichloropropane	5.72	5.00	114	70-130

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	%REC	Limits	RPD	Limit	
Batch B323032 - TO-15 Prep											
LCS (B323032-BS1)					Prepared & Analyzed: 11/11/22						
cis-1,3-Dichloropropene	5.46				5.00		109	70-130			L-03
trans-1,3-Dichloropropene	5.59				5.00		112	70-130			
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	4.15				5.00		83.1	70-130			
1,4-Dioxane	5.07				5.00		101	70-130			
Ethanol	3.47				5.00	69.4	*	70-130			
Ethyl Acetate	5.20				5.00		104	70-130			
Ethylbenzene	5.36				5.00		107	70-130			
4-Ethyltoluene	5.48				5.00		110	70-130			
Heptane	5.70				5.00		114	70-130			
Hexachlorobutadiene	4.48				5.00		89.5	70-130			
Hexane	5.48				5.00		110	70-130			
2-Hexanone (MBK)	5.61				5.00		112	70-130			
Isopropanol	4.15				5.00		82.9	70-130			
Methyl tert-Butyl Ether (MTBE)	4.95				5.00		98.9	70-130			
Methylene Chloride	4.46				5.00		89.2	70-130			
4-Methyl-2-pentanone (MIBK)	5.66				5.00		113	70-130			
Naphthalene	4.62				5.00		92.5	70-130			
Propene	4.65				5.00		93.0	70-130			
Styrene	5.33				5.00		107	70-130			
1,1,2,2-Tetrachloroethane	5.39				5.00		108	70-130			
Tetrachloroethylene	4.66				5.00		93.1	70-130			
Tetrahydrofuran	5.28				5.00		106	70-130			
Toluene	5.28				5.00		106	70-130			
1,2,4-Trichlorobenzene	4.07				5.00		81.5	70-130			
1,1,1-Trichloroethane	5.08				5.00		102	70-130			
1,1,2-Trichloroethane	5.10				5.00		102	70-130			
Trichloroethylene	5.12				5.00		102	70-130			
Trichlorofluoromethane (Freon 11)	5.02				5.00		100	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	4.42				5.00		88.4	70-130			
1,2,4-Trimethylbenzene	5.37				5.00		107	70-130			
1,3,5-Trimethylbenzene	5.44				5.00		109	70-130			
Vinyl Acetate	4.85				5.00		97.1	70-130			
Vinyl Chloride	4.62				5.00		92.3	70-130			
m&p-Xylene	11.1				10.0		111	70-130			
o-Xylene	5.58				5.00		112	70-130			
Surrogate: 4-Bromofluorobenzene (1)	8.31				8.00		104	70-130			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
	Results	RL	Results	RL							
Batch B323032 - TO-15 Prep											
Duplicate (B323032-DUP1)		Source: 22K0833-06				Prepared: 11/11/22 Analyzed: 11/12/22					
Acetone	7.4	1.4	17	3.3		7.3			0.449	25	
Benzene	0.23	0.035	0.73	0.11		0.22			5.03	25	
Benzyl chloride	ND	0.035	ND	0.18		ND				25	
Bromodichloromethane	ND	0.035	ND	0.24		ND				25	
Bromoform	ND	0.035	ND	0.36		ND				25	
Bromomethane	ND	0.035	ND	0.14		ND				25	
1,3-Butadiene	ND	0.035	ND	0.078		ND				25	
2-Butanone (MEK)	0.66	1.4	1.9	4.1		0.67			1.49	25	
Carbon Disulfide	ND	0.35	ND	1.1		ND				25	
Carbon Tetrachloride	0.072	0.035	0.45	0.22		0.069			4.98	25	
Chlorobenzene	ND	0.035	ND	0.16		ND				25	
Chloroethane	ND	0.035	ND	0.093		ND				25	
Chloroform	ND	0.035	ND	0.17		ND				25	
Chloromethane	0.44	0.070	0.90	0.14		0.44			0.482	25	
Cyclohexane	0.033	0.035	0.11	0.12		0.028			16.1	25	
Dibromochloromethane	ND	0.035	ND	0.30		ND				25	
1,2-Dibromoethane (EDB)	ND	0.035	ND	0.27		ND				25	
1,2-Dichlorobenzene	ND	0.035	ND	0.21		ND				25	
1,3-Dichlorobenzene	ND	0.035	ND	0.21		ND				25	
1,4-Dichlorobenzene	ND	0.035	ND	0.21		ND				25	
Dichlorodifluoromethane (Freon 12)	0.19	0.035	0.95	0.17		0.25			25.3	25	R-01
1,1-Dichloroethane	ND	0.035	ND	0.14		ND				25	
1,2-Dichloroethane	ND	0.035	ND	0.14		ND				25	
1,1-Dichloroethylene	ND	0.035	ND	0.14		ND				25	
cis-1,2-Dichloroethylene	ND	0.035	ND	0.14		ND				25	
trans-1,2-Dichloroethylene	ND	0.035	ND	0.14		ND				25	
1,2-Dichloropropane	ND	0.035	ND	0.16		ND				25	
cis-1,3-Dichloropropene	ND	0.035	ND	0.16		ND				25	
trans-1,3-Dichloropropene	ND	0.035	ND	0.16		ND				25	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035	ND	0.25		ND				25	
1,4-Dioxane	ND	0.35	ND	1.3		ND				25	
Ethanol	4.9	1.4	9.2	2.6		4.9			0.101	25	
Ethyl Acetate	0.38	0.35	1.4	1.3		0.40			3.25	25	
Ethylbenzene	0.034	0.035	0.15	0.15		0.032			6.45	25	
4-Ethyltoluene	ND	0.035	ND	0.17		ND				25	
Heptane	0.039	0.035	0.16	0.14		0.039			0.00	25	
Hexachlorobutadiene	ND	0.035	ND	0.37		ND				25	
Hexane	1.2	1.4	4.1	4.9		1.2			1.02	25	
2-Hexanone (MBK)	0.066	0.035	0.27	0.14		0.057			14.9	25	
Isopropanol	1.0	1.4	2.6	3.4		1.0			1.36	25	
Methyl tert-Butyl Ether (MTBE)	ND	0.035	ND	0.13		ND				25	
Methylene Chloride	0.26	0.35	0.91	1.2		0.25			6.08	25	
4-Methyl-2-pentanone (MIBK)	0.031	0.035	0.13	0.14		0.033			6.59	25	
Naphthalene	ND	0.035	ND	0.18		0.027				25	
Propene	ND	1.4	ND	2.4		ND				25	
Styrene	ND	0.035	ND	0.15		ND				25	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result		Limits		Limit	
Batch B323032 - TO-15 Prep											
Duplicate (B323032-DUP1)	Source: 22K0833-06				Prepared: 11/11/22 Analyzed: 11/12/22						
1,1,2,2-Tetrachloroethane	ND	0.035	ND	0.24		ND				25	
Tetrachloroethylene	ND	0.035	ND	0.24		ND				25	
Tetrahydrofuran	ND	0.35	ND	1.0		ND				25	
Toluene	0.19	0.035	0.72	0.13		0.19			0.738	25	
1,2,4-Trichlorobenzene	ND	0.035	ND	0.26		ND				25	
1,1,1-Trichloroethane	ND	0.035	ND	0.19		ND				25	
1,1,2-Trichloroethane	ND	0.035	ND	0.19		ND				25	
Trichloroethylene	ND	0.035	ND	0.19		ND				25	
Trichlorofluoromethane (Freon 11)	0.20	0.14	1.1	0.79		0.21			6.50	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.050	0.14	0.38	1.1		0.057			13.2	25	
1,2,4-Trimethylbenzene	0.027	0.035	0.13	0.17		0.027			0.00	25	
1,3,5-Trimethylbenzene	ND	0.035	ND	0.17		ND				25	
Vinyl Acetate	0.44	0.70	1.6	2.5		0.44			1.59	25	
Vinyl Chloride	ND	0.035	ND	0.090		ND				25	
m&p-Xylene	0.12	0.070	0.50	0.30		0.11			2.45	25	
o-Xylene	0.038	0.035	0.16	0.15		0.036			5.71	25	
Surrogate: 4-Bromofluorobenzene (1)	7.90				8.00		98.7	70-130			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332**FLAG/QUALIFIER SUMMARY**

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
L-03	Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.
R-01	Duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (S076501-ICV1)			Lab File ID: G22A256016.D			Analyzed: 09/13/22 22:00			
Bromochloromethane (1)	1141026	8.307	1141026	8.307	100	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	2751702	10.081	2751702	10.081	100	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	2471195	14.446	2471195	14.446	100	60 - 140	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (S079336-CCV1)			Lab File ID: G22A315004.D			Analyzed: 11/11/22 13:00			
Bromochloromethane (1)	1360146	8.313	1360146	8.313	100	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	2986790	10.087	2986790	10.087	100	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	2671925	14.446	2671925	14.446	100	60 - 140	0.0000	+/-0.50	
LCS (B323032-BS1)			Lab File ID: G22A315005.D			Analyzed: 11/11/22 13:40			
Bromochloromethane (1)	1347118	8.313	1360146	8.313	99	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	2911464	10.081	2986790	10.087	97	60 - 140	-0.0060	+/-0.50	
Chlorobenzene-d5 (1)	2589726	14.446	2671925	14.446	97	60 - 140	0.0000	+/-0.50	
Blank (B323032-BLK1)			Lab File ID: G22A315008.D			Analyzed: 11/11/22 15:46			
Bromochloromethane (1)	1165202	8.319	1360146	8.313	86	60 - 140	0.0060	+/-0.50	
1,4-Difluorobenzene (1)	2388877	10.081	2986790	10.087	80	60 - 140	-0.0060	+/-0.50	
Chlorobenzene-d5 (1)	2169580	14.446	2671925	14.446	81	60 - 140	0.0000	+/-0.50	
UPW-1025-1 (22K0833-01)			Lab File ID: G22A315028.D			Analyzed: 11/12/22 05:44			
Bromochloromethane (1)	1254851	8.307	1360146	8.313	92	60 - 140	-0.0060	+/-0.50	
1,4-Difluorobenzene (1)	2574642	10.081	2986790	10.087	86	60 - 140	-0.0060	+/-0.50	
Chlorobenzene-d5 (1)	2373363	14.446	2671925	14.446	89	60 - 140	0.0000	+/-0.50	
IN1-1025-1 (22K0833-02)			Lab File ID: G22A315029.D			Analyzed: 11/12/22 06:33			
Bromochloromethane (1)	1223065	8.307	1360146	8.313	90	60 - 140	-0.0060	+/-0.50	
1,4-Difluorobenzene (1)	2474015	10.081	2986790	10.087	83	60 - 140	-0.0060	+/-0.50	
Chlorobenzene-d5 (1)	2311421	14.446	2671925	14.446	87	60 - 140	0.0000	+/-0.50	
IN2-1025-1 (22K0833-03)			Lab File ID: G22A315030.D			Analyzed: 11/12/22 07:23			
Bromochloromethane (1)	1207189	8.307	1360146	8.313	89	60 - 140	-0.0060	+/-0.50	
1,4-Difluorobenzene (1)	2454841	10.081	2986790	10.087	82	60 - 140	-0.0060	+/-0.50	
Chlorobenzene-d5 (1)	2250273	14.446	2671925	14.446	84	60 - 140	0.0000	+/-0.50	
DW1-1025-1A (22K0833-04)			Lab File ID: G22A315031.D			Analyzed: 11/12/22 08:13			
Bromochloromethane (1)	1414951	8.307	1360146	8.313	104	60 - 140	-0.0060	+/-0.50	
1,4-Difluorobenzene (1)	3167117	10.081	2986790	10.087	106	60 - 140	-0.0060	+/-0.50	
Chlorobenzene-d5 (1)	2951846	14.446	2671925	14.446	110	60 - 140	0.0000	+/-0.50	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DW1-1025-1B (22K0833-05) Lab File ID: G22A315032.D Analyzed: 11/12/22 09:03									
Bromochloromethane (1)	1272690	8.307	1360146	8.313	94	60 - 140	-0.0060	+/-0.50	
1,4-Difluorobenzene (1)	2672139	10.081	2986790	10.087	89	60 - 140	-0.0060	+/-0.50	
Chlorobenzene-d5 (1)	2473829	14.446	2671925	14.446	93	60 - 140	0.0000	+/-0.50	
DW2-1025-1 (22K0833-06) Lab File ID: G22A315033.D Analyzed: 11/12/22 09:51									
Bromochloromethane (1)	1375629	8.307	1360146	8.313	101	60 - 140	-0.0060	+/-0.50	
1,4-Difluorobenzene (1)	3043045	10.081	2986790	10.087	102	60 - 140	-0.0060	+/-0.50	
Chlorobenzene-d5 (1)	2817104	14.446	2671925	14.446	105	60 - 140	0.0000	+/-0.50	
Duplicate (B323032-DUP1) Lab File ID: G22A315034.D Analyzed: 11/12/22 10:38									
Bromochloromethane (1)	1235855	8.307	1360146	8.313	91	60 - 140	-0.0060	+/-0.50	
1,4-Difluorobenzene (1)	2530051	10.081	2986790	10.087	85	60 - 140	-0.0060	+/-0.50	
Chlorobenzene-d5 (1)	2335399	14.446	2671925	14.446	87	60 - 140	0.0000	+/-0.50	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CONTINUING CALIBRATION CHECK

EPA TO-15

S079336-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.00	5.21	1.084004	1.130167		4.3	30
Benzene	A	5.00	5.12	0.9129288	0.935821		2.5	30
Benzyl chloride	A	5.00	5.61	1.030942	1.156476		12.2	30
Bromodichloromethane	A	5.00	4.98	0.6953811	0.6927437		-0.4	30
Bromoform	A	5.00	4.94	0.5656468	0.5592169		-1.1	30
Bromomethane	A	5.00	4.20	0.6009459	0.5051599		-15.9	30
1,3-Butadiene	A	5.00	4.19	0.5443004	0.4565898		-16.1	30
2-Butanone (MEK)	A	5.00	4.65	1.507683	1.403135		-6.9	30
Carbon Disulfide	A	5.00	4.54	2.02748	1.839752		-9.3	30
Carbon Tetrachloride	A	5.00	4.95	0.5479998	0.5428383		-0.9	30
Chlorobenzene	A	5.00	4.62	0.8809329	0.8136893		-7.6	30
Chloroethane	A	5.00	4.46	0.3452967	0.3078411		-10.8	30
Chloroform	A	5.00	4.66	1.561184	1.455775		-6.8	30
Chloromethane	A	5.00	4.07	0.6821899	0.5548451		-18.7	30
Cyclohexane	A	5.00	4.86	0.3600845	0.3497786		-2.9	30
Dibromochloromethane	A	5.00	4.96	0.6396581	0.6343142		-0.8	30
1,2-Dibromoethane (EDB)	A	5.00	4.71	0.6171207	0.5815636		-5.8	30
1,2-Dichlorobenzene	A	5.00	4.88	0.6937094	0.6774064		-2.4	30
1,3-Dichlorobenzene	A	5.00	5.07	0.7409581	0.7517828		1.5	30
1,4-Dichlorobenzene	A	5.00	5.09	0.7218155	0.7342925		1.7	30
Dichlorodifluoromethane (Freon 12)	A	5.00	4.70	1.62808	1.530578		-6.0	30
1,1-Dichloroethane	A	5.00	4.81	1.342742	1.290918		-3.9	30
1,2-Dichloroethane	A	5.00	4.73	0.9627523	0.9104587		-5.4	30
1,1-Dichloroethylene	A	5.00	4.75	1.140142	1.082892		-5.0	30
cis-1,2-Dichloroethylene	A	5.00	4.65	0.9670963	0.9001422		-6.9	30
trans-1,2-Dichloroethylene	A	5.00	4.62	1.001825	0.9247972		-7.7	30
1,2-Dichloropropane	A	5.00	5.21	0.3567989	0.3718582		4.2	30
cis-1,3-Dichloropropene	A	5.00	5.20	0.5092852	0.5301976		4.1	30
trans-1,3-Dichloropropene	A	5.00	5.12	0.4570981	0.4679619		2.4	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	A	5.00	4.32	1.73998	1.504293		-13.5	30
1,4-Dioxane	A	5.00	4.60	0.1857641	0.1709978		-7.9	30
Ethanol	A	5.00	4.00	0.2343264	0.1876799		-19.9	30
Ethyl Acetate	A	5.00	5.16	0.2308163	0.2382509		3.2	30
Ethylbenzene	A	5.00	5.02	1.455024	1.461078		0.4	30
4-Ethyltoluene	A	5.00	5.17	1.413771	1.462136		3.4	30
Heptane	A	5.00	5.30	0.2850308	0.3019959		6.0	30
Hexachlorobutadiene	A	5.00	4.99	0.4677459	0.4664957		-0.3	30
Hexane	A	5.00	5.04	0.8985394	0.8508781		0.8	30

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CONTINUING CALIBRATION CHECK

EPA TO-15

S079336-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
2-Hexanone (MBK)	A	5.00	5.20	0.7712864	0.8014722		3.9	30
Isopropanol	A	5.00	4.54	1.338902	1.215998		-9.2	30
Methyl tert-Butyl Ether (MTBE)	A	5.00	4.68	1.834723	1.716599		-6.4	30
Methylene Chloride	A	5.00	4.11	0.9597215	0.7884577		-17.8	30
4-Methyl-2-pentanone (MIBK)	A	5.00	5.26	0.7726854	0.8124516		5.1	30
Naphthalene	A	5.00	5.21	1.092246	1.139068		4.3	30
Propene	A	5.00	4.49	0.5941328	0.5330934		-10.3	30
Styrene	A	5.00	5.09	0.7890752	0.8037926		1.9	30
1,1,2,2-Tetrachloroethane	A	5.00	5.08	0.9851261	1.001686		1.7	30
Tetrachloroethylene	A	5.00	4.47	0.457194	0.4083606		-10.7	30
Tetrahydrofuran	A	5.00	5.07	0.2957092	0.2999584		1.4	30
Toluene	A	5.00	4.90	1.15399	1.130147		-2.1	30
1,2,4-Trichlorobenzene	A	5.00	4.81	0.4973623	0.4784026		-3.8	30
1,1,1-Trichloroethane	A	5.00	4.91	0.5975698	0.5868304		-1.8	30
1,1,2-Trichloroethane	A	5.00	4.72	0.4162703	0.3929979		-5.6	30
Trichloroethylene	A	5.00	4.80	0.3947958	0.3790017		-4.0	30
Trichlorofluoromethane (Freon 11)	A	5.00	4.87	1.463327	1.424911		-2.6	30
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	A	5.00	4.24	1.432547	1.214183		-15.2	30
1,2,4-Trimethylbenzene	A	5.00	5.22	1.156019	1.207471		4.5	30
1,3,5-Trimethylbenzene	A	5.00	5.27	1.190388	1.253908		5.3	30
Vinyl Acetate	A	5.00	4.16	1.986739	1.652423		-16.8	30
Vinyl Chloride	A	5.00	4.40	0.7142115	0.628689		-12.0	30
m&p-Xylene	A	10.0	10.6	1.129066	1.192354		5.6	30
o-Xylene	A	5.00	5.26	1.138955	1.197046		5.1	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
Acetone	AIHA,NY,ME,NH
Benzene	AIHA,FL,NJ,NY,ME,NH,VA
Benzyl chloride	AIHA,FL,NJ,NY,ME,NH,VA
Bromodichloromethane	AIHA,NJ,NY,ME,NH,VA
Bromoform	AIHA,NJ,NY,ME,NH,VA
Bromomethane	AIHA,FL,NJ,NY,ME,NH
1,3-Butadiene	AIHA,NJ,NY,ME,NH,VA
2-Butanone (MEK)	AIHA,FL,NJ,NY,ME,NH,VA
Carbon Disulfide	AIHA,NJ,NY,ME,NH,VA
Carbon Tetrachloride	AIHA,FL,NJ,NY,ME,NH,VA
Chlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
Chloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Chloroform	AIHA,FL,NJ,NY,ME,NH,VA
Chloromethane	AIHA,FL,NJ,NY,ME,NH,VA
Cyclohexane	AIHA,NJ,NY,ME,NH,VA
Dibromochloromethane	AIHA,NY,ME,NH
1,2-Dibromoethane (EDB)	AIHA,NJ,NY,ME,NH
1,2-Dichlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
1,3-Dichlorobenzene	AIHA,NJ,NY,ME,NH
1,4-Dichlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
Dichlorodifluoromethane (Freon 12)	AIHA,NY,ME,NH
1,1-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,2-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1-Dichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
cis-1,2-Dichloroethylene	AIHA,FL,NY,ME,NH,VA
trans-1,2-Dichloroethylene	AIHA,NJ,NY,ME,NH,VA
1,2-Dichloropropane	AIHA,FL,NJ,NY,ME,NH,VA
cis-1,3-Dichloropropene	AIHA,FL,NJ,NY,ME,NH,VA
trans-1,3-Dichloropropene	AIHA,NY,ME,NH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	AIHA,NJ,NY,ME,NH,VA
1,4-Dioxane	AIHA,NJ,NY,ME,NH,VA
Ethanol	AIHA
Ethyl Acetate	AIHA
Ethylbenzene	AIHA,FL,NJ,NY,ME,NH,VA
4-Ethyltoluene	AIHA,NJ
Heptane	AIHA,NJ,NY,ME,NH,VA
Hexachlorobutadiene	AIHA,NJ,NY,ME,NH,VA
Hexane	AIHA,FL,NJ,NY,ME,NH,VA
2-Hexanone (MBK)	AIHA
Isopropanol	AIHA,NY,ME,NH
Methyl tert-Butyl Ether (MTBE)	AIHA,FL,NJ,NY,ME,NH,VA
Methylene Chloride	AIHA,FL,NJ,NY,ME,NH,VA
4-Methyl-2-pentanone (MIBK)	AIHA,FL,NJ,NY,ME,NH
Naphthalene	NY,ME,NH
Propene	AIHA
Styrene	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY,ME,NH,VA

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
Tetrachloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Tetrahydrofuran	AIHA
Toluene	AIHA,FL,NJ,NY,ME,NH,VA
1,2,4-Trichlorobenzene	AIHA,NJ,NY,ME,NH,VA
1,1,1-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Trichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Trichlorofluoromethane (Freon 11)	AIHA,NY,ME,NH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	AIHA,NJ,NY,ME,NH,VA
1,2,4-Trimethylbenzene	AIHA,NJ,NY,ME,NH
1,3,5-Trimethylbenzene	AIHA,NJ,NY,ME,NH
Vinyl Acetate	AIHA,FL,NJ,NY,ME,NH,VA
Vinyl Chloride	AIHA,FL,NJ,NY,ME,NH,VA
m&p-Xylene	AIHA,FL,NJ,NY,ME,NH,VA
o-Xylene	AIHA,FL,NJ,NY,ME,NH,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO 17025:2017	100033	03/1/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
FL	Florida Department of Health	E871027 NELAP	06/30/2023
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2022

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Air Media Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Clean Air

Received By <u>UR</u>	Date <u>11/2</u>	Time <u>940</u>
How Were the samples received?	In Cooler <u>Y</u>	On Ice <u> </u>
	In Box <u> </u>	No Ice <u> </u>
Were samples within Temperature Compliance?	Within 2-6°C <u> </u>	Ambient <u> </u>
Was Custody Seal In tact?		By Gun # <u> </u>
Was COC Relinquished?	<u>NA</u>	By Blank # <u> </u>
	<u>Y</u>	Actual Temp - <u> </u>
Are there any loose caps/valves on any samples?	<u>F</u>	Actual Temp - <u> </u>
Is COC in ink/ Legible?	<u>Y</u>	Were Samples Tampered with? <u>NA</u>
Did COC Include all Pertinent Information?	Client? <u>Y</u>	Does Chain Agree With Samples? <u>Y</u>
Are Sample Labels filled out and legible?	Project? <u>Y</u>	
Are there Rushes?	<u>F</u>	Analysis? <u>Y</u>
Samples are received within holding time?	<u>Y</u>	ID's? <u>Y</u>
Proper Media Used?	<u>Y</u>	Who was notified? <u> </u>
Are there Trip Blanks?	<u>F</u>	Individually Certified Cans? <u>F</u>
		Collection Dates/Times? <u>Y</u>
		Is there enough Volume? <u>Y</u>

Containers:	#	Size	Regulator	Duration	Accessories:		
Summa Cans	<u>2</u>	<u>6L</u>	<u>6</u>	<u>24 hr</u>	Nut/Ferrule		IC Train
Tedlar Bags					Tubing		
TO-17 Tubes					T-Connector		Shipping Charges
Radiello					Syringe		
Pufs/TO-11s					Tedlar		

Can #'s					Reg #'s			
1826					3690			
1700					3193			
1649					3472			
1691					3172			
1837					3681			
1999					3517			
Unused Media					Pufs/TO-17's			

Comments:

November 16, 2022

Tim Rodak
Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275

Project Location: PA
Client Job Number:
Project Number: 14796 Quote 123244
Laboratory Work Order Number: 22K0834

Enclosed are results of analyses for samples as received by the laboratory on November 2, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Albania Hernandez
Project Manager

Table of Contents

Sample Summary	3
Case Narrative	4
Sample Results	5
Sample Preparation Information	17
QC Data	18
Air Toxics by EPA Compendium Methods	18
B322997	18
Flag/Qualifier Summary	23
Internal standard Area & RT Summary	24
Continuing Calibration Check	26
Certifications	28
Chain of Custody/Sample Receipt	30

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275
ATTN: Tim Rodak

REPORT DATE: 11/16/2022

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 14796 Quote 123244

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22K0834

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: PA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
UPW-1026-2A	22K0834-01	Air		EPA TO-15	
UPW-1026-2B	22K0834-02	Air		EPA TO-15	
IN1-1026-2	22K0834-03	Air		EPA TO-15	
IN2-1026-2	22K0834-04	Air		EPA TO-15	
DW1-1026-2	22K0834-05	Air		EPA TO-15	
DW2-1026-2	22K0834-06	Air		EPA TO-15	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA TO-15

Qualifications:

L-03

Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Ethanol

22K0834-01[UPW-1026-2A], 22K0834-02[UPW-1026-2B], 22K0834-03[IN1-1026-2], 22K0834-04[IN2-1026-2], 22K0834-05[DW1-1026-2], 22K0834-06[DW2-1026-2], B322997-BLK1, B322997-BS1

R-01

Duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result.

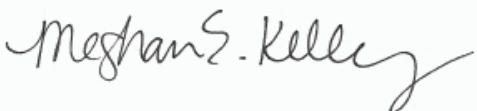
Analyte & Samples(s) Qualified:

Dichlorodifluoromethane (Freon 12)

B322997-DUP1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

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ANALYTICAL RESULTS

Project Location: PA
 Date Received: 11/2/2022
Field Sample #: UPW-1026-2A
Sample ID: 22K0834-01
 Sample Matrix: Air
 Sampled: 10/27/2022 16:12

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1641
 Canister Size: 6 liter
 Flow Controller ID: 3743
 Sample Type: 24 hr

Work Order: 22K0834
 Initial Vacuum(in Hg): -26
 Final Vacuum(in Hg): -8
 Receipt Vacuum(in Hg): -9.8
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		
	Results	RL		Results	RL		Analyzed	Analyst	
Acetone	3.3	1.4		7.8	3.3	0.702	11/11/22	4:00	CMR
Benzene	0.17	0.035		0.56	0.11	0.702	11/11/22	4:00	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	11/11/22	4:00	CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	11/11/22	4:00	CMR
Bromoform	ND	0.035		ND	0.36	0.702	11/11/22	4:00	CMR
Bromomethane	ND	0.035		ND	0.14	0.702	11/11/22	4:00	CMR
1,3-Butadiene	ND	0.035		ND	0.078	0.702	11/11/22	4:00	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	11/11/22	4:00	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	11/11/22	4:00	CMR
Carbon Tetrachloride	0.073	0.035		0.46	0.22	0.702	11/11/22	4:00	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	11/11/22	4:00	CMR
Chloroethane	ND	0.035		ND	0.093	0.702	11/11/22	4:00	CMR
Chloroform	ND	0.035		ND	0.17	0.702	11/11/22	4:00	CMR
Chloromethane	0.38	0.070		0.78	0.14	0.702	11/11/22	4:00	CMR
Cyclohexane	0.036	0.035		0.13	0.12	0.702	11/11/22	4:00	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	11/11/22	4:00	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	11/11/22	4:00	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/11/22	4:00	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/11/22	4:00	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/11/22	4:00	CMR
Dichlorodifluoromethane (Freon 12)	0.21	0.035		1.0	0.17	0.702	11/11/22	4:00	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	11/11/22	4:00	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	11/11/22	4:00	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/11/22	4:00	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/11/22	4:00	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/11/22	4:00	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	11/11/22	4:00	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/11/22	4:00	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/11/22	4:00	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	11/11/22	4:00	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	11/11/22	4:00	CMR
Ethanol	3.5	1.4	L-03	6.6	2.6	0.702	11/11/22	4:00	CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.702	11/11/22	4:00	CMR
Ethylbenzene	0.046	0.035		0.20	0.15	0.702	11/11/22	4:00	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	11/11/22	4:00	CMR
Heptane	0.072	0.035		0.29	0.14	0.702	11/11/22	4:00	CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	11/11/22	4:00	CMR

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ANALYTICAL RESULTS

Project Location: PA
 Date Received: 11/2/2022
Field Sample #: UPW-1026-2A
Sample ID: 22K0834-01
 Sample Matrix: Air
 Sampled: 10/27/2022 16:12

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1641
 Canister Size: 6 liter
 Flow Controller ID: 3743
 Sample Type: 24 hr

Work Order: 22K0834
 Initial Vacuum(in Hg): -26
 Final Vacuum(in Hg): -8
 Receipt Vacuum(in Hg): -9.8
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4		ND	4.9	0.702	11/11/22 4:00		CMR
2-Hexanone (MBK)	0.068	0.035		0.28	0.14	0.702	11/11/22 4:00		CMR
Isopropanol	ND	1.4		ND	3.4	0.702	11/11/22 4:00		CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	11/11/22 4:00		CMR
Methylene Chloride	ND	0.35		ND	1.2	0.702	11/11/22 4:00		CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.702	11/11/22 4:00		CMR
Naphthalene	ND	0.035		ND	0.18	0.702	11/11/22 4:00		CMR
Propene	ND	1.4		ND	2.4	0.702	11/11/22 4:00		CMR
Styrene	ND	0.035		ND	0.15	0.702	11/11/22 4:00		CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	11/11/22 4:00		CMR
Tetrachloroethylene	0.055	0.035		0.37	0.24	0.702	11/11/22 4:00		CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.702	11/11/22 4:00		CMR
Toluene	0.34	0.035		1.3	0.13	0.702	11/11/22 4:00		CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.702	11/11/22 4:00		CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	11/11/22 4:00		CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	11/11/22 4:00		CMR
Trichloroethylene	ND	0.035		ND	0.19	0.702	11/11/22 4:00		CMR
Trichlorofluoromethane (Freon 11)	0.20	0.14		1.1	0.79	0.702	11/11/22 4:00		CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.702	11/11/22 4:00		CMR
1,2,4-Trimethylbenzene	0.051	0.035		0.25	0.17	0.702	11/11/22 4:00		CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.702	11/11/22 4:00		CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.702	11/11/22 4:00		CMR
Vinyl Chloride	ND	0.035		ND	0.090	0.702	11/11/22 4:00		CMR
m&p-Xylene	0.15	0.070		0.64	0.30	0.702	11/11/22 4:00		CMR
o-Xylene	0.062	0.035		0.27	0.15	0.702	11/11/22 4:00		CMR

Surrogates	% Recovery	% REC Limits		
4-Bromofluorobenzene (1)	97.2	70-130	11/11/22 4:00	

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ANALYTICAL RESULTS

Project Location: PA
Date Received: 11/2/2022
Field Sample #: UPW-1026-2B
Sample ID: 22K0834-02
Sample Matrix: Air
Sampled: 10/27/2022 16:12

Sample Description/Location:
Sub Description/Location:
Canister ID: 1827
Canister Size: 6 liter
Flow Controller ID: 3744
Sample Type: 24 hr

Work Order: 22K0834
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -7.5
Receipt Vacuum(in Hg): -7.9
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	2.6	1.4		6.1	3.3	0.702	11/11/22	4:47	CMR
Benzene	0.17	0.035		0.54	0.11	0.702	11/11/22	4:47	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	11/11/22	4:47	CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	11/11/22	4:47	CMR
Bromoform	ND	0.035		ND	0.36	0.702	11/11/22	4:47	CMR
Bromomethane	ND	0.035		ND	0.14	0.702	11/11/22	4:47	CMR
1,3-Butadiene	0.036	0.035		0.081	0.078	0.702	11/11/22	4:47	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	11/11/22	4:47	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	11/11/22	4:47	CMR
Carbon Tetrachloride	0.066	0.035		0.41	0.22	0.702	11/11/22	4:47	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	11/11/22	4:47	CMR
Chloroethane	ND	0.035		ND	0.093	0.702	11/11/22	4:47	CMR
Chloroform	ND	0.035		ND	0.17	0.702	11/11/22	4:47	CMR
Chloromethane	0.40	0.070		0.82	0.14	0.702	11/11/22	4:47	CMR
Cyclohexane	ND	0.035		ND	0.12	0.702	11/11/22	4:47	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	11/11/22	4:47	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	11/11/22	4:47	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/11/22	4:47	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/11/22	4:47	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/11/22	4:47	CMR
Dichlorodifluoromethane (Freon 12)	0.23	0.035		1.1	0.17	0.702	11/11/22	4:47	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	11/11/22	4:47	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	11/11/22	4:47	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/11/22	4:47	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/11/22	4:47	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/11/22	4:47	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	11/11/22	4:47	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/11/22	4:47	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/11/22	4:47	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	11/11/22	4:47	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	11/11/22	4:47	CMR
Ethanol	3.2	1.4	L-03	6.1	2.6	0.702	11/11/22	4:47	CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.702	11/11/22	4:47	CMR
Ethylbenzene	0.042	0.035		0.18	0.15	0.702	11/11/22	4:47	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	11/11/22	4:47	CMR
Heptane	0.086	0.035		0.35	0.14	0.702	11/11/22	4:47	CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	11/11/22	4:47	CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: PA
 Date Received: 11/2/2022
Field Sample #: UPW-1026-2B
Sample ID: 22K0834-02
 Sample Matrix: Air
 Sampled: 10/27/2022 16:12

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1827
 Canister Size: 6 liter
 Flow Controller ID: 3744
 Sample Type: 24 hr

Work Order: 22K0834
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -7.5
 Receipt Vacuum(in Hg): -7.9
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4		ND	4.9	0.702	11/11/22	4:47	CMR
2-Hexanone (MBK)	ND	0.035		ND	0.14	0.702	11/11/22	4:47	CMR
Isopropanol	ND	1.4		ND	3.4	0.702	11/11/22	4:47	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	11/11/22	4:47	CMR
Methylene Chloride	ND	0.35		ND	1.2	0.702	11/11/22	4:47	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.702	11/11/22	4:47	CMR
Naphthalene	ND	0.035		ND	0.18	0.702	11/11/22	4:47	CMR
Propene	ND	1.4		ND	2.4	0.702	11/11/22	4:47	CMR
Styrene	ND	0.035		ND	0.15	0.702	11/11/22	4:47	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	11/11/22	4:47	CMR
Tetrachloroethylene	0.054	0.035		0.37	0.24	0.702	11/11/22	4:47	CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.702	11/11/22	4:47	CMR
Toluene	0.32	0.035		1.2	0.13	0.702	11/11/22	4:47	CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.702	11/11/22	4:47	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	11/11/22	4:47	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	11/11/22	4:47	CMR
Trichloroethylene	ND	0.035		ND	0.19	0.702	11/11/22	4:47	CMR
Trichlorofluoromethane (Freon 11)	0.20	0.14		1.1	0.79	0.702	11/11/22	4:47	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.702	11/11/22	4:47	CMR
1,2,4-Trimethylbenzene	0.049	0.035		0.24	0.17	0.702	11/11/22	4:47	CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.702	11/11/22	4:47	CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.702	11/11/22	4:47	CMR
Vinyl Chloride	ND	0.035		ND	0.090	0.702	11/11/22	4:47	CMR
m&p-Xylene	0.15	0.070		0.63	0.30	0.702	11/11/22	4:47	CMR
o-Xylene	0.057	0.035		0.25	0.15	0.702	11/11/22	4:47	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	96.7	70-130	11/11/22 4:47

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: PA
 Date Received: 11/2/2022
Field Sample #: IN1-1026-2
Sample ID: 22K0834-03
 Sample Matrix: Air
 Sampled: 10/27/2022 14:51

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 2037
 Canister Size: 6 liter
 Flow Controller ID: 3255
 Sample Type: 24 hr

Work Order: 22K0834
 Initial Vacuum(in Hg): -26
 Final Vacuum(in Hg): -4
 Receipt Vacuum(in Hg): -5.8
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	2.8	1.4		6.7	3.3	0.702	11/11/22 5:34		CMR
Benzene	7.9	0.035		25	0.11	0.702	11/11/22 5:34		CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	11/11/22 5:34		CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	11/11/22 5:34		CMR
Bromoform	ND	0.035		ND	0.36	0.702	11/11/22 5:34		CMR
Bromomethane	ND	0.035		ND	0.14	0.702	11/11/22 5:34		CMR
1,3-Butadiene	0.14	0.035		0.32	0.078	0.702	11/11/22 5:34		CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	11/11/22 5:34		CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	11/11/22 5:34		CMR
Carbon Tetrachloride	0.072	0.035		0.45	0.22	0.702	11/11/22 5:34		CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	11/11/22 5:34		CMR
Chloroethane	ND	0.035		ND	0.093	0.702	11/11/22 5:34		CMR
Chloroform	ND	0.035		ND	0.17	0.702	11/11/22 5:34		CMR
Chloromethane	0.43	0.070		0.89	0.14	0.702	11/11/22 5:34		CMR
Cyclohexane	0.062	0.035		0.21	0.12	0.702	11/11/22 5:34		CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	11/11/22 5:34		CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	11/11/22 5:34		CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/11/22 5:34		CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/11/22 5:34		CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/11/22 5:34		CMR
Dichlorodifluoromethane (Freon 12)	0.25	0.035		1.2	0.17	0.702	11/11/22 5:34		CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	11/11/22 5:34		CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	11/11/22 5:34		CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/11/22 5:34		CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/11/22 5:34		CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/11/22 5:34		CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	11/11/22 5:34		CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/11/22 5:34		CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/11/22 5:34		CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	11/11/22 5:34		CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	11/11/22 5:34		CMR
Ethanol	3.6	1.4	L-03	6.9	2.6	0.702	11/11/22 5:34		CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.702	11/11/22 5:34		CMR
Ethylbenzene	0.053	0.035		0.23	0.15	0.702	11/11/22 5:34		CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	11/11/22 5:34		CMR
Heptane	0.15	0.035		0.60	0.14	0.702	11/11/22 5:34		CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	11/11/22 5:34		CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: PA
 Date Received: 11/2/2022
Field Sample #: IN1-1026-2
Sample ID: 22K0834-03
 Sample Matrix: Air
 Sampled: 10/27/2022 14:51

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 2037
 Canister Size: 6 liter
 Flow Controller ID: 3255
 Sample Type: 24 hr

Work Order: 22K0834
 Initial Vacuum(in Hg): -26
 Final Vacuum(in Hg): -4
 Receipt Vacuum(in Hg): -5.8
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4		ND	4.9	0.702	11/11/22 5:34		CMR
2-Hexanone (MBK)	ND	0.035		ND	0.14	0.702	11/11/22 5:34		CMR
Isopropanol	1.7	1.4		4.1	3.4	0.702	11/11/22 5:34		CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	11/11/22 5:34		CMR
Methylene Chloride	ND	0.35		ND	1.2	0.702	11/11/22 5:34		CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.702	11/11/22 5:34		CMR
Naphthalene	2.1	0.035		11	0.18	0.702	11/11/22 5:34		CMR
Propene	ND	1.4		ND	2.4	0.702	11/11/22 5:34		CMR
Styrene	0.15	0.035		0.65	0.15	0.702	11/11/22 5:34		CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	11/11/22 5:34		CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.702	11/11/22 5:34		CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.702	11/11/22 5:34		CMR
Toluene	1.3	0.035		5.1	0.13	0.702	11/11/22 5:34		CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.702	11/11/22 5:34		CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	11/11/22 5:34		CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	11/11/22 5:34		CMR
Trichloroethylene	ND	0.035		ND	0.19	0.702	11/11/22 5:34		CMR
Trichlorofluoromethane (Freon 11)	0.20	0.14		1.1	0.79	0.702	11/11/22 5:34		CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.702	11/11/22 5:34		CMR
1,2,4-Trimethylbenzene	0.11	0.035		0.55	0.17	0.702	11/11/22 5:34		CMR
1,3,5-Trimethylbenzene	0.042	0.035		0.21	0.17	0.702	11/11/22 5:34		CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.702	11/11/22 5:34		CMR
Vinyl Chloride	ND	0.035		ND	0.090	0.702	11/11/22 5:34		CMR
m&p-Xylene	0.42	0.070		1.8	0.30	0.702	11/11/22 5:34		CMR
o-Xylene	0.12	0.035		0.53	0.15	0.702	11/11/22 5:34		CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	97.5	70-130	11/11/22 5:34

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: PA
 Date Received: 11/2/2022
Field Sample #: IN2-1026-2
Sample ID: 22K0834-04
 Sample Matrix: Air
 Sampled: 10/27/2022 15:24

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1813
 Canister Size: 6 liter
 Flow Controller ID: 3468
 Sample Type: 24 hr

Work Order: 22K0834
 Initial Vacuum(in Hg): -28
 Final Vacuum(in Hg): -9
 Receipt Vacuum(in Hg): -8.8
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	2.3	1.4		5.4	3.3	0.702	11/11/22	6:22	CMR
Benzene	8.7	0.035		28	0.11	0.702	11/11/22	6:22	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	11/11/22	6:22	CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	11/11/22	6:22	CMR
Bromoform	ND	0.035		ND	0.36	0.702	11/11/22	6:22	CMR
Bromomethane	ND	0.035		ND	0.14	0.702	11/11/22	6:22	CMR
1,3-Butadiene	0.19	0.035		0.42	0.078	0.702	11/11/22	6:22	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	11/11/22	6:22	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	11/11/22	6:22	CMR
Carbon Tetrachloride	0.063	0.035		0.40	0.22	0.702	11/11/22	6:22	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	11/11/22	6:22	CMR
Chloroethane	ND	0.035		ND	0.093	0.702	11/11/22	6:22	CMR
Chloroform	ND	0.035		ND	0.17	0.702	11/11/22	6:22	CMR
Chloromethane	0.42	0.070		0.87	0.14	0.702	11/11/22	6:22	CMR
Cyclohexane	0.055	0.035		0.19	0.12	0.702	11/11/22	6:22	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	11/11/22	6:22	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	11/11/22	6:22	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/11/22	6:22	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/11/22	6:22	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/11/22	6:22	CMR
Dichlorodifluoromethane (Freon 12)	0.23	0.035		1.1	0.17	0.702	11/11/22	6:22	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	11/11/22	6:22	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	11/11/22	6:22	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/11/22	6:22	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/11/22	6:22	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/11/22	6:22	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	11/11/22	6:22	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/11/22	6:22	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/11/22	6:22	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	11/11/22	6:22	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	11/11/22	6:22	CMR
Ethanol	2.9	1.4	L-03	5.4	2.6	0.702	11/11/22	6:22	CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.702	11/11/22	6:22	CMR
Ethylbenzene	0.049	0.035		0.21	0.15	0.702	11/11/22	6:22	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	11/11/22	6:22	CMR
Heptane	0.091	0.035		0.37	0.14	0.702	11/11/22	6:22	CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	11/11/22	6:22	CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: PA
 Date Received: 11/2/2022
Field Sample #: IN2-1026-2
Sample ID: 22K0834-04
 Sample Matrix: Air
 Sampled: 10/27/2022 15:24

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1813
 Canister Size: 6 liter
 Flow Controller ID: 3468
 Sample Type: 24 hr

Work Order: 22K0834
 Initial Vacuum(in Hg): -28
 Final Vacuum(in Hg): -9
 Receipt Vacuum(in Hg): -8.8
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4		ND	4.9	0.702	11/11/22	6:22	CMR
2-Hexanone (MBK)	ND	0.035		ND	0.14	0.702	11/11/22	6:22	CMR
Isopropanol	ND	1.4		ND	3.4	0.702	11/11/22	6:22	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	11/11/22	6:22	CMR
Methylene Chloride	ND	0.35		ND	1.2	0.702	11/11/22	6:22	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.702	11/11/22	6:22	CMR
Naphthalene	6.2	0.035		33	0.18	0.702	11/11/22	6:22	CMR
Propene	1.5	1.4		2.6	2.4	0.702	11/11/22	6:22	CMR
Styrene	0.20	0.035		0.87	0.15	0.702	11/11/22	6:22	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	11/11/22	6:22	CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.702	11/11/22	6:22	CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.702	11/11/22	6:22	CMR
Toluene	1.5	0.035		5.7	0.13	0.702	11/11/22	6:22	CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.702	11/11/22	6:22	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	11/11/22	6:22	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	11/11/22	6:22	CMR
Trichloroethylene	ND	0.035		ND	0.19	0.702	11/11/22	6:22	CMR
Trichlorofluoromethane (Freon 11)	0.21	0.14		1.2	0.79	0.702	11/11/22	6:22	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.702	11/11/22	6:22	CMR
1,2,4-Trimethylbenzene	0.12	0.035		0.57	0.17	0.702	11/11/22	6:22	CMR
1,3,5-Trimethylbenzene	0.046	0.035		0.22	0.17	0.702	11/11/22	6:22	CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.702	11/11/22	6:22	CMR
Vinyl Chloride	ND	0.035		ND	0.090	0.702	11/11/22	6:22	CMR
m&p-Xylene	0.47	0.070		2.0	0.30	0.702	11/11/22	6:22	CMR
o-Xylene	0.13	0.035		0.59	0.15	0.702	11/11/22	6:22	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	102	70-130	11/11/22 6:22

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: PA
 Date Received: 11/2/2022
Field Sample #: DW1-1026-2
Sample ID: 22K0834-05
 Sample Matrix: Air
 Sampled: 10/27/2022 14:20

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 2224
 Canister Size: 6 liter
 Flow Controller ID: 3056
 Sample Type: 24 hr

Work Order: 22K0834
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -8
 Receipt Vacuum(in Hg): -8.7
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	4.8	1.4		11	3.3	0.702	11/11/22 7:10		CMR
Benzene	0.15	0.035		0.49	0.11	0.702	11/11/22 7:10		CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	11/11/22 7:10		CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	11/11/22 7:10		CMR
Bromoform	ND	0.035		ND	0.36	0.702	11/11/22 7:10		CMR
Bromomethane	ND	0.035		ND	0.14	0.702	11/11/22 7:10		CMR
1,3-Butadiene	ND	0.035		ND	0.078	0.702	11/11/22 7:10		CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	11/11/22 7:10		CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	11/11/22 7:10		CMR
Carbon Tetrachloride	0.066	0.035		0.41	0.22	0.702	11/11/22 7:10		CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	11/11/22 7:10		CMR
Chloroethane	ND	0.035		ND	0.093	0.702	11/11/22 7:10		CMR
Chloroform	ND	0.035		ND	0.17	0.702	11/11/22 7:10		CMR
Chloromethane	0.38	0.070		0.78	0.14	0.702	11/11/22 7:10		CMR
Cyclohexane	ND	0.035		ND	0.12	0.702	11/11/22 7:10		CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	11/11/22 7:10		CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	11/11/22 7:10		CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/11/22 7:10		CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/11/22 7:10		CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/11/22 7:10		CMR
Dichlorodifluoromethane (Freon 12)	0.23	0.035		1.1	0.17	0.702	11/11/22 7:10		CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	11/11/22 7:10		CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	11/11/22 7:10		CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/11/22 7:10		CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/11/22 7:10		CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/11/22 7:10		CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	11/11/22 7:10		CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/11/22 7:10		CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/11/22 7:10		CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	11/11/22 7:10		CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	11/11/22 7:10		CMR
Ethanol	3.1	1.4	L-03	5.8	2.6	0.702	11/11/22 7:10		CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.702	11/11/22 7:10		CMR
Ethylbenzene	ND	0.035		ND	0.15	0.702	11/11/22 7:10		CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	11/11/22 7:10		CMR
Heptane	0.050	0.035		0.20	0.14	0.702	11/11/22 7:10		CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	11/11/22 7:10		CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: PA
 Date Received: 11/2/2022
Field Sample #: DW1-1026-2
Sample ID: 22K0834-05
 Sample Matrix: Air
 Sampled: 10/27/2022 14:20

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 2224
 Canister Size: 6 liter
 Flow Controller ID: 3056
 Sample Type: 24 hr

Work Order: 22K0834
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -8
 Receipt Vacuum(in Hg): -8.7
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4		ND	4.9	0.702	11/11/22 7:10		CMR
2-Hexanone (MBK)	0.080	0.035		0.33	0.14	0.702	11/11/22 7:10		CMR
Isopropanol	ND	1.4		ND	3.4	0.702	11/11/22 7:10		CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	11/11/22 7:10		CMR
Methylene Chloride	ND	0.35		ND	1.2	0.702	11/11/22 7:10		CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.702	11/11/22 7:10		CMR
Naphthalene	0.051	0.035		0.26	0.18	0.702	11/11/22 7:10		CMR
Propene	ND	1.4		ND	2.4	0.702	11/11/22 7:10		CMR
Styrene	ND	0.035		ND	0.15	0.702	11/11/22 7:10		CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	11/11/22 7:10		CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.702	11/11/22 7:10		CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.702	11/11/22 7:10		CMR
Toluene	0.22	0.035		0.81	0.13	0.702	11/11/22 7:10		CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.702	11/11/22 7:10		CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	11/11/22 7:10		CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	11/11/22 7:10		CMR
Trichloroethylene	ND	0.035		ND	0.19	0.702	11/11/22 7:10		CMR
Trichlorofluoromethane (Freon 11)	0.21	0.14		1.2	0.79	0.702	11/11/22 7:10		CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.702	11/11/22 7:10		CMR
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17	0.702	11/11/22 7:10		CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.702	11/11/22 7:10		CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.702	11/11/22 7:10		CMR
Vinyl Chloride	ND	0.035		ND	0.090	0.702	11/11/22 7:10		CMR
m&p-Xylene	0.091	0.070		0.40	0.30	0.702	11/11/22 7:10		CMR
o-Xylene	0.039	0.035		0.17	0.15	0.702	11/11/22 7:10		CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	100	70-130	11/11/22 7:10

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: PA
Date Received: 11/2/2022
Field Sample #: DW2-1026-2
Sample ID: 22K0834-06
Sample Matrix: Air
Sampled: 10/27/2022 13:50

Sample Description/Location:
Sub Description/Location:
Canister ID: 1095
Canister Size: 6 liter
Flow Controller ID: 3055
Sample Type: 24 hr

Work Order: 22K0834
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -8
Receipt Vacuum(in Hg): -8.0
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	2.1	1.4		4.9	3.3	0.702	11/11/22 7:57		CMR
Benzene	0.37	0.035		1.2	0.11	0.702	11/11/22 7:57		CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	11/11/22 7:57		CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	11/11/22 7:57		CMR
Bromoform	ND	0.035		ND	0.36	0.702	11/11/22 7:57		CMR
Bromomethane	ND	0.035		ND	0.14	0.702	11/11/22 7:57		CMR
1,3-Butadiene	ND	0.035		ND	0.078	0.702	11/11/22 7:57		CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	11/11/22 7:57		CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	11/11/22 7:57		CMR
Carbon Tetrachloride	0.074	0.035		0.47	0.22	0.702	11/11/22 7:57		CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	11/11/22 7:57		CMR
Chloroethane	ND	0.035		ND	0.093	0.702	11/11/22 7:57		CMR
Chloroform	ND	0.035		ND	0.17	0.702	11/11/22 7:57		CMR
Chloromethane	0.37	0.070		0.77	0.14	0.702	11/11/22 7:57		CMR
Cyclohexane	ND	0.035		ND	0.12	0.702	11/11/22 7:57		CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	11/11/22 7:57		CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	11/11/22 7:57		CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/11/22 7:57		CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/11/22 7:57		CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	11/11/22 7:57		CMR
Dichlorodifluoromethane (Freon 12)	0.23	0.035		1.1	0.17	0.702	11/11/22 7:57		CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	11/11/22 7:57		CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	11/11/22 7:57		CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/11/22 7:57		CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/11/22 7:57		CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	11/11/22 7:57		CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	11/11/22 7:57		CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/11/22 7:57		CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	11/11/22 7:57		CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.25	0.702	11/11/22 7:57		CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	11/11/22 7:57		CMR
Ethanol	2.5	1.4	L-03	4.7	2.6	0.702	11/11/22 7:57		CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.702	11/11/22 7:57		CMR
Ethylbenzene	ND	0.035		ND	0.15	0.702	11/11/22 7:57		CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	11/11/22 7:57		CMR
Heptane	0.052	0.035		0.21	0.14	0.702	11/11/22 7:57		CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	11/11/22 7:57		CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: PA
 Date Received: 11/2/2022
Field Sample #: DW2-1026-2
Sample ID: 22K0834-06
 Sample Matrix: Air
 Sampled: 10/27/2022 13:50

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1095
 Canister Size: 6 liter
 Flow Controller ID: 3055
 Sample Type: 24 hr

Work Order: 22K0834
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -8
 Receipt Vacuum(in Hg): -8.0
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4		ND	4.9	0.702	11/11/22 7:57		CMR
2-Hexanone (MBK)	ND	0.035		ND	0.14	0.702	11/11/22 7:57		CMR
Isopropanol	ND	1.4		ND	3.4	0.702	11/11/22 7:57		CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	11/11/22 7:57		CMR
Methylene Chloride	ND	0.35		ND	1.2	0.702	11/11/22 7:57		CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.702	11/11/22 7:57		CMR
Naphthalene	ND	0.035		ND	0.18	0.702	11/11/22 7:57		CMR
Propene	ND	1.4		ND	2.4	0.702	11/11/22 7:57		CMR
Styrene	ND	0.035		ND	0.15	0.702	11/11/22 7:57		CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	11/11/22 7:57		CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.702	11/11/22 7:57		CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.702	11/11/22 7:57		CMR
Toluene	0.20	0.035		0.77	0.13	0.702	11/11/22 7:57		CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.702	11/11/22 7:57		CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	11/11/22 7:57		CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	11/11/22 7:57		CMR
Trichloroethylene	ND	0.035		ND	0.19	0.702	11/11/22 7:57		CMR
Trichlorofluoromethane (Freon 11)	0.20	0.14		1.1	0.79	0.702	11/11/22 7:57		CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.702	11/11/22 7:57		CMR
1,2,4-Trimethylbenzene	0.041	0.035		0.20	0.17	0.702	11/11/22 7:57		CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.702	11/11/22 7:57		CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.702	11/11/22 7:57		CMR
Vinyl Chloride	ND	0.035		ND	0.090	0.702	11/11/22 7:57		CMR
m&p-Xylene	0.094	0.070		0.41	0.30	0.702	11/11/22 7:57		CMR
o-Xylene	0.040	0.035		0.17	0.15	0.702	11/11/22 7:57		CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	96.2	70-130	11/11/22 7:57

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: TO-15 Prep

Analytical Method: EP

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
22K0834-01 [UPW-1026-2A]	B322997	1.5	1	N/A	1000	400	855	11/10/22
22K0834-02 [UPW-1026-2B]	B322997	1.5	1	N/A	1000	400	855	11/10/22
22K0834-03 [IN1-1026-2]	B322997	1.5	1	N/A	1000	400	855	11/10/22
22K0834-04 [IN2-1026-2]	B322997	1.5	1	N/A	1000	400	855	11/10/22
22K0834-05 [DW1-1026-2]	B322997	1.5	1	N/A	1000	400	855	11/10/22
22K0834-06 [DW2-1026-2]	B322997	1.5	1	N/A	1000	400	855	11/10/22

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	%REC	Limits	RPD	Limit	

Batch B322997 - TO-15 Prep
Blank (B322997-BLK1)

Prepared & Analyzed: 11/10/22

Acetone	ND	1.4
Benzene	ND	0.035
Benzyl chloride	ND	0.035
Bromodichloromethane	ND	0.035
Bromoform	ND	0.035
Bromomethane	ND	0.035
1,3-Butadiene	ND	0.035
2-Butanone (MEK)	ND	1.4
Carbon Disulfide	ND	0.35
Carbon Tetrachloride	ND	0.035
Chlorobenzene	ND	0.035
Chloroethane	ND	0.035
Chloroform	ND	0.035
Chloromethane	ND	0.070
Cyclohexane	ND	0.035
Dibromochloromethane	ND	0.035
1,2-Dibromoethane (EDB)	ND	0.035
1,2-Dichlorobenzene	ND	0.035
1,3-Dichlorobenzene	ND	0.035
1,4-Dichlorobenzene	ND	0.035
Dichlorodifluoromethane (Freon 12)	ND	0.035
1,1-Dichloroethane	ND	0.035
1,2-Dichloroethane	ND	0.035
1,1-Dichloroethylene	ND	0.035
cis-1,2-Dichloroethylene	ND	0.035
trans-1,2-Dichloroethylene	ND	0.035
1,2-Dichloropropane	ND	0.035
cis-1,3-Dichloropropene	ND	0.035
trans-1,3-Dichloropropene	ND	0.035
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035
1,4-Dioxane	ND	0.35
Ethanol	ND	1.4
Ethyl Acetate	ND	0.35
Ethylbenzene	ND	0.035
4-Ethyltoluene	ND	0.035
Heptane	ND	0.035
Hexachlorobutadiene	ND	0.035
Hexane	ND	1.4
2-Hexanone (MBK)	ND	0.035
Isopropanol	ND	1.4
Methyl tert-Butyl Ether (MTBE)	ND	0.035
Methylene Chloride	ND	0.35
4-Methyl-2-pentanone (MIBK)	ND	0.035
Naphthalene	ND	0.035
Propene	ND	1.4
Styrene	ND	0.035

L-03

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	Limits	RPD	Limit	

Batch B322997 - TO-15 Prep
Blank (B322997-BLK1)

Prepared & Analyzed: 11/10/22

1,1,2,2-Tetrachloroethane	ND	0.035
Tetrachloroethylene	ND	0.035
Tetrahydrofuran	ND	0.35
Toluene	ND	0.035
1,2,4-Trichlorobenzene	ND	0.035
1,1,1-Trichloroethane	ND	0.035
1,1,2-Trichloroethane	ND	0.035
Trichloroethylene	ND	0.035
Trichlorofluoromethane (Freon 11)	ND	0.14
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14
1,2,4-Trimethylbenzene	ND	0.035
1,3,5-Trimethylbenzene	ND	0.035
Vinyl Acetate	ND	0.70
Vinyl Chloride	ND	0.035
m&p-Xylene	ND	0.070
o-Xylene	ND	0.035

Surrogate: 4-Bromofluorobenzene (1) 7.86 8.00 98.3 70-130

LCS (B322997-BS1)

Prepared & Analyzed: 11/10/22

Acetone	5.04	5.00	101	70-130
Benzene	5.75	5.00	115	70-130
Benzyl chloride	6.25	5.00	125	70-130
Bromodichloromethane	5.54	5.00	111	70-130
Bromoform	5.32	5.00	106	70-130
Bromomethane	4.20	5.00	83.9	70-130
1,3-Butadiene	4.16	5.00	83.1	70-130
2-Butanone (MEK)	5.01	5.00	100	70-130
Carbon Disulfide	4.99	5.00	99.8	70-130
Carbon Tetrachloride	5.54	5.00	111	70-130
Chlorobenzene	4.89	5.00	97.7	70-130
Chloroethane	4.56	5.00	91.1	70-130
Chloroform	4.78	5.00	95.5	70-130
Chloromethane	4.05	5.00	81.0	70-130
Cyclohexane	5.54	5.00	111	70-130
Dibromochloromethane	5.42	5.00	108	70-130
1,2-Dibromoethane (EDB)	5.07	5.00	101	70-130
1,2-Dichlorobenzene	5.00	5.00	100	70-130
1,3-Dichlorobenzene	5.17	5.00	103	70-130
1,4-Dichlorobenzene	5.23	5.00	105	70-130
Dichlorodifluoromethane (Freon 12)	4.72	5.00	94.4	70-130
1,1-Dichloroethane	5.12	5.00	102	70-130
1,2-Dichloroethane	5.02	5.00	100	70-130
1,1-Dichloroethylene	5.14	5.00	103	70-130
cis-1,2-Dichloroethylene	5.03	5.00	101	70-130
trans-1,2-Dichloroethylene	5.09	5.00	102	70-130
1,2-Dichloropropane	6.10	5.00	122	70-130

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	%REC	Limits	RPD	Limit	
Batch B322997 - TO-15 Prep											
LCS (B322997-BS1)					Prepared & Analyzed: 11/10/22						
cis-1,3-Dichloropropene	5.80				5.00		116	70-130			L-03
trans-1,3-Dichloropropene	5.87				5.00		117	70-130			
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	3.94				5.00		78.8	70-130			
1,4-Dioxane	5.13				5.00		103	70-130			
Ethanol	3.28				5.00		65.7	* 70-130			
Ethyl Acetate	5.11				5.00		102	70-130			
Ethylbenzene	5.52				5.00		110	70-130			
4-Ethyltoluene	5.55				5.00		111	70-130			
Heptane	6.04				5.00		121	70-130			
Hexachlorobutadiene	4.32				5.00		86.3	70-130			
Hexane	5.45				5.00		109	70-130			
2-Hexanone (MBK)	5.97				5.00		119	70-130			
Isopropanol	4.06				5.00		81.2	70-130			
Methyl tert-Butyl Ether (MTBE)	4.86				5.00		97.1	70-130			
Methylene Chloride	4.39				5.00		87.7	70-130			
4-Methyl-2-pentanone (MIBK)	5.99				5.00		120	70-130			
Naphthalene	4.71				5.00		94.1	70-130			
Propene	4.63				5.00		92.7	70-130			
Styrene	5.44				5.00		109	70-130			
1,1,2,2-Tetrachloroethane	5.51				5.00		110	70-130			
Tetrachloroethylene	4.69				5.00		93.7	70-130			
Tetrahydrofuran	5.16				5.00		103	70-130			
Toluene	5.42				5.00		108	70-130			
1,2,4-Trichlorobenzene	4.10				5.00		82.1	70-130			
1,1,1-Trichloroethane	5.18				5.00		104	70-130			
1,1,2-Trichloroethane	5.23				5.00		105	70-130			
Trichloroethylene	5.26				5.00		105	70-130			
Trichlorofluoromethane (Freon 11)	4.84				5.00		96.7	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	4.18				5.00		83.7	70-130			
1,2,4-Trimethylbenzene	5.50				5.00		110	70-130			
1,3,5-Trimethylbenzene	5.54				5.00		111	70-130			
Vinyl Acetate	4.56				5.00		91.2	70-130			
Vinyl Chloride	4.44				5.00		88.8	70-130			
m&p-Xylene	11.2				10.0		112	70-130			
o-Xylene	5.71				5.00		114	70-130			
Surrogate: 4-Bromofluorobenzene (1)	8.10				8.00		101	70-130			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
	Results	RL	Results	RL							
Batch B322997 - TO-15 Prep											
Duplicate (B322997-DUP1)		Source: 22K0834-06				Prepared: 11/10/22 Analyzed: 11/11/22					
Acetone	2.1	1.4	5.0	3.3		2.1			1.32	25	
Benzene	0.36	0.035	1.2	0.11		0.37			2.29	25	
Benzyl chloride	ND	0.035	ND	0.18		ND				25	
Bromodichloromethane	ND	0.035	ND	0.24		ND				25	
Bromoform	ND	0.035	ND	0.36		ND				25	
Bromomethane	ND	0.035	ND	0.14		ND				25	
1,3-Butadiene	ND	0.035	ND	0.078		ND				25	
2-Butanone (MEK)	ND	1.4	ND	4.1		ND				25	
Carbon Disulfide	ND	0.35	ND	1.1		ND				25	
Carbon Tetrachloride	0.076	0.035	0.48	0.22		0.074			2.79	25	
Chlorobenzene	ND	0.035	ND	0.16		ND				25	
Chloroethane	ND	0.035	ND	0.093		ND				25	
Chloroform	ND	0.035	ND	0.17		ND				25	
Chloromethane	0.38	0.070	0.78	0.14		0.37			1.69	25	
Cyclohexane	0.022	0.035	0.075	0.12		ND				25	
Dibromochloromethane	ND	0.035	ND	0.30		ND				25	
1,2-Dibromoethane (EDB)	ND	0.035	ND	0.27		ND				25	
1,2-Dichlorobenzene	ND	0.035	ND	0.21		ND				25	
1,3-Dichlorobenzene	ND	0.035	ND	0.21		ND				25	
1,4-Dichlorobenzene	ND	0.035	ND	0.21		ND				25	
Dichlorodifluoromethane (Freon 12)	0.17	0.035	0.86	0.17		0.23			25.3	25	R-01
1,1-Dichloroethane	ND	0.035	ND	0.14		ND				25	
1,2-Dichloroethane	ND	0.035	ND	0.14		ND				25	
1,1-Dichloroethylene	ND	0.035	ND	0.14		ND				25	
cis-1,2-Dichloroethylene	ND	0.035	ND	0.14		ND				25	
trans-1,2-Dichloroethylene	ND	0.035	ND	0.14		ND				25	
1,2-Dichloropropane	ND	0.035	ND	0.16		ND				25	
cis-1,3-Dichloropropene	ND	0.035	ND	0.16		ND				25	
trans-1,3-Dichloropropene	ND	0.035	ND	0.16		ND				25	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035	ND	0.25		ND				25	
1,4-Dioxane	ND	0.35	ND	1.3		ND				25	
Ethanol	2.6	1.4	4.9	2.6		2.5			2.93	25	
Ethyl Acetate	ND	0.35	ND	1.3		ND				25	
Ethylbenzene	0.028	0.035	0.12	0.15		0.029			4.88	25	
4-Ethyltoluene	ND	0.035	ND	0.17		ND				25	
Heptane	0.054	0.035	0.22	0.14		0.052			3.97	25	
Hexachlorobutadiene	ND	0.035	ND	0.37		ND				25	
Hexane	0.20	1.4	0.72	4.9		ND				25	
2-Hexanone (MBK)	ND	0.035	ND	0.14		ND				25	
Isopropanol	0.77	1.4	1.9	3.4		0.76			0.0917	25	
Methyl tert-Butyl Ether (MTBE)	ND	0.035	ND	0.13		ND				25	
Methylene Chloride	ND	0.35	ND	1.2		ND				25	
4-Methyl-2-pentanone (MIBK)	ND	0.035	ND	0.14		ND				25	
Naphthalene	ND	0.035	ND	0.18		ND				25	
Propene	0.41	1.4	0.71	2.4		0.44			5.11	25	
Styrene	ND	0.035	ND	0.15		ND				25	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
	Results	RL	Results	RL							
Batch B322997 - TO-15 Prep											
Duplicate (B322997-DUP1)	Source: 22K0834-06				Prepared: 11/10/22 Analyzed: 11/11/22						
1,1,2,2-Tetrachloroethane	ND	0.035	ND	0.24		ND				25	
Tetrachloroethylene	ND	0.035	ND	0.24		ND				25	
Tetrahydrofuran	ND	0.35	ND	1.0		ND				25	
Toluene	0.20	0.035	0.75	0.13		0.20			2.78	25	
1,2,4-Trichlorobenzene	ND	0.035	ND	0.26		ND				25	
1,1,1-Trichloroethane	ND	0.035	ND	0.19		ND				25	
1,1,2-Trichloroethane	ND	0.035	ND	0.19		ND				25	
Trichloroethylene	ND	0.035	ND	0.19		ND				25	
Trichlorofluoromethane (Freon 11)	0.20	0.14	1.1	0.79		0.20			0.699	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.051	0.14	0.39	1.1		0.052			2.74	25	
1,2,4-Trimethylbenzene	0.039	0.035	0.19	0.17		0.041			3.51	25	
1,3,5-Trimethylbenzene	ND	0.035	ND	0.17		ND				25	
Vinyl Acetate	ND	0.70	ND	2.5		ND				25	
Vinyl Chloride	ND	0.035	ND	0.090		ND				25	
m&p-Xylene	0.092	0.070	0.40	0.30		0.094			2.26	25	
o-Xylene	0.039	0.035	0.17	0.15		0.040			1.77	25	
Surrogate: 4-Bromofluorobenzene (1)	7.61				8.00		95.2	70-130			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
L-03	Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.
R-01	Duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (S076501-ICV1)			Lab File ID: G22A256016.D			Analyzed: 09/13/22 22:00			
Bromochloromethane (1)	1141026	8.307	1141026	8.307	100	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	2751702	10.081	2751702	10.081	100	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	2471195	14.446	2471195	14.446	100	60 - 140	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (S079309-CCV1)			Lab File ID: G22A314006.D			Analyzed: 11/10/22 16:45			
Bromochloromethane (1)	1240892	8.307	1240892	8.307	100	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	2549481	10.081	2549481	10.081	100	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	2273343	14.446	2273343	14.446	100	60 - 140	0.0000	+/-0.50	
LCS (B322997-BS1)			Lab File ID: G22A314007.D			Analyzed: 11/10/22 17:24			
Bromochloromethane (1)	1245587	8.307	1240892	8.307	100	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	2518219	10.081	2549481	10.081	99	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	2259461	14.446	2273343	14.446	99	60 - 140	0.0000	+/-0.50	
Blank (B322997-BLK1)			Lab File ID: G22A314010.D			Analyzed: 11/10/22 19:31			
Bromochloromethane (1)	1256780	8.313	1240892	8.307	101	60 - 140	0.0060	+/-0.50	
1,4-Difluorobenzene (1)	2529477	10.081	2549481	10.081	99	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	2287025	14.446	2273343	14.446	101	60 - 140	0.0000	+/-0.50	
UPW-1026-2A (22K0834-01)			Lab File ID: G22A314022.D			Analyzed: 11/11/22 04:00			
Bromochloromethane (1)	1245220	8.307	1240892	8.307	100	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	2430948	10.081	2549481	10.081	95	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	2159899	14.446	2273343	14.446	95	60 - 140	0.0000	+/-0.50	
UPW-1026-2B (22K0834-02)			Lab File ID: G22A314023.D			Analyzed: 11/11/22 04:47			
Bromochloromethane (1)	1129862	8.313	1240892	8.307	91	60 - 140	0.0060	+/-0.50	
1,4-Difluorobenzene (1)	2178753	10.081	2549481	10.081	85	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	1942831	14.446	2273343	14.446	85	60 - 140	0.0000	+/-0.50	
IN1-1026-2 (22K0834-03)			Lab File ID: G22A314024.D			Analyzed: 11/11/22 05:34			
Bromochloromethane (1)	1151403	8.307	1240892	8.307	93	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	2226052	10.081	2549481	10.081	87	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	2029825	14.446	2273343	14.446	89	60 - 140	0.0000	+/-0.50	
IN2-1026-2 (22K0834-04)			Lab File ID: G22A314025.D			Analyzed: 11/11/22 06:22			
Bromochloromethane (1)	1375102	8.307	1240892	8.307	111	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	3001378	10.081	2549481	10.081	118	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	2718857	14.446	2273343	14.446	120	60 - 140	0.0000	+/-0.50	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DW1-1026-2 (22K0834-05) Lab File ID: G22A314026.D Analyzed: 11/11/22 07:10									
Bromochloromethane (1)	1281913	8.307	1240892	8.307	103	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	2600674	10.081	2549481	10.081	102	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	2318762	14.446	2273343	14.446	102	60 - 140	0.0000	+/-0.50	
DW2-1026-2 (22K0834-06) Lab File ID: G22A314027.D Analyzed: 11/11/22 07:57									
Bromochloromethane (1)	1153927	8.307	1240892	8.307	93	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	2228037	10.075	2549481	10.081	87	60 - 140	-0.0060	+/-0.50	
Chlorobenzene-d5 (1)	2049837	14.446	2273343	14.446	90	60 - 140	0.0000	+/-0.50	
Duplicate (B322997-DUP1) Lab File ID: G22A314028.D Analyzed: 11/11/22 08:46									
Bromochloromethane (1)	1175934	8.307	1240892	8.307	95	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	2263181	10.081	2549481	10.081	89	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	2059688	14.446	2273343	14.446	91	60 - 140	0.0000	+/-0.50	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CONTINUING CALIBRATION CHECK

EPA TO-15

S079309-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.00	5.02	1.084004	1.087295		0.3	30
Benzene	A	5.00	5.22	0.9129288	0.9526607		4.4	30
Benzyl chloride	A	5.00	5.76	1.030942	1.187972		15.2	30
Bromodichloromethane	A	5.00	5.10	0.6953811	0.7092876		2.0	30
Bromoform	A	5.00	4.89	0.5656468	0.5533426		-2.2	30
Bromomethane	A	5.00	3.80	0.6009459	0.4566044		-24.0	30
1,3-Butadiene	A	5.00	3.92	0.5443004	0.427067		-21.5	30
2-Butanone (MEK)	A	5.00	4.66	1.507683	1.405847		-6.8	30
Carbon Disulfide	A	5.00	4.33	2.02748	1.755268		-13.4	30
Carbon Tetrachloride	A	5.00	5.03	0.5479998	0.5517277		0.7	30
Chlorobenzene	A	5.00	4.65	0.8809329	0.8196599		-7.0	30
Chloroethane	A	5.00	4.04	0.3452967	0.2789658		-19.2	30
Chloroform	A	5.00	4.40	1.561184	1.374494		-12.0	30
Chloromethane	A	5.00	3.73	0.6821899	0.5091602		-25.4	30
Cyclohexane	A	5.00	4.98	0.3600845	0.3587905		-0.4	30
Dibromochloromethane	A	5.00	4.99	0.6396581	0.6380693		-0.2	30
1,2-Dibromoethane (EDB)	A	5.00	4.77	0.6171207	0.5883396		-4.7	30
1,2-Dichlorobenzene	A	5.00	4.87	0.6937094	0.6759054		-2.6	30
1,3-Dichlorobenzene	A	5.00	5.02	0.7409581	0.7435211		0.3	30
1,4-Dichlorobenzene	A	5.00	4.98	0.7218155	0.7190538		-0.4	30
Dichlorodifluoromethane (Freon 12)	A	5.00	4.39	1.62808	1.428294		-12.3	30
1,1-Dichloroethane	A	5.00	4.65	1.342742	1.247616		-7.1	30
1,2-Dichloroethane	A	5.00	4.56	0.9627523	0.8786789		-8.7	30
1,1-Dichloroethylene	A	5.00	4.65	1.140142	1.060193		-7.0	30
cis-1,2-Dichloroethylene	A	5.00	4.65	0.9670963	0.8989082		-7.1	30
trans-1,2-Dichloroethylene	A	5.00	4.59	1.001825	0.9194122		-8.2	30
1,2-Dichloropropane	A	5.00	5.44	0.3567989	0.3879974		8.7	30
cis-1,3-Dichloropropene	A	5.00	5.53	0.5092852	0.5628383		10.5	30
trans-1,3-Dichloropropene	A	5.00	5.44	0.4570981	0.4974465		8.8	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	A	5.00	3.90	1.73998	1.359039		-21.9	30
1,4-Dioxane	A	5.00	4.75	0.1857641	0.1764187		-5.0	30
Ethanol	A	5.00	3.89	0.2343264	0.1823385		-22.2	30
Ethyl Acetate	A	5.00	5.00	0.2308163	0.2308662		0.02	30
Ethylbenzene	A	5.00	5.21	1.455024	1.516305		4.2	30
4-Ethyltoluene	A	5.00	5.24	1.413771	1.48314		4.9	30
Heptane	A	5.00	5.47	0.2850308	0.3116612		9.3	30
Hexachlorobutadiene	A	5.00	4.99	0.4677459	0.4668804		-0.2	30
Hexane	A	5.00	4.89	0.8985394	0.8253263		-2.2	30

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CONTINUING CALIBRATION CHECK

EPA TO-15

S079309-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
2-Hexanone (MBK)	A	5.00	5.60	0.7712864	0.8641181		12.0	30
Isopropanol	A	5.00	4.43	1.338902	1.18721		-11.3	30
Methyl tert-Butyl Ether (MTBE)	A	5.00	4.62	1.834723	1.696678		-7.5	30
Methylene Chloride	A	5.00	4.01	0.9597215	0.7691989		-19.9	30
4-Methyl-2-pentanone (MIBK)	A	5.00	5.62	0.7726854	0.8682621		12.4	30
Naphthalene	A	5.00	5.13	1.092246	1.121453		2.7	30
Propene	A	5.00	4.35	0.5941328	0.5167135		-13.0	30
Styrene	A	5.00	5.16	0.7890752	0.8144327		3.2	30
1,1,2,2-Tetrachloroethane	A	5.00	5.19	0.9851261	1.023108		3.9	30
Tetrachloroethylene	A	5.00	4.47	0.457194	0.4085226		-10.6	30
Tetrahydrofuran	A	5.00	4.88	0.2957092	0.2885021		-2.4	30
Toluene	A	5.00	5.00	1.15399	1.154541		0.05	30
1,2,4-Trichlorobenzene	A	5.00	4.75	0.4973623	0.472311		-5.0	30
1,1,1-Trichloroethane	A	5.00	4.98	0.5975698	0.5951354		-0.4	30
1,1,2-Trichloroethane	A	5.00	4.76	0.4162703	0.3960976		-4.8	30
Trichloroethylene	A	5.00	4.85	0.3947958	0.3829523		-3.0	30
Trichlorofluoromethane (Freon 11)	A	5.00	4.48	1.463327	1.309913		-10.5	30
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	A	5.00	3.90	1.432547	1.117211		-22.0	30
1,2,4-Trimethylbenzene	A	5.00	5.36	1.156019	1.238837		7.2	30
1,3,5-Trimethylbenzene	A	5.00	5.27	1.190388	1.254478		5.4	30
Vinyl Acetate	A	5.00	3.96	1.986739	1.574902		-20.7	30
Vinyl Chloride	A	5.00	4.05	0.7142115	0.5779791		-19.1	30
m&p-Xylene	A	10.0	10.8	1.129066	1.218947		8.0	30
o-Xylene	A	5.00	5.35	1.138955	1.218062		6.9	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
Acetone	AIHA,NY,ME,NH
Benzene	AIHA,FL,NJ,NY,ME,NH,VA
Benzyl chloride	AIHA,FL,NJ,NY,ME,NH,VA
Bromodichloromethane	AIHA,NJ,NY,ME,NH,VA
Bromoform	AIHA,NJ,NY,ME,NH,VA
Bromomethane	AIHA,FL,NJ,NY,ME,NH
1,3-Butadiene	AIHA,NJ,NY,ME,NH,VA
2-Butanone (MEK)	AIHA,FL,NJ,NY,ME,NH,VA
Carbon Disulfide	AIHA,NJ,NY,ME,NH,VA
Carbon Tetrachloride	AIHA,FL,NJ,NY,ME,NH,VA
Chlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
Chloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Chloroform	AIHA,FL,NJ,NY,ME,NH,VA
Chloromethane	AIHA,FL,NJ,NY,ME,NH,VA
Cyclohexane	AIHA,NJ,NY,ME,NH,VA
Dibromochloromethane	AIHA,NY,ME,NH
1,2-Dibromoethane (EDB)	AIHA,NJ,NY,ME,NH
1,2-Dichlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
1,3-Dichlorobenzene	AIHA,NJ,NY,ME,NH
1,4-Dichlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
Dichlorodifluoromethane (Freon 12)	AIHA,NY,ME,NH
1,1-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,2-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1-Dichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
cis-1,2-Dichloroethylene	AIHA,FL,NY,ME,NH,VA
trans-1,2-Dichloroethylene	AIHA,NJ,NY,ME,NH,VA
1,2-Dichloropropane	AIHA,FL,NJ,NY,ME,NH,VA
cis-1,3-Dichloropropene	AIHA,FL,NJ,NY,ME,NH,VA
trans-1,3-Dichloropropene	AIHA,NY,ME,NH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	AIHA,NJ,NY,ME,NH,VA
1,4-Dioxane	AIHA,NJ,NY,ME,NH,VA
Ethanol	AIHA
Ethyl Acetate	AIHA
Ethylbenzene	AIHA,FL,NJ,NY,ME,NH,VA
4-Ethyltoluene	AIHA,NJ
Heptane	AIHA,NJ,NY,ME,NH,VA
Hexachlorobutadiene	AIHA,NJ,NY,ME,NH,VA
Hexane	AIHA,FL,NJ,NY,ME,NH,VA
2-Hexanone (MBK)	AIHA
Isopropanol	AIHA,NY,ME,NH
Methyl tert-Butyl Ether (MTBE)	AIHA,FL,NJ,NY,ME,NH,VA
Methylene Chloride	AIHA,FL,NJ,NY,ME,NH,VA
4-Methyl-2-pentanone (MIBK)	AIHA,FL,NJ,NY,ME,NH
Naphthalene	NY,ME,NH
Propene	AIHA
Styrene	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY,ME,NH,VA

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
Tetrachloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Tetrahydrofuran	AIHA
Toluene	AIHA,FL,NJ,NY,ME,NH,VA
1,2,4-Trichlorobenzene	AIHA,NJ,NY,ME,NH,VA
1,1,1-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Trichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Trichlorofluoromethane (Freon 11)	AIHA,NY,ME,NH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	AIHA,NJ,NY,ME,NH,VA
1,2,4-Trimethylbenzene	AIHA,NJ,NY,ME,NH
1,3,5-Trimethylbenzene	AIHA,NJ,NY,ME,NH
Vinyl Acetate	AIHA,FL,NJ,NY,ME,NH,VA
Vinyl Chloride	AIHA,FL,NJ,NY,ME,NH,VA
m&p-Xylene	AIHA,FL,NJ,NY,ME,NH,VA
o-Xylene	AIHA,FL,NJ,NY,ME,NH,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO 17025:2017	100033	03/1/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
FL	Florida Department of Health	E871027 NELAP	06/30/2023
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2022

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Doc# 278 Rev 7 July 2022

Air Media Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Clear Air

Received By <u>VR</u>	Date <u>11/2</u>	Time <u>940</u>
How Were the samples received?	In Cooler <u>T</u>	On Ice <u> </u>
Were samples within Temperature Compliance?	In Box <u> </u>	Ambient <u> </u>
Was Custody Seal In tact?	Within <u> </u>	By Gun # <u> </u>
Was COC Relinquished?	2-6°C <u> </u>	By Blank # <u> </u>
Are there any loose caps/valves on any samples?	<u>MA</u>	Were Samples Tampered with? <u>MA</u>
Is COC in ink/ Legible?	<u>T</u>	Does Chain Agree With Samples? <u>T</u>
Did COC Include all Pertinent Information?	Client? <u>T</u>	Analysis? <u>T</u>
Are Sample Labels filled out and legible?	Project? <u>T</u>	ID's? <u>T</u>
Are there Rushes?	<u>F</u>	Who was notified? <u> </u>
Samples are received within holding time?	<u>T</u>	Individually Certified Cans? <u>F</u>
Proper Media Used?	<u>T</u>	Is there enough Volume? <u>T</u>
Are there Trip Blanks?	<u>F</u>	

Containers:	#	Size	Regulator	Duration	Accessories:		
Summa Cans	<u>6</u>	<u>6L</u>	<u>6</u>	<u>24 hr</u>	Nut/Ferrule		IC Train
Tedlar Bags					Tubing		
TO-17 Tubes					T-Connector		Shipping Charges
Radiello					Syringe		
Pufs/TO-11s					Tedlar		

Can #'s				Reg #'s				
<u>1641</u>				<u>3743</u>				
<u>1827</u>				<u>3744</u>				
<u>2037</u>				<u>3255</u>				
<u>1813</u>				<u>3468</u>				
<u>2224</u>				<u>3056</u>				
<u>1095</u>				<u>3055</u>				
Unused Media				Pufs/TO-17's				

Comments:

December 8, 2022

Tim Rodak
Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275

Project Location: Zuq Island
Client Job Number:
Project Number: 14796 Quote 123244
Laboratory Work Order Number: 22K2322

Enclosed are results of analyses for samples as received by the laboratory on November 15, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

DRAFT REPORT
Project Manager

Table of Contents

Sample Summary	3
Case Narrative	4
Sample Results	5
Sample Preparation Information	17
QC Data	18
Air Toxics by EPA Compendium Methods	18
B325056	18
B325211	21
Flag/Qualifier Summary	22
Internal standard Area & RT Summary	23
Continuing Calibration Check	25
Certifications	28
Chain of Custody/Sample Receipt	30

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275
ATTN: Tim Rodak

REPORT DATE: 12/8/2022

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 14796 Quote 123244

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22K2322

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Zuq Island

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
DW2-1109-3	22K2322-01	Air		EPA TO-15	
DW1-1109-3	22K2322-02	Air		EPA TO-15	
IN1-1109-3B	22K2322-03	Air		EPA TO-15	
IN1-1109-3A	22K2322-04	Air		EPA TO-15	
UPW-1109-3	22K2322-05	Air		EPA TO-15	
IN2-1109-3	22K2322-06	Air		EPA TO-15	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA TO-15**Qualifications:**

B

Analyte is found in the associated laboratory blank as well as in the sample.

Analyte & Samples(s) Qualified:**1,2,4-Trichlorobenzene**

B325056-BS1

Naphthalene

22K2322-03[IN1-1109-3B], 22K2322-04[IN1-1109-3A], 22K2322-06[IN2-1109-3], B325056-BLK1, B325056-BS1

B-05

Data is not affected by elevated level in laboratory blank since sample(s) result is "Not Detected".

Analyte & Samples(s) Qualified:**1,2,4-Trichlorobenzene**

B325056-BLK1

B-07

Data is not affected by elevated level in laboratory blank since sample result is >10x level found in the blank.

Analyte & Samples(s) Qualified:**Naphthalene**

22K2322-03[IN1-1109-3B], 22K2322-04[IN1-1109-3A], 22K2322-06[IN2-1109-3]

L-03

Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**1,2,4-Trichlorobenzene**

22K2322-01[DW2-1109-3], 22K2322-02[DW1-1109-3], 22K2322-03[IN1-1109-3B], 22K2322-04[IN1-1109-3A], 22K2322-05[UPW-1109-3], 22K2322-06[IN2-1109-3], B325056-BLK1, B325056-BS1

Hexachlorobutadiene

22K2322-01[DW2-1109-3], 22K2322-02[DW1-1109-3], 22K2322-03[IN1-1109-3B], 22K2322-04[IN1-1109-3A], 22K2322-05[UPW-1109-3], 22K2322-06[IN2-1109-3], B325056-BLK1, B325056-BS1

Naphthalene

22K2322-01RE1[DW2-1109-3], 22K2322-02RE1[DW1-1109-3], 22K2322-03[IN1-1109-3B], 22K2322-04[IN1-1109-3A], 22K2322-05RE1[UPW-1109-3], 22K2322-06[IN2-1109-3], B325056-BLK1, B325056-BS1, B325211-BLK1, B325211-BS1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

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ANALYTICAL RESULTS

 Project Location: Zuq Island
 Date Received: 11/15/2022
Field Sample #: DW2-1109-3
Sample ID: 22K2322-01
 Sample Matrix: Air
 Sampled: 11/10/2022 11:30

 Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1864
 Canister Size: 6 liter
 Flow Controller ID: 3461
 Sample Type: 24 hr

Work Order: 22K2322
 Initial Vacuum(in Hg): -28
 Final Vacuum(in Hg): -8
 Receipt Vacuum(in Hg): -8.6
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15								
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time	
	Results	RL		Results	RL		Analyzed	Analyst
Acetone	3.6	1.4		8.6	3.3	0.698	12/3/22 14:17	CMR
Benzene	0.17	0.035		0.53	0.11	0.698	12/3/22 14:17	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.698	12/3/22 14:17	CMR
Bromodichloromethane	ND	0.035		ND	0.23	0.698	12/3/22 14:17	CMR
Bromoform	ND	0.035		ND	0.36	0.698	12/3/22 14:17	CMR
Bromomethane	ND	0.035		ND	0.14	0.698	12/3/22 14:17	CMR
1,3-Butadiene	ND	0.035		ND	0.077	0.698	12/3/22 14:17	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.698	12/3/22 14:17	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.698	12/3/22 14:17	CMR
Carbon Tetrachloride	0.073	0.035		0.46	0.22	0.698	12/3/22 14:17	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.698	12/3/22 14:17	CMR
Chloroethane	ND	0.035		ND	0.092	0.698	12/3/22 14:17	CMR
Chloroform	ND	0.035		ND	0.17	0.698	12/3/22 14:17	CMR
Chloromethane	0.46	0.070		0.95	0.14	0.698	12/3/22 14:17	CMR
Cyclohexane	0.040	0.035		0.14	0.12	0.698	12/3/22 14:17	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.698	12/3/22 14:17	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.698	12/3/22 14:17	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/3/22 14:17	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/3/22 14:17	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/3/22 14:17	CMR
Dichlorodifluoromethane (Freon 12)	0.48	0.035		2.4	0.17	0.698	12/3/22 14:17	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.698	12/3/22 14:17	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.698	12/3/22 14:17	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/3/22 14:17	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/3/22 14:17	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/3/22 14:17	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.698	12/3/22 14:17	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/3/22 14:17	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/3/22 14:17	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.24	0.698	12/3/22 14:17	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.698	12/3/22 14:17	CMR
Ethanol	4.0	1.4		7.5	2.6	0.698	12/3/22 14:17	CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.698	12/3/22 14:17	CMR
Ethylbenzene	0.038	0.035		0.16	0.15	0.698	12/3/22 14:17	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.698	12/3/22 14:17	CMR
Heptane	0.077	0.035		0.31	0.14	0.698	12/3/22 14:17	CMR
Hexachlorobutadiene	ND	0.035	L-03	ND	0.37	0.698	12/3/22 14:17	CMR

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ANALYTICAL RESULTS

Project Location: Zuq Island
 Date Received: 11/15/2022
Field Sample #: DW2-1109-3
Sample ID: 22K2322-01
 Sample Matrix: Air
 Sampled: 11/10/2022 11:30

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1864
 Canister Size: 6 liter
 Flow Controller ID: 3461
 Sample Type: 24 hr

Work Order: 22K2322
 Initial Vacuum(in Hg): -28
 Final Vacuum(in Hg): -8
 Receipt Vacuum(in Hg): -8.6
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15								
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time	
	Results	RL		Results	RL		Analyzed	Analyst
Hexane	ND	1.4		ND	4.9	0.698	12/3/22 14:17	CMR
2-Hexanone (MBK)	0.11	0.070		0.46	0.29	0.698	12/3/22 14:17	CMR
Isopropanol	ND	1.4		ND	3.4	0.698	12/3/22 14:17	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.698	12/3/22 14:17	CMR
Methylene Chloride	ND	0.35		ND	1.2	0.698	12/3/22 14:17	CMR
4-Methyl-2-pentanone (MIBK)	0.043	0.035		0.18	0.14	0.698	12/3/22 14:17	CMR
Naphthalene	ND	0.035	L-03	ND	0.18	0.698	12/7/22 20:43	CMR
Propene	ND	1.4		ND	2.4	0.698	12/3/22 14:17	CMR
Styrene	ND	0.035		ND	0.15	0.698	12/3/22 14:17	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.698	12/3/22 14:17	CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.698	12/3/22 14:17	CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.698	12/3/22 14:17	CMR
Toluene	0.19	0.035		0.70	0.13	0.698	12/3/22 14:17	CMR
1,2,4-Trichlorobenzene	ND	0.035	L-03	ND	0.26	0.698	12/3/22 14:17	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.698	12/3/22 14:17	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.698	12/3/22 14:17	CMR
Trichloroethylene	ND	0.035		ND	0.19	0.698	12/3/22 14:17	CMR
Trichlorofluoromethane (Freon 11)	0.23	0.14		1.3	0.78	0.698	12/3/22 14:17	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.698	12/3/22 14:17	CMR
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17	0.698	12/3/22 14:17	CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.698	12/3/22 14:17	CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.698	12/3/22 14:17	CMR
Vinyl Chloride	ND	0.035		ND	0.089	0.698	12/3/22 14:17	CMR
m&p-Xylene	0.090	0.070		0.39	0.30	0.698	12/3/22 14:17	CMR
o-Xylene	0.040	0.035		0.18	0.15	0.698	12/3/22 14:17	CMR
Surrogates	% Recovery			% REC Limits				
4-Bromofluorobenzene (1)	95.0			70-130			12/7/22 20:43	
4-Bromofluorobenzene (1)	96.1			70-130			12/3/22 14:17	

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ANALYTICAL RESULTS

Project Location: Zuq Island
 Date Received: 11/15/2022
Field Sample #: DW1-1109-3
Sample ID: 22K2322-02
 Sample Matrix: Air
 Sampled: 11/10/2022 12:00

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1878
 Canister Size: 6 liter
 Flow Controller ID: 3676
 Sample Type: 24 hr

Work Order: 22K2322
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -10
 Receipt Vacuum(in Hg): -10.4
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	4.6	1.4		11	3.3	0.696	12/3/22 14:50		CMR
Benzene	0.22	0.035		0.70	0.11	0.696	12/3/22 14:50		CMR
Benzyl chloride	ND	0.035		ND	0.18	0.696	12/3/22 14:50		CMR
Bromodichloromethane	ND	0.035		ND	0.23	0.696	12/3/22 14:50		CMR
Bromoform	ND	0.035		ND	0.36	0.696	12/3/22 14:50		CMR
Bromomethane	ND	0.035		ND	0.14	0.696	12/3/22 14:50		CMR
1,3-Butadiene	ND	0.035		ND	0.077	0.696	12/3/22 14:50		CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.696	12/3/22 14:50		CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.696	12/3/22 14:50		CMR
Carbon Tetrachloride	0.068	0.035		0.42	0.22	0.696	12/3/22 14:50		CMR
Chlorobenzene	ND	0.035		ND	0.16	0.696	12/3/22 14:50		CMR
Chloroethane	ND	0.035		ND	0.092	0.696	12/3/22 14:50		CMR
Chloroform	ND	0.035		ND	0.17	0.696	12/3/22 14:50		CMR
Chloromethane	0.48	0.070		0.99	0.14	0.696	12/3/22 14:50		CMR
Cyclohexane	ND	0.035		ND	0.12	0.696	12/3/22 14:50		CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.696	12/3/22 14:50		CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.696	12/3/22 14:50		CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.696	12/3/22 14:50		CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.696	12/3/22 14:50		CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.696	12/3/22 14:50		CMR
Dichlorodifluoromethane (Freon 12)	0.48	0.035		2.4	0.17	0.696	12/3/22 14:50		CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.696	12/3/22 14:50		CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.696	12/3/22 14:50		CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.696	12/3/22 14:50		CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.696	12/3/22 14:50		CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.696	12/3/22 14:50		CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.696	12/3/22 14:50		CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.696	12/3/22 14:50		CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.696	12/3/22 14:50		CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.24	0.696	12/3/22 14:50		CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.696	12/3/22 14:50		CMR
Ethanol	6.3	1.4		12	2.6	0.696	12/3/22 14:50		CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.696	12/3/22 14:50		CMR
Ethylbenzene	ND	0.035		ND	0.15	0.696	12/3/22 14:50		CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.696	12/3/22 14:50		CMR
Heptane	0.063	0.035		0.26	0.14	0.696	12/3/22 14:50		CMR
Hexachlorobutadiene	ND	0.035	L-03	ND	0.37	0.696	12/3/22 14:50		CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
 Date Received: 11/15/2022
Field Sample #: DW1-1109-3
Sample ID: 22K2322-02
 Sample Matrix: Air
 Sampled: 11/10/2022 12:00

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1878
 Canister Size: 6 liter
 Flow Controller ID: 3676
 Sample Type: 24 hr

Work Order: 22K2322
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -10
 Receipt Vacuum(in Hg): -10.4
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15								
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time	
	Results	RL		Results	RL		Analyzed	Analyst
Hexane	ND	1.4		ND	4.9	0.696	12/3/22 14:50	CMR
2-Hexanone (MBK)	0.092	0.070		0.38	0.29	0.696	12/3/22 14:50	CMR
Isopropanol	ND	1.4		ND	3.4	0.696	12/3/22 14:50	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.696	12/3/22 14:50	CMR
Methylene Chloride	ND	0.35		ND	1.2	0.696	12/3/22 14:50	CMR
4-Methyl-2-pentanone (MIBK)	0.042	0.035		0.17	0.14	0.696	12/3/22 14:50	CMR
Naphthalene	ND	0.040	L-03	ND	0.21	0.81	12/7/22 21:15	CMR
Propene	ND	1.4		ND	2.4	0.696	12/3/22 14:50	CMR
Styrene	ND	0.035		ND	0.15	0.696	12/3/22 14:50	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.696	12/3/22 14:50	CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.696	12/3/22 14:50	CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.696	12/3/22 14:50	CMR
Toluene	0.19	0.035		0.72	0.13	0.696	12/3/22 14:50	CMR
1,2,4-Trichlorobenzene	ND	0.035	L-03	ND	0.26	0.696	12/3/22 14:50	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.696	12/3/22 14:50	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.696	12/3/22 14:50	CMR
Trichloroethylene	ND	0.035		ND	0.19	0.696	12/3/22 14:50	CMR
Trichlorofluoromethane (Freon 11)	0.22	0.14		1.2	0.78	0.696	12/3/22 14:50	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.696	12/3/22 14:50	CMR
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17	0.696	12/3/22 14:50	CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.696	12/3/22 14:50	CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.696	12/3/22 14:50	CMR
Vinyl Chloride	ND	0.035		ND	0.089	0.696	12/3/22 14:50	CMR
m&p-Xylene	0.088	0.070		0.38	0.30	0.696	12/3/22 14:50	CMR
o-Xylene	ND	0.035		ND	0.15	0.696	12/3/22 14:50	CMR
Surrogates	% Recovery			% REC Limits				
4-Bromofluorobenzene (1)	95.5			70-130			12/7/22 21:15	
4-Bromofluorobenzene (1)	98.6			70-130			12/3/22 14:50	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
 Date Received: 11/15/2022
Field Sample #: IN1-1109-3B
Sample ID: 22K2322-03
 Sample Matrix: Air
 Sampled: 11/10/2022 12:50

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1042
 Canister Size: 6 liter
 Flow Controller ID: 3494
 Sample Type: 24 hr

Work Order: 22K2322
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -9
 Receipt Vacuum(in Hg): -8.7
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15								
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time	
	Results	RL		Results	RL		Analyzed	Analyst
Acetone	2.9	1.4		6.8	3.3	0.698	12/3/22 15:21	CMR
Benzene	11	0.035		37	0.11	0.698	12/3/22 15:21	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.698	12/3/22 15:21	CMR
Bromodichloromethane	ND	0.035		ND	0.23	0.698	12/3/22 15:21	CMR
Bromoform	ND	0.035		ND	0.36	0.698	12/3/22 15:21	CMR
Bromomethane	ND	0.035		ND	0.14	0.698	12/3/22 15:21	CMR
1,3-Butadiene	ND	0.035		ND	0.077	0.698	12/3/22 15:21	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.698	12/3/22 15:21	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.698	12/3/22 15:21	CMR
Carbon Tetrachloride	0.062	0.035		0.39	0.22	0.698	12/3/22 15:21	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.698	12/3/22 15:21	CMR
Chloroethane	ND	0.035		ND	0.092	0.698	12/3/22 15:21	CMR
Chloroform	ND	0.035		ND	0.17	0.698	12/3/22 15:21	CMR
Chloromethane	0.48	0.070		0.99	0.14	0.698	12/3/22 15:21	CMR
Cyclohexane	0.053	0.035		0.18	0.12	0.698	12/3/22 15:21	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.698	12/3/22 15:21	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.698	12/3/22 15:21	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/3/22 15:21	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/3/22 15:21	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/3/22 15:21	CMR
Dichlorodifluoromethane (Freon 12)	0.45	0.035		2.2	0.17	0.698	12/3/22 15:21	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.698	12/3/22 15:21	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.698	12/3/22 15:21	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/3/22 15:21	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/3/22 15:21	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/3/22 15:21	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.698	12/3/22 15:21	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/3/22 15:21	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/3/22 15:21	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.24	0.698	12/3/22 15:21	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.698	12/3/22 15:21	CMR
Ethanol	5.3	1.4		9.9	2.6	0.698	12/3/22 15:21	CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.698	12/3/22 15:21	CMR
Ethylbenzene	0.053	0.035		0.23	0.15	0.698	12/3/22 15:21	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.698	12/3/22 15:21	CMR
Heptane	0.077	0.035		0.32	0.14	0.698	12/3/22 15:21	CMR
Hexachlorobutadiene	ND	0.035	L-03	ND	0.37	0.698	12/3/22 15:21	CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
Date Received: 11/15/2022
Field Sample #: IN1-1109-3B
Sample ID: 22K2322-03
Sample Matrix: Air
Sampled: 11/10/2022 12:50

Sample Description/Location:
Sub Description/Location:
Canister ID: 1042
Canister Size: 6 liter
Flow Controller ID: 3494
Sample Type: 24 hr

Work Order: 22K2322
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -9
Receipt Vacuum(in Hg): -8.7
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4	B-07, L-03, B	ND	4.9	0.698	12/3/22	15:21	CMR
2-Hexanone (MBK)	ND	0.070		ND	0.29	0.698	12/3/22	15:21	CMR
Isopropanol	ND	1.4		ND	3.4	0.698	12/3/22	15:21	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.698	12/3/22	15:21	CMR
Methylene Chloride	ND	0.35		ND	1.2	0.698	12/3/22	15:21	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.698	12/3/22	15:21	CMR
Naphthalene	5.6	0.035		29	0.18	0.698	12/3/22	15:21	CMR
Propene	ND	1.4		ND	2.4	0.698	12/3/22	15:21	CMR
Styrene	0.40	0.035		1.7	0.15	0.698	12/3/22	15:21	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.698	12/3/22	15:21	CMR
Tetrachloroethylene	ND	0.035	ND	0.24	0.698	12/3/22	15:21	CMR	
Tetrahydrofuran	ND	0.35	ND	1.0	0.698	12/3/22	15:21	CMR	
Toluene	2.3	0.035	L-03	8.5	0.13	0.698	12/3/22	15:21	CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.698	12/3/22	15:21	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.698	12/3/22	15:21	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.698	12/3/22	15:21	CMR
Trichloroethylene	ND	0.035		ND	0.19	0.698	12/3/22	15:21	CMR
Trichlorofluoromethane (Freon 11)	0.20	0.14		1.1	0.78	0.698	12/3/22	15:21	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.698	12/3/22	15:21	CMR
1,2,4-Trimethylbenzene	0.11	0.035		0.55	0.17	0.698	12/3/22	15:21	CMR
1,3,5-Trimethylbenzene	0.064	0.035	0.32	0.17	0.698	12/3/22	15:21	CMR	
Vinyl Acetate	ND	0.70	ND	2.5	0.698	12/3/22	15:21	CMR	
Vinyl Chloride	ND	0.035	ND	0.089	0.698	12/3/22	15:21	CMR	
m&p-Xylene	0.57	0.070	2.5	0.30	0.698	12/3/22	15:21	CMR	
o-Xylene	0.16	0.035	0.71	0.15	0.698	12/3/22	15:21	CMR	

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	99.0	70-130	12/3/22 15:21

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
 Date Received: 11/15/2022
Field Sample #: IN1-1109-3A
Sample ID: 22K2322-04
 Sample Matrix: Air
 Sampled: 11/10/2022 12:50

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 2018
 Canister Size: 6 liter
 Flow Controller ID: 3645
 Sample Type: 24 hr

Work Order: 22K2322
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -8
 Receipt Vacuum(in Hg): -8.7
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	4.5	1.4		11	3.3	0.698	12/3/22	15:52	CMR
Benzene	12	0.035		37	0.11	0.698	12/3/22	15:52	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.698	12/3/22	15:52	CMR
Bromodichloromethane	ND	0.035		ND	0.23	0.698	12/3/22	15:52	CMR
Bromoform	ND	0.035		ND	0.36	0.698	12/3/22	15:52	CMR
Bromomethane	ND	0.035		ND	0.14	0.698	12/3/22	15:52	CMR
1,3-Butadiene	0.085	0.035		0.19	0.077	0.698	12/3/22	15:52	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.698	12/3/22	15:52	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.698	12/3/22	15:52	CMR
Carbon Tetrachloride	0.065	0.035		0.41	0.22	0.698	12/3/22	15:52	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.698	12/3/22	15:52	CMR
Chloroethane	ND	0.035		ND	0.092	0.698	12/3/22	15:52	CMR
Chloroform	ND	0.035		ND	0.17	0.698	12/3/22	15:52	CMR
Chloromethane	0.46	0.070		0.96	0.14	0.698	12/3/22	15:52	CMR
Cyclohexane	0.056	0.035		0.19	0.12	0.698	12/3/22	15:52	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.698	12/3/22	15:52	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.698	12/3/22	15:52	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/3/22	15:52	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/3/22	15:52	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/3/22	15:52	CMR
Dichlorodifluoromethane (Freon 12)	0.45	0.035		2.2	0.17	0.698	12/3/22	15:52	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.698	12/3/22	15:52	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.698	12/3/22	15:52	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/3/22	15:52	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/3/22	15:52	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/3/22	15:52	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.698	12/3/22	15:52	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/3/22	15:52	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/3/22	15:52	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.24	0.698	12/3/22	15:52	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.698	12/3/22	15:52	CMR
Ethanol	5.1	1.4		9.6	2.6	0.698	12/3/22	15:52	CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.698	12/3/22	15:52	CMR
Ethylbenzene	0.054	0.035		0.23	0.15	0.698	12/3/22	15:52	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.698	12/3/22	15:52	CMR
Heptane	0.066	0.035		0.27	0.14	0.698	12/3/22	15:52	CMR
Hexachlorobutadiene	ND	0.035	L-03	ND	0.37	0.698	12/3/22	15:52	CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
Date Received: 11/15/2022
Field Sample #: IN1-1109-3A
Sample ID: 22K2322-04
Sample Matrix: Air
Sampled: 11/10/2022 12:50

Sample Description/Location:
Sub Description/Location:
Canister ID: 2018
Canister Size: 6 liter
Flow Controller ID: 3645
Sample Type: 24 hr

Work Order: 22K2322
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -8
Receipt Vacuum(in Hg): -8.7
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4	B-07, L-03, B	ND	4.9	0.698	12/3/22	15:52	CMR
2-Hexanone (MBK)	0.11	0.070		0.46	0.29	0.698	12/3/22	15:52	CMR
Isopropanol	ND	1.4		ND	3.4	0.698	12/3/22	15:52	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.698	12/3/22	15:52	CMR
Methylene Chloride	ND	0.35	L-03	ND	1.2	0.698	12/3/22	15:52	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.698	12/3/22	15:52	CMR
Naphthalene	7.6	0.035		40	0.18	0.698	12/3/22	15:52	CMR
Propene	ND	1.4		ND	2.4	0.698	12/3/22	15:52	CMR
Styrene	0.42	0.035		1.8	0.15	0.698	12/3/22	15:52	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.698	12/3/22	15:52	CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.698	12/3/22	15:52	CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.698	12/3/22	15:52	CMR
Toluene	2.3	0.035		8.5	0.13	0.698	12/3/22	15:52	CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.698	12/3/22	15:52	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.698	12/3/22	15:52	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.698	12/3/22	15:52	CMR
Trichloroethylene	ND	0.035		ND	0.19	0.698	12/3/22	15:52	CMR
Trichlorofluoromethane (Freon 11)	0.22	0.14		1.2	0.78	0.698	12/3/22	15:52	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.698	12/3/22	15:52	CMR
1,2,4-Trimethylbenzene	0.13	0.035		0.66	0.17	0.698	12/3/22	15:52	CMR
1,3,5-Trimethylbenzene	0.075	0.035		0.37	0.17	0.698	12/3/22	15:52	CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.698	12/3/22	15:52	CMR
Vinyl Chloride	ND	0.035		ND	0.089	0.698	12/3/22	15:52	CMR
m&p-Xylene	0.62	0.070		2.7	0.30	0.698	12/3/22	15:52	CMR
o-Xylene	0.18	0.035		0.76	0.15	0.698	12/3/22	15:52	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	101	70-130	12/3/22 15:52

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
 Date Received: 11/15/2022
Field Sample #: UPW-1109-3
Sample ID: 22K2322-05
 Sample Matrix: Air
 Sampled: 11/10/2022 14:09

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 2171
 Canister Size: 6 liter
 Flow Controller ID: 3454
 Sample Type: 24 hr

Work Order: 22K2322
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -8
 Receipt Vacuum(in Hg): -7.8
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	6.1	1.4		15	3.3	0.698	12/3/22 16:23		CMR
Benzene	0.31	0.035		0.98	0.11	0.698	12/3/22 16:23		CMR
Benzyl chloride	ND	0.035		ND	0.18	0.698	12/3/22 16:23		CMR
Bromodichloromethane	ND	0.035		ND	0.23	0.698	12/3/22 16:23		CMR
Bromoform	ND	0.035		ND	0.36	0.698	12/3/22 16:23		CMR
Bromomethane	ND	0.035		ND	0.14	0.698	12/3/22 16:23		CMR
1,3-Butadiene	ND	0.035		ND	0.077	0.698	12/3/22 16:23		CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.698	12/3/22 16:23		CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.698	12/3/22 16:23		CMR
Carbon Tetrachloride	0.061	0.035		0.38	0.22	0.698	12/3/22 16:23		CMR
Chlorobenzene	ND	0.035		ND	0.16	0.698	12/3/22 16:23		CMR
Chloroethane	ND	0.035		ND	0.092	0.698	12/3/22 16:23		CMR
Chloroform	ND	0.035		ND	0.17	0.698	12/3/22 16:23		CMR
Chloromethane	0.51	0.070		1.0	0.14	0.698	12/3/22 16:23		CMR
Cyclohexane	0.082	0.035		0.28	0.12	0.698	12/3/22 16:23		CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.698	12/3/22 16:23		CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.698	12/3/22 16:23		CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/3/22 16:23		CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/3/22 16:23		CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/3/22 16:23		CMR
Dichlorodifluoromethane (Freon 12)	0.47	0.035		2.3	0.17	0.698	12/3/22 16:23		CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.698	12/3/22 16:23		CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.698	12/3/22 16:23		CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/3/22 16:23		CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/3/22 16:23		CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/3/22 16:23		CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.698	12/3/22 16:23		CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/3/22 16:23		CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/3/22 16:23		CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.24	0.698	12/3/22 16:23		CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.698	12/3/22 16:23		CMR
Ethanol	6.2	1.4		12	2.6	0.698	12/3/22 16:23		CMR
Ethyl Acetate	0.47	0.35		1.7	1.3	0.698	12/3/22 16:23		CMR
Ethylbenzene	0.045	0.035		0.20	0.15	0.698	12/3/22 16:23		CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.698	12/3/22 16:23		CMR
Heptane	0.12	0.035		0.47	0.14	0.698	12/3/22 16:23		CMR
Hexachlorobutadiene	ND	0.035	L-03	ND	0.37	0.698	12/3/22 16:23		CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
 Date Received: 11/15/2022
Field Sample #: UPW-1109-3
Sample ID: 22K2322-05
 Sample Matrix: Air
 Sampled: 11/10/2022 14:09

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 2171
 Canister Size: 6 liter
 Flow Controller ID: 3454
 Sample Type: 24 hr

Work Order: 22K2322
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -8
 Receipt Vacuum(in Hg): -7.8
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4		ND	4.9	0.698	12/3/22 16:23		CMR
2-Hexanone (MBK)	0.16	0.070		0.67	0.29	0.698	12/3/22 16:23		CMR
Isopropanol	ND	1.4		ND	3.4	0.698	12/3/22 16:23		CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.698	12/3/22 16:23		CMR
Methylene Chloride	ND	0.35		ND	1.2	0.698	12/3/22 16:23		CMR
4-Methyl-2-pentanone (MIBK)	0.081	0.035		0.33	0.14	0.698	12/3/22 16:23		CMR
Naphthalene	ND	0.035	L-03	ND	0.18	0.698	12/7/22 21:47		CMR
Propene	ND	1.4		ND	2.4	0.698	12/3/22 16:23		CMR
Styrene	ND	0.035		ND	0.15	0.698	12/3/22 16:23		CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.698	12/3/22 16:23		CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.698	12/3/22 16:23		CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.698	12/3/22 16:23		CMR
Toluene	0.38	0.035		1.4	0.13	0.698	12/3/22 16:23		CMR
1,2,4-Trichlorobenzene	ND	0.035	L-03	ND	0.26	0.698	12/3/22 16:23		CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.698	12/3/22 16:23		CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.698	12/3/22 16:23		CMR
Trichloroethylene	ND	0.035		ND	0.19	0.698	12/3/22 16:23		CMR
Trichlorofluoromethane (Freon 11)	0.21	0.14		1.2	0.78	0.698	12/3/22 16:23		CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.698	12/3/22 16:23		CMR
1,2,4-Trimethylbenzene	0.048	0.035		0.24	0.17	0.698	12/3/22 16:23		CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.698	12/3/22 16:23		CMR
Vinyl Acetate	0.75	0.70		2.6	2.5	0.698	12/3/22 16:23		CMR
Vinyl Chloride	ND	0.035		ND	0.089	0.698	12/3/22 16:23		CMR
m&p-Xylene	0.13	0.070		0.56	0.30	0.698	12/3/22 16:23		CMR
o-Xylene	0.050	0.035		0.22	0.15	0.698	12/3/22 16:23		CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	95.8	70-130	12/7/22 21:47
4-Bromofluorobenzene (1)	98.4	70-130	12/3/22 16:23

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
Date Received: 11/15/2022
Field Sample #: IN2-1109-3
Sample ID: 22K2322-06
Sample Matrix: Air
Sampled: 11/10/2022 13:30

Sample Description/Location:
Sub Description/Location:
Canister ID: 2002
Canister Size: 6 liter
Flow Controller ID: 3504
Sample Type: 24 hr

Work Order: 22K2322
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -7.5
Receipt Vacuum(in Hg): -7.9
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	5.7	1.4		14	3.3	0.698	12/3/22 16:54		CMR
Benzene	0.48	0.035		1.5	0.11	0.698	12/3/22 16:54		CMR
Benzyl chloride	ND	0.035		ND	0.18	0.698	12/3/22 16:54		CMR
Bromodichloromethane	ND	0.035		ND	0.23	0.698	12/3/22 16:54		CMR
Bromoform	ND	0.035		ND	0.36	0.698	12/3/22 16:54		CMR
Bromomethane	ND	0.035		ND	0.14	0.698	12/3/22 16:54		CMR
1,3-Butadiene	ND	0.035		ND	0.077	0.698	12/3/22 16:54		CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.698	12/3/22 16:54		CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.698	12/3/22 16:54		CMR
Carbon Tetrachloride	0.070	0.035		0.44	0.22	0.698	12/3/22 16:54		CMR
Chlorobenzene	ND	0.035		ND	0.16	0.698	12/3/22 16:54		CMR
Chloroethane	ND	0.035		ND	0.092	0.698	12/3/22 16:54		CMR
Chloroform	ND	0.035		ND	0.17	0.698	12/3/22 16:54		CMR
Chloromethane	0.44	0.070		0.91	0.14	0.698	12/3/22 16:54		CMR
Cyclohexane	ND	0.035		ND	0.12	0.698	12/3/22 16:54		CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.698	12/3/22 16:54		CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.698	12/3/22 16:54		CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/3/22 16:54		CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/3/22 16:54		CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/3/22 16:54		CMR
Dichlorodifluoromethane (Freon 12)	0.46	0.035		2.3	0.17	0.698	12/3/22 16:54		CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.698	12/3/22 16:54		CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.698	12/3/22 16:54		CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/3/22 16:54		CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/3/22 16:54		CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/3/22 16:54		CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.698	12/3/22 16:54		CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/3/22 16:54		CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/3/22 16:54		CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.24	0.698	12/3/22 16:54		CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.698	12/3/22 16:54		CMR
Ethanol	4.8	1.4		9.0	2.6	0.698	12/3/22 16:54		CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.698	12/3/22 16:54		CMR
Ethylbenzene	ND	0.035		ND	0.15	0.698	12/3/22 16:54		CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.698	12/3/22 16:54		CMR
Heptane	0.053	0.035		0.22	0.14	0.698	12/3/22 16:54		CMR
Hexachlorobutadiene	ND	0.035	L-03	ND	0.37	0.698	12/3/22 16:54		CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
 Date Received: 11/15/2022
Field Sample #: IN2-1109-3
Sample ID: 22K2322-06
 Sample Matrix: Air
 Sampled: 11/10/2022 13:30

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 2002
 Canister Size: 6 liter
 Flow Controller ID: 3504
 Sample Type: 24 hr

Work Order: 22K2322
 Initial Vacuum(in Hg): -28
 Final Vacuum(in Hg): -7.5
 Receipt Vacuum(in Hg): -7.9
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4	B-07, L-03, B	ND	4.9	0.698	12/3/22	16:54	CMR
2-Hexanone (MBK)	0.11	0.070		0.46	0.29	0.698	12/3/22	16:54	CMR
Isopropanol	ND	1.4		ND	3.4	0.698	12/3/22	16:54	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.698	12/3/22	16:54	CMR
Methylene Chloride	ND	0.35	L-03	ND	1.2	0.698	12/3/22	16:54	CMR
4-Methyl-2-pentanone (MIBK)	0.040	0.035		0.16	0.14	0.698	12/3/22	16:54	CMR
Naphthalene	2.7	0.035		14	0.18	0.698	12/3/22	16:54	CMR
Propene	ND	1.4		ND	2.4	0.698	12/3/22	16:54	CMR
Styrene	0.039	0.035		0.17	0.15	0.698	12/3/22	16:54	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.698	12/3/22	16:54	CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.698	12/3/22	16:54	CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.698	12/3/22	16:54	CMR
Toluene	0.25	0.035		0.94	0.13	0.698	12/3/22	16:54	CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.698	12/3/22	16:54	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.698	12/3/22	16:54	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.698	12/3/22	16:54	CMR
Trichloroethylene	ND	0.035		ND	0.19	0.698	12/3/22	16:54	CMR
Trichlorofluoromethane (Freon 11)	0.20	0.14		1.1	0.78	0.698	12/3/22	16:54	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.698	12/3/22	16:54	CMR
1,2,4-Trimethylbenzene	0.037	0.035		0.18	0.17	0.698	12/3/22	16:54	CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.698	12/3/22	16:54	CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.698	12/3/22	16:54	CMR
Vinyl Chloride	ND	0.035		ND	0.089	0.698	12/3/22	16:54	CMR
m&p-Xylene	0.098	0.070		0.42	0.30	0.698	12/3/22	16:54	CMR
o-Xylene	0.038	0.035		0.16	0.15	0.698	12/3/22	16:54	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	97.7	70-130	12/3/22 16:54

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: TO-15 Prep Analytical Method: EP

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
22K2322-01 [DW2-1109-3]	B325056	1.5	1	N/A	1000	200	430	12/03/22
22K2322-02 [DW1-1109-3]	B325056	1.74	1	N/A	1000	200	500	12/03/22
22K2322-03 [IN1-1109-3B]	B325056	1.5	1	N/A	1000	200	430	12/03/22
22K2322-04 [IN1-1109-3A]	B325056	1.5	1	N/A	1000	200	430	12/03/22
22K2322-05 [UPW-1109-3]	B325056	1.5	1	N/A	1000	200	430	12/03/22
22K2322-06 [IN2-1109-3]	B325056	1.5	1	N/A	1000	200	430	12/03/22

Prep Method: TO-15 Prep Analytical Method: EP

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
22K2322-01RE1 [DW2-1109-3]	B325211	1.5	1	N/A	1000	200	430	12/07/22
22K2322-02RE1 [DW1-1109-3]	B325211	1.74	1	N/A	1000	200	430	12/07/22
22K2322-05RE1 [UPW-1109-3]	B325211	1.5	1	N/A	1000	200	430	12/07/22

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result		Limits		Limit	
Batch B325056 - TO-15 Prep											
Blank (B325056-BLK1)					Prepared & Analyzed: 12/03/22						
Acetone	ND	0.80									
Benzene	ND	0.020									
Benzyl chloride	ND	0.020									
Bromodichloromethane	ND	0.020									
Bromoform	ND	0.020									
Bromomethane	ND	0.020									
1,3-Butadiene	ND	0.020									
2-Butanone (MEK)	ND	0.80									
Carbon Disulfide	ND	0.20									
Carbon Tetrachloride	ND	0.020									
Chlorobenzene	ND	0.020									
Chloroethane	ND	0.020									
Chloroform	ND	0.020									
Chloromethane	ND	0.040									
Cyclohexane	ND	0.020									
Dibromochloromethane	ND	0.020									
1,2-Dibromoethane (EDB)	ND	0.020									
1,2-Dichlorobenzene	ND	0.020									
1,3-Dichlorobenzene	ND	0.020									
1,4-Dichlorobenzene	ND	0.020									
Dichlorodifluoromethane (Freon 12)	ND	0.020									
1,1-Dichloroethane	ND	0.020									
1,2-Dichloroethane	ND	0.020									
1,1-Dichloroethylene	ND	0.020									
cis-1,2-Dichloroethylene	ND	0.020									
trans-1,2-Dichloroethylene	ND	0.020									
1,2-Dichloropropane	ND	0.020									
cis-1,3-Dichloropropene	ND	0.020									
trans-1,3-Dichloropropene	ND	0.020									
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.020									
1,4-Dioxane	ND	0.20									
Ethanol	ND	0.80									
Ethyl Acetate	ND	0.20									
Ethylbenzene	ND	0.020									
4-Ethyltoluene	ND	0.020									
Heptane	ND	0.020									
Hexachlorobutadiene	ND	0.020									L-0
Hexane	ND	0.80									
2-Hexanone (MBK)	ND	0.040									
Isopropanol	ND	0.80									
Methyl tert-Butyl Ether (MTBE)	ND	0.020									
Methylene Chloride	ND	0.20									
4-Methyl-2-pentanone (MIBK)	ND	0.020									
Naphthalene	0.024	0.020									B, L-0
Propene	ND	0.80									
Styrene	ND	0.020									

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	Limits	RPD	Limit	

Batch B325056 - TO-15 Prep
Blank (B325056-BLK1)

Prepared & Analyzed: 12/03/22

1,1,2,2-Tetrachloroethane	ND	0.020								
Tetrachloroethylene	ND	0.020								
Tetrahydrofuran	ND	0.20								
Toluene	ND	0.020								
1,2,4-Trichlorobenzene	0.028	0.020								B-05, L-03
1,1,1-Trichloroethane	ND	0.020								
1,1,2-Trichloroethane	ND	0.020								
Trichloroethylene	ND	0.020								
Trichlorofluoromethane (Freon 11)	ND	0.080								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.080								
1,2,4-Trimethylbenzene	ND	0.020								
1,3,5-Trimethylbenzene	ND	0.020								
Vinyl Acetate	ND	0.40								
Vinyl Chloride	ND	0.020								
m&p-Xylene	ND	0.040								
o-Xylene	ND	0.020								

<i>Surrogate: 4-Bromofluorobenzene (1)</i>	<i>8.02</i>				<i>8.00</i>		<i>100</i>	<i>70-130</i>		
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LCS (B325056-BS1)

Prepared & Analyzed: 12/03/22

Acetone	4.04				5.00		80.7	70-130		
Benzene	4.63				5.00		92.5	70-130		
Benzyl chloride	4.57				5.00		91.4	70-130		
Bromodichloromethane	4.53				5.00		90.6	70-130		
Bromoform	4.33				5.00		86.6	70-130		
Bromomethane	4.53				5.00		90.6	70-130		
1,3-Butadiene	4.46				5.00		89.3	70-130		
2-Butanone (MEK)	5.91				5.00		118	70-130		
Carbon Disulfide	4.68				5.00		93.5	70-130		
Carbon Tetrachloride	4.47				5.00		89.4	70-130		
Chlorobenzene	4.20				5.00		83.9	70-130		
Chloroethane	4.67				5.00		93.4	70-130		
Chloroform	4.48				5.00		89.7	70-130		
Chloromethane	5.19				5.00		104	70-130		
Cyclohexane	4.96				5.00		99.2	70-130		
Dibromochloromethane	4.44				5.00		88.8	70-130		
1,2-Dibromoethane (EDB)	4.28				5.00		85.5	70-130		
1,2-Dichlorobenzene	3.70				5.00		74.0	70-130		
1,3-Dichlorobenzene	3.93				5.00		78.7	70-130		
1,4-Dichlorobenzene	3.85				5.00		77.0	70-130		
Dichlorodifluoromethane (Freon 12)	4.54				5.00		90.8	70-130		
1,1-Dichloroethane	4.65				5.00		93.0	70-130		
1,2-Dichloroethane	4.47				5.00		89.4	70-130		
1,1-Dichloroethylene	4.66				5.00		93.1	70-130		
cis-1,2-Dichloroethylene	4.56				5.00		91.2	70-130		
trans-1,2-Dichloroethylene	4.55				5.00		91.0	70-130		
1,2-Dichloropropane	4.52				5.00		90.5	70-130		

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	%REC	Limits	RPD	Limit	
Batch B325056 - TO-15 Prep											
LCS (B325056-BS1)					Prepared & Analyzed: 12/03/22						
cis-1,3-Dichloropropene	4.54				5.00		90.8	70-130			
trans-1,3-Dichloropropene	4.61				5.00		92.2	70-130			
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	4.27				5.00		85.5	70-130			
1,4-Dioxane	4.60				5.00		92.0	70-130			
Ethanol	3.87				5.00		77.4	70-130			
Ethyl Acetate	4.23				5.00		84.6	70-130			
Ethylbenzene	4.50				5.00		90.0	70-130			
4-Ethyltoluene	4.31				5.00		86.3	70-130			
Heptane	4.63				5.00		92.6	70-130			
Hexachlorobutadiene	2.97				5.00		59.3	* 70-130			L-03
Hexane	4.64				5.00		92.7	70-130			
2-Hexanone (MBK)	5.18				5.00		104	70-130			
Isopropanol	3.76				5.00		75.2	70-130			
Methyl tert-Butyl Ether (MTBE)	4.68				5.00		93.6	70-130			
Methylene Chloride	4.26				5.00		85.2	70-130			
4-Methyl-2-pentanone (MIBK)	4.60				5.00		92.0	70-130			
Naphthalene	3.11				5.00		62.3	* 70-130			L-03, B
Propene	4.41				5.00		88.3	70-130			
Styrene	3.95				5.00		79.0	70-130			
1,1,2,2-Tetrachloroethane	3.92				5.00		78.3	70-130			
Tetrachloroethylene	4.25				5.00		85.0	70-130			
Tetrahydrofuran	4.65				5.00		93.0	70-130			
Toluene	4.46				5.00		89.3	70-130			
1,2,4-Trichlorobenzene	3.05				5.00		61.0	* 70-130			B, L-03
1,1,1-Trichloroethane	4.29				5.00		85.9	70-130			
1,1,2-Trichloroethane	4.33				5.00		86.7	70-130			
Trichloroethylene	4.37				5.00		87.4	70-130			
Trichlorofluoromethane (Freon 11)	4.48				5.00		89.5	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	4.51				5.00		90.2	70-130			
1,2,4-Trimethylbenzene	4.17				5.00		83.5	70-130			
1,3,5-Trimethylbenzene	4.58				5.00		91.6	70-130			
Vinyl Acetate	4.66				5.00		93.2	70-130			
Vinyl Chloride	4.53				5.00		90.7	70-130			
m&p-Xylene	9.24				10.0		92.4	70-130			
o-Xylene	4.52				5.00		90.3	70-130			
Surrogate: 4-Bromofluorobenzene (1)	8.02				8.00		100	70-130			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC		RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	%REC	Limits	RPD	

Batch B325211 - TO-15 Prep
Blank (B325211-BLK1)

Prepared & Analyzed: 12/07/22

Naphthalene	ND	0.020								L-03
Surrogate: 4-Bromofluorobenzene (1)	7.79				8.00		97.4	70-130		

LCS (B325211-BS1)

Prepared & Analyzed: 12/07/22

Naphthalene	3.04				5.00		60.8 *	70-130		L-03
Surrogate: 4-Bromofluorobenzene (1)	7.84				8.00		98.0	70-130		

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332**FLAG/QUALIFIER SUMMARY**

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
B	Analyte is found in the associated laboratory blank as well as in the sample.
B-05	Data is not affected by elevated level in laboratory blank since sample(s) result is "Not Detected".
B-07	Data is not affected by elevated level in laboratory blank since sample result is >10x level found in the blank.
L-03	Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (S080302-ICV1)			Lab File ID: J22A0337018.D			Analyzed: 12/03/22 08:35			
Bromochloromethane (1)	460265	2.801	459868	2.801	100	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	1200591	3.428	1177712	3.428	102	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	1081405	5.038	1063705	5.039	102	60 - 140	-0.0010	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (S080338-CCV1)			Lab File ID: J22A0337021.D			Analyzed: 12/03/22 11:51			
Bromochloromethane (1)	464864	2.807	459868	2.801	101	60 - 140	0.0060	+/-0.50	
1,4-Difluorobenzene (1)	1183034	3.428	1177712	3.428	100	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	1071936	5.044	1063705	5.039	101	60 - 140	0.0050	+/-0.50	
LCS (B325056-BS1)			Lab File ID: J22A0337022.D			Analyzed: 12/03/22 12:16			
Bromochloromethane (1)	467160	2.806	464864	2.807	100	60 - 140	-0.0010	+/-0.50	
1,4-Difluorobenzene (1)	1195306	3.428	1183034	3.428	101	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	1088918	5.043	1071936	5.044	102	60 - 140	-0.0010	+/-0.50	
Blank (B325056-BLK1)			Lab File ID: J22A0337025.D			Analyzed: 12/03/22 13:45			
Bromochloromethane (1)	450655	2.79	464864	2.807	97	60 - 140	-0.0170	+/-0.50	
1,4-Difluorobenzene (1)	1105729	3.422	1183034	3.428	93	60 - 140	-0.0060	+/-0.50	
Chlorobenzene-d5 (1)	1001763	5.036	1071936	5.044	93	60 - 140	-0.0080	+/-0.50	
DW2-1109-3 (22K2322-01)			Lab File ID: J22A0337026.D			Analyzed: 12/03/22 14:17			
Bromochloromethane (1)	461718	2.791	464864	2.807	99	60 - 140	-0.0160	+/-0.50	
1,4-Difluorobenzene (1)	1122388	3.423	1183034	3.428	95	60 - 140	-0.0050	+/-0.50	
Chlorobenzene-d5 (1)	1021972	5.038	1071936	5.044	95	60 - 140	-0.0060	+/-0.50	
DW1-1109-3 (22K2322-02)			Lab File ID: J22A0337027.D			Analyzed: 12/03/22 14:50			
Bromochloromethane (1)	456076	2.79	464864	2.807	98	60 - 140	-0.0170	+/-0.50	
1,4-Difluorobenzene (1)	1113902	3.423	1183034	3.428	94	60 - 140	-0.0050	+/-0.50	
Chlorobenzene-d5 (1)	990738	5.037	1071936	5.044	92	60 - 140	-0.0070	+/-0.50	
IN1-1109-3B (22K2322-03)			Lab File ID: J22A0337028.D			Analyzed: 12/03/22 15:21			
Bromochloromethane (1)	466960	2.791	464864	2.807	100	60 - 140	-0.0160	+/-0.50	
1,4-Difluorobenzene (1)	1134703	3.423	1183034	3.428	96	60 - 140	-0.0050	+/-0.50	
Chlorobenzene-d5 (1)	1022434	5.038	1071936	5.044	95	60 - 140	-0.0060	+/-0.50	
IN1-1109-3A (22K2322-04)			Lab File ID: J22A0337029.D			Analyzed: 12/03/22 15:52			
Bromochloromethane (1)	461931	2.791	464864	2.807	99	60 - 140	-0.0160	+/-0.50	
1,4-Difluorobenzene (1)	1126975	3.423	1183034	3.428	95	60 - 140	-0.0050	+/-0.50	
Chlorobenzene-d5 (1)	1003211	5.038	1071936	5.044	94	60 - 140	-0.0060	+/-0.50	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
UPW-1109-3 (22K2322-05) Lab File ID: J22A0337030.D Analyzed: 12/03/22 16:23									
Bromochloromethane (1)	463502	2.791	464864	2.807	100	60 - 140	-0.0160	+/-0.50	
1,4-Difluorobenzene (1)	1118320	3.423	1183034	3.428	95	60 - 140	-0.0050	+/-0.50	
Chlorobenzene-d5 (1)	1019258	5.038	1071936	5.044	95	60 - 140	-0.0060	+/-0.50	
IN2-1109-3 (22K2322-06) Lab File ID: J22A0337031.D Analyzed: 12/03/22 16:54									
Bromochloromethane (1)	467913	2.791	464864	2.807	101	60 - 140	-0.0160	+/-0.50	
1,4-Difluorobenzene (1)	1117955	3.423	1183034	3.428	94	60 - 140	-0.0050	+/-0.50	
Chlorobenzene-d5 (1)	1019118	5.038	1071936	5.044	95	60 - 140	-0.0060	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (S080384-CCV1) Lab File ID: J22A341007.D Analyzed: 12/07/22 14:18									
Bromochloromethane (1)	374697	2.801	459868	2.801	81	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	1054783	3.427	1177712	3.428	90	60 - 140	-0.0010	+/-0.50	
Chlorobenzene-d5 (1)	958625	5.043	1063705	5.039	90	60 - 140	0.0040	+/-0.50	
LCS (B325211-BS1) Lab File ID: J22A341008.D Analyzed: 12/07/22 14:43									
Bromochloromethane (1)	373251	2.806	374697	2.801	100	60 - 140	0.0050	+/-0.50	
1,4-Difluorobenzene (1)	1065780	3.428	1054783	3.427	101	60 - 140	0.0010	+/-0.50	
Chlorobenzene-d5 (1)	967450	5.043	958625	5.043	101	60 - 140	0.0000	+/-0.50	
Blank (B325211-BLK1) Lab File ID: J22A341014.D Analyzed: 12/07/22 17:33									
Bromochloromethane (1)	354973	2.79	374697	2.801	95	60 - 140	-0.0110	+/-0.50	
1,4-Difluorobenzene (1)	954350	3.421	1054783	3.427	90	60 - 140	-0.0060	+/-0.50	
Chlorobenzene-d5 (1)	874164	5.036	958625	5.043	91	60 - 140	-0.0070	+/-0.50	
DW2-1109-3 (22K2322-01RE1) Lab File ID: J22A341020.D Analyzed: 12/07/22 20:43									
Bromochloromethane (1)	363979	2.79	374697	2.801	97	60 - 140	-0.0110	+/-0.50	
1,4-Difluorobenzene (1)	970403	3.422	1054783	3.427	92	60 - 140	-0.0050	+/-0.50	
Chlorobenzene-d5 (1)	902617	5.037	958625	5.043	94	60 - 140	-0.0060	+/-0.50	
DW1-1109-3 (22K2322-02RE1) Lab File ID: J22A341021.D Analyzed: 12/07/22 21:15									
Bromochloromethane (1)	371427	2.79	374697	2.801	99	60 - 140	-0.0110	+/-0.50	
1,4-Difluorobenzene (1)	1000354	3.422	1054783	3.427	95	60 - 140	-0.0050	+/-0.50	
Chlorobenzene-d5 (1)	901639	5.037	958625	5.043	94	60 - 140	-0.0060	+/-0.50	
UPW-1109-3 (22K2322-05RE1) Lab File ID: J22A341022.D Analyzed: 12/07/22 21:47									
Bromochloromethane (1)	371765	2.79	374697	2.801	99	60 - 140	-0.0110	+/-0.50	
1,4-Difluorobenzene (1)	984891	3.422	1054783	3.427	93	60 - 140	-0.0050	+/-0.50	
Chlorobenzene-d5 (1)	906187	5.037	958625	5.043	95	60 - 140	-0.0060	+/-0.50	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CONTINUING CALIBRATION CHECK

EPA TO-15

S080338-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.00	4.54	1.032116	0.9380017		-9.1	30
Benzene	A	5.00	4.82	0.6962521	0.6714519		-3.6	30
Benzyl chloride	A	5.00	6.08	0.5761045	0.7003239		21.6	30
Bromodichloromethane	A	5.00	4.84	0.567843	0.5495443		-3.2	30
Bromoform	A	5.00	4.98	0.4767222	0.4751985		-0.3	30
Bromomethane	A	5.00	4.78	0.5448882	0.5213706		-4.3	30
1,3-Butadiene	A	5.00	4.95	0.4630172	0.4582502		-1.0	30
2-Butanone (MEK)	A	5.00	6.29	1.088012	1.36862		25.8	30
Carbon Disulfide	A	5.00	4.69	1.884119	1.767037		-6.2	30
Carbon Tetrachloride	A	5.00	4.80	0.5397988	0.5178739		-4.1	30
Chlorobenzene	A	5.00	4.71	0.7450185	0.7018016		-5.8	30
Chloroethane	A	5.00	4.75	0.3310126	0.314208		-5.1	30
Chloroform	A	5.00	4.77	1.363653	1.301886		-4.5	30
Chloromethane	A	5.00	5.14	0.5543863	0.5697598		2.8	30
Cyclohexane	A	5.00	5.13	0.2817457	0.2892982		2.7	30
Dibromochloromethane	A	5.00	4.94	0.5685361	0.5616574		-1.2	30
1,2-Dibromoethane (EDB)	A	5.00	4.76	0.50474	0.4804048		-4.8	30
1,2-Dichlorobenzene	A	5.00	4.97	0.604848	0.6015747		-0.5	30
1,3-Dichlorobenzene	A	5.00	5.18	0.655583	0.6787898		3.5	30
1,4-Dichlorobenzene	A	5.00	4.91	0.6296439	0.6179085		-1.9	30
Dichlorodifluoromethane (Freon 12)	A	5.00	4.80	1.643714	1.579528		-3.9	30
1,1-Dichloroethane	A	5.00	4.88	1.121121	1.094121		-2.4	30
1,2-Dichloroethane	A	5.00	4.74	1.002185	0.9506299		-5.1	30
1,1-Dichloroethylene	A	5.00	4.80	1.17684	1.128863		-4.1	30
cis-1,2-Dichloroethylene	A	5.00	4.83	0.8843401	0.8536518		-3.5	30
trans-1,2-Dichloroethylene	A	5.00	4.80	0.9442735	0.9054863		-4.1	30
1,2-Dichloropropane	A	5.00	4.78	0.2821164	0.269785		-4.4	30
cis-1,3-Dichloropropene	A	5.00	5.11	0.400776	0.4098628		2.3	30
trans-1,3-Dichloropropene	A	5.00	5.11	0.3537848	0.3614855		2.2	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	A	5.00	4.77	1.639508	1.562948		-4.7	30
1,4-Dioxane	A	5.00	5.15	0.1415858	0.1459326		3.1	30
Ethanol	A	5.00	4.63	0.1759911	0.1631066		-7.3	30
Ethyl Acetate	A	5.00	4.81	0.1980954	0.1907311		-3.7	30
Ethylbenzene	A	5.00	5.05	1.215427	1.226845		0.9	30
4-Ethyltoluene	A	5.00	5.09	1.226482	1.248057		1.8	30
Heptane	A	5.00	5.07	0.2359411	0.2390667		1.3	30
Hexachlorobutadiene	A	5.00	4.77	0.4402774	0.4198266		-4.6	30
Hexane	L	5.00	4.86	0.717826	0.6963482		-2.8	30

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CONTINUING CALIBRATION CHECK

EPA TO-15

S080338-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
2-Hexanone (MBK)	A	5.00	5.54	0.5926727	0.6569362		10.8	30
Isopropanol	A	5.00	4.97	1.086258	1.078929		-0.7	30
Methyl tert-Butyl Ether (MTBE)	A	5.00	4.94	1.553618	1.536188		-1.1	30
Methylene Chloride	A	5.00	4.42	0.8835862	0.7803882		-11.7	30
4-Methyl-2-pentanone (MIBK)	A	5.00	4.95	0.2311175	0.2288624		-1.0	30
Naphthalene	A	5.00	5.04	0.8775899	0.8840991		0.7	30
Propene	A	5.00	4.82	0.3777909	0.3644868		-3.5	30
Styrene	A	5.00	6.12	0.7316371	0.8954505		22.4	30
1,1,2,2-Tetrachloroethane	A	5.00	4.77	0.7289953	0.6960251		-4.5	30
Tetrachloroethylene	A	5.00	4.71	0.4190246	0.3944071		-5.9	30
Tetrahydrofuran	A	5.00	4.92	0.7392332	0.7274523		-1.6	30
Toluene	A	5.00	4.80	0.9595253	0.9215416		-4.0	30
1,2,4-Trichlorobenzene	A	5.00	5.15	0.3518629	0.3625933		3.0	30
1,1,1-Trichloroethane	A	5.00	4.77	0.5348868	0.5106152		-4.5	30
1,1,2-Trichloroethane	A	5.00	4.71	0.3348068	0.3156129		-5.7	30
Trichloroethylene	A	5.00	4.61	0.3387431	0.3120816		-7.9	30
Trichlorofluoromethane (Freon 11)	A	5.00	4.82	1.707162	1.646149		-3.6	30
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	A	5.00	4.68	1.390833	1.300878		-6.5	30
1,2,4-Trimethylbenzene	A	5.00	5.28	1.010685	1.066732		5.5	30
1,3,5-Trimethylbenzene	A	5.00	5.52	0.9919636	1.094295		10.3	30
Vinyl Acetate	A	5.00	4.44	1.241368	1.102908		-11.2	30
Vinyl Chloride	A	5.00	4.79	0.632048	0.6059131		-4.1	30
m&p-Xylene	A	10.0	10.6	0.9799166	1.033982		5.5	30
o-Xylene	A	5.00	5.10	0.9582822	0.976715		1.9	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

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CONTINUING CALIBRATION CHECK**EPA TO-15****S080384-CCV1**

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Naphthalene	A	5.00	4.84	0.8775899	0.849203		-3.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
Acetone	AIHA,NY,ME,NH
Benzene	AIHA,FL,NJ,NY,ME,NH,VA
Benzyl chloride	AIHA,FL,NJ,NY,ME,NH,VA
Bromodichloromethane	AIHA,NJ,NY,ME,NH,VA
Bromoform	AIHA,NJ,NY,ME,NH,VA
Bromomethane	AIHA,FL,NJ,NY,ME,NH
1,3-Butadiene	AIHA,NJ,NY,ME,NH,VA
2-Butanone (MEK)	AIHA,FL,NJ,NY,ME,NH,VA
Carbon Disulfide	AIHA,NJ,NY,ME,NH,VA
Carbon Tetrachloride	AIHA,FL,NJ,NY,ME,NH,VA
Chlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
Chloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Chloroform	AIHA,FL,NJ,NY,ME,NH,VA
Chloromethane	AIHA,FL,NJ,NY,ME,NH,VA
Cyclohexane	AIHA,NJ,NY,ME,NH,VA
Dibromochloromethane	AIHA,NY,ME,NH
1,2-Dibromoethane (EDB)	AIHA,NJ,NY,ME,NH
1,2-Dichlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
1,3-Dichlorobenzene	AIHA,NJ,NY,ME,NH
1,4-Dichlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
Dichlorodifluoromethane (Freon 12)	AIHA,NY,ME,NH
1,1-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,2-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1-Dichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
cis-1,2-Dichloroethylene	AIHA,FL,NY,ME,NH,VA
trans-1,2-Dichloroethylene	AIHA,NJ,NY,ME,NH,VA
1,2-Dichloropropane	AIHA,FL,NJ,NY,ME,NH,VA
cis-1,3-Dichloropropene	AIHA,FL,NJ,NY,ME,NH,VA
trans-1,3-Dichloropropene	AIHA,NY,ME,NH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	AIHA,NJ,NY,ME,NH,VA
1,4-Dioxane	AIHA,NJ,NY,ME,NH,VA
Ethanol	AIHA
Ethyl Acetate	AIHA
Ethylbenzene	AIHA,FL,NJ,NY,ME,NH,VA
4-Ethyltoluene	AIHA,NJ
Heptane	AIHA,NJ,NY,ME,NH,VA
Hexachlorobutadiene	AIHA,NJ,NY,ME,NH,VA
Hexane	AIHA,FL,NJ,NY,ME,NH,VA
2-Hexanone (MBK)	AIHA
Isopropanol	AIHA,NY,ME,NH
Methyl tert-Butyl Ether (MTBE)	AIHA,FL,NJ,NY,ME,NH,VA
Methylene Chloride	AIHA,FL,NJ,NY,ME,NH,VA
4-Methyl-2-pentanone (MIBK)	AIHA,FL,NJ,NY,ME,NH
Naphthalene	NY,ME,NH
Propene	AIHA
Styrene	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY,ME,NH,VA

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
Tetrachloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Tetrahydrofuran	AIHA
Toluene	AIHA,FL,NJ,NY,ME,NH,VA
1,2,4-Trichlorobenzene	AIHA,NJ,NY,ME,NH,VA
1,1,1-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Trichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Trichlorofluoromethane (Freon 11)	AIHA,NY,ME,NH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	AIHA,NJ,NY,ME,NH,VA
1,2,4-Trimethylbenzene	AIHA,NJ,NY,ME,NH
1,3,5-Trimethylbenzene	AIHA,NJ,NY,ME,NH
Vinyl Acetate	AIHA,FL,NJ,NY,ME,NH,VA
Vinyl Chloride	AIHA,FL,NJ,NY,ME,NH,VA
m&p-Xylene	AIHA,FL,NJ,NY,ME,NH,VA
o-Xylene	AIHA,FL,NJ,NY,ME,NH,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO 17025:2017	100033	03/1/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
FL	Florida Department of Health	E871027 NELAP	06/30/2023
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2022

Page 30 of 32

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Doc# 278 Rev 7 July 2022

Air Media Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client clean Air

Received By	<u>LR</u>	Date	<u>11/5</u>	Time	<u>938</u>
How Were the samples received?	In Cooler	<u>On Ice</u>	No Ice		
	In Box	<u>T</u>	Ambient	Melted Ice	
Were samples within Temperature Compliance?	Within	<u>2-6°C</u>	By Gun #	Actual Temp -	
			By Blank #	Actual Temp -	
Was Custody Seal In tact?	<u>MA</u>	Were Samples Tampered with?	<u>MA</u>		
Was COC Relinquished?	<u>T</u>	Does Chain Agree With Samples?	<u>T</u>		
Are there any loose caps/valves on any samples?	<u>F</u>	Were samples received within holding time?	<u>T</u>		
Is COC in ink/ Legible?	<u>T</u>	Did COC Include all Pertinent Information?	Client? <u>T</u> Project? <u>T</u>	Analysis? <u>T</u> ID's? <u>T</u>	Sampler Name? <u>T</u> Collection Dates/Times? <u>T</u>
Are Sample Labels filled out and legible?		Who was notified?			
Are there Rushes?	<u>F</u>	Samples are received within holding time?	<u>T</u>		
Proper Media Used?	<u>T</u>	Individually Certified Cans?	<u>F</u>		
Are there Trip Blanks?	<u>F</u>	Is there enough Volume?	<u>T</u>		

Containers:	#	Size	Regulator	Duration	Accessories:			
Summa Cans	<u>6</u>	<u>6L</u>	<u>6</u>	<u>24 hr</u>	Nut/Ferrule		IC Train	
Tedlar Bags					Tubing			
TO-17 Tubes					T-Connector		Shipping Charges	
Radiello					Syringe			
Pufs/TO-11s					Tedlar			

Can #'s				Reg #'s				
<u>1864</u>				<u>3461</u>				
<u>1828</u>				<u>3676</u>				
<u>1042</u>				<u>3494</u>				
<u>2018</u>				<u>3645</u>				
<u>2171</u>				<u>3454</u>				
<u>2002</u>				<u>3504</u>				
Unused Media				Pufs/TO-17's				

Comments:

December 28, 2022

Tim Rodak
Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275

Project Location: Zuq Island
Client Job Number:
Project Number: 14796 Quote 123244
Laboratory Work Order Number: 22L2843

Enclosed are results of analyses for samples as received by the laboratory on December 20, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

DRAFT REPORT
Project Manager

Table of Contents

Sample Summary	3
Case Narrative	4
Sample Results	6
Sample Preparation Information	18
QC Data	19
Air Toxics by EPA Compendium Methods	19
B327010	19
Flag/Qualifier Summary	22
Internal standard Area & RT Summary	23
Continuing Calibration Check	25
Certifications	27
Chain of Custody/Sample Receipt	29

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275
ATTN: Tim Rodak

REPORT DATE: 12/28/2022

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 14796 Quote 123244

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22L2843

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Zuq Island

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
VPW-1205-4	22L2843-01	Air		-	
				EPA TO-15	
IN1-1205-4	22L2843-02	Air		EPA TO-15	
IN2-1205-4A	22L2843-03	Air		EPA TO-15	
IN2-1205-4B	22L2843-04	Air		EPA TO-15	
DW2-1205-4	22L2843-05	Air		EPA TO-15	
DW1-1205-4	22L2843-06	Air		EPA TO-15	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA TO-15**Qualifications:**

L-01

Laboratory fortified blank/laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.

Analyte & Samples(s) Qualified:**2-Butanone (MEK)**B327010-BS1

L-03

Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**1,2,4-Trichlorobenzene**

22L2843-01[VPW-1205-4], 22L2843-02[IN1-1205-4], 22L2843-03[IN2-1205-4A], 22L2843-04[IN2-1205-4B], 22L2843-05[DW2-1205-4], 22L2843-06[DW1-1205-4], B327010-BLK1, B327010-BS1

Hexachlorobutadiene

22L2843-01[VPW-1205-4], 22L2843-02[IN1-1205-4], 22L2843-03[IN2-1205-4A], 22L2843-04[IN2-1205-4B], 22L2843-05[DW2-1205-4], 22L2843-06[DW1-1205-4], B327010-BLK1, B327010-BS1

Naphthalene22L2843-01[VPW-1205-4], 22L2843-02[IN1-1205-4], 22L2843-03[IN2-1205-4A], 22L2843-04[IN2-1205-4B], 22L2843-05[DW2-1205-4], 22L2843-06[DW1-1205-4], B327010-BLK1, B327010-BS1

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:**2-Butanone (MEK)**

B327010-BS1, S081234-CCV1

Benzyl chlorideB327010-BS1, S081234-CCV1

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**Hexachlorobutadiene**

22L2843-01[VPW-1205-4], 22L2843-02[IN1-1205-4], 22L2843-03[IN2-1205-4A], 22L2843-04[IN2-1205-4B], 22L2843-05[DW2-1205-4], 22L2843-06[DW1-1205-4], B327010-BLK1, B327010-BS1, S081234-CCV1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

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ANALYTICAL RESULTS

Project Location: Zuq Island
Date Received: 12/20/2022
Field Sample #: VPW-1205-4
Sample ID: 22L2843-01
Sample Matrix: Air
Sampled: 12/16/2022 15:41

Sample Description/Location:
Sub Description/Location:
Canister ID: 2134
Canister Size: 6 liter
Flow Controller ID: 3178
Sample Type: 24 hr

Work Order: 22L2843
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -7
Receipt Vacuum(in Hg): -7.9
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		
	Results	RL		Results	RL		Analyzed	Analyst	
Acetone	4.5	1.4		11	3.3	0.698	12/23/22	11:52	CMR
Benzene	0.31	0.035		0.98	0.11	0.698	12/23/22	11:52	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.698	12/23/22	11:52	CMR
Bromodichloromethane	ND	0.035		ND	0.23	0.698	12/23/22	11:52	CMR
Bromoform	ND	0.035		ND	0.36	0.698	12/23/22	11:52	CMR
Bromomethane	ND	0.035		ND	0.14	0.698	12/23/22	11:52	CMR
1,3-Butadiene	ND	0.035		ND	0.077	0.698	12/23/22	11:52	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.698	12/23/22	11:52	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.698	12/23/22	11:52	CMR
Carbon Tetrachloride	0.077	0.035		0.49	0.22	0.698	12/23/22	11:52	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.698	12/23/22	11:52	CMR
Chloroethane	ND	0.035		ND	0.092	0.698	12/23/22	11:52	CMR
Chloroform	ND	0.035		ND	0.17	0.698	12/23/22	11:52	CMR
Chloromethane	0.51	0.070		1.1	0.14	0.698	12/23/22	11:52	CMR
Cyclohexane	0.045	0.035		0.16	0.12	0.698	12/23/22	11:52	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.698	12/23/22	11:52	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.698	12/23/22	11:52	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/23/22	11:52	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/23/22	11:52	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/23/22	11:52	CMR
Dichlorodifluoromethane (Freon 12)	0.53	0.035		2.6	0.17	0.698	12/23/22	11:52	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.698	12/23/22	11:52	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.698	12/23/22	11:52	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/23/22	11:52	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/23/22	11:52	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/23/22	11:52	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.698	12/23/22	11:52	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/23/22	11:52	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/23/22	11:52	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.24	0.698	12/23/22	11:52	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.698	12/23/22	11:52	CMR
Ethanol	4.3	1.4		8.1	2.6	0.698	12/23/22	11:52	CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.698	12/23/22	11:52	CMR
Ethylbenzene	ND	0.035		ND	0.15	0.698	12/23/22	11:52	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.698	12/23/22	11:52	CMR
Heptane	0.068	0.035		0.28	0.14	0.698	12/23/22	11:52	CMR
Hexachlorobutadiene	ND	0.035	L-03, V-34	ND	0.37	0.698	12/23/22	11:52	CMR

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ANALYTICAL RESULTS

Project Location: Zuq Island
Date Received: 12/20/2022
Field Sample #: VPW-1205-4
Sample ID: 22L2843-01
Sample Matrix: Air
Sampled: 12/16/2022 15:41

Sample Description/Location:
Sub Description/Location:
Canister ID: 2134
Canister Size: 6 liter
Flow Controller ID: 3178
Sample Type: 24 hr

Work Order: 22L2843
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -7
Receipt Vacuum(in Hg): -7.9
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15								
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time	
	Results	RL		Results	RL		Analyzed	Analyst
Hexane	ND	1.4		ND	4.9	0.698	12/23/22 11:52	CMR
2-Hexanone (MBK)	0.097	0.070		0.40	0.29	0.698	12/23/22 11:52	CMR
Isopropanol	ND	1.4		ND	3.4	0.698	12/23/22 11:52	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.698	12/23/22 11:52	CMR
Methylene Chloride	ND	0.35		ND	1.2	0.698	12/23/22 11:52	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.698	12/23/22 11:52	CMR
Naphthalene	ND	0.035	L-03	ND	0.18	0.698	12/23/22 11:52	CMR
Propene	ND	1.4		ND	2.4	0.698	12/23/22 11:52	CMR
Styrene	ND	0.035		ND	0.15	0.698	12/23/22 11:52	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.698	12/23/22 11:52	CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.698	12/23/22 11:52	CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.698	12/23/22 11:52	CMR
Toluene	0.27	0.035		1.0	0.13	0.698	12/23/22 11:52	CMR
1,2,4-Trichlorobenzene	ND	0.035	L-03	ND	0.26	0.698	12/23/22 11:52	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.698	12/23/22 11:52	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.698	12/23/22 11:52	CMR
Trichloroethylene	ND	0.035		ND	0.19	0.698	12/23/22 11:52	CMR
Trichlorofluoromethane (Freon 11)	0.24	0.14		1.3	0.78	0.698	12/23/22 11:52	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.698	12/23/22 11:52	CMR
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17	0.698	12/23/22 11:52	CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.698	12/23/22 11:52	CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.698	12/23/22 11:52	CMR
Vinyl Chloride	ND	0.035		ND	0.089	0.698	12/23/22 11:52	CMR
m&p-Xylene	0.082	0.070		0.36	0.30	0.698	12/23/22 11:52	CMR
o-Xylene	0.040	0.035		0.18	0.15	0.698	12/23/22 11:52	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	94.8	70-130	12/23/22 11:52

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
 Date Received: 12/20/2022
Field Sample #: IN1-1205-4
Sample ID: 22L2843-02
 Sample Matrix: Air
 Sampled: 12/16/2022 14:39

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1831
 Canister Size: 6 liter
 Flow Controller ID: 3177
 Sample Type: 24 hr

Work Order: 22L2843
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -8.5
 Receipt Vacuum(in Hg): -7.4
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	2.4	1.4		5.7	3.3	0.698	12/23/22 12:25		CMR
Benzene	11	0.035		37	0.11	0.698	12/23/22 12:25		CMR
Benzyl chloride	ND	0.035		ND	0.18	0.698	12/23/22 12:25		CMR
Bromodichloromethane	ND	0.035		ND	0.23	0.698	12/23/22 12:25		CMR
Bromoform	ND	0.035		ND	0.36	0.698	12/23/22 12:25		CMR
Bromomethane	ND	0.035		ND	0.14	0.698	12/23/22 12:25		CMR
1,3-Butadiene	ND	0.035		ND	0.077	0.698	12/23/22 12:25		CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.698	12/23/22 12:25		CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.698	12/23/22 12:25		CMR
Carbon Tetrachloride	0.077	0.035		0.48	0.22	0.698	12/23/22 12:25		CMR
Chlorobenzene	ND	0.035		ND	0.16	0.698	12/23/22 12:25		CMR
Chloroethane	ND	0.035		ND	0.092	0.698	12/23/22 12:25		CMR
Chloroform	ND	0.035		ND	0.17	0.698	12/23/22 12:25		CMR
Chloromethane	0.48	0.070		0.99	0.14	0.698	12/23/22 12:25		CMR
Cyclohexane	0.046	0.035		0.16	0.12	0.698	12/23/22 12:25		CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.698	12/23/22 12:25		CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.698	12/23/22 12:25		CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/23/22 12:25		CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/23/22 12:25		CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/23/22 12:25		CMR
Dichlorodifluoromethane (Freon 12)	0.53	0.035		2.6	0.17	0.698	12/23/22 12:25		CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.698	12/23/22 12:25		CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.698	12/23/22 12:25		CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/23/22 12:25		CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/23/22 12:25		CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/23/22 12:25		CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.698	12/23/22 12:25		CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/23/22 12:25		CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/23/22 12:25		CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.24	0.698	12/23/22 12:25		CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.698	12/23/22 12:25		CMR
Ethanol	3.0	1.4		5.6	2.6	0.698	12/23/22 12:25		CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.698	12/23/22 12:25		CMR
Ethylbenzene	0.046	0.035		0.20	0.15	0.698	12/23/22 12:25		CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.698	12/23/22 12:25		CMR
Heptane	0.078	0.035		0.32	0.14	0.698	12/23/22 12:25		CMR
Hexachlorobutadiene	ND	0.035	L-03, V-34	ND	0.37	0.698	12/23/22 12:25		CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
 Date Received: 12/20/2022
Field Sample #: IN1-1205-4
Sample ID: 22L2843-02
 Sample Matrix: Air
 Sampled: 12/16/2022 14:39

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1831
 Canister Size: 6 liter
 Flow Controller ID: 3177
 Sample Type: 24 hr

Work Order: 22L2843
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -8.5
 Receipt Vacuum(in Hg): -7.4
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4		ND	4.9	0.698	12/23/22	12:25	CMR
2-Hexanone (MBK)	ND	0.070		ND	0.29	0.698	12/23/22	12:25	CMR
Isopropanol	ND	1.4		ND	3.4	0.698	12/23/22	12:25	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.698	12/23/22	12:25	CMR
Methylene Chloride	ND	0.35		ND	1.2	0.698	12/23/22	12:25	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.698	12/23/22	12:25	CMR
Naphthalene	3.4	0.035	L-03	18	0.18	0.698	12/23/22	12:25	CMR
Propene	ND	1.4		ND	2.4	0.698	12/23/22	12:25	CMR
Styrene	0.15	0.035		0.66	0.15	0.698	12/23/22	12:25	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.698	12/23/22	12:25	CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.698	12/23/22	12:25	CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.698	12/23/22	12:25	CMR
Toluene	1.5	0.035		5.8	0.13	0.698	12/23/22	12:25	CMR
1,2,4-Trichlorobenzene	ND	0.035	L-03	ND	0.26	0.698	12/23/22	12:25	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.698	12/23/22	12:25	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.698	12/23/22	12:25	CMR
Trichloroethylene	ND	0.035		ND	0.19	0.698	12/23/22	12:25	CMR
Trichlorofluoromethane (Freon 11)	0.23	0.14		1.3	0.78	0.698	12/23/22	12:25	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.698	12/23/22	12:25	CMR
1,2,4-Trimethylbenzene	0.071	0.035		0.35	0.17	0.698	12/23/22	12:25	CMR
1,3,5-Trimethylbenzene	0.038	0.035		0.19	0.17	0.698	12/23/22	12:25	CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.698	12/23/22	12:25	CMR
Vinyl Chloride	ND	0.035		ND	0.089	0.698	12/23/22	12:25	CMR
m&p-Xylene	0.35	0.070		1.5	0.30	0.698	12/23/22	12:25	CMR
o-Xylene	0.12	0.035		0.51	0.15	0.698	12/23/22	12:25	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	96.6	70-130	12/23/22 12:25

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
Date Received: 12/20/2022
Field Sample #: IN2-1205-4A
Sample ID: 22L2843-03
Sample Matrix: Air
Sampled: 12/16/2022 15:10

Sample Description/Location:
Sub Description/Location:
Canister ID: 2042
Canister Size: 6 liter
Flow Controller ID: 3261
Sample Type: 24 hr

Work Order: 22L2843
Initial Vacuum(in Hg): -24
Final Vacuum(in Hg): -6.5
Receipt Vacuum(in Hg): -5.3
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	3.2	1.4		7.5	3.3	0.698	12/23/22	12:57	CMR
Benzene	0.87	0.035		2.8	0.11	0.698	12/23/22	12:57	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.698	12/23/22	12:57	CMR
Bromodichloromethane	ND	0.035		ND	0.23	0.698	12/23/22	12:57	CMR
Bromoform	ND	0.035		ND	0.36	0.698	12/23/22	12:57	CMR
Bromomethane	ND	0.035		ND	0.14	0.698	12/23/22	12:57	CMR
1,3-Butadiene	ND	0.035		ND	0.077	0.698	12/23/22	12:57	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.698	12/23/22	12:57	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.698	12/23/22	12:57	CMR
Carbon Tetrachloride	0.073	0.035		0.46	0.22	0.698	12/23/22	12:57	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.698	12/23/22	12:57	CMR
Chloroethane	ND	0.035		ND	0.092	0.698	12/23/22	12:57	CMR
Chloroform	ND	0.035		ND	0.17	0.698	12/23/22	12:57	CMR
Chloromethane	0.49	0.070		1.0	0.14	0.698	12/23/22	12:57	CMR
Cyclohexane	ND	0.035		ND	0.12	0.698	12/23/22	12:57	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.698	12/23/22	12:57	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.698	12/23/22	12:57	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/23/22	12:57	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/23/22	12:57	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/23/22	12:57	CMR
Dichlorodifluoromethane (Freon 12)	0.52	0.035		2.6	0.17	0.698	12/23/22	12:57	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.698	12/23/22	12:57	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.698	12/23/22	12:57	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/23/22	12:57	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/23/22	12:57	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/23/22	12:57	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.698	12/23/22	12:57	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/23/22	12:57	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/23/22	12:57	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.24	0.698	12/23/22	12:57	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.698	12/23/22	12:57	CMR
Ethanol	3.2	1.4		6.0	2.6	0.698	12/23/22	12:57	CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.698	12/23/22	12:57	CMR
Ethylbenzene	ND	0.035		ND	0.15	0.698	12/23/22	12:57	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.698	12/23/22	12:57	CMR
Heptane	0.048	0.035		0.20	0.14	0.698	12/23/22	12:57	CMR
Hexachlorobutadiene	ND	0.035	L-03, V-34	ND	0.37	0.698	12/23/22	12:57	CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
Date Received: 12/20/2022
Field Sample #: IN2-1205-4A
Sample ID: 22L2843-03
Sample Matrix: Air
Sampled: 12/16/2022 15:10

Sample Description/Location:
Sub Description/Location:
Canister ID: 2042
Canister Size: 6 liter
Flow Controller ID: 3261
Sample Type: 24 hr

Work Order: 22L2843
Initial Vacuum(in Hg): -24
Final Vacuum(in Hg): -6.5
Receipt Vacuum(in Hg): -5.3
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4		ND	4.9	0.698	12/23/22 12:57		CMR
2-Hexanone (MBK)	ND	0.070		ND	0.29	0.698	12/23/22 12:57		CMR
Isopropanol	ND	1.4		ND	3.4	0.698	12/23/22 12:57		CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.698	12/23/22 12:57		CMR
Methylene Chloride	ND	0.35		ND	1.2	0.698	12/23/22 12:57		CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.698	12/23/22 12:57		CMR
Naphthalene	1.1	0.035	L-03	5.7	0.18	0.698	12/23/22 12:57		CMR
Propene	ND	1.4		ND	2.4	0.698	12/23/22 12:57		CMR
Styrene	ND	0.035		ND	0.15	0.698	12/23/22 12:57		CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.698	12/23/22 12:57		CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.698	12/23/22 12:57		CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.698	12/23/22 12:57		CMR
Toluene	0.24	0.035		0.89	0.13	0.698	12/23/22 12:57		CMR
1,2,4-Trichlorobenzene	ND	0.035	L-03	ND	0.26	0.698	12/23/22 12:57		CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.698	12/23/22 12:57		CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.698	12/23/22 12:57		CMR
Trichloroethylene	ND	0.035		ND	0.19	0.698	12/23/22 12:57		CMR
Trichlorofluoromethane (Freon 11)	0.23	0.14		1.3	0.78	0.698	12/23/22 12:57		CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.698	12/23/22 12:57		CMR
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17	0.698	12/23/22 12:57		CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.698	12/23/22 12:57		CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.698	12/23/22 12:57		CMR
Vinyl Chloride	ND	0.035		ND	0.089	0.698	12/23/22 12:57		CMR
m&p-Xylene	0.090	0.070		0.39	0.30	0.698	12/23/22 12:57		CMR
o-Xylene	0.037	0.035		0.16	0.15	0.698	12/23/22 12:57		CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	93.8	70-130	12/23/22 12:57

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
 Date Received: 12/20/2022
Field Sample #: IN2-1205-4B
Sample ID: 22L2843-04
 Sample Matrix: Air
 Sampled: 12/16/2022 15:10

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1669
 Canister Size: 6 liter
 Flow Controller ID: 3261
 Sample Type: 24 hr

Work Order: 22L2843
 Initial Vacuum(in Hg): -24
 Final Vacuum(in Hg): -6.5
 Receipt Vacuum(in Hg): -5.3
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	1.9	1.4		4.5	3.3	0.698	12/23/22	13:28	CMR
Benzene	0.90	0.035		2.9	0.11	0.698	12/23/22	13:28	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.698	12/23/22	13:28	CMR
Bromodichloromethane	ND	0.035		ND	0.23	0.698	12/23/22	13:28	CMR
Bromoform	ND	0.035		ND	0.36	0.698	12/23/22	13:28	CMR
Bromomethane	ND	0.035		ND	0.14	0.698	12/23/22	13:28	CMR
1,3-Butadiene	ND	0.035		ND	0.077	0.698	12/23/22	13:28	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.698	12/23/22	13:28	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.698	12/23/22	13:28	CMR
Carbon Tetrachloride	0.082	0.035		0.52	0.22	0.698	12/23/22	13:28	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.698	12/23/22	13:28	CMR
Chloroethane	ND	0.035		ND	0.092	0.698	12/23/22	13:28	CMR
Chloroform	ND	0.035		ND	0.17	0.698	12/23/22	13:28	CMR
Chloromethane	0.56	0.070		1.1	0.14	0.698	12/23/22	13:28	CMR
Cyclohexane	0.036	0.035		0.12	0.12	0.698	12/23/22	13:28	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.698	12/23/22	13:28	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.698	12/23/22	13:28	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/23/22	13:28	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/23/22	13:28	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/23/22	13:28	CMR
Dichlorodifluoromethane (Freon 12)	0.54	0.035		2.6	0.17	0.698	12/23/22	13:28	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.698	12/23/22	13:28	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.698	12/23/22	13:28	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/23/22	13:28	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/23/22	13:28	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/23/22	13:28	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.698	12/23/22	13:28	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/23/22	13:28	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/23/22	13:28	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.24	0.698	12/23/22	13:28	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.698	12/23/22	13:28	CMR
Ethanol	2.6	1.4		5.0	2.6	0.698	12/23/22	13:28	CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.698	12/23/22	13:28	CMR
Ethylbenzene	ND	0.035		ND	0.15	0.698	12/23/22	13:28	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.698	12/23/22	13:28	CMR
Heptane	0.059	0.035		0.24	0.14	0.698	12/23/22	13:28	CMR
Hexachlorobutadiene	ND	0.035	L-03, V-34	ND	0.37	0.698	12/23/22	13:28	CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
Date Received: 12/20/2022
Field Sample #: IN2-1205-4B
Sample ID: 22L2843-04
Sample Matrix: Air
Sampled: 12/16/2022 15:10

Sample Description/Location:
Sub Description/Location:
Canister ID: 1669
Canister Size: 6 liter
Flow Controller ID: 3261
Sample Type: 24 hr

Work Order: 22L2843
Initial Vacuum(in Hg): -24
Final Vacuum(in Hg): -6.5
Receipt Vacuum(in Hg): -5.3
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4		ND	4.9	0.698	12/23/22 13:28		CMR
2-Hexanone (MBK)	ND	0.070		ND	0.29	0.698	12/23/22 13:28		CMR
Isopropanol	ND	1.4		ND	3.4	0.698	12/23/22 13:28		CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.698	12/23/22 13:28		CMR
Methylene Chloride	ND	0.35		ND	1.2	0.698	12/23/22 13:28		CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.698	12/23/22 13:28		CMR
Naphthalene	0.94	0.035	L-03	4.9	0.18	0.698	12/23/22 13:28		CMR
Propene	ND	1.4		ND	2.4	0.698	12/23/22 13:28		CMR
Styrene	0.046	0.035		0.20	0.15	0.698	12/23/22 13:28		CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.698	12/23/22 13:28		CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.698	12/23/22 13:28		CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.698	12/23/22 13:28		CMR
Toluene	0.25	0.035		0.95	0.13	0.698	12/23/22 13:28		CMR
1,2,4-Trichlorobenzene	ND	0.035	L-03	ND	0.26	0.698	12/23/22 13:28		CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.698	12/23/22 13:28		CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.698	12/23/22 13:28		CMR
Trichloroethylene	ND	0.035		ND	0.19	0.698	12/23/22 13:28		CMR
Trichlorofluoromethane (Freon 11)	0.24	0.14		1.3	0.78	0.698	12/23/22 13:28		CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.698	12/23/22 13:28		CMR
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17	0.698	12/23/22 13:28		CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.698	12/23/22 13:28		CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.698	12/23/22 13:28		CMR
Vinyl Chloride	ND	0.035		ND	0.089	0.698	12/23/22 13:28		CMR
m&p-Xylene	0.092	0.070		0.40	0.30	0.698	12/23/22 13:28		CMR
o-Xylene	ND	0.035		ND	0.15	0.698	12/23/22 13:28		CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	95.1	70-130	12/23/22 13:28

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
Date Received: 12/20/2022
Field Sample #: DW2-1205-4
Sample ID: 22L2843-05
Sample Matrix: Air
Sampled: 12/16/2022 13:48

Sample Description/Location:
Sub Description/Location:
Canister ID: 1281
Canister Size: 6 liter
Flow Controller ID: 3472
Sample Type: 24 hr

Work Order: 22L2843
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -8.1
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15								
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time	
	Results	RL		Results	RL		Analyzed	Analyst
Acetone	1.6	1.4		3.9	3.3	0.698	12/23/22 14:00	CMR
Benzene	0.29	0.035		0.94	0.11	0.698	12/23/22 14:00	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.698	12/23/22 14:00	CMR
Bromodichloromethane	ND	0.035		ND	0.23	0.698	12/23/22 14:00	CMR
Bromoform	ND	0.035		ND	0.36	0.698	12/23/22 14:00	CMR
Bromomethane	ND	0.035		ND	0.14	0.698	12/23/22 14:00	CMR
1,3-Butadiene	ND	0.035		ND	0.077	0.698	12/23/22 14:00	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.698	12/23/22 14:00	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.698	12/23/22 14:00	CMR
Carbon Tetrachloride	0.080	0.035		0.50	0.22	0.698	12/23/22 14:00	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.698	12/23/22 14:00	CMR
Chloroethane	ND	0.035		ND	0.092	0.698	12/23/22 14:00	CMR
Chloroform	ND	0.035		ND	0.17	0.698	12/23/22 14:00	CMR
Chloromethane	0.55	0.070		1.1	0.14	0.698	12/23/22 14:00	CMR
Cyclohexane	ND	0.035		ND	0.12	0.698	12/23/22 14:00	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.698	12/23/22 14:00	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.698	12/23/22 14:00	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/23/22 14:00	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/23/22 14:00	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/23/22 14:00	CMR
Dichlorodifluoromethane (Freon 12)	0.60	0.035		3.0	0.17	0.698	12/23/22 14:00	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.698	12/23/22 14:00	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.698	12/23/22 14:00	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/23/22 14:00	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/23/22 14:00	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/23/22 14:00	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.698	12/23/22 14:00	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/23/22 14:00	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/23/22 14:00	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.24	0.698	12/23/22 14:00	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.698	12/23/22 14:00	CMR
Ethanol	2.3	1.4		4.3	2.6	0.698	12/23/22 14:00	CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.698	12/23/22 14:00	CMR
Ethylbenzene	ND	0.035		ND	0.15	0.698	12/23/22 14:00	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.698	12/23/22 14:00	CMR
Heptane	0.054	0.035		0.22	0.14	0.698	12/23/22 14:00	CMR
Hexachlorobutadiene	ND	0.035	L-03, V-34	ND	0.37	0.698	12/23/22 14:00	CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
Date Received: 12/20/2022
Field Sample #: DW2-1205-4
Sample ID: 22L2843-05
Sample Matrix: Air
Sampled: 12/16/2022 13:48

Sample Description/Location:
Sub Description/Location:
Canister ID: 1281
Canister Size: 6 liter
Flow Controller ID: 3472
Sample Type: 24 hr

Work Order: 22L2843
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -8.1
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15								
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time	
	Results	RL		Results	RL		Analyzed	Analyst
Hexane	ND	1.4		ND	4.9	0.698	12/23/22 14:00	CMR
2-Hexanone (MBK)	ND	0.070		ND	0.29	0.698	12/23/22 14:00	CMR
Isopropanol	ND	1.4		ND	3.4	0.698	12/23/22 14:00	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.698	12/23/22 14:00	CMR
Methylene Chloride	ND	0.35		ND	1.2	0.698	12/23/22 14:00	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.698	12/23/22 14:00	CMR
Naphthalene	0.050	0.035	L-03	0.26	0.18	0.698	12/23/22 14:00	CMR
Propene	ND	1.4		ND	2.4	0.698	12/23/22 14:00	CMR
Styrene	ND	0.035		ND	0.15	0.698	12/23/22 14:00	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.698	12/23/22 14:00	CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.698	12/23/22 14:00	CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.698	12/23/22 14:00	CMR
Toluene	0.14	0.035		0.52	0.13	0.698	12/23/22 14:00	CMR
1,2,4-Trichlorobenzene	ND	0.035	L-03	ND	0.26	0.698	12/23/22 14:00	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.698	12/23/22 14:00	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.698	12/23/22 14:00	CMR
Trichloroethylene	ND	0.035		ND	0.19	0.698	12/23/22 14:00	CMR
Trichlorofluoromethane (Freon 11)	0.26	0.14		1.4	0.78	0.698	12/23/22 14:00	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.698	12/23/22 14:00	CMR
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17	0.698	12/23/22 14:00	CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.698	12/23/22 14:00	CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.698	12/23/22 14:00	CMR
Vinyl Chloride	ND	0.035		ND	0.089	0.698	12/23/22 14:00	CMR
m&p-Xylene	ND	0.070		ND	0.30	0.698	12/23/22 14:00	CMR
o-Xylene	ND	0.035		ND	0.15	0.698	12/23/22 14:00	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	93.8	70-130	12/23/22 14:00

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
Date Received: 12/20/2022
Field Sample #: DW1-1205-4
Sample ID: 22L2843-06
Sample Matrix: Air
Sampled: 12/16/2022 14:15

Sample Description/Location:
Sub Description/Location:
Canister ID: 1301
Canister Size: 6 liter
Flow Controller ID: 3473
Sample Type: 24 hr

Work Order: 22L2843
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -7
Receipt Vacuum(in Hg): -8.3
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15								
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time	
	Results	RL		Results	RL		Analyzed	Analyst
Acetone	1.6	1.4		3.9	3.3	0.698	12/23/22 14:31	CMR
Benzene	0.43	0.035		1.4	0.11	0.698	12/23/22 14:31	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.698	12/23/22 14:31	CMR
Bromodichloromethane	ND	0.035		ND	0.23	0.698	12/23/22 14:31	CMR
Bromoform	ND	0.035		ND	0.36	0.698	12/23/22 14:31	CMR
Bromomethane	ND	0.035		ND	0.14	0.698	12/23/22 14:31	CMR
1,3-Butadiene	ND	0.035		ND	0.077	0.698	12/23/22 14:31	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.698	12/23/22 14:31	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.698	12/23/22 14:31	CMR
Carbon Tetrachloride	0.080	0.035		0.50	0.22	0.698	12/23/22 14:31	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.698	12/23/22 14:31	CMR
Chloroethane	ND	0.035		ND	0.092	0.698	12/23/22 14:31	CMR
Chloroform	ND	0.035		ND	0.17	0.698	12/23/22 14:31	CMR
Chloromethane	0.51	0.070		1.1	0.14	0.698	12/23/22 14:31	CMR
Cyclohexane	0.043	0.035		0.15	0.12	0.698	12/23/22 14:31	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.698	12/23/22 14:31	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.698	12/23/22 14:31	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/23/22 14:31	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/23/22 14:31	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.698	12/23/22 14:31	CMR
Dichlorodifluoromethane (Freon 12)	0.90	0.035		4.5	0.17	0.698	12/23/22 14:31	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.698	12/23/22 14:31	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.698	12/23/22 14:31	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/23/22 14:31	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/23/22 14:31	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.698	12/23/22 14:31	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.698	12/23/22 14:31	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/23/22 14:31	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.698	12/23/22 14:31	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.24	0.698	12/23/22 14:31	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.698	12/23/22 14:31	CMR
Ethanol	2.5	1.4		4.7	2.6	0.698	12/23/22 14:31	CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.698	12/23/22 14:31	CMR
Ethylbenzene	ND	0.035		ND	0.15	0.698	12/23/22 14:31	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.698	12/23/22 14:31	CMR
Heptane	0.069	0.035		0.28	0.14	0.698	12/23/22 14:31	CMR
Hexachlorobutadiene	ND	0.035	L-03, V-34	ND	0.37	0.698	12/23/22 14:31	CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Zuq Island
 Date Received: 12/20/2022
Field Sample #: DW1-1205-4
Sample ID: 22L2843-06
 Sample Matrix: Air
 Sampled: 12/16/2022 14:15

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1301
 Canister Size: 6 liter
 Flow Controller ID: 3473
 Sample Type: 24 hr

Work Order: 22L2843
 Initial Vacuum(in Hg): -28
 Final Vacuum(in Hg): -7
 Receipt Vacuum(in Hg): -8.3
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15								
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time	
	Results	RL		Results	RL		Analyzed	Analyst
Hexane	ND	1.4		ND	4.9	0.698	12/23/22 14:31	CMR
2-Hexanone (MBK)	ND	0.070		ND	0.29	0.698	12/23/22 14:31	CMR
Isopropanol	ND	1.4		ND	3.4	0.698	12/23/22 14:31	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.698	12/23/22 14:31	CMR
Methylene Chloride	ND	0.35		ND	1.2	0.698	12/23/22 14:31	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.698	12/23/22 14:31	CMR
Naphthalene	0.043	0.035	L-03	0.22	0.18	0.698	12/23/22 14:31	CMR
Propene	ND	1.4		ND	2.4	0.698	12/23/22 14:31	CMR
Styrene	ND	0.035		ND	0.15	0.698	12/23/22 14:31	CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.698	12/23/22 14:31	CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.698	12/23/22 14:31	CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.698	12/23/22 14:31	CMR
Toluene	0.15	0.035		0.57	0.13	0.698	12/23/22 14:31	CMR
1,2,4-Trichlorobenzene	ND	0.035	L-03	ND	0.26	0.698	12/23/22 14:31	CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.698	12/23/22 14:31	CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.698	12/23/22 14:31	CMR
Trichloroethylene	ND	0.035		ND	0.19	0.698	12/23/22 14:31	CMR
Trichlorofluoromethane (Freon 11)	0.26	0.14		1.5	0.78	0.698	12/23/22 14:31	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.698	12/23/22 14:31	CMR
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17	0.698	12/23/22 14:31	CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.698	12/23/22 14:31	CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.698	12/23/22 14:31	CMR
Vinyl Chloride	ND	0.035		ND	0.089	0.698	12/23/22 14:31	CMR
m&p-Xylene	ND	0.070		ND	0.30	0.698	12/23/22 14:31	CMR
o-Xylene	ND	0.035		ND	0.15	0.698	12/23/22 14:31	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	94.7	70-130	12/23/22 14:31

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data**Prep Method: TO-15 Prep****Analytical Method: EP**

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
22L2843-01 [VPW-1205-4]	B327010	1.5	1	N/A	1000	200	430	12/23/22
22L2843-02 [IN1-1205-4]	B327010	1.5	1	N/A	1000	200	430	12/23/22
22L2843-03 [IN2-1205-4A]	B327010	1.5	1	N/A	1000	200	430	12/23/22
22L2843-04 [IN2-1205-4B]	B327010	1.5	1	N/A	1000	200	430	12/23/22
22L2843-05 [DW2-1205-4]	B327010	1.5	1	N/A	1000	200	430	12/23/22
22L2843-06 [DW1-1205-4]	B327010	1.5	1	N/A	1000	200	430	12/23/22

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	%REC	Limits	RPD	Limit	

Batch B327010 - TO-15 Prep

Blank (B327010-BLK1)						Prepared & Analyzed: 12/23/22					
Acetone	ND	0.80									
Benzene	ND	0.020									
Benzyl chloride	ND	0.020									
Bromodichloromethane	ND	0.020									
Bromoform	ND	0.020									
Bromomethane	ND	0.020									
1,3-Butadiene	ND	0.020									
2-Butanone (MEK)	ND	0.80									
Carbon Disulfide	ND	0.20									
Carbon Tetrachloride	ND	0.020									
Chlorobenzene	ND	0.020									
Chloroethane	ND	0.020									
Chloroform	ND	0.020									
Chloromethane	ND	0.040									
Cyclohexane	ND	0.020									
Dibromochloromethane	ND	0.020									
1,2-Dibromoethane (EDB)	ND	0.020									
1,2-Dichlorobenzene	ND	0.020									
1,3-Dichlorobenzene	ND	0.020									
1,4-Dichlorobenzene	ND	0.020									
Dichlorodifluoromethane (Freon 12)	ND	0.020									
1,1-Dichloroethane	ND	0.020									
1,2-Dichloroethane	ND	0.020									
1,1-Dichloroethylene	ND	0.020									
cis-1,2-Dichloroethylene	ND	0.020									
trans-1,2-Dichloroethylene	ND	0.020									
1,2-Dichloropropane	ND	0.020									
cis-1,3-Dichloropropene	ND	0.020									
trans-1,3-Dichloropropene	ND	0.020									
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.020									
1,4-Dioxane	ND	0.20									
Ethanol	ND	0.80									
Ethyl Acetate	ND	0.20									
Ethylbenzene	ND	0.020									
4-Ethyltoluene	ND	0.020									
Heptane	ND	0.020									
Hexachlorobutadiene	ND	0.020									L-03, V-34
Hexane	ND	0.80									
2-Hexanone (MBK)	ND	0.040									
Isopropanol	ND	0.80									
Methyl tert-Butyl Ether (MTBE)	ND	0.020									
Methylene Chloride	ND	0.20									
4-Methyl-2-pentanone (MIBK)	ND	0.020									
Naphthalene	ND	0.020									L-03
Propene	ND	0.80									
Styrene	ND	0.020									

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual	
	Results	RL	Results	RL	ppbv	Result	%REC	Limits	RPD	Limit		
Batch B327010 - TO-15 Prep												
Blank (B327010-BLK1)					Prepared & Analyzed: 12/23/22							
1,1,2,2-Tetrachloroethane	ND	0.020									L-03	
Tetrachloroethylene	ND	0.020										
Tetrahydrofuran	ND	0.20										
Toluene	ND	0.020										
1,2,4-Trichlorobenzene	ND	0.020										
1,1,1-Trichloroethane	ND	0.020										
1,1,2-Trichloroethane	ND	0.020										
Trichloroethylene	ND	0.020										
Trichlorofluoromethane (Freon 11)	ND	0.080										
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.080										
1,2,4-Trimethylbenzene	ND	0.020										
1,3,5-Trimethylbenzene	ND	0.020										
Vinyl Acetate	ND	0.40										
Vinyl Chloride	ND	0.020										
m&p-Xylene	ND	0.040										
o-Xylene	ND	0.020										
Surrogate: 4-Bromofluorobenzene (1)	7.65				8.00		95.6	70-130				
LCS (B327010-BS1)					Prepared & Analyzed: 12/23/22							
Acetone	4.65				5.00		92.9	70-130			V-20	
Benzene	5.59				5.00		112	70-130				
Benzyl chloride	5.26				5.00		105	70-130				
Bromodichloromethane	5.41				5.00		108	70-130				
Bromoform	4.99				5.00		99.7	70-130				
Bromomethane	5.98				5.00		120	70-130				
1,3-Butadiene	5.48				5.00		110	70-130				
2-Butanone (MEK)	7.12				5.00		142 *	70-130				L-01, V-20
Carbon Disulfide	6.17				5.00		123	70-130				
Carbon Tetrachloride	4.10				5.00		82.1	70-130				
Chlorobenzene	5.24				5.00		105	70-130				
Chloroethane	6.25				5.00		125	70-130				
Chloroform	6.01				5.00		120	70-130				
Chloromethane	5.23				5.00		105	70-130				
Cyclohexane	5.77				5.00		115	70-130				
Dibromochloromethane	5.32				5.00		106	70-130				
1,2-Dibromoethane (EDB)	5.23				5.00		105	70-130				
1,2-Dichlorobenzene	4.39				5.00		87.8	70-130				
1,3-Dichlorobenzene	4.90				5.00		97.9	70-130				
1,4-Dichlorobenzene	4.64				5.00		92.8	70-130				
Dichlorodifluoromethane (Freon 12)	5.79				5.00		116	70-130				
1,1-Dichloroethane	6.17				5.00		123	70-130				
1,2-Dichloroethane	5.48				5.00		110	70-130				
1,1-Dichloroethylene	5.65				5.00		113	70-130				
cis-1,2-Dichloroethylene	5.68				5.00		114	70-130				
trans-1,2-Dichloroethylene	5.86				5.00		117	70-130				
1,2-Dichloropropane	5.66				5.00		113	70-130				

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	%REC	Limits	RPD	Limit	
Batch B327010 - TO-15 Prep											
LCS (B327010-BS1)					Prepared & Analyzed: 12/23/22						
cis-1,3-Dichloropropene	5.27				5.00		105	70-130			
trans-1,3-Dichloropropene	5.38				5.00		108	70-130			
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	5.57				5.00		111	70-130			
1,4-Dioxane	5.37				5.00		107	70-130			
Ethanol	4.48				5.00		89.6	70-130			
Ethyl Acetate	5.00				5.00		100	70-130			
Ethylbenzene	5.14				5.00		103	70-130			
4-Ethyltoluene	4.74				5.00		94.9	70-130			
Heptane	5.50				5.00		110	70-130			
Hexachlorobutadiene	3.48				5.00		69.7	* 70-130			L-03, V-34
Hexane	5.23				5.00		105	70-130			
2-Hexanone (MBK)	5.21				5.00		104	70-130			
Isopropanol	4.16				5.00		83.1	70-130			
Methyl tert-Butyl Ether (MTBE)	5.48				5.00		110	70-130			
Methylene Chloride	4.83				5.00		96.6	70-130			
4-Methyl-2-pentanone (MIBK)	5.32				5.00		106	70-130			
Naphthalene	3.11				5.00		62.2	* 70-130			L-03
Propene	4.85				5.00		97.0	70-130			
Styrene	4.56				5.00		91.1	70-130			
1,1,2,2-Tetrachloroethane	5.05				5.00		101	70-130			
Tetrachloroethylene	5.11				5.00		102	70-130			
Tetrahydrofuran	5.15				5.00		103	70-130			
Toluene	5.30				5.00		106	70-130			
1,2,4-Trichlorobenzene	3.20				5.00		64.1	* 70-130			L-03
1,1,1-Trichloroethane	5.07				5.00		101	70-130			
1,1,2-Trichloroethane	5.46				5.00		109	70-130			
Trichloroethylene	5.23				5.00		105	70-130			
Trichlorofluoromethane (Freon 11)	5.62				5.00		112	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5.75				5.00		115	70-130			
1,2,4-Trimethylbenzene	4.64				5.00		92.8	70-130			
1,3,5-Trimethylbenzene	5.40				5.00		108	70-130			
Vinyl Acetate	5.20				5.00		104	70-130			
Vinyl Chloride	5.90				5.00		118	70-130			
m&p-Xylene	10.9				10.0		109	70-130			
o-Xylene	5.38				5.00		108	70-130			
Surrogate: 4-Bromofluorobenzene (1)	7.80				8.00		97.6	70-130			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
L-01	Laboratory fortified blank/laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.
L-03	Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (S080302-ICV1)			Lab File ID: J22A0337018.D			Analyzed: 12/03/22 08:35			
Bromochloromethane (1)	460265	2.801	459868	2.801	100	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	1200591	3.428	1177712	3.428	102	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	1081405	5.038	1063705	5.039	102	60 - 140	-0.0010	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (S081234-CCV1)			Lab File ID: J22A357004.D			Analyzed: 12/23/22 04:50			
Bromochloromethane (1)	418482	2.806	459868	2.801	91	60 - 140	0.0050	+/-0.50	
1,4-Difluorobenzene (1)	1159240	3.433	1177712	3.428	98	60 - 140	0.0050	+/-0.50	
Chlorobenzene-d5 (1)	1029604	5.043	1063705	5.039	97	60 - 140	0.0040	+/-0.50	
LCS (B327010-BS1)			Lab File ID: J22A357005.D			Analyzed: 12/23/22 05:15			
Bromochloromethane (1)	416259	2.806	418482	2.806	99	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	1159233	3.433	1159240	3.433	100	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	1048940	5.043	1029604	5.043	102	60 - 140	0.0000	+/-0.50	
Blank (B327010-BLK1)			Lab File ID: J22A357008.D			Analyzed: 12/23/22 11:21			
Bromochloromethane (1)	425314	2.79	418482	2.806	102	60 - 140	-0.0160	+/-0.50	
1,4-Difluorobenzene (1)	1052344	3.422	1159240	3.433	91	60 - 140	-0.0110	+/-0.50	
Chlorobenzene-d5 (1)	960850	5.035	1029604	5.043	93	60 - 140	-0.0080	+/-0.50	
VPW-1205-4 (22L2843-01)			Lab File ID: J22A357009.D			Analyzed: 12/23/22 11:52			
Bromochloromethane (1)	416402	2.796	418482	2.806	100	60 - 140	-0.0100	+/-0.50	
1,4-Difluorobenzene (1)	1048061	3.423	1159240	3.433	90	60 - 140	-0.0100	+/-0.50	
Chlorobenzene-d5 (1)	978990	5.037	1029604	5.043	95	60 - 140	-0.0060	+/-0.50	
IN1-1205-4 (22L2843-02)			Lab File ID: J22A357010.D			Analyzed: 12/23/22 12:25			
Bromochloromethane (1)	431906	2.796	418482	2.806	103	60 - 140	-0.0100	+/-0.50	
1,4-Difluorobenzene (1)	1107240	3.422	1159240	3.433	96	60 - 140	-0.0110	+/-0.50	
Chlorobenzene-d5 (1)	1014832	5.037	1029604	5.043	99	60 - 140	-0.0060	+/-0.50	
IN2-1205-4A (22L2843-03)			Lab File ID: J22A357011.D			Analyzed: 12/23/22 12:57			
Bromochloromethane (1)	436371	2.796	418482	2.806	104	60 - 140	-0.0100	+/-0.50	
1,4-Difluorobenzene (1)	1079933	3.422	1159240	3.433	93	60 - 140	-0.0110	+/-0.50	
Chlorobenzene-d5 (1)	1009886	5.037	1029604	5.043	98	60 - 140	-0.0060	+/-0.50	
IN2-1205-4B (22L2843-04)			Lab File ID: J22A357012.D			Analyzed: 12/23/22 13:28			
Bromochloromethane (1)	423155	2.796	418482	2.806	101	60 - 140	-0.0100	+/-0.50	
1,4-Difluorobenzene (1)	1062193	3.422	1159240	3.433	92	60 - 140	-0.0110	+/-0.50	
Chlorobenzene-d5 (1)	968790	5.037	1029604	5.043	94	60 - 140	-0.0060	+/-0.50	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DW2-1205-4 (22L2843-05) Lab File ID: J22A357013.D Analyzed: 12/23/22 14:00									
Bromochloromethane (1)	426160	2.796	418482	2.806	102	60 - 140	-0.0100	+/-0.50	
1,4-Difluorobenzene (1)	1058346	3.422	1159240	3.433	91	60 - 140	-0.0110	+/-0.50	
Chlorobenzene-d5 (1)	976684	5.037	1029604	5.043	95	60 - 140	-0.0060	+/-0.50	
DW1-1205-4 (22L2843-06) Lab File ID: J22A357014.D Analyzed: 12/23/22 14:31									
Bromochloromethane (1)	428459	2.796	418482	2.806	102	60 - 140	-0.0100	+/-0.50	
1,4-Difluorobenzene (1)	1047113	3.422	1159240	3.433	90	60 - 140	-0.0110	+/-0.50	
Chlorobenzene-d5 (1)	972388	5.037	1029604	5.043	94	60 - 140	-0.0060	+/-0.50	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CONTINUING CALIBRATION CHECK

EPA TO-15

S081234-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.00	4.64	1.032116	0.9581679		-7.2	30
Benzene	A	5.00	5.34	0.6962521	0.7436031		6.8	30
Benzyl chloride	A	5.00	6.98	0.5761045	0.8037109		39.5	30 *
Bromodichloromethane	A	5.00	5.30	0.567843	0.6022346		6.1	30
Bromoform	A	5.00	5.70	0.4767222	0.5431106		13.9	30
Bromomethane	A	5.00	5.79	0.5448882	0.6306642		15.7	30
1,3-Butadiene	A	5.00	5.40	0.4630172	0.4999059		8.0	30
2-Butanone (MEK)	A	5.00	6.89	1.088012	1.49872		37.7	30 *
Carbon Disulfide	A	5.00	5.62	1.884119	2.116029		12.3	30
Carbon Tetrachloride	A	5.00	5.04	0.5397988	0.5445706		0.9	30
Chlorobenzene	A	5.00	5.40	0.7450185	0.8050691		8.1	30
Chloroethane	A	5.00	5.83	0.3310126	0.3862035		16.7	30
Chloroform	A	5.00	5.62	1.363653	1.532759		12.4	30
Chloromethane	A	5.00	4.94	0.5543863	0.5478085		-1.2	30
Cyclohexane	A	5.00	5.43	0.2817457	0.3061426		8.7	30
Dibromochloromethane	A	5.00	5.53	0.5685361	0.6284762		10.5	30
1,2-Dibromoethane (EDB)	A	5.00	5.41	0.50474	0.5462061		8.2	30
1,2-Dichlorobenzene	A	5.00	5.72	0.604848	0.6924138		14.5	30
1,3-Dichlorobenzene	A	5.00	5.99	0.655583	0.7852448		19.8	30
1,4-Dichlorobenzene	A	5.00	5.82	0.6296439	0.7324369		16.3	30
Dichlorodifluoromethane (Freon 12)	A	5.00	5.48	1.643714	1.800725		9.6	30
1,1-Dichloroethane	A	5.00	5.76	1.121121	1.292011		15.2	30
1,2-Dichloroethane	A	5.00	5.18	1.002185	1.039001		3.7	30
1,1-Dichloroethylene	A	5.00	5.32	1.17684	1.251093		6.3	30
cis-1,2-Dichloroethylene	A	5.00	5.49	0.8843401	0.9708805		9.8	30
trans-1,2-Dichloroethylene	A	5.00	5.50	0.9442735	1.037808		9.9	30
1,2-Dichloropropane	A	5.00	5.42	0.2821164	0.3061206		8.5	30
cis-1,3-Dichloropropene	A	5.00	5.25	0.400776	0.4208647		5.0	30
trans-1,3-Dichloropropene	A	5.00	5.21	0.3537848	0.3684193		4.1	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	A	5.00	5.58	1.639508	1.831297		11.7	30
1,4-Dioxane	A	5.00	5.80	0.1415858	0.1641751		16.0	30
Ethanol	A	5.00	4.89	0.1759911	0.1720581		-2.2	30
Ethyl Acetate	A	5.00	4.93	0.1980954	0.1952543		-1.4	30
Ethylbenzene	A	5.00	5.37	1.215427	1.304732		7.3	30
4-Ethyltoluene	A	5.00	5.36	1.226482	1.314157		7.1	30
Heptane	A	5.00	5.42	0.2359411	0.2556406		8.3	30
Hexachlorobutadiene	A	5.00	5.90	0.4402774	0.5191044		17.9	30
Hexane	L	5.00	4.96	0.717826	0.7111646		-0.8	30

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CONTINUING CALIBRATION CHECK

EPA TO-15

S081234-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
2-Hexanone (MBK)	A	5.00	5.44	0.5926727	0.6452951		8.9	30
Isopropanol	A	5.00	5.08	1.086258	1.102683		1.5	30
Methyl tert-Butyl Ether (MTBE)	A	5.00	5.26	1.553618	1.633783		5.2	30
Methylene Chloride	A	5.00	4.66	0.8835862	0.8225692		-6.9	30
4-Methyl-2-pentanone (MIBK)	A	5.00	5.29	0.2311175	0.2446334		5.8	30
Naphthalene	A	5.00	6.26	0.8775899	1.09941		25.3	30
Propene	A	5.00	4.76	0.3777909	0.3598262		-4.8	30
Styrene	A	5.00	4.90	0.7316371	0.7172187		-2.0	30
1,1,2,2-Tetrachloroethane	A	5.00	5.85	0.7289953	0.8530254		17.0	30
Tetrachloroethylene	A	5.00	5.14	0.4190246	0.4304537		2.7	30
Tetrahydrofuran	A	5.00	4.55	0.7392332	0.6730383		-9.0	30
Toluene	A	5.00	5.20	0.9595253	0.9984219		4.1	30
1,2,4-Trichlorobenzene	A	5.00	5.91	0.3518629	0.4159502		18.2	30
1,1,1-Trichloroethane	A	5.00	5.00	0.5348868	0.5350181		0.02	30
1,1,2-Trichloroethane	A	5.00	5.41	0.3348068	0.3625363		8.3	30
Trichloroethylene	A	5.00	5.03	0.3387431	0.3404741		0.5	30
Trichlorofluoromethane (Freon 11)	A	5.00	5.36	1.707162	1.831347		7.3	30
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	A	5.00	5.38	1.390833	1.497213		7.6	30
1,2,4-Trimethylbenzene	A	5.00	5.66	1.010685	1.144578		13.2	30
1,3,5-Trimethylbenzene	A	5.00	6.22	0.9919636	1.23374		24.4	30
Vinyl Acetate	A	5.00	4.86	1.241368	1.206612		-2.8	30
Vinyl Chloride	A	5.00	5.65	0.632048	0.7139327		13.0	30
m&p-Xylene	A	10.0	11.5	0.9799166	1.127701		15.1	30
o-Xylene	A	5.00	5.68	0.9582822	1.089419		13.7	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
Acetone	AIHA,NY,ME,NH
Benzene	AIHA,FL,NJ,NY,ME,NH,VA
Benzyl chloride	AIHA,FL,NJ,NY,ME,NH,VA
Bromodichloromethane	AIHA,NJ,NY,ME,NH,VA
Bromoform	AIHA,NJ,NY,ME,NH,VA
Bromomethane	AIHA,FL,NJ,NY,ME,NH
1,3-Butadiene	AIHA,NJ,NY,ME,NH,VA
2-Butanone (MEK)	AIHA,FL,NJ,NY,ME,NH,VA
Carbon Disulfide	AIHA,NJ,NY,ME,NH,VA
Carbon Tetrachloride	AIHA,FL,NJ,NY,ME,NH,VA
Chlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
Chloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Chloroform	AIHA,FL,NJ,NY,ME,NH,VA
Chloromethane	AIHA,FL,NJ,NY,ME,NH,VA
Cyclohexane	AIHA,NJ,NY,ME,NH,VA
Dibromochloromethane	AIHA,NY,ME,NH
1,2-Dibromoethane (EDB)	AIHA,NJ,NY,ME,NH
1,2-Dichlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
1,3-Dichlorobenzene	AIHA,NJ,NY,ME,NH
1,4-Dichlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
Dichlorodifluoromethane (Freon 12)	AIHA,NY,ME,NH
1,1-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,2-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1-Dichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
cis-1,2-Dichloroethylene	AIHA,FL,NY,ME,NH,VA
trans-1,2-Dichloroethylene	AIHA,NJ,NY,ME,NH,VA
1,2-Dichloropropane	AIHA,FL,NJ,NY,ME,NH,VA
cis-1,3-Dichloropropene	AIHA,FL,NJ,NY,ME,NH,VA
trans-1,3-Dichloropropene	AIHA,NY,ME,NH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	AIHA,NJ,NY,ME,NH,VA
1,4-Dioxane	AIHA,NJ,NY,ME,NH,VA
Ethanol	AIHA
Ethyl Acetate	AIHA
Ethylbenzene	AIHA,FL,NJ,NY,ME,NH,VA
4-Ethyltoluene	AIHA,NJ
Heptane	AIHA,NJ,NY,ME,NH,VA
Hexachlorobutadiene	AIHA,NJ,NY,ME,NH,VA
Hexane	AIHA,FL,NJ,NY,ME,NH,VA
2-Hexanone (MBK)	AIHA
Isopropanol	AIHA,NY,ME,NH
Methyl tert-Butyl Ether (MTBE)	AIHA,FL,NJ,NY,ME,NH,VA
Methylene Chloride	AIHA,FL,NJ,NY,ME,NH,VA
4-Methyl-2-pentanone (MIBK)	AIHA,FL,NJ,NY,ME,NH
Naphthalene	NY,ME,NH
Propene	AIHA
Styrene	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY,ME,NH,VA

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
Tetrachloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Tetrahydrofuran	AIHA
Toluene	AIHA,FL,NJ,NY,ME,NH,VA
1,2,4-Trichlorobenzene	AIHA,NJ,NY,ME,NH,VA
1,1,1-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Trichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Trichlorofluoromethane (Freon 11)	AIHA,NY,ME,NH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	AIHA,NJ,NY,ME,NH,VA
1,2,4-Trimethylbenzene	AIHA,NJ,NY,ME,NH
1,3,5-Trimethylbenzene	AIHA,NJ,NY,ME,NH
Vinyl Acetate	AIHA,FL,NJ,NY,ME,NH,VA
Vinyl Chloride	AIHA,FL,NJ,NY,ME,NH,VA
m&p-Xylene	AIHA,FL,NJ,NY,ME,NH,VA
o-Xylene	AIHA,FL,NJ,NY,ME,NH,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO 17025:2017	100033	03/1/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
FL	Florida Department of Health	E871027 NELAP	06/30/2023
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2023



222-2843

Company Name:

Address:

Phone:

Project Name:

Project Location:

Project Number:

Project Manager:

Con-Test Quote Name/Number:

Invoice Recipient:

Sampled By:

Client Use:

Client Sample ID / Description

Beginning Date/Time

Ending Date/Time

Duration

Flow Rate

Matrix

Code

Volume

Liters

m³

m³/min

L/min

Total

Minutes

Sampled

Matrix

Code

Volume

Liters

m³

m³/min

L/min

Total

Minutes

Sampled

Matrix

Code

Volume

Liters

m³

m³/min

L/min

Clean Air Engineering

412 370 2611

EFS Coke Battery

249 Island

14796

Tim Rodak

0173244

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Comments:

Please use the following codes to indicate possible sample concentration within the Conc Code column above:

H - High; M - Medium; L - Low; C - Clean; U - Unknown

Matrix Codes:

SG = SOIL GAS
IA = INDOOR AIR
AMB = AMBIENT
SS = SUB SLAB
D = DUP
BL = BLANK
O = Other

Relinquished by: (signature)	Date/Time:	12/19/00
Received by: (signature)	Date/Time:	12/20
Relinquished by: (signature)	Date/Time:	10/3
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	



NEIAC and AIHA-LAP, LLC Accredited

Other

Chromatogram

AIHA-LAP, LLC

PCB ONLY

Soxhlet

Non Soxhlet

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↓ Shipment is 1 of 2 pieces

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12/19/2022 10:54 AM

PACKAGE RECEIVED BY FEDEX

PITTSBURGH, PA

12/19/2022 1:17 PM

IN TRANSIT

WINDSOR LOCKS, CT

12/20/2022 9:14 AM

OUT FOR DELIVERY

WINDSOR LOCKS, CT

12/20/2022 9:28 AM

DELIVERED

EAST LONGMEADOW, MA US

DELIVERED

12/20/2022 at 10:33 AM

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SUBMIT

January 18, 2023

Tim Rodak
Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275

Project Location: River Rouge, MI
Client Job Number:
Project Number: 14796 Quote 123244
Laboratory Work Order Number: 23A1156

Enclosed are results of analyses for samples as received by the laboratory on January 11, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

DRAFT REPORT
Project Manager

Table of Contents

Sample Summary	3
Case Narrative	4
Sample Results	5
Sample Preparation Information	17
QC Data	18
Air Toxics by EPA Compendium Methods	18
B329051	18
Flag/Qualifier Summary	21
Internal standard Area & RT Summary	22
Continuing Calibration Check	24
Certifications	26
Chain of Custody/Sample Receipt	28

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275
ATTN: Tim Rodak

REPORT DATE: 1/18/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 14796 Quote 123244

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23A1156

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: River Rouge, MI

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
UPW-0104-6	23A1156-01	Air		EPA TO-15	
IN1-0104-6	23A1156-02	Air		EPA TO-15	
IN2-0104-6A	23A1156-03	Air		EPA TO-15	
IN2-0104-6B	23A1156-04	Air		EPA TO-15	
DW1-0104-6	23A1156-05	Air		EPA TO-15	
DW2-0104-6	23A1156-06	Air		EPA TO-15	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

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ANALYTICAL RESULTS

Project Location: River Rouge, MI
Date Received: 1/11/2023
Field Sample #: UPW-0104-6
Sample ID: 23A1156-01
Sample Matrix: Air
Sampled: 1/5/2023 16:54

Sample Description/Location:
Sub Description/Location:
Canister ID: 1987
Canister Size: 6 liter
Flow Controller ID: 3530
Sample Type: 2 hr

Work Order: 23A1156
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -8
Receipt Vacuum(in Hg): -8.5
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	2.9	1.4		6.9	3.3	0.696	1/17/23 3:11	CMR	
Benzene	0.14	0.035		0.45	0.11	0.696	1/17/23 3:11	CMR	
Benzyl chloride	ND	0.035		ND	0.18	0.696	1/17/23 3:11	CMR	
Bromodichloromethane	ND	0.035		ND	0.23	0.696	1/17/23 3:11	CMR	
Bromoform	ND	0.035		ND	0.36	0.696	1/17/23 3:11	CMR	
Bromomethane	ND	0.035		ND	0.14	0.696	1/17/23 3:11	CMR	
1,3-Butadiene	ND	0.035		ND	0.077	0.696	1/17/23 3:11	CMR	
2-Butanone (MEK)	ND	1.4		ND	4.1	0.696	1/17/23 3:11	CMR	
Carbon Disulfide	ND	0.35		ND	1.1	0.696	1/17/23 3:11	CMR	
Carbon Tetrachloride	0.071	0.035		0.45	0.22	0.696	1/17/23 3:11	CMR	
Chlorobenzene	ND	0.035		ND	0.16	0.696	1/17/23 3:11	CMR	
Chloroethane	ND	0.035		ND	0.092	0.696	1/17/23 3:11	CMR	
Chloroform	ND	0.035		ND	0.17	0.696	1/17/23 3:11	CMR	
Chloromethane	0.44	0.070		0.90	0.14	0.696	1/17/23 3:11	CMR	
Cyclohexane	ND	0.035		ND	0.12	0.696	1/17/23 3:11	CMR	
Dibromochloromethane	ND	0.035		ND	0.30	0.696	1/17/23 3:11	CMR	
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.696	1/17/23 3:11	CMR	
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.696	1/17/23 3:11	CMR	
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.696	1/17/23 3:11	CMR	
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.696	1/17/23 3:11	CMR	
Dichlorodifluoromethane (Freon 12)	0.27	0.035		1.3	0.17	0.696	1/17/23 3:11	CMR	
1,1-Dichloroethane	ND	0.035		ND	0.14	0.696	1/17/23 3:11	CMR	
1,2-Dichloroethane	ND	0.035		ND	0.14	0.696	1/17/23 3:11	CMR	
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.696	1/17/23 3:11	CMR	
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.696	1/17/23 3:11	CMR	
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.696	1/17/23 3:11	CMR	
1,2-Dichloropropane	ND	0.035		ND	0.16	0.696	1/17/23 3:11	CMR	
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.696	1/17/23 3:11	CMR	
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.696	1/17/23 3:11	CMR	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.24	0.696	1/17/23 3:11	CMR	
1,4-Dioxane	ND	0.35		ND	1.3	0.696	1/17/23 3:11	CMR	
Ethanol	1.8	1.4		3.4	2.6	0.696	1/17/23 3:11	CMR	
Ethyl Acetate	ND	0.35		ND	1.3	0.696	1/17/23 3:11	CMR	
Ethylbenzene	ND	0.035		ND	0.15	0.696	1/17/23 3:11	CMR	
4-Ethyltoluene	ND	0.035		ND	0.17	0.696	1/17/23 3:11	CMR	
Heptane	0.039	0.035		0.16	0.14	0.696	1/17/23 3:11	CMR	
Hexachlorobutadiene	ND	0.035		ND	0.37	0.696	1/17/23 3:11	CMR	

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ANALYTICAL RESULTS

Project Location: River Rouge, MI
Date Received: 1/11/2023
Field Sample #: UPW-0104-6
Sample ID: 23A1156-01
Sample Matrix: Air
Sampled: 1/5/2023 16:54

Sample Description/Location:
Sub Description/Location:
Canister ID: 1987
Canister Size: 6 liter
Flow Controller ID: 3530
Sample Type: 2 hr

Work Order: 23A1156
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -8
Receipt Vacuum(in Hg): -8.5
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4		ND	4.9	0.696	1/17/23 3:11		CMR
2-Hexanone (MBK)	0.068	0.035		0.28	0.14	0.696	1/17/23 3:11		CMR
Isopropanol	ND	1.4		ND	3.4	0.696	1/17/23 3:11		CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.696	1/17/23 3:11		CMR
Methylene Chloride	ND	0.35		ND	1.2	0.696	1/17/23 3:11		CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.696	1/17/23 3:11		CMR
Naphthalene	ND	0.035		ND	0.18	0.696	1/17/23 3:11		CMR
Propene	ND	1.4		ND	2.4	0.696	1/17/23 3:11		CMR
Styrene	ND	0.035		ND	0.15	0.696	1/17/23 3:11		CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.696	1/17/23 3:11		CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.696	1/17/23 3:11		CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.696	1/17/23 3:11		CMR
Toluene	0.095	0.035		0.36	0.13	0.696	1/17/23 3:11		CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.696	1/17/23 3:11		CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.696	1/17/23 3:11		CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.696	1/17/23 3:11		CMR
Trichloroethylene	ND	0.035		ND	0.19	0.696	1/17/23 3:11		CMR
Trichlorofluoromethane (Freon 11)	0.21	0.14		1.2	0.78	0.696	1/17/23 3:11		CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.696	1/17/23 3:11		CMR
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17	0.696	1/17/23 3:11		CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.696	1/17/23 3:11		CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.696	1/17/23 3:11		CMR
Vinyl Chloride	ND	0.035		ND	0.089	0.696	1/17/23 3:11		CMR
m&p-Xylene	ND	0.070		ND	0.30	0.696	1/17/23 3:11		CMR
o-Xylene	ND	0.035		ND	0.15	0.696	1/17/23 3:11		CMR

Surrogates	% Recovery	% REC Limits		
4-Bromofluorobenzene (1)	111	70-130	1/17/23	3:11

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ANALYTICAL RESULTS

Project Location: River Rouge, MI
 Date Received: 1/11/2023
Field Sample #: IN1-0104-6
Sample ID: 23A1156-02
 Sample Matrix: Air
 Sampled: 1/5/2023 15:45

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1060
 Canister Size: 6 liter
 Flow Controller ID: 3062
 Sample Type: 2 hr

Work Order: 23A1156
 Initial Vacuum(in Hg): -28
 Final Vacuum(in Hg): -9
 Receipt Vacuum(in Hg): -8.9
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	2.5	1.4		6.0	3.3	0.696	1/17/23 4:00		CMR
Benzene	9.2	0.035		29	0.11	0.696	1/17/23 4:00		CMR
Benzyl chloride	ND	0.035		ND	0.18	0.696	1/17/23 4:00		CMR
Bromodichloromethane	ND	0.035		ND	0.23	0.696	1/17/23 4:00		CMR
Bromoform	ND	0.035		ND	0.36	0.696	1/17/23 4:00		CMR
Bromomethane	ND	0.035		ND	0.14	0.696	1/17/23 4:00		CMR
1,3-Butadiene	0.14	0.035		0.30	0.077	0.696	1/17/23 4:00		CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.696	1/17/23 4:00		CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.696	1/17/23 4:00		CMR
Carbon Tetrachloride	0.068	0.035		0.43	0.22	0.696	1/17/23 4:00		CMR
Chlorobenzene	ND	0.035		ND	0.16	0.696	1/17/23 4:00		CMR
Chloroethane	ND	0.035		ND	0.092	0.696	1/17/23 4:00		CMR
Chloroform	ND	0.035		ND	0.17	0.696	1/17/23 4:00		CMR
Chloromethane	0.44	0.070		0.92	0.14	0.696	1/17/23 4:00		CMR
Cyclohexane	ND	0.035		ND	0.12	0.696	1/17/23 4:00		CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.696	1/17/23 4:00		CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.696	1/17/23 4:00		CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.696	1/17/23 4:00		CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.696	1/17/23 4:00		CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.696	1/17/23 4:00		CMR
Dichlorodifluoromethane (Freon 12)	0.26	0.035		1.3	0.17	0.696	1/17/23 4:00		CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.696	1/17/23 4:00		CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.696	1/17/23 4:00		CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.696	1/17/23 4:00		CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.696	1/17/23 4:00		CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.696	1/17/23 4:00		CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.696	1/17/23 4:00		CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.696	1/17/23 4:00		CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.696	1/17/23 4:00		CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.24	0.696	1/17/23 4:00		CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.696	1/17/23 4:00		CMR
Ethanol	1.9	1.4		3.6	2.6	0.696	1/17/23 4:00		CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.696	1/17/23 4:00		CMR
Ethylbenzene	ND	0.035		ND	0.15	0.696	1/17/23 4:00		CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.696	1/17/23 4:00		CMR
Heptane	0.051	0.035		0.21	0.14	0.696	1/17/23 4:00		CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.696	1/17/23 4:00		CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: River Rouge, MI
Date Received: 1/11/2023
Field Sample #: IN1-0104-6
Sample ID: 23A1156-02
Sample Matrix: Air
Sampled: 1/5/2023 15:45

Sample Description/Location:
Sub Description/Location:
Canister ID: 1060
Canister Size: 6 liter
Flow Controller ID: 3062
Sample Type: 2 hr

Work Order: 23A1156
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -9
Receipt Vacuum(in Hg): -8.9
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4		ND	4.9	0.696	1/17/23 4:00		CMR
2-Hexanone (MBK)	0.052	0.035		0.21	0.14	0.696	1/17/23 4:00		CMR
Isopropanol	ND	1.4		ND	3.4	0.696	1/17/23 4:00		CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.696	1/17/23 4:00		CMR
Methylene Chloride	0.35	0.35		1.2	1.2	0.696	1/17/23 4:00		CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.696	1/17/23 4:00		CMR
Naphthalene	6.3	0.035		33	0.18	0.696	1/17/23 4:00		CMR
Propene	1.5	1.4		2.6	2.4	0.696	1/17/23 4:00		CMR
Styrene	0.26	0.035		1.1	0.15	0.696	1/17/23 4:00		CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.696	1/17/23 4:00		CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.696	1/17/23 4:00		CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.696	1/17/23 4:00		CMR
Toluene	1.5	0.035		5.6	0.13	0.696	1/17/23 4:00		CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.696	1/17/23 4:00		CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.696	1/17/23 4:00		CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.696	1/17/23 4:00		CMR
Trichloroethylene	ND	0.035		ND	0.19	0.696	1/17/23 4:00		CMR
Trichlorofluoromethane (Freon 11)	0.20	0.14		1.1	0.78	0.696	1/17/23 4:00		CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.696	1/17/23 4:00		CMR
1,2,4-Trimethylbenzene	0.077	0.035		0.38	0.17	0.696	1/17/23 4:00		CMR
1,3,5-Trimethylbenzene	0.035	0.035		0.17	0.17	0.696	1/17/23 4:00		CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.696	1/17/23 4:00		CMR
Vinyl Chloride	ND	0.035		ND	0.089	0.696	1/17/23 4:00		CMR
m&p-Xylene	0.36	0.070		1.6	0.30	0.696	1/17/23 4:00		CMR
o-Xylene	0.093	0.035		0.40	0.15	0.696	1/17/23 4:00		CMR

Surrogates	% Recovery	% REC Limits		
4-Bromofluorobenzene (1)	112	70-130	1/17/23	4:00

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: River Rouge, MI
Date Received: 1/11/2023
Field Sample #: IN2-0104-6A
Sample ID: 23A1156-03
Sample Matrix: Air
Sampled: 1/5/2023 16:17

Sample Description/Location:
Sub Description/Location:
Canister ID: 1811
Canister Size: 6 liter
Flow Controller ID: 3254
Sample Type: 2 hr

Work Order: 23A1156
Initial Vacuum(in Hg): -28.5
Final Vacuum(in Hg): -12
Receipt Vacuum(in Hg): -11.4
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	2.9	1.4		6.8	3.3	0.696	1/17/23 4:49		CMR
Benzene	0.43	0.035		1.4	0.11	0.696	1/17/23 4:49		CMR
Benzyl chloride	ND	0.035		ND	0.18	0.696	1/17/23 4:49		CMR
Bromodichloromethane	ND	0.035		ND	0.23	0.696	1/17/23 4:49		CMR
Bromoform	ND	0.035		ND	0.36	0.696	1/17/23 4:49		CMR
Bromomethane	ND	0.035		ND	0.14	0.696	1/17/23 4:49		CMR
1,3-Butadiene	0.037	0.035		0.082	0.077	0.696	1/17/23 4:49		CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.696	1/17/23 4:49		CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.696	1/17/23 4:49		CMR
Carbon Tetrachloride	0.070	0.035		0.44	0.22	0.696	1/17/23 4:49		CMR
Chlorobenzene	ND	0.035		ND	0.16	0.696	1/17/23 4:49		CMR
Chloroethane	ND	0.035		ND	0.092	0.696	1/17/23 4:49		CMR
Chloroform	ND	0.035		ND	0.17	0.696	1/17/23 4:49		CMR
Chloromethane	0.43	0.070		0.90	0.14	0.696	1/17/23 4:49		CMR
Cyclohexane	ND	0.035		ND	0.12	0.696	1/17/23 4:49		CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.696	1/17/23 4:49		CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.696	1/17/23 4:49		CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.696	1/17/23 4:49		CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.696	1/17/23 4:49		CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.696	1/17/23 4:49		CMR
Dichlorodifluoromethane (Freon 12)	0.25	0.035		1.2	0.17	0.696	1/17/23 4:49		CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.696	1/17/23 4:49		CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.696	1/17/23 4:49		CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.696	1/17/23 4:49		CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.696	1/17/23 4:49		CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.696	1/17/23 4:49		CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.696	1/17/23 4:49		CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.696	1/17/23 4:49		CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.696	1/17/23 4:49		CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.24	0.696	1/17/23 4:49		CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.696	1/17/23 4:49		CMR
Ethanol	2.1	1.4		4.0	2.6	0.696	1/17/23 4:49		CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.696	1/17/23 4:49		CMR
Ethylbenzene	ND	0.035		ND	0.15	0.696	1/17/23 4:49		CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.696	1/17/23 4:49		CMR
Heptane	0.054	0.035		0.22	0.14	0.696	1/17/23 4:49		CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.696	1/17/23 4:49		CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: River Rouge, MI
Date Received: 1/11/2023
Field Sample #: IN2-0104-6A
Sample ID: 23A1156-03
Sample Matrix: Air
Sampled: 1/5/2023 16:17

Sample Description/Location:
Sub Description/Location:
Canister ID: 1811
Canister Size: 6 liter
Flow Controller ID: 3254
Sample Type: 2 hr

Work Order: 23A1156
Initial Vacuum(in Hg): -28.5
Final Vacuum(in Hg): -12
Receipt Vacuum(in Hg): -11.4
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4		ND	4.9	0.696	1/17/23 4:49		CMR
2-Hexanone (MBK)	0.063	0.035		0.26	0.14	0.696	1/17/23 4:49		CMR
Isopropanol	ND	1.4		ND	3.4	0.696	1/17/23 4:49		CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.696	1/17/23 4:49		CMR
Methylene Chloride	ND	0.35		ND	1.2	0.696	1/17/23 4:49		CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.696	1/17/23 4:49		CMR
Naphthalene	1.6	0.035		8.6	0.18	0.696	1/17/23 4:49		CMR
Propene	ND	1.4		ND	2.4	0.696	1/17/23 4:49		CMR
Styrene	ND	0.035		ND	0.15	0.696	1/17/23 4:49		CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.696	1/17/23 4:49		CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.696	1/17/23 4:49		CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.696	1/17/23 4:49		CMR
Toluene	0.14	0.035		0.52	0.13	0.696	1/17/23 4:49		CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.696	1/17/23 4:49		CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.696	1/17/23 4:49		CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.696	1/17/23 4:49		CMR
Trichloroethylene	ND	0.035		ND	0.19	0.696	1/17/23 4:49		CMR
Trichlorofluoromethane (Freon 11)	0.26	0.14		1.5	0.78	0.696	1/17/23 4:49		CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.18	0.14		1.4	1.1	0.696	1/17/23 4:49		CMR
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17	0.696	1/17/23 4:49		CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.696	1/17/23 4:49		CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.696	1/17/23 4:49		CMR
Vinyl Chloride	ND	0.035		ND	0.089	0.696	1/17/23 4:49		CMR
m&p-Xylene	ND	0.070		ND	0.30	0.696	1/17/23 4:49		CMR
o-Xylene	ND	0.035		ND	0.15	0.696	1/17/23 4:49		CMR

Surrogates	% Recovery	% REC Limits		
4-Bromofluorobenzene (1)	111	70-130	1/17/23	4:49

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: River Rouge, MI
Date Received: 1/11/2023
Field Sample #: IN2-0104-6B
Sample ID: 23A1156-04
Sample Matrix: Air
Sampled: 1/5/2023 16:17

Sample Description/Location:
Sub Description/Location:
Canister ID: 2197
Canister Size: 6 liter
Flow Controller ID: 3254
Sample Type: 2 hr

Work Order: 23A1156
Initial Vacuum(in Hg): -28.5
Final Vacuum(in Hg): -12
Receipt Vacuum(in Hg): -9.9
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	3.8	1.4		9.0	3.3	0.696	1/17/23 5:38		CMR
Benzene	0.40	0.035		1.3	0.11	0.696	1/17/23 5:38		CMR
Benzyl chloride	ND	0.035		ND	0.18	0.696	1/17/23 5:38		CMR
Bromodichloromethane	ND	0.035		ND	0.23	0.696	1/17/23 5:38		CMR
Bromoform	ND	0.035		ND	0.36	0.696	1/17/23 5:38		CMR
Bromomethane	ND	0.035		ND	0.14	0.696	1/17/23 5:38		CMR
1,3-Butadiene	ND	0.035		ND	0.077	0.696	1/17/23 5:38		CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.696	1/17/23 5:38		CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.696	1/17/23 5:38		CMR
Carbon Tetrachloride	0.069	0.035		0.43	0.22	0.696	1/17/23 5:38		CMR
Chlorobenzene	ND	0.035		ND	0.16	0.696	1/17/23 5:38		CMR
Chloroethane	ND	0.035		ND	0.092	0.696	1/17/23 5:38		CMR
Chloroform	ND	0.035		ND	0.17	0.696	1/17/23 5:38		CMR
Chloromethane	0.42	0.070		0.87	0.14	0.696	1/17/23 5:38		CMR
Cyclohexane	ND	0.035		ND	0.12	0.696	1/17/23 5:38		CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.696	1/17/23 5:38		CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.696	1/17/23 5:38		CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.696	1/17/23 5:38		CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.696	1/17/23 5:38		CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.696	1/17/23 5:38		CMR
Dichlorodifluoromethane (Freon 12)	0.24	0.035		1.2	0.17	0.696	1/17/23 5:38		CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.696	1/17/23 5:38		CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.696	1/17/23 5:38		CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.696	1/17/23 5:38		CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.696	1/17/23 5:38		CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.696	1/17/23 5:38		CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.696	1/17/23 5:38		CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.696	1/17/23 5:38		CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.696	1/17/23 5:38		CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.24	0.696	1/17/23 5:38		CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.696	1/17/23 5:38		CMR
Ethanol	2.9	1.4		5.4	2.6	0.696	1/17/23 5:38		CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.696	1/17/23 5:38		CMR
Ethylbenzene	ND	0.035		ND	0.15	0.696	1/17/23 5:38		CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.696	1/17/23 5:38		CMR
Heptane	0.049	0.035		0.20	0.14	0.696	1/17/23 5:38		CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.696	1/17/23 5:38		CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: River Rouge, MI
Date Received: 1/11/2023
Field Sample #: IN2-0104-6B
Sample ID: 23A1156-04
Sample Matrix: Air
Sampled: 1/5/2023 16:17

Sample Description/Location:
Sub Description/Location:
Canister ID: 2197
Canister Size: 6 liter
Flow Controller ID: 3254
Sample Type: 2 hr

Work Order: 23A1156
Initial Vacuum(in Hg): -28.5
Final Vacuum(in Hg): -12
Receipt Vacuum(in Hg): -9.9
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4		ND	4.9	0.696	1/17/23 5:38		CMR
2-Hexanone (MBK)	0.10	0.035		0.41	0.14	0.696	1/17/23 5:38		CMR
Isopropanol	ND	1.4		ND	3.4	0.696	1/17/23 5:38		CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.696	1/17/23 5:38		CMR
Methylene Chloride	ND	0.35		ND	1.2	0.696	1/17/23 5:38		CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.696	1/17/23 5:38		CMR
Naphthalene	1.6	0.035		8.4	0.18	0.696	1/17/23 5:38		CMR
Propene	ND	1.4		ND	2.4	0.696	1/17/23 5:38		CMR
Styrene	ND	0.035		ND	0.15	0.696	1/17/23 5:38		CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.696	1/17/23 5:38		CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.696	1/17/23 5:38		CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.696	1/17/23 5:38		CMR
Toluene	0.14	0.035		0.52	0.13	0.696	1/17/23 5:38		CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.696	1/17/23 5:38		CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.696	1/17/23 5:38		CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.696	1/17/23 5:38		CMR
Trichloroethylene	ND	0.035		ND	0.19	0.696	1/17/23 5:38		CMR
Trichlorofluoromethane (Freon 11)	0.22	0.14		1.2	0.78	0.696	1/17/23 5:38		CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.696	1/17/23 5:38		CMR
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17	0.696	1/17/23 5:38		CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.696	1/17/23 5:38		CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.696	1/17/23 5:38		CMR
Vinyl Chloride	ND	0.035		ND	0.089	0.696	1/17/23 5:38		CMR
m&p-Xylene	ND	0.070		ND	0.30	0.696	1/17/23 5:38		CMR
o-Xylene	ND	0.035		ND	0.15	0.696	1/17/23 5:38		CMR

Surrogates	% Recovery	% REC Limits		
4-Bromofluorobenzene (1)	111	70-130	1/17/23	5:38

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: River Rouge, MI
Date Received: 1/11/2023
Field Sample #: DW1-0104-6
Sample ID: 23A1156-05
Sample Matrix: Air
Sampled: 1/5/2023 15:12

Sample Description/Location:
Sub Description/Location:
Canister ID: 1470
Canister Size: 6 liter
Flow Controller ID: 3615
Sample Type: 2 hr

Work Order: 23A1156
Initial Vacuum(in Hg): -28.5
Final Vacuum(in Hg): -9.5
Receipt Vacuum(in Hg): -11.8
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	5.4	1.6		13	3.8	0.8	1/17/23 6:28		CMR
Benzene	1.8	0.040		5.6	0.13	0.8	1/17/23 6:28		CMR
Benzyl chloride	ND	0.040		ND	0.21	0.8	1/17/23 6:28		CMR
Bromodichloromethane	ND	0.040		ND	0.27	0.8	1/17/23 6:28		CMR
Bromoform	ND	0.040		ND	0.41	0.8	1/17/23 6:28		CMR
Bromomethane	ND	0.040		ND	0.16	0.8	1/17/23 6:28		CMR
1,3-Butadiene	0.074	0.040		0.16	0.088	0.8	1/17/23 6:28		CMR
2-Butanone (MEK)	ND	1.6		ND	4.7	0.8	1/17/23 6:28		CMR
Carbon Disulfide	ND	0.40		ND	1.2	0.8	1/17/23 6:28		CMR
Carbon Tetrachloride	ND	0.040		ND	0.25	0.8	1/17/23 6:28		CMR
Chlorobenzene	ND	0.040		ND	0.18	0.8	1/17/23 6:28		CMR
Chloroethane	ND	0.040		ND	0.11	0.8	1/17/23 6:28		CMR
Chloroform	ND	0.040		ND	0.20	0.8	1/17/23 6:28		CMR
Chloromethane	0.46	0.080		0.94	0.17	0.8	1/17/23 6:28		CMR
Cyclohexane	ND	0.040		ND	0.14	0.8	1/17/23 6:28		CMR
Dibromochloromethane	ND	0.040		ND	0.34	0.8	1/17/23 6:28		CMR
1,2-Dibromoethane (EDB)	ND	0.040		ND	0.31	0.8	1/17/23 6:28		CMR
1,2-Dichlorobenzene	ND	0.040		ND	0.24	0.8	1/17/23 6:28		CMR
1,3-Dichlorobenzene	ND	0.040		ND	0.24	0.8	1/17/23 6:28		CMR
1,4-Dichlorobenzene	ND	0.040		ND	0.24	0.8	1/17/23 6:28		CMR
Dichlorodifluoromethane (Freon 12)	0.25	0.040		1.2	0.20	0.8	1/17/23 6:28		CMR
1,1-Dichloroethane	ND	0.040		ND	0.16	0.8	1/17/23 6:28		CMR
1,2-Dichloroethane	ND	0.040		ND	0.16	0.8	1/17/23 6:28		CMR
1,1-Dichloroethylene	ND	0.040		ND	0.16	0.8	1/17/23 6:28		CMR
cis-1,2-Dichloroethylene	ND	0.040		ND	0.16	0.8	1/17/23 6:28		CMR
trans-1,2-Dichloroethylene	ND	0.040		ND	0.16	0.8	1/17/23 6:28		CMR
1,2-Dichloropropane	ND	0.040		ND	0.18	0.8	1/17/23 6:28		CMR
cis-1,3-Dichloropropene	ND	0.040		ND	0.18	0.8	1/17/23 6:28		CMR
trans-1,3-Dichloropropene	ND	0.040		ND	0.18	0.8	1/17/23 6:28		CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.040		ND	0.28	0.8	1/17/23 6:28		CMR
1,4-Dioxane	ND	0.40		ND	1.4	0.8	1/17/23 6:28		CMR
Ethanol	ND	1.6		ND	3.0	0.8	1/17/23 6:28		CMR
Ethyl Acetate	ND	0.40		ND	1.4	0.8	1/17/23 6:28		CMR
Ethylbenzene	ND	0.040		ND	0.17	0.8	1/17/23 6:28		CMR
4-Ethyltoluene	ND	0.040		ND	0.20	0.8	1/17/23 6:28		CMR
Heptane	0.058	0.040		0.24	0.16	0.8	1/17/23 6:28		CMR
Hexachlorobutadiene	ND	0.040		ND	0.43	0.8	1/17/23 6:28		CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: River Rouge, MI
 Date Received: 1/11/2023
Field Sample #: DW1-0104-6
Sample ID: 23A1156-05
 Sample Matrix: Air
 Sampled: 1/5/2023 15:12

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1470
 Canister Size: 6 liter
 Flow Controller ID: 3615
 Sample Type: 2 hr

Work Order: 23A1156
 Initial Vacuum(in Hg): -28.5
 Final Vacuum(in Hg): -9.5
 Receipt Vacuum(in Hg): -11.8
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.6		ND	5.6	0.8	1/17/23 6:28		CMR
2-Hexanone (MBK)	0.080	0.040		0.33	0.16	0.8	1/17/23 6:28		CMR
Isopropanol	ND	1.6		ND	3.9	0.8	1/17/23 6:28		CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.040		ND	0.14	0.8	1/17/23 6:28		CMR
Methylene Chloride	ND	0.40		ND	1.4	0.8	1/17/23 6:28		CMR
4-Methyl-2-pentanone (MIBK)	0.049	0.040		0.20	0.16	0.8	1/17/23 6:28		CMR
Naphthalene	0.078	0.040		0.41	0.21	0.8	1/17/23 6:28		CMR
Propene	ND	1.6		ND	2.8	0.8	1/17/23 6:28		CMR
Styrene	0.058	0.040		0.25	0.17	0.8	1/17/23 6:28		CMR
1,1,2,2-Tetrachloroethane	ND	0.040		ND	0.27	0.8	1/17/23 6:28		CMR
Tetrachloroethylene	ND	0.040		ND	0.27	0.8	1/17/23 6:28		CMR
Tetrahydrofuran	ND	0.40		ND	1.2	0.8	1/17/23 6:28		CMR
Toluene	0.30	0.040		1.1	0.15	0.8	1/17/23 6:28		CMR
1,2,4-Trichlorobenzene	ND	0.040		ND	0.30	0.8	1/17/23 6:28		CMR
1,1,1-Trichloroethane	ND	0.040		ND	0.22	0.8	1/17/23 6:28		CMR
1,1,2-Trichloroethane	ND	0.040		ND	0.22	0.8	1/17/23 6:28		CMR
Trichloroethylene	ND	0.040		ND	0.21	0.8	1/17/23 6:28		CMR
Trichlorofluoromethane (Freon 11)	0.20	0.16		1.1	0.90	0.8	1/17/23 6:28		CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.16		ND	1.2	0.8	1/17/23 6:28		CMR
1,2,4-Trimethylbenzene	ND	0.040		ND	0.20	0.8	1/17/23 6:28		CMR
1,3,5-Trimethylbenzene	ND	0.040		ND	0.20	0.8	1/17/23 6:28		CMR
Vinyl Acetate	ND	0.80		ND	2.8	0.8	1/17/23 6:28		CMR
Vinyl Chloride	ND	0.040		ND	0.10	0.8	1/17/23 6:28		CMR
m&p-Xylene	0.091	0.080		0.40	0.35	0.8	1/17/23 6:28		CMR
o-Xylene	ND	0.040		ND	0.17	0.8	1/17/23 6:28		CMR

Surrogates	% Recovery	% REC Limits		
4-Bromofluorobenzene (1)	110	70-130	1/17/23	6:28

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: River Rouge, MI
Date Received: 1/11/2023
Field Sample #: DW2-0104-6
Sample ID: 23A1156-06
Sample Matrix: Air
Sampled: 1/5/2023 14:23

Sample Description/Location:
Sub Description/Location:
Canister ID: 1065
Canister Size: 6 liter
Flow Controller ID: 3722
Sample Type: 2 hr

Work Order: 23A1156
Initial Vacuum(in Hg): -28.5
Final Vacuum(in Hg): -9.5
Receipt Vacuum(in Hg): -9.1
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	2.6	1.4		6.2	3.3	0.696	1/17/23 7:17		CMR
Benzene	0.68	0.035		2.2	0.11	0.696	1/17/23 7:17		CMR
Benzyl chloride	ND	0.035		ND	0.18	0.696	1/17/23 7:17		CMR
Bromodichloromethane	ND	0.035		ND	0.23	0.696	1/17/23 7:17		CMR
Bromoform	ND	0.035		ND	0.36	0.696	1/17/23 7:17		CMR
Bromomethane	ND	0.035		ND	0.14	0.696	1/17/23 7:17		CMR
1,3-Butadiene	0.056	0.035		0.12	0.077	0.696	1/17/23 7:17		CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.696	1/17/23 7:17		CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.696	1/17/23 7:17		CMR
Carbon Tetrachloride	0.067	0.035		0.42	0.22	0.696	1/17/23 7:17		CMR
Chlorobenzene	ND	0.035		ND	0.16	0.696	1/17/23 7:17		CMR
Chloroethane	ND	0.035		ND	0.092	0.696	1/17/23 7:17		CMR
Chloroform	ND	0.035		ND	0.17	0.696	1/17/23 7:17		CMR
Chloromethane	0.45	0.070		0.93	0.14	0.696	1/17/23 7:17		CMR
Cyclohexane	0.037	0.035		0.13	0.12	0.696	1/17/23 7:17		CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.696	1/17/23 7:17		CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.696	1/17/23 7:17		CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.696	1/17/23 7:17		CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.696	1/17/23 7:17		CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.696	1/17/23 7:17		CMR
Dichlorodifluoromethane (Freon 12)	0.27	0.035		1.3	0.17	0.696	1/17/23 7:17		CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.696	1/17/23 7:17		CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.696	1/17/23 7:17		CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.696	1/17/23 7:17		CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.696	1/17/23 7:17		CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.696	1/17/23 7:17		CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.696	1/17/23 7:17		CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.696	1/17/23 7:17		CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.696	1/17/23 7:17		CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035		ND	0.24	0.696	1/17/23 7:17		CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.696	1/17/23 7:17		CMR
Ethanol	1.7	1.4		3.2	2.6	0.696	1/17/23 7:17		CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.696	1/17/23 7:17		CMR
Ethylbenzene	ND	0.035		ND	0.15	0.696	1/17/23 7:17		CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.696	1/17/23 7:17		CMR
Heptane	0.056	0.035		0.23	0.14	0.696	1/17/23 7:17		CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.696	1/17/23 7:17		CMR

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: River Rouge, MI
 Date Received: 1/11/2023
Field Sample #: DW2-0104-6
Sample ID: 23A1156-06
 Sample Matrix: Air
 Sampled: 1/5/2023 14:23

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1065
 Canister Size: 6 liter
 Flow Controller ID: 3722
 Sample Type: 2 hr

Work Order: 23A1156
 Initial Vacuum(in Hg): -28.5
 Final Vacuum(in Hg): -9.5
 Receipt Vacuum(in Hg): -9.1
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4		ND	4.9	0.696	1/17/23 7:17		CMR
2-Hexanone (MBK)	0.046	0.035		0.19	0.14	0.696	1/17/23 7:17		CMR
Isopropanol	ND	1.4		ND	3.4	0.696	1/17/23 7:17		CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.696	1/17/23 7:17		CMR
Methylene Chloride	ND	0.35		ND	1.2	0.696	1/17/23 7:17		CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.696	1/17/23 7:17		CMR
Naphthalene	0.29	0.035		1.5	0.18	0.696	1/17/23 7:17		CMR
Propene	ND	1.4		ND	2.4	0.696	1/17/23 7:17		CMR
Styrene	ND	0.035		ND	0.15	0.696	1/17/23 7:17		CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.696	1/17/23 7:17		CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.696	1/17/23 7:17		CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.696	1/17/23 7:17		CMR
Toluene	0.19	0.035		0.71	0.13	0.696	1/17/23 7:17		CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.696	1/17/23 7:17		CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.696	1/17/23 7:17		CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.696	1/17/23 7:17		CMR
Trichloroethylene	ND	0.035		ND	0.19	0.696	1/17/23 7:17		CMR
Trichlorofluoromethane (Freon 11)	0.24	0.14		1.4	0.78	0.696	1/17/23 7:17		CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.696	1/17/23 7:17		CMR
1,2,4-Trimethylbenzene	0.049	0.035		0.24	0.17	0.696	1/17/23 7:17		CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.696	1/17/23 7:17		CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.696	1/17/23 7:17		CMR
Vinyl Chloride	ND	0.035		ND	0.089	0.696	1/17/23 7:17		CMR
m&p-Xylene	0.091	0.070		0.40	0.30	0.696	1/17/23 7:17		CMR
o-Xylene	0.036	0.035		0.16	0.15	0.696	1/17/23 7:17		CMR

Surrogates	% Recovery	% REC Limits		
4-Bromofluorobenzene (1)	114	70-130	1/17/23	7:17

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data**Prep Method: TO-15 Prep****Analytical Method: EP**

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
23A1156-01 [UPW-0104-6]	B329051	1.74	1	N/A	1000	400	1000	01/16/23
23A1156-02 [IN1-0104-6]	B329051	1.74	1	N/A	1000	400	1000	01/16/23
23A1156-03 [IN2-0104-6A]	B329051	1.74	1	N/A	1000	400	1000	01/16/23
23A1156-04 [IN2-0104-6B]	B329051	1.74	1	N/A	1000	400	1000	01/16/23
23A1156-05 [DW1-0104-6]	B329051	2	1	N/A	1000	400	1000	01/16/23
23A1156-06 [DW2-0104-6]	B329051	1.74	1	N/A	1000	400	1000	01/16/23

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	%REC	Limits	RPD	Limit	

Batch B329051 - TO-15 Prep
Blank (B329051-BLK1)

Prepared & Analyzed: 01/16/23

Acetone	ND	1.4
Benzene	ND	0.035
Benzyl chloride	ND	0.035
Bromodichloromethane	ND	0.035
Bromoform	ND	0.035
Bromomethane	ND	0.035
1,3-Butadiene	ND	0.035
2-Butanone (MEK)	ND	1.4
Carbon Disulfide	ND	0.35
Carbon Tetrachloride	ND	0.035
Chlorobenzene	ND	0.035
Chloroethane	ND	0.035
Chloroform	ND	0.035
Chloromethane	ND	0.070
Cyclohexane	ND	0.035
Dibromochloromethane	ND	0.035
1,2-Dibromoethane (EDB)	ND	0.035
1,2-Dichlorobenzene	ND	0.035
1,3-Dichlorobenzene	ND	0.035
1,4-Dichlorobenzene	ND	0.035
Dichlorodifluoromethane (Freon 12)	ND	0.035
1,1-Dichloroethane	ND	0.035
1,2-Dichloroethane	ND	0.035
1,1-Dichloroethylene	ND	0.035
cis-1,2-Dichloroethylene	ND	0.035
trans-1,2-Dichloroethylene	ND	0.035
1,2-Dichloropropane	ND	0.035
cis-1,3-Dichloropropene	ND	0.035
trans-1,3-Dichloropropene	ND	0.035
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035
1,4-Dioxane	ND	0.35
Ethanol	ND	1.4
Ethyl Acetate	ND	0.35
Ethylbenzene	ND	0.035
4-Ethyltoluene	ND	0.035
Heptane	ND	0.035
Hexachlorobutadiene	ND	0.035
Hexane	ND	1.4
2-Hexanone (MBK)	ND	0.035
Isopropanol	ND	1.4
Methyl tert-Butyl Ether (MTBE)	ND	0.035
Methylene Chloride	ND	0.35
4-Methyl-2-pentanone (MIBK)	ND	0.035
Naphthalene	ND	0.035
Propene	ND	1.4
Styrene	ND	0.035

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	Limits	RPD	Limit	

Batch B329051 - TO-15 Prep
Blank (B329051-BLK1)

Prepared & Analyzed: 01/16/23

1,1,2,2-Tetrachloroethane	ND	0.035
Tetrachloroethylene	ND	0.035
Tetrahydrofuran	ND	0.35
Toluene	ND	0.035
1,2,4-Trichlorobenzene	ND	0.035
1,1,1-Trichloroethane	ND	0.035
1,1,2-Trichloroethane	ND	0.035
Trichloroethylene	ND	0.035
Trichlorofluoromethane (Freon 11)	ND	0.14
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14
1,2,4-Trimethylbenzene	ND	0.035
1,3,5-Trimethylbenzene	ND	0.035
Vinyl Acetate	ND	0.70
Vinyl Chloride	ND	0.035
m&p-Xylene	ND	0.070
o-Xylene	ND	0.035

<i>Surrogate: 4-Bromofluorobenzene (1)</i>	<i>9.02</i>	<i>8.00</i>	<i>113</i>	<i>70-130</i>
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LCS (B329051-BS1)

Prepared & Analyzed: 01/16/23

Acetone	4.50	5.00	90.0	70-130
Benzene	5.21	5.00	104	70-130
Benzyl chloride	5.35	5.00	107	70-130
Bromodichloromethane	5.03	5.00	101	70-130
Bromoform	5.58	5.00	112	70-130
Bromomethane	4.44	5.00	88.8	70-130
1,3-Butadiene	4.00	5.00	80.0	70-130
2-Butanone (MEK)	5.08	5.00	102	70-130
Carbon Disulfide	5.50	5.00	110	70-130
Carbon Tetrachloride	5.41	5.00	108	70-130
Chlorobenzene	4.91	5.00	98.1	70-130
Chloroethane	4.40	5.00	88.1	70-130
Chloroform	5.36	5.00	107	70-130
Chloromethane	4.04	5.00	80.9	70-130
Cyclohexane	5.13	5.00	103	70-130
Dibromochloromethane	5.41	5.00	108	70-130
1,2-Dibromoethane (EDB)	4.96	5.00	99.2	70-130
1,2-Dichlorobenzene	5.19	5.00	104	70-130
1,3-Dichlorobenzene	5.32	5.00	106	70-130
1,4-Dichlorobenzene	5.36	5.00	107	70-130
Dichlorodifluoromethane (Freon 12)	5.26	5.00	105	70-130
1,1-Dichloroethane	5.44	5.00	109	70-130
1,2-Dichloroethane	5.45	5.00	109	70-130
1,1-Dichloroethylene	4.93	5.00	98.6	70-130
cis-1,2-Dichloroethylene	5.37	5.00	107	70-130
trans-1,2-Dichloroethylene	5.46	5.00	109	70-130
1,2-Dichloropropane	5.21	5.00	104	70-130

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result		Limits			
Batch B329051 - TO-15 Prep											
LCS (B329051-BS1)					Prepared & Analyzed: 01/16/23						
cis-1,3-Dichloropropene	5.09				5.00		102	70-130			
trans-1,3-Dichloropropene	5.14				5.00		103	70-130			
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	4.15				5.00		82.9	70-130			
1,4-Dioxane	4.99				5.00		99.8	70-130			
Ethanol	4.57				5.00		91.4	70-130			
Ethyl Acetate	5.37				5.00		107	70-130			
Ethylbenzene	5.13				5.00		103	70-130			
4-Ethyltoluene	5.25				5.00		105	70-130			
Heptane	5.15				5.00		103	70-130			
Hexachlorobutadiene	4.98				5.00		99.6	70-130			
Hexane	5.60				5.00		112	70-130			
2-Hexanone (MBK)	4.83				5.00		96.6	70-130			
Isopropanol	3.57				5.00		71.4	70-130			
Methyl tert-Butyl Ether (MTBE)	5.19				5.00		104	70-130			
Methylene Chloride	4.55				5.00		90.9	70-130			
4-Methyl-2-pentanone (MIBK)	4.79				5.00		95.8	70-130			
Naphthalene	5.18				5.00		104	70-130			
Propene	4.85				5.00		97.1	70-130			
Styrene	5.20				5.00		104	70-130			
1,1,2,2-Tetrachloroethane	4.69				5.00		93.8	70-130			
Tetrachloroethylene	5.37				5.00		107	70-130			
Tetrahydrofuran	5.46				5.00		109	70-130			
Toluene	5.10				5.00		102	70-130			
1,2,4-Trichlorobenzene	4.83				5.00		96.7	70-130			
1,1,1-Trichloroethane	4.91				5.00		98.2	70-130			
1,1,2-Trichloroethane	5.08				5.00		102	70-130			
Trichloroethylene	5.18				5.00		104	70-130			
Trichlorofluoromethane (Freon 11)	4.81				5.00		96.1	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5.18				5.00		104	70-130			
1,2,4-Trimethylbenzene	5.19				5.00		104	70-130			
1,3,5-Trimethylbenzene	5.25				5.00		105	70-130			
Vinyl Acetate	4.56				5.00		91.1	70-130			
Vinyl Chloride	4.33				5.00		86.5	70-130			
m&p-Xylene	10.4				10.0		104	70-130			
o-Xylene	5.17				5.00		103	70-130			
Surrogate: 4-Bromofluorobenzene (1)	9.03				8.00		113	70-130			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332**FLAG/QUALIFIER SUMMARY**

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (S076501-ICV1)			Lab File ID: G22A256016.D			Analyzed: 09/13/22 22:00			
Bromochloromethane (1)	1141026	8.307	1123386	8.307	102	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	2751702	10.081	2650535	10.081	104	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	2471195	14.446	2407851	14.446	103	60 - 140	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (S082050-CCV1)			Lab File ID: G23A016004.D			Analyzed: 01/16/23 14:30			
Bromochloromethane (1)	1122577	8.301	1123386	8.307	100	60 - 140	-0.0060	+/-0.50	
1,4-Difluorobenzene (1)	2643614	10.075	2650535	10.081	100	60 - 140	-0.0060	+/-0.50	
Chlorobenzene-d5 (1)	2359494	14.44	2407851	14.446	98	60 - 140	-0.0060	+/-0.50	
LCS (B329051-BS1)			Lab File ID: G23A016005.D			Analyzed: 01/16/23 15:10			
Bromochloromethane (1)	1129851	8.3	1122577	8.301	101	60 - 140	-0.0010	+/-0.50	
1,4-Difluorobenzene (1)	2837862	10.075	2643614	10.075	107	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	2555748	14.44	2359494	14.44	108	60 - 140	0.0000	+/-0.50	
Blank (B329051-BLK1)			Lab File ID: G23A016008.D			Analyzed: 01/16/23 17:17			
Bromochloromethane (1)	1146846	8.307	1122577	8.301	102	60 - 140	0.0060	+/-0.50	
1,4-Difluorobenzene (1)	2886741	10.075	2643614	10.075	109	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	2593529	14.44	2359494	14.44	110	60 - 140	0.0000	+/-0.50	
UPW-0104-6 (23A1156-01)			Lab File ID: G23A016021.D			Analyzed: 01/17/23 03:11			
Bromochloromethane (1)	1094133	8.301	1122577	8.301	97	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	2745023	10.075	2643614	10.075	104	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	2547687	14.44	2359494	14.44	108	60 - 140	0.0000	+/-0.50	
IN1-0104-6 (23A1156-02)			Lab File ID: G23A016022.D			Analyzed: 01/17/23 04:00			
Bromochloromethane (1)	1135764	8.307	1122577	8.301	101	60 - 140	0.0060	+/-0.50	
1,4-Difluorobenzene (1)	2914617	10.075	2643614	10.075	110	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	2677705	14.44	2359494	14.44	113	60 - 140	0.0000	+/-0.50	
IN2-0104-6A (23A1156-03)			Lab File ID: G23A016023.D			Analyzed: 01/17/23 04:49			
Bromochloromethane (1)	1126497	8.307	1122577	8.301	100	60 - 140	0.0060	+/-0.50	
1,4-Difluorobenzene (1)	2826392	10.075	2643614	10.075	107	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	2568085	14.44	2359494	14.44	109	60 - 140	0.0000	+/-0.50	
IN2-0104-6B (23A1156-04)			Lab File ID: G23A016024.D			Analyzed: 01/17/23 05:38			
Bromochloromethane (1)	1119768	8.301	1122577	8.301	100	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	2758292	10.075	2643614	10.075	104	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	2532947	14.44	2359494	14.44	107	60 - 140	0.0000	+/-0.50	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DW1-0104-6 (23A1156-05) Lab File ID: G23A016025.D Analyzed: 01/17/23 06:28									
Bromochloromethane (1)	1105877	8.301	1122577	8.301	99	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	2740720	10.068	2643614	10.075	104	60 - 140	-0.0070	+/-0.50	
Chlorobenzene-d5 (1)	2558491	14.44	2359494	14.44	108	60 - 140	0.0000	+/-0.50	
DW2-0104-6 (23A1156-06) Lab File ID: G23A016026.D Analyzed: 01/17/23 07:17									
Bromochloromethane (1)	1195494	8.301	1122577	8.301	106	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	3137348	10.075	2643614	10.075	119	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	2917920	14.44	2359494	14.44	124	60 - 140	0.0000	+/-0.50	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CONTINUING CALIBRATION CHECK

EPA TO-15

S082050-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.00	5.14	1.084004	1.115352		2.9	30
Benzene	A	5.00	5.30	0.9129288	0.9671935		5.9	30
Benzyl chloride	A	5.00	5.75	1.030942	1.185911		15.0	30
Bromodichloromethane	A	5.00	5.27	0.6953811	0.7323823		5.3	30
Bromoform	A	5.00	5.77	0.5656468	0.6531563		15.5	30
Bromomethane	A	5.00	4.87	0.6009459	0.585537		-2.6	30
1,3-Butadiene	A	5.00	4.83	0.5443004	0.5254367		-3.5	30
2-Butanone (MEK)	A	5.00	5.09	1.507683	1.5355		1.8	30
Carbon Disulfide	A	5.00	5.19	2.02748	2.104513		3.8	30
Carbon Tetrachloride	A	5.00	5.43	0.5479998	0.5946363		8.5	30
Chlorobenzene	A	5.00	5.07	0.8809329	0.8934187		1.4	30
Chloroethane	A	5.00	4.96	0.3452967	0.3427528		-0.7	30
Chloroform	A	5.00	5.13	1.561184	1.602226		2.6	30
Chloromethane	A	5.00	4.63	0.6821899	0.6320201		-7.4	30
Cyclohexane	A	5.00	5.21	0.3600845	0.3750738		4.2	30
Dibromochloromethane	A	5.00	5.53	0.6396581	0.7079186		10.7	30
1,2-Dibromoethane (EDB)	A	5.00	5.17	0.6171207	0.6379002		3.4	30
1,2-Dichlorobenzene	A	5.00	5.39	0.6937094	0.7479122		7.8	30
1,3-Dichlorobenzene	A	5.00	5.62	0.7409581	0.8322272		12.3	30
1,4-Dichlorobenzene	A	5.00	5.62	0.7218155	0.8115821		12.4	30
Dichlorodifluoromethane (Freon 12)	A	5.00	5.26	1.62808	1.713426		5.2	30
1,1-Dichloroethane	A	5.00	5.27	1.342742	1.415606		5.4	30
1,2-Dichloroethane	A	5.00	5.33	0.9627523	1.027045		6.7	30
1,1-Dichloroethylene	A	5.00	4.98	1.140142	1.136558		-0.3	30
cis-1,2-Dichloroethylene	A	5.00	5.22	0.9670963	1.009972		4.4	30
trans-1,2-Dichloroethylene	A	5.00	5.33	1.001825	1.068238		6.6	30
1,2-Dichloropropane	A	5.00	5.34	0.3567989	0.381013		6.8	30
cis-1,3-Dichloropropene	A	5.00	5.34	0.5092852	0.5443923		6.9	30
trans-1,3-Dichloropropene	A	5.00	5.25	0.4570981	0.4801839		5.1	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	A	5.00	4.82	1.73998	1.679078		-3.5	30
1,4-Dioxane	A	5.00	4.74	0.1857641	0.1763011		-5.1	30
Ethanol	A	5.00	4.41	0.2343264	0.2068455		-11.7	30
Ethyl Acetate	A	5.00	5.59	0.2308163	0.2582073		11.9	30
Ethylbenzene	A	5.00	5.38	1.455024	1.566036		7.6	30
4-Ethyltoluene	A	5.00	5.56	1.413771	1.572334		11.2	30
Heptane	A	5.00	5.53	0.2850308	0.3154088		10.7	30
Hexachlorobutadiene	A	5.00	5.05	0.4677459	0.4724579		1.0	30
Hexane	A	5.00	5.69	0.8985394	0.9602007		13.8	30

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CONTINUING CALIBRATION CHECK

EPA TO-15

S082050-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
2-Hexanone (MBK)	A	5.00	5.44	0.7712864	0.8396783		8.9	30
Isopropanol	A	5.00	4.70	1.338902	1.258651		-6.0	30
Methyl tert-Butyl Ether (MTBE)	A	5.00	5.06	1.834723	1.854946		1.1	30
Methylene Chloride	A	5.00	4.55	0.9597215	0.873741		-9.0	30
4-Methyl-2-pentanone (MIBK)	A	5.00	5.33	0.7726854	0.8239333		6.6	30
Naphthalene	A	5.00	4.97	1.092246	1.086397		-0.5	30
Propene	A	5.00	4.99	0.5941328	0.5924511		-0.3	30
Styrene	A	5.00	5.52	0.7890752	0.8710824		10.4	30
1,1,2,2-Tetrachloroethane	A	5.00	5.10	0.9851261	1.004585		2.0	30
Tetrachloroethylene	A	5.00	5.36	0.457194	0.4906062		7.3	30
Tetrahydrofuran	A	5.00	5.03	0.2957092	0.2976665		0.7	30
Toluene	A	5.00	5.30	1.15399	1.222343		5.9	30
1,2,4-Trichlorobenzene	A	5.00	4.78	0.4973623	0.4758986		-4.3	30
1,1,1-Trichloroethane	A	5.00	5.17	0.5975698	0.6178082		3.4	30
1,1,2-Trichloroethane	A	5.00	5.10	0.4162703	0.4246185		2.0	30
Trichloroethylene	A	5.00	5.18	0.3947958	0.4091429		3.6	30
Trichlorofluoromethane (Freon 11)	A	5.00	5.18	1.463327	1.516655		3.6	30
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	A	5.00	4.97	1.432547	1.424323		-0.6	30
1,2,4-Trimethylbenzene	A	5.00	5.55	1.156019	1.283143		11.0	30
1,3,5-Trimethylbenzene	A	5.00	5.62	1.190388	1.339171		12.5	30
Vinyl Acetate	A	5.00	4.59	1.986739	1.825178		-8.1	30
Vinyl Chloride	A	5.00	4.96	0.7142115	0.7089217		-0.7	30
m&p-Xylene	A	10.0	11.1	1.129066	1.254976		11.2	30
o-Xylene	A	5.00	5.55	1.138955	1.263423		10.9	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
Acetone	AIHA,NY,ME,NH
Benzene	AIHA,FL,NJ,NY,ME,NH,VA
Benzyl chloride	AIHA,FL,NJ,NY,ME,NH,VA
Bromodichloromethane	AIHA,NJ,NY,ME,NH,VA
Bromoform	AIHA,NJ,NY,ME,NH,VA
Bromomethane	AIHA,FL,NJ,NY,ME,NH
1,3-Butadiene	AIHA,NJ,NY,ME,NH,VA
2-Butanone (MEK)	AIHA,FL,NJ,NY,ME,NH,VA
Carbon Disulfide	AIHA,NJ,NY,ME,NH,VA
Carbon Tetrachloride	AIHA,FL,NJ,NY,ME,NH,VA
Chlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
Chloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Chloroform	AIHA,FL,NJ,NY,ME,NH,VA
Chloromethane	AIHA,FL,NJ,NY,ME,NH,VA
Cyclohexane	AIHA,NJ,NY,ME,NH,VA
Dibromochloromethane	AIHA,NY,ME,NH
1,2-Dibromoethane (EDB)	AIHA,NJ,NY,ME,NH
1,2-Dichlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
1,3-Dichlorobenzene	AIHA,NJ,NY,ME,NH
1,4-Dichlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
Dichlorodifluoromethane (Freon 12)	AIHA,NY,ME,NH
1,1-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,2-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1-Dichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
cis-1,2-Dichloroethylene	AIHA,FL,NY,ME,NH,VA
trans-1,2-Dichloroethylene	AIHA,NJ,NY,ME,NH,VA
1,2-Dichloropropane	AIHA,FL,NJ,NY,ME,NH,VA
cis-1,3-Dichloropropene	AIHA,FL,NJ,NY,ME,NH,VA
trans-1,3-Dichloropropene	AIHA,NY,ME,NH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	AIHA,NJ,NY,ME,NH,VA
1,4-Dioxane	AIHA,NJ,NY,ME,NH,VA
Ethanol	AIHA
Ethyl Acetate	AIHA
Ethylbenzene	AIHA,FL,NJ,NY,ME,NH,VA
4-Ethyltoluene	AIHA,NJ
Heptane	AIHA,NJ,NY,ME,NH,VA
Hexachlorobutadiene	AIHA,NJ,NY,ME,NH,VA
Hexane	AIHA,FL,NJ,NY,ME,NH,VA
2-Hexanone (MBK)	AIHA
Isopropanol	AIHA,NY,ME,NH
Methyl tert-Butyl Ether (MTBE)	AIHA,FL,NJ,NY,ME,NH,VA
Methylene Chloride	AIHA,FL,NJ,NY,ME,NH,VA
4-Methyl-2-pentanone (MIBK)	AIHA,FL,NJ,NY,ME,NH
Naphthalene	NY,ME,NH
Propene	AIHA
Styrene	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY,ME,NH,VA

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
Tetrachloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Tetrahydrofuran	AIHA
Toluene	AIHA,FL,NJ,NY,ME,NH,VA
1,2,4-Trichlorobenzene	AIHA,NJ,NY,ME,NH,VA
1,1,1-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Trichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Trichlorofluoromethane (Freon 11)	AIHA,NY,ME,NH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	AIHA,NJ,NY,ME,NH,VA
1,2,4-Trimethylbenzene	AIHA,NJ,NY,ME,NH
1,3,5-Trimethylbenzene	AIHA,NJ,NY,ME,NH
Vinyl Acetate	AIHA,FL,NJ,NY,ME,NH,VA
Vinyl Chloride	AIHA,FL,NJ,NY,ME,NH,VA
m&p-Xylene	AIHA,FL,NJ,NY,ME,NH,VA
o-Xylene	AIHA,FL,NJ,NY,ME,NH,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO 17025:2017	100033	03/1/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
FL	Florida Department of Health	E871027 NELAP	06/30/2023
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2023

Phone: 413-525-2332

Fax: 413-525-6405

Email: info@contestlabs.com



23A1156

Company Name:

Address: 110 Technology Drive, P.O. Box 15275

Phone: 413-370-2011

Project Name:

Project Location: River Rouge, MI

Project Number:

Project Manager: Tim Rodak

Con-Test Quote Name/Number:

Invoice Recipient: Tim Rodak

Sampled By:

Tim Rodak

CHAIN OF CUSTODY RECORD (AIR)

39 Spruce Street

East Longmeadow, MA 01028

Page ____ of ____

ANALYSIS REQUESTED

Requested Turnaround Time

7-Day ☐ 10-Day ☒

Due Date:

Rush Approval Required

1-Day ☐ 3-Day ☐2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☒ EXCEL ☒

Other:

CLP Like Data Pkg Required: ☐Email To: timrodak@conair.com

Fax To #:

Lab Receipt Pressure

Final Pressure

Initial Pressure

" Hg

Please fill out completely, sign, date and retain the yellow copy for your records

Summa canisters and flow controllers must be returned within 15 days of receipt or rental fees will apply

For summa canister and flow controller information please refer to Con-Test's Air Media Agreement

Summa Can ID

Flow Controller ID

3530

3062

3254 DUP

3254 DUP

3615

3722

To-15 low level

Volume

Liters

m³/min

L/min

Matrix

Code

Duration

Total

Minutes

Sampled

Beginning

Date/Time

Ending

Date/Time

Client Use

Client Sample ID / Description

Con-Test

Work Order#

1

UPW-0104-6

2

IN1-0104-6

3

IN2-0104-6A

4

IN2-0104-6B

5

DW1-0104-6

6

DW2-0104-6

1512

1510

1423

Comments:

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Matrix Codes:

SG = SOIL GAS

IA = INDOOR AIR

AMB = AMBIENT

SS = SUB SLAB

D = DUP

BL = BLANK

O = Other



www.contestlabs.com

NELAP and AIHA-LAP, LLC Accredited

Other

Chromatogram

AIHA-LAP, LLC

PCB ONLY

Soxhlet

Non Soxhlet

Project Entity

Government

Federal

City

Municipality

21 J

Brownfield

Date/Time:

Date/Time:

Date/Time:

Date/Time:

Date/Time:

Date/Time:

(https://www.fedex.com/en-us/home.html)

FedEx® Tracking



DELIVERED

Wednesday

1/11/2023 at 9:26 am

Signed for by: L.ARRPYP

↓ Obtain Proof of delivery

How was your delivery?



DELIVERY STATUS

Delivered

↓ Shipment is 1 of 2 pieces

TRACKING ID

770982227930

FROM

PITTSBURGH, PA US

Label Created

1/9/2023 1:39 PM

PACKAGE RECEIVED BY FEDEX

MOON TOWNSHIP, PA

1/9/2023 3:40 PM

IN TRANSIT

WINDSOR LOCKS, CT

1/11/2023 7:33 AM

OUT FOR DELIVERY

WINDSOR LOCKS, CT

1/11/2023 7:44 AM

DELIVERED

EAST LONGMEADOW, MA US

DELIVERED

1/11/2023 at 9:26 AM

↓ View travel history

Want updates on this shipment? Enter your email and we will do the rest!

YOUR EMAIL

SUBMIT

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.pacelabs.com



Doc# 278 Rev 7 July 2022

Air Media Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Clean Air

Received By <u>VR</u>	Date <u>1/11</u>	Time <u>926</u>
How Were the samples received?	In Cooler <u> </u>	On Ice <u> </u>
	In Box <u>T</u>	Ambient <u> </u>
Were samples within Temperature Compliance?	Within <u> </u>	By Gun # <u> </u>
	2-6°C <u> </u>	By Blank # <u> </u>
Was Custody Seal In tact?	<u>NA</u>	Were Samples Tampered with?
Was COC Relinquished?	<u>T</u>	Does Chain Agree With Samples?
Are there any loose caps/valves on any samples?	<u>F</u>	
Is COC in ink/ Legible?	<u>T</u>	Were samples received within holding time?
Did COC Include all Pertinent Information?	Client? <u>T</u>	Analysis? <u>T</u>
	Project? <u>T</u>	ID's? <u>T</u>
Are Sample Labels filled out and legible?		Sampler Name? <u>T</u>
Are there Rushes?	<u>F</u>	Collection Dates/Times? <u>T</u>
Samples are received within holding time?	<u>T</u>	
Proper Media Used?	<u>T</u>	Individually Certified Cans?
Are there Trip Blanks?	<u>F</u>	Is there enough Volume?

Containers:	#	Size	Regulator	Duration	Accessories:		
Summa Cans	<u>6</u>	<u>6L</u>	<u>5</u>	<u>24 hr</u>	Nut/Ferrule		IC Train
Tedlar Bags					Tubing		
TO-17 Tubes					T-Connector		Shipping Charges
Radiello					Syringe		
Pufs/TO-11s					Tedlar		

Can #'s					Reg #'s				
<u>1987</u>					<u>3730</u>				
<u>1060</u>					<u>3062</u>				
<u>1811</u>					<u>3254</u>				
<u>2197</u>					<u>3615</u>				
<u>1470</u>					<u>3722</u>				
<u>1065</u>									
Unused Media					Pufs/TO-17's				

Comments:

January 19, 2023

Tim Rodak
Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275

Project Location: Zug Island
Client Job Number:
Project Number: 14796 Quote 123244
Laboratory Work Order Number: 23A1507

Enclosed are results of analyses for samples as received by the laboratory on December 29, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

DRAFT REPORT
Project Manager

Table of Contents

Sample Summary	3
Case Narrative	4
Sample Results	5
Sample Preparation Information	17
QC Data	18
Air Toxics by EPA Compendium Methods	18
B329211	18
Flag/Qualifier Summary	21
Internal standard Area & RT Summary	22
Continuing Calibration Check	23
Certifications	24
Chain of Custody/Sample Receipt	26

Clean Air Engineering
110 Technology Drive
Pittsburg, PA 15275
ATTN: Tim Rodak

REPORT DATE: 1/19/2023

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 14796 Quote 123244

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23A1507

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Zug Island

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
VPW-1220-5A	23A1507-01	Air		EPA TO-15	
DW1-1220-5	23A1507-02	Air		EPA TO-15	
DW2-1220-5	23A1507-03	Air		EPA TO-15	
IN2-1220-5	23A1507-04	Air		EPA TO-15	
IN1-1220-5	23A1507-05	Air		EPA TO-15	
VPW-1220-5B	23A1507-06	Air		EPA TO-15	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA TO-15**Qualifications:****L-03**

Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)**

23A1507-01[VPW-1220-5A], 23A1507-02[DW1-1220-5], 23A1507-03[DW2-1220-5], 23A1507-04[IN2-1220-5], 23A1507-05[IN1-1220-5], 23A1507-06[VPW-1220-5B], B329211-BLK1, B329211-BS1

1,3-Butadiene

23A1507-01[VPW-1220-5A], 23A1507-02[DW1-1220-5], 23A1507-03[DW2-1220-5], 23A1507-04[IN2-1220-5], 23A1507-05[IN1-1220-5], 23A1507-06[VPW-1220-5B], B329211-BLK1, B329211-BS1

Chloromethane

23A1507-01[VPW-1220-5A], 23A1507-02[DW1-1220-5], 23A1507-03[DW2-1220-5], 23A1507-04[IN2-1220-5], 23A1507-05[IN1-1220-5], 23A1507-06[VPW-1220-5B], B329211-BLK1, B329211-BS1

Isopropanol

23A1507-01[VPW-1220-5A], 23A1507-02[DW1-1220-5], 23A1507-03[DW2-1220-5], 23A1507-04[IN2-1220-5], 23A1507-05[IN1-1220-5], 23A1507-06[VPW-1220-5B], B329211-BLK1, B329211-BS1

Vinyl Chloride

23A1507-01[VPW-1220-5A], 23A1507-02[DW1-1220-5], 23A1507-03[DW2-1220-5], 23A1507-04[IN2-1220-5], 23A1507-05[IN1-1220-5], 23A1507-06[VPW-1220-5B], B329211-BLK1, B329211-BS1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ANALYTICAL RESULTS

Project Location: Zug Island
 Date Received: 12/29/2022
Field Sample #: VPW-1220-5A
Sample ID: 23A1507-01
 Sample Matrix: Air
 Sampled: 12/21/2022 12:10

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1247
 Canister Size: 6 liter
 Flow Controller ID: 3433 DUP
 Sample Type: 24 hr

Work Order: 23A1507
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -9
 Receipt Vacuum(in Hg): -8.1
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15								
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time	
	Results	RL		Results	RL		Analyzed	Analyst
Acetone	2.2	1.4		5.3	3.3	0.702	1/17/23 18:10	CMR
Benzene	0.24	0.035		0.77	0.11	0.702	1/17/23 18:10	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	1/17/23 18:10	CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	1/17/23 18:10	CMR
Bromoform	ND	0.035		ND	0.36	0.702	1/17/23 18:10	CMR
Bromomethane	ND	0.035		ND	0.14	0.702	1/17/23 18:10	CMR
1,3-Butadiene	0.041	0.035	L-03	0.092	0.078	0.702	1/17/23 18:10	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	1/17/23 18:10	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	1/17/23 18:10	CMR
Carbon Tetrachloride	0.069	0.035		0.44	0.22	0.702	1/17/23 18:10	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	1/17/23 18:10	CMR
Chloroethane	ND	0.035		ND	0.093	0.702	1/17/23 18:10	CMR
Chloroform	ND	0.035		ND	0.17	0.702	1/17/23 18:10	CMR
Chloromethane	0.39	0.070	L-03	0.81	0.14	0.702	1/17/23 18:10	CMR
Cyclohexane	0.040	0.035		0.14	0.12	0.702	1/17/23 18:10	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	1/17/23 18:10	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	1/17/23 18:10	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	1/17/23 18:10	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	1/17/23 18:10	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	1/17/23 18:10	CMR
Dichlorodifluoromethane (Freon 12)	0.25	0.035		1.3	0.17	0.702	1/17/23 18:10	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	1/17/23 18:10	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	1/17/23 18:10	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	1/17/23 18:10	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	1/17/23 18:10	CMR
trans-1,2-Dichloroethylene	0.099	0.035		0.39	0.14	0.702	1/17/23 18:10	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	1/17/23 18:10	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	1/17/23 18:10	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	1/17/23 18:10	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035	L-03	ND	0.25	0.702	1/17/23 18:10	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	1/17/23 18:10	CMR
Ethanol	5.8	1.4		11	2.6	0.702	1/17/23 18:10	CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.702	1/17/23 18:10	CMR
Ethylbenzene	0.038	0.035		0.16	0.15	0.702	1/17/23 18:10	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	1/17/23 18:10	CMR
Heptane	0.10	0.035		0.42	0.14	0.702	1/17/23 18:10	CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	1/17/23 18:10	CMR

ANALYTICAL RESULTS

Project Location: Zug Island
Date Received: 12/29/2022
Field Sample #: VPW-1220-5A
Sample ID: 23A1507-01
Sample Matrix: Air
Sampled: 12/21/2022 12:10

Sample Description/Location:
Sub Description/Location:
Canister ID: 1247
Canister Size: 6 liter
Flow Controller ID: 3433 DUP
Sample Type: 24 hr

Work Order: 23A1507
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -9
Receipt Vacuum(in Hg): -8.1
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4	L-03	ND	4.9	0.702	1/17/23 18:10	CMR	
2-Hexanone (MBK)	ND	0.035		ND	0.14	0.702	1/17/23 18:10	CMR	
Isopropanol	ND	1.4		ND	3.4	0.702	1/17/23 18:10	CMR	
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	1/17/23 18:10	CMR	
Methylene Chloride	ND	0.35		ND	1.2	0.702	1/17/23 18:10	CMR	
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.702	1/17/23 18:10	CMR	
Naphthalene	ND	0.035		ND	0.18	0.702	1/17/23 18:10	CMR	
Propene	ND	1.4		ND	2.4	0.702	1/17/23 18:10	CMR	
Styrene	ND	0.035		ND	0.15	0.702	1/17/23 18:10	CMR	
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	1/17/23 18:10	CMR	
Tetrachloroethylene	ND	0.035		ND	0.24	0.702	1/17/23 18:10	CMR	
Tetrahydrofuran	ND	0.35		ND	1.0	0.702	1/17/23 18:10	CMR	
Toluene	0.27	0.035		1.0	0.13	0.702	1/17/23 18:10	CMR	
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.702	1/17/23 18:10	CMR	
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	1/17/23 18:10	CMR	
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	1/17/23 18:10	CMR	
Trichloroethylene	ND	0.035		ND	0.19	0.702	1/17/23 18:10	CMR	
Trichlorofluoromethane (Freon 11)	0.20	0.14		1.1	0.79	0.702	1/17/23 18:10	CMR	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.702	1/17/23 18:10	CMR	
1,2,4-Trimethylbenzene	0.045	0.035		0.22	0.17	0.702	1/17/23 18:10	CMR	
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.702	1/17/23 18:10	CMR	
Vinyl Acetate	ND	0.70		ND	2.5	0.702	1/17/23 18:10	CMR	
Vinyl Chloride	ND	0.035	L-03	ND	0.090	0.702	1/17/23 18:10	CMR	
m&p-Xylene	0.12	0.070		0.51	0.30	0.702	1/17/23 18:10	CMR	
o-Xylene	0.044	0.035		0.19	0.15	0.702	1/17/23 18:10	CMR	

Surrogates	% Recovery	% REC Limits
4-Bromofluorobenzene (1)	112	70-130
		1/17/23 18:10

ANALYTICAL RESULTS

Project Location: Zug Island
 Date Received: 12/29/2022
Field Sample #: DW1-1220-5
Sample ID: 23A1507-02
 Sample Matrix: Air
 Sampled: 12/21/2022 10:30

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1225
 Canister Size: 6 liter
 Flow Controller ID: 3056
 Sample Type: 24 hr

Work Order: 23A1507
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -7
 Receipt Vacuum(in Hg): -5.6
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	3.8	1.4		8.9	3.3	0.702	1/17/23 18:58	CMR	
Benzene	0.42	0.035		1.4	0.11	0.702	1/17/23 18:58	CMR	
Benzyl chloride	ND	0.035		ND	0.18	0.702	1/17/23 18:58	CMR	
Bromodichloromethane	ND	0.035		ND	0.24	0.702	1/17/23 18:58	CMR	
Bromoform	ND	0.035		ND	0.36	0.702	1/17/23 18:58	CMR	
Bromomethane	ND	0.035		ND	0.14	0.702	1/17/23 18:58	CMR	
1,3-Butadiene	0.047	0.035	L-03	0.10	0.078	0.702	1/17/23 18:58	CMR	
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	1/17/23 18:58	CMR	
Carbon Disulfide	ND	0.35		ND	1.1	0.702	1/17/23 18:58	CMR	
Carbon Tetrachloride	0.064	0.035		0.40	0.22	0.702	1/17/23 18:58	CMR	
Chlorobenzene	ND	0.035		ND	0.16	0.702	1/17/23 18:58	CMR	
Chloroethane	ND	0.035		ND	0.093	0.702	1/17/23 18:58	CMR	
Chloroform	ND	0.035		ND	0.17	0.702	1/17/23 18:58	CMR	
Chloromethane	0.40	0.070	L-03	0.82	0.14	0.702	1/17/23 18:58	CMR	
Cyclohexane	ND	0.035		ND	0.12	0.702	1/17/23 18:58	CMR	
Dibromochloromethane	ND	0.035		ND	0.30	0.702	1/17/23 18:58	CMR	
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	1/17/23 18:58	CMR	
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	1/17/23 18:58	CMR	
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	1/17/23 18:58	CMR	
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	1/17/23 18:58	CMR	
Dichlorodifluoromethane (Freon 12)	0.30	0.035		1.5	0.17	0.702	1/17/23 18:58	CMR	
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	1/17/23 18:58	CMR	
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	1/17/23 18:58	CMR	
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	1/17/23 18:58	CMR	
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	1/17/23 18:58	CMR	
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	1/17/23 18:58	CMR	
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	1/17/23 18:58	CMR	
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	1/17/23 18:58	CMR	
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	1/17/23 18:58	CMR	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035	L-03	ND	0.25	0.702	1/17/23 18:58	CMR	
1,4-Dioxane	ND	0.35		ND	1.3	0.702	1/17/23 18:58	CMR	
Ethanol	2.5	1.4		4.8	2.6	0.702	1/17/23 18:58	CMR	
Ethyl Acetate	ND	0.35		ND	1.3	0.702	1/17/23 18:58	CMR	
Ethylbenzene	ND	0.035		ND	0.15	0.702	1/17/23 18:58	CMR	
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	1/17/23 18:58	CMR	
Heptane	0.063	0.035		0.26	0.14	0.702	1/17/23 18:58	CMR	
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	1/17/23 18:58	CMR	

ANALYTICAL RESULTS

Project Location: Zug Island
 Date Received: 12/29/2022
Field Sample #: DW1-1220-5
Sample ID: 23A1507-02
 Sample Matrix: Air
 Sampled: 12/21/2022 10:30

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1225
 Canister Size: 6 liter
 Flow Controller ID: 3056
 Sample Type: 24 hr

Work Order: 23A1507
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -7
 Receipt Vacuum(in Hg): -5.6
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4		ND	4.9	0.702	1/17/23 18:58	CMR	
2-Hexanone (MBK)	0.058	0.035		0.24	0.14	0.702	1/17/23 18:58	CMR	
Isopropanol	ND	1.4	L-03	ND	3.4	0.702	1/17/23 18:58	CMR	
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	1/17/23 18:58	CMR	
Methylene Chloride	0.39	0.35		1.4	1.2	0.702	1/17/23 18:58	CMR	
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.702	1/17/23 18:58	CMR	
Naphthalene	0.051	0.035		0.27	0.18	0.702	1/17/23 18:58	CMR	
Propene	ND	1.4		ND	2.4	0.702	1/17/23 18:58	CMR	
Styrene	ND	0.035		ND	0.15	0.702	1/17/23 18:58	CMR	
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	1/17/23 18:58	CMR	
Tetrachloroethylene	ND	0.035		ND	0.24	0.702	1/17/23 18:58	CMR	
Tetrahydrofuran	ND	0.35		ND	1.0	0.702	1/17/23 18:58	CMR	
Toluene	0.22	0.035		0.82	0.13	0.702	1/17/23 18:58	CMR	
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.702	1/17/23 18:58	CMR	
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	1/17/23 18:58	CMR	
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	1/17/23 18:58	CMR	
Trichloroethylene	ND	0.035		ND	0.19	0.702	1/17/23 18:58	CMR	
Trichlorofluoromethane (Freon 11)	0.21	0.14		1.2	0.79	0.702	1/17/23 18:58	CMR	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.702	1/17/23 18:58	CMR	
1,2,4-Trimethylbenzene	ND	0.035		ND	0.17	0.702	1/17/23 18:58	CMR	
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.702	1/17/23 18:58	CMR	
Vinyl Acetate	ND	0.70		ND	2.5	0.702	1/17/23 18:58	CMR	
Vinyl Chloride	ND	0.035	L-03	ND	0.090	0.702	1/17/23 18:58	CMR	
m&p-Xylene	0.091	0.070		0.40	0.30	0.702	1/17/23 18:58	CMR	
o-Xylene	0.037	0.035		0.16	0.15	0.702	1/17/23 18:58	CMR	

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	114	70-130	1/17/23 18:58

ANALYTICAL RESULTS

Project Location: Zug Island
 Date Received: 12/29/2022
Field Sample #: DW2-1220-5
Sample ID: 23A1507-03
 Sample Matrix: Air
 Sampled: 12/21/2022 10:00

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 9017
 Canister Size: 6 liter
 Flow Controller ID: 3055
 Sample Type: 24 hr

Work Order: 23A1507
 Initial Vacuum(in Hg): -28
 Final Vacuum(in Hg): -6
 Receipt Vacuum(in Hg): -3.78
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	3.3	1.4		7.7	3.3	0.702	1/17/23 19:45		CMR
Benzene	0.51	0.035		1.6	0.11	0.702	1/17/23 19:45		CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	1/17/23 19:45		CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	1/17/23 19:45		CMR
Bromoform	ND	0.035		ND	0.36	0.702	1/17/23 19:45		CMR
Bromomethane	ND	0.035		ND	0.14	0.702	1/17/23 19:45		CMR
1,3-Butadiene	0.046	0.035	L-03	0.10	0.078	0.702	1/17/23 19:45		CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	1/17/23 19:45		CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	1/17/23 19:45		CMR
Carbon Tetrachloride	0.066	0.035		0.41	0.22	0.702	1/17/23 19:45		CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	1/17/23 19:45		CMR
Chloroethane	ND	0.035		ND	0.093	0.702	1/17/23 19:45		CMR
Chloroform	ND	0.035		ND	0.17	0.702	1/17/23 19:45		CMR
Chloromethane	0.38	0.070	L-03	0.79	0.14	0.702	1/17/23 19:45		CMR
Cyclohexane	0.041	0.035		0.14	0.12	0.702	1/17/23 19:45		CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	1/17/23 19:45		CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	1/17/23 19:45		CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	1/17/23 19:45		CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	1/17/23 19:45		CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	1/17/23 19:45		CMR
Dichlorodifluoromethane (Freon 12)	0.30	0.035		1.5	0.17	0.702	1/17/23 19:45		CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	1/17/23 19:45		CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	1/17/23 19:45		CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	1/17/23 19:45		CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	1/17/23 19:45		CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	1/17/23 19:45		CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	1/17/23 19:45		CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	1/17/23 19:45		CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	1/17/23 19:45		CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035	L-03	ND	0.25	0.702	1/17/23 19:45		CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	1/17/23 19:45		CMR
Ethanol	2.5	1.4		4.7	2.6	0.702	1/17/23 19:45		CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.702	1/17/23 19:45		CMR
Ethylbenzene	ND	0.035		ND	0.15	0.702	1/17/23 19:45		CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	1/17/23 19:45		CMR
Heptane	0.077	0.035		0.32	0.14	0.702	1/17/23 19:45		CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	1/17/23 19:45		CMR

ANALYTICAL RESULTS

Project Location: Zug Island
 Date Received: 12/29/2022
Field Sample #: DW2-1220-5
Sample ID: 23A1507-03
 Sample Matrix: Air
 Sampled: 12/21/2022 10:00

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 9017
 Canister Size: 6 liter
 Flow Controller ID: 3055
 Sample Type: 24 hr

Work Order: 23A1507
 Initial Vacuum(in Hg): -28
 Final Vacuum(in Hg): -6
 Receipt Vacuum(in Hg): -3.78
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4	L-03	ND	4.9	0.702	1/17/23 19:45	CMR	
2-Hexanone (MBK)	0.097	0.035		0.40	0.14	0.702	1/17/23 19:45	CMR	
Isopropanol	ND	1.4		ND	3.4	0.702	1/17/23 19:45	CMR	
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	1/17/23 19:45	CMR	
Methylene Chloride	ND	0.35		ND	1.2	0.702	1/17/23 19:45	CMR	
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.702	1/17/23 19:45	CMR	
Naphthalene	0.14	0.035		0.74	0.18	0.702	1/17/23 19:45	CMR	
Propene	ND	1.4		ND	2.4	0.702	1/17/23 19:45	CMR	
Styrene	ND	0.035		ND	0.15	0.702	1/17/23 19:45	CMR	
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	1/17/23 19:45	CMR	
Tetrachloroethylene	ND	0.035		ND	0.24	0.702	1/17/23 19:45	CMR	
Tetrahydrofuran	ND	0.35		ND	1.0	0.702	1/17/23 19:45	CMR	
Toluene	0.23	0.035		0.87	0.13	0.702	1/17/23 19:45	CMR	
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.702	1/17/23 19:45	CMR	
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	1/17/23 19:45	CMR	
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	1/17/23 19:45	CMR	
Trichloroethylene	ND	0.035		ND	0.19	0.702	1/17/23 19:45	CMR	
Trichlorofluoromethane (Freon 11)	0.20	0.14		1.1	0.79	0.702	1/17/23 19:45	CMR	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.702	1/17/23 19:45	CMR	
1,2,4-Trimethylbenzene	0.044	0.035		0.22	0.17	0.702	1/17/23 19:45	CMR	
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.702	1/17/23 19:45	CMR	
Vinyl Acetate	ND	0.70		ND	2.5	0.702	1/17/23 19:45	CMR	
Vinyl Chloride	ND	0.035	L-03	ND	0.090	0.702	1/17/23 19:45	CMR	
m&p-Xylene	0.11	0.070		0.47	0.30	0.702	1/17/23 19:45	CMR	
o-Xylene	0.044	0.035		0.19	0.15	0.702	1/17/23 19:45	CMR	

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	113	70-130	1/17/23 19:45

ANALYTICAL RESULTS

Project Location: Zug Island
 Date Received: 12/29/2022
Field Sample #: IN2-1220-5
Sample ID: 23A1507-04
 Sample Matrix: Air
 Sampled: 12/21/2022 11:15

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1858
 Canister Size: 6 liter
 Flow Controller ID: 3523
 Sample Type: 24 hr

Work Order: 23A1507
 Initial Vacuum(in Hg): -28.5
 Final Vacuum(in Hg): -7
 Receipt Vacuum(in Hg): -7.1
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	3.1	1.4		7.3	3.3	0.702	1/17/23 20:32		CMR
Benzene	1.7	0.035		5.5	0.11	0.702	1/17/23 20:32		CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	1/17/23 20:32		CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	1/17/23 20:32		CMR
Bromoform	ND	0.035		ND	0.36	0.702	1/17/23 20:32		CMR
Bromomethane	ND	0.035		ND	0.14	0.702	1/17/23 20:32		CMR
1,3-Butadiene	0.061	0.035	L-03	0.14	0.078	0.702	1/17/23 20:32		CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	1/17/23 20:32		CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	1/17/23 20:32		CMR
Carbon Tetrachloride	0.066	0.035		0.41	0.22	0.702	1/17/23 20:32		CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	1/17/23 20:32		CMR
Chloroethane	ND	0.035		ND	0.093	0.702	1/17/23 20:32		CMR
Chloroform	ND	0.035		ND	0.17	0.702	1/17/23 20:32		CMR
Chloromethane	0.39	0.070	L-03	0.80	0.14	0.702	1/17/23 20:32		CMR
Cyclohexane	0.046	0.035		0.16	0.12	0.702	1/17/23 20:32		CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	1/17/23 20:32		CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	1/17/23 20:32		CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	1/17/23 20:32		CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	1/17/23 20:32		CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	1/17/23 20:32		CMR
Dichlorodifluoromethane (Freon 12)	0.26	0.035		1.3	0.17	0.702	1/17/23 20:32		CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	1/17/23 20:32		CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	1/17/23 20:32		CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	1/17/23 20:32		CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	1/17/23 20:32		CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	1/17/23 20:32		CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	1/17/23 20:32		CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	1/17/23 20:32		CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	1/17/23 20:32		CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035	L-03	ND	0.25	0.702	1/17/23 20:32		CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	1/17/23 20:32		CMR
Ethanol	3.1	1.4		5.9	2.6	0.702	1/17/23 20:32		CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.702	1/17/23 20:32		CMR
Ethylbenzene	0.041	0.035		0.18	0.15	0.702	1/17/23 20:32		CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	1/17/23 20:32		CMR
Heptane	0.079	0.035		0.32	0.14	0.702	1/17/23 20:32		CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	1/17/23 20:32		CMR

ANALYTICAL RESULTS

Project Location: Zug Island
 Date Received: 12/29/2022
Field Sample #: IN2-1220-5
Sample ID: 23A1507-04
 Sample Matrix: Air
 Sampled: 12/21/2022 11:15

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1858
 Canister Size: 6 liter
 Flow Controller ID: 3523
 Sample Type: 24 hr

Work Order: 23A1507
 Initial Vacuum(in Hg): -28.5
 Final Vacuum(in Hg): -7
 Receipt Vacuum(in Hg): -7.1
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4	L-03	ND	4.9	0.702	1/17/23 20:32	CMR	
2-Hexanone (MBK)	0.067	0.035		0.27	0.14	0.702	1/17/23 20:32	CMR	
Isopropanol	ND	1.4		ND	3.4	0.702	1/17/23 20:32	CMR	
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	1/17/23 20:32	CMR	
Methylene Chloride	ND	0.35		ND	1.2	0.702	1/17/23 20:32	CMR	
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.702	1/17/23 20:32	CMR	
Naphthalene	2.9	0.035		15	0.18	0.702	1/17/23 20:32	CMR	
Propene	ND	1.4		ND	2.4	0.702	1/17/23 20:32	CMR	
Styrene	0.065	0.035		0.28	0.15	0.702	1/17/23 20:32	CMR	
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	1/17/23 20:32	CMR	
Tetrachloroethylene	ND	0.035		ND	0.24	0.702	1/17/23 20:32	CMR	
Tetrahydrofuran	ND	0.35		ND	1.0	0.702	1/17/23 20:32	CMR	
Toluene	0.45	0.035		1.7	0.13	0.702	1/17/23 20:32	CMR	
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.702	1/17/23 20:32	CMR	
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	1/17/23 20:32	CMR	
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	1/17/23 20:32	CMR	
Trichloroethylene	ND	0.035		ND	0.19	0.702	1/17/23 20:32	CMR	
Trichlorofluoromethane (Freon 11)	0.20	0.14		1.1	0.79	0.702	1/17/23 20:32	CMR	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.702	1/17/23 20:32	CMR	
1,2,4-Trimethylbenzene	0.053	0.035		0.26	0.17	0.702	1/17/23 20:32	CMR	
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.702	1/17/23 20:32	CMR	
Vinyl Acetate	ND	0.70		ND	2.5	0.702	1/17/23 20:32	CMR	
Vinyl Chloride	ND	0.035	L-03	ND	0.090	0.702	1/17/23 20:32	CMR	
m&p-Xylene	0.15	0.070		0.67	0.30	0.702	1/17/23 20:32	CMR	
o-Xylene	0.060	0.035		0.26	0.15	0.702	1/17/23 20:32	CMR	

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	110	70-130	1/17/23 20:32

ANALYTICAL RESULTS

Project Location: Zug Island
 Date Received: 12/29/2022
Field Sample #: IN1-1220-5
Sample ID: 23A1507-05
 Sample Matrix: Air
 Sampled: 12/21/2022 10:50

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1169
 Canister Size: 6 liter
 Flow Controller ID: 3327
 Sample Type: 24 hr

Work Order: 23A1507
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -10.11
 Receipt Vacuum(in Hg): -7.8
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	3.9	1.4		9.2	3.3	0.702	1/17/23 21:20		CMR
Benzene	15	0.035		49	0.11	0.702	1/17/23 21:20		CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	1/17/23 21:20		CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	1/17/23 21:20		CMR
Bromoform	ND	0.035		ND	0.36	0.702	1/17/23 21:20		CMR
Bromomethane	ND	0.035		ND	0.14	0.702	1/17/23 21:20		CMR
1,3-Butadiene	0.093	0.035	L-03	0.20	0.078	0.702	1/17/23 21:20		CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	1/17/23 21:20		CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	1/17/23 21:20		CMR
Carbon Tetrachloride	ND	0.035		ND	0.22	0.702	1/17/23 21:20		CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	1/17/23 21:20		CMR
Chloroethane	ND	0.035		ND	0.093	0.702	1/17/23 21:20		CMR
Chloroform	ND	0.035		ND	0.17	0.702	1/17/23 21:20		CMR
Chloromethane	0.37	0.070	L-03	0.77	0.14	0.702	1/17/23 21:20		CMR
Cyclohexane	0.051	0.035		0.17	0.12	0.702	1/17/23 21:20		CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	1/17/23 21:20		CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	1/17/23 21:20		CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	1/17/23 21:20		CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	1/17/23 21:20		CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	1/17/23 21:20		CMR
Dichlorodifluoromethane (Freon 12)	0.22	0.035		1.1	0.17	0.702	1/17/23 21:20		CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	1/17/23 21:20		CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	1/17/23 21:20		CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	1/17/23 21:20		CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	1/17/23 21:20		CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	1/17/23 21:20		CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	1/17/23 21:20		CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	1/17/23 21:20		CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	1/17/23 21:20		CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035	L-03	ND	0.25	0.702	1/17/23 21:20		CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	1/17/23 21:20		CMR
Ethanol	3.2	1.4		6.0	2.6	0.702	1/17/23 21:20		CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.702	1/17/23 21:20		CMR
Ethylbenzene	0.056	0.035		0.24	0.15	0.702	1/17/23 21:20		CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	1/17/23 21:20		CMR
Heptane	0.070	0.035		0.29	0.14	0.702	1/17/23 21:20		CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	1/17/23 21:20		CMR

ANALYTICAL RESULTS

Project Location: Zug Island
 Date Received: 12/29/2022
Field Sample #: IN1-1220-5
Sample ID: 23A1507-05
 Sample Matrix: Air
 Sampled: 12/21/2022 10:50

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1169
 Canister Size: 6 liter
 Flow Controller ID: 3327
 Sample Type: 24 hr

Work Order: 23A1507
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -10.11
 Receipt Vacuum(in Hg): -7.8
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4	L-03	ND	4.9	0.702	1/17/23 21:20	CMR	
2-Hexanone (MBK)	ND	0.035		ND	0.14	0.702	1/17/23 21:20	CMR	
Isopropanol	ND	1.4		ND	3.4	0.702	1/17/23 21:20	CMR	
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	1/17/23 21:20	CMR	
Methylene Chloride	2.0	0.35		6.9	1.2	0.702	1/17/23 21:20	CMR	
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.702	1/17/23 21:20	CMR	
Naphthalene	6.8	0.035		36	0.18	0.702	1/17/23 21:20	CMR	
Propene	ND	1.4		ND	2.4	0.702	1/17/23 21:20	CMR	
Styrene	0.65	0.035		2.8	0.15	0.702	1/17/23 21:20	CMR	
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	1/17/23 21:20	CMR	
Tetrachloroethylene	ND	0.035		ND	0.24	0.702	1/17/23 21:20	CMR	
Tetrahydrofuran	ND	0.35		ND	1.0	0.702	1/17/23 21:20	CMR	
Toluene	3.5	0.035		13	0.13	0.702	1/17/23 21:20	CMR	
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.702	1/17/23 21:20	CMR	
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	1/17/23 21:20	CMR	
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	1/17/23 21:20	CMR	
Trichloroethylene	ND	0.035		ND	0.19	0.702	1/17/23 21:20	CMR	
Trichlorofluoromethane (Freon 11)	0.20	0.14		1.1	0.79	0.702	1/17/23 21:20	CMR	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.702	1/17/23 21:20	CMR	
1,2,4-Trimethylbenzene	0.17	0.035		0.84	0.17	0.702	1/17/23 21:20	CMR	
1,3,5-Trimethylbenzene	0.084	0.035		0.41	0.17	0.702	1/17/23 21:20	CMR	
Vinyl Acetate	ND	0.70		ND	2.5	0.702	1/17/23 21:20	CMR	
Vinyl Chloride	ND	0.035	L-03	ND	0.090	0.702	1/17/23 21:20	CMR	
m&p-Xylene	1.0	0.070		4.5	0.30	0.702	1/17/23 21:20	CMR	
o-Xylene	0.25	0.035		1.1	0.15	0.702	1/17/23 21:20	CMR	

Surrogates	% Recovery	% REC Limits
4-Bromofluorobenzene (1)	115	70-130
		1/17/23 21:20

ANALYTICAL RESULTS

Project Location: Zug Island
 Date Received: 12/29/2022
Field Sample #: VPW-1220-5B
Sample ID: 23A1507-06
 Sample Matrix: Air
 Sampled: 12/21/2022 12:10

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1611
 Canister Size: 6 liter
 Flow Controller ID: 3433 DUP
 Sample Type: 24 hr

Work Order: 23A1507
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -9.11
 Receipt Vacuum(in Hg): -8.4
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	2.7	1.4		6.4	3.3	0.702	1/17/23	22:07	CMR
Benzene	0.25	0.035		0.81	0.11	0.702	1/17/23	22:07	CMR
Benzyl chloride	ND	0.035		ND	0.18	0.702	1/17/23	22:07	CMR
Bromodichloromethane	ND	0.035		ND	0.24	0.702	1/17/23	22:07	CMR
Bromoform	ND	0.035		ND	0.36	0.702	1/17/23	22:07	CMR
Bromomethane	ND	0.035		ND	0.14	0.702	1/17/23	22:07	CMR
1,3-Butadiene	0.049	0.035	L-03	0.11	0.078	0.702	1/17/23	22:07	CMR
2-Butanone (MEK)	ND	1.4		ND	4.1	0.702	1/17/23	22:07	CMR
Carbon Disulfide	ND	0.35		ND	1.1	0.702	1/17/23	22:07	CMR
Carbon Tetrachloride	0.044	0.035		0.27	0.22	0.702	1/17/23	22:07	CMR
Chlorobenzene	ND	0.035		ND	0.16	0.702	1/17/23	22:07	CMR
Chloroethane	ND	0.035		ND	0.093	0.702	1/17/23	22:07	CMR
Chloroform	ND	0.035		ND	0.17	0.702	1/17/23	22:07	CMR
Chloromethane	0.39	0.070	L-03	0.80	0.14	0.702	1/17/23	22:07	CMR
Cyclohexane	0.048	0.035		0.17	0.12	0.702	1/17/23	22:07	CMR
Dibromochloromethane	ND	0.035		ND	0.30	0.702	1/17/23	22:07	CMR
1,2-Dibromoethane (EDB)	ND	0.035		ND	0.27	0.702	1/17/23	22:07	CMR
1,2-Dichlorobenzene	ND	0.035		ND	0.21	0.702	1/17/23	22:07	CMR
1,3-Dichlorobenzene	ND	0.035		ND	0.21	0.702	1/17/23	22:07	CMR
1,4-Dichlorobenzene	ND	0.035		ND	0.21	0.702	1/17/23	22:07	CMR
Dichlorodifluoromethane (Freon 12)	0.25	0.035		1.3	0.17	0.702	1/17/23	22:07	CMR
1,1-Dichloroethane	ND	0.035		ND	0.14	0.702	1/17/23	22:07	CMR
1,2-Dichloroethane	ND	0.035		ND	0.14	0.702	1/17/23	22:07	CMR
1,1-Dichloroethylene	ND	0.035		ND	0.14	0.702	1/17/23	22:07	CMR
cis-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	1/17/23	22:07	CMR
trans-1,2-Dichloroethylene	ND	0.035		ND	0.14	0.702	1/17/23	22:07	CMR
1,2-Dichloropropane	ND	0.035		ND	0.16	0.702	1/17/23	22:07	CMR
cis-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	1/17/23	22:07	CMR
trans-1,3-Dichloropropene	ND	0.035		ND	0.16	0.702	1/17/23	22:07	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035	L-03	ND	0.25	0.702	1/17/23	22:07	CMR
1,4-Dioxane	ND	0.35		ND	1.3	0.702	1/17/23	22:07	CMR
Ethanol	3.6	1.4		6.9	2.6	0.702	1/17/23	22:07	CMR
Ethyl Acetate	ND	0.35		ND	1.3	0.702	1/17/23	22:07	CMR
Ethylbenzene	0.041	0.035		0.18	0.15	0.702	1/17/23	22:07	CMR
4-Ethyltoluene	ND	0.035		ND	0.17	0.702	1/17/23	22:07	CMR
Heptane	0.076	0.035		0.31	0.14	0.702	1/17/23	22:07	CMR
Hexachlorobutadiene	ND	0.035		ND	0.37	0.702	1/17/23	22:07	CMR

ANALYTICAL RESULTS

Project Location: Zug Island
 Date Received: 12/29/2022
Field Sample #: VPW-1220-5B
Sample ID: 23A1507-06
 Sample Matrix: Air
 Sampled: 12/21/2022 12:10

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1611
 Canister Size: 6 liter
 Flow Controller ID: 3433 DUP
 Sample Type: 24 hr

Work Order: 23A1507
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -9.11
 Receipt Vacuum(in Hg): -8.4
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	1.4		ND	4.9	0.702	1/17/23 22:07		CMR
2-Hexanone (MBK)	ND	0.035		ND	0.14	0.702	1/17/23 22:07		CMR
Isopropanol	ND	1.4	L-03	ND	3.4	0.702	1/17/23 22:07		CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035		ND	0.13	0.702	1/17/23 22:07		CMR
Methylene Chloride	ND	0.35		ND	1.2	0.702	1/17/23 22:07		CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035		ND	0.14	0.702	1/17/23 22:07		CMR
Naphthalene	0.092	0.035		0.48	0.18	0.702	1/17/23 22:07		CMR
Propene	ND	1.4		ND	2.4	0.702	1/17/23 22:07		CMR
Styrene	ND	0.035		ND	0.15	0.702	1/17/23 22:07		CMR
1,1,2,2-Tetrachloroethane	ND	0.035		ND	0.24	0.702	1/17/23 22:07		CMR
Tetrachloroethylene	ND	0.035		ND	0.24	0.702	1/17/23 22:07		CMR
Tetrahydrofuran	ND	0.35		ND	1.0	0.702	1/17/23 22:07		CMR
Toluene	0.29	0.035		1.1	0.13	0.702	1/17/23 22:07		CMR
1,2,4-Trichlorobenzene	ND	0.035		ND	0.26	0.702	1/17/23 22:07		CMR
1,1,1-Trichloroethane	ND	0.035		ND	0.19	0.702	1/17/23 22:07		CMR
1,1,2-Trichloroethane	ND	0.035		ND	0.19	0.702	1/17/23 22:07		CMR
Trichloroethylene	ND	0.035		ND	0.19	0.702	1/17/23 22:07		CMR
Trichlorofluoromethane (Freon 11)	0.21	0.14		1.2	0.79	0.702	1/17/23 22:07		CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14		ND	1.1	0.702	1/17/23 22:07		CMR
1,2,4-Trimethylbenzene	0.048	0.035		0.24	0.17	0.702	1/17/23 22:07		CMR
1,3,5-Trimethylbenzene	ND	0.035		ND	0.17	0.702	1/17/23 22:07		CMR
Vinyl Acetate	ND	0.70		ND	2.5	0.702	1/17/23 22:07		CMR
Vinyl Chloride	ND	0.035	L-03	ND	0.090	0.702	1/17/23 22:07		CMR
m&p-Xylene	0.12	0.070		0.54	0.30	0.702	1/17/23 22:07		CMR
o-Xylene	0.048	0.035		0.21	0.15	0.702	1/17/23 22:07		CMR

Surrogates	% Recovery	% REC Limits
4-Bromofluorobenzene (1)	113	70-130
		1/17/23 22:07

Sample Extraction Data

Prep Method: TO-15 Prep

Analytical Method: EP

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
23A1507-01 [VPW-1220-5A]	B329211	1.5	1	N/A	1000	400	855	01/13/23
23A1507-02 [DW1-1220-5]	B329211	1.5	1	N/A	1000	400	855	01/13/23
23A1507-03 [DW2-1220-5]	B329211	1.5	1	N/A	1000	400	855	01/13/23
23A1507-04 [IN2-1220-5]	B329211	1.5	1	N/A	1000	400	855	01/13/23
23A1507-05 [IN1-1220-5]	B329211	1.5	1	N/A	1000	400	855	01/13/23
23A1507-06 [VPW-1220-5B]	B329211	1.5	1	N/A	1000	400	855	01/13/23

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	%REC	Limits	RPD	Limit	
Batch B329211 - TO-15 Prep											
Blank (B329211-BLK1)					Prepared & Analyzed: 01/17/23						
Acetone	ND	1.4									
Benzene	ND	0.035									
Benzyl chloride	ND	0.035									
Bromodichloromethane	ND	0.035									
Bromoform	ND	0.035									
Bromomethane	ND	0.035									
1,3-Butadiene	ND	0.035									L-03
2-Butanone (MEK)	ND	1.4									
Carbon Disulfide	ND	0.35									
Carbon Tetrachloride	ND	0.035									
Chlorobenzene	ND	0.035									
Chloroethane	ND	0.035									
Chloroform	ND	0.035									
Chloromethane	ND	0.070									L-03
Cyclohexane	ND	0.035									
Dibromochloromethane	ND	0.035									
1,2-Dibromoethane (EDB)	ND	0.035									
1,2-Dichlorobenzene	ND	0.035									
1,3-Dichlorobenzene	ND	0.035									
1,4-Dichlorobenzene	ND	0.035									
Dichlorodifluoromethane (Freon 12)	ND	0.035									
1,1-Dichloroethane	ND	0.035									
1,2-Dichloroethane	ND	0.035									
1,1-Dichloroethylene	ND	0.035									
cis-1,2-Dichloroethylene	ND	0.035									
trans-1,2-Dichloroethylene	ND	0.035									
1,2-Dichloropropane	ND	0.035									
cis-1,3-Dichloropropene	ND	0.035									
trans-1,3-Dichloropropene	ND	0.035									
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035									L-03
1,4-Dioxane	ND	0.35									
Ethanol	ND	1.4									
Ethyl Acetate	ND	0.35									
Ethylbenzene	ND	0.035									
4-Ethyltoluene	ND	0.035									
Heptane	ND	0.035									
Hexachlorobutadiene	ND	0.035									
Hexane	ND	1.4									
2-Hexanone (MBK)	ND	0.035									
Isopropanol	ND	1.4									L-03
Methyl tert-Butyl Ether (MTBE)	ND	0.035									
Methylene Chloride	ND	0.35									
4-Methyl-2-pentanone (MIBK)	ND	0.035									
Naphthalene	ND	0.035									
Propene	ND	1.4									
Styrene	ND	0.035									

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	%REC	Limits	RPD	Limit	
Batch B329211 - TO-15 Prep											
Blank (B329211-BLK1)					Prepared & Analyzed: 01/17/23						
1,1,2,2-Tetrachloroethane	ND	0.035									
Tetrachloroethylene	ND	0.035									
Tetrahydrofuran	ND	0.35									
Toluene	ND	0.035									
1,2,4-Trichlorobenzene	ND	0.035									
1,1,1-Trichloroethane	ND	0.035									
1,1,2-Trichloroethane	ND	0.035									
Trichloroethylene	ND	0.035									
Trichlorofluoromethane (Freon 11)	ND	0.14									
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14									
1,2,4-Trimethylbenzene	ND	0.035									
1,3,5-Trimethylbenzene	ND	0.035									
Vinyl Acetate	ND	0.70									
Vinyl Chloride	ND	0.035									L-03
m&p-Xylene	ND	0.070									
o-Xylene	ND	0.035									
Surrogate: 4-Bromofluorobenzene (1)	9.08				8.00		113	70-130			
LCS (B329211-BS1)					Prepared & Analyzed: 01/17/23						
Acetone	3.53				5.00		70.6	70-130			
Benzene	4.04				5.00		80.8	70-130			
Benzyl chloride	4.07				5.00		81.5	70-130			
Bromodichloromethane	3.88				5.00		77.5	70-130			
Bromoform	4.22				5.00		84.5	70-130			
Bromomethane	3.54				5.00		70.8	70-130			
1,3-Butadiene	3.17				5.00		63.4	* 70-130			L-03
2-Butanone (MEK)	3.99				5.00		79.8	70-130			
Carbon Disulfide	4.34				5.00		86.8	70-130			
Carbon Tetrachloride	4.20				5.00		84.0	70-130			
Chlorobenzene	3.74				5.00		74.7	70-130			
Chloroethane	3.51				5.00		70.2	70-130			
Chloroform	4.23				5.00		84.5	70-130			
Chloromethane	3.20				5.00		64.1	* 70-130			L-03
Cyclohexane	4.03				5.00		80.5	70-130			
Dibromochloromethane	4.07				5.00		81.4	70-130			
1,2-Dibromoethane (EDB)	3.74				5.00		74.9	70-130			
1,2-Dichlorobenzene	4.01				5.00		80.2	70-130			
1,3-Dichlorobenzene	4.09				5.00		81.8	70-130			
1,4-Dichlorobenzene	4.13				5.00		82.6	70-130			
Dichlorodifluoromethane (Freon 12)	4.15				5.00		83.1	70-130			
1,1-Dichloroethane	4.32				5.00		86.4	70-130			
1,2-Dichloroethane	4.30				5.00		86.1	70-130			
1,1-Dichloroethylene	3.66				5.00		73.2	70-130			
cis-1,2-Dichloroethylene	4.22				5.00		84.4	70-130			
trans-1,2-Dichloroethylene	4.30				5.00		86.0	70-130			
1,2-Dichloropropane	4.01				5.00		80.2	70-130			

QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
	Results	RL	Results	RL							
Batch B329211 - TO-15 Prep											
LCS (B329211-BS1)					Prepared & Analyzed: 01/17/23						
cis-1,3-Dichloropropene	3.89				5.00		77.8	70-130			
trans-1,3-Dichloropropene	3.97				5.00		79.4	70-130			
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	3.30				5.00		66.0	* 70-130			L-03
1,4-Dioxane	3.96				5.00		79.2	70-130			
Ethanol	3.78				5.00		75.5	70-130			
Ethyl Acetate	4.26				5.00		85.1	70-130			
Ethylbenzene	3.85				5.00		76.9	70-130			
4-Ethyltoluene	4.03				5.00		80.7	70-130			
Heptane	4.00				5.00		79.9	70-130			
Hexachlorobutadiene	3.92				5.00		78.5	70-130			
Hexane	4.39				5.00		87.9	70-130			
2-Hexanone (MBK)	3.66				5.00		73.1	70-130			
Isopropanol	2.93				5.00		58.5	* 70-130			L-03
Methyl tert-Butyl Ether (MTBE)	4.12				5.00		82.4	70-130			
Methylene Chloride	3.56				5.00		71.2	70-130			
4-Methyl-2-pentanone (MIBK)	3.68				5.00		73.7	70-130			
Naphthalene	4.08				5.00		81.5	70-130			
Propene	3.77				5.00		75.4	70-130			
Styrene	3.95				5.00		79.0	70-130			
1,1,2,2-Tetrachloroethane	3.55				5.00		71.1	70-130			
Tetrachloroethylene	4.14				5.00		82.8	70-130			
Tetrahydrofuran	4.38				5.00		87.5	70-130			
Toluene	3.87				5.00		77.4	70-130			
1,2,4-Trichlorobenzene	3.80				5.00		75.9	70-130			
1,1,1-Trichloroethane	3.82				5.00		76.4	70-130			
1,1,2-Trichloroethane	3.81				5.00		76.3	70-130			
Trichloroethylene	4.00				5.00		79.9	70-130			
Trichlorofluoromethane (Freon 11)	3.85				5.00		76.9	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	4.13				5.00		82.5	70-130			
1,2,4-Trimethylbenzene	3.99				5.00		79.9	70-130			
1,3,5-Trimethylbenzene	4.01				5.00		80.1	70-130			
Vinyl Acetate	3.55				5.00		71.0	70-130			
Vinyl Chloride	3.44				5.00		68.9	* 70-130			L-03
m&p-Xylene	7.87				10.0		78.7	70-130			
o-Xylene	3.89				5.00		77.7	70-130			
Surrogate: 4-Bromofluorobenzene (1)	8.98				8.00		112	70-130			

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
L-03	Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
VPW-1220-5A (23A1507-01)									
Lab File ID: G23A017011.D				Analyzed: 01/17/23 18:10					
Bromochloromethane (1)	1120715	8.307				60 - 140		+/-0.50	
1,4-Difluorobenzene (1)	2841122	10.075				60 - 140		+/-0.50	
Chlorobenzene-d5 (1)	2599384	14.44				60 - 140		+/-0.50	
DW1-1220-5 (23A1507-02)									
Lab File ID: G23A017012.D				Analyzed: 01/17/23 18:58					
Bromochloromethane (1)	1186228	8.301				60 - 140		+/-0.50	
1,4-Difluorobenzene (1)	3121159	10.075				60 - 140		+/-0.50	
Chlorobenzene-d5 (1)	2888006	14.44				60 - 140		+/-0.50	
DW2-1220-5 (23A1507-03)									
Lab File ID: G23A017013.D				Analyzed: 01/17/23 19:45					
Bromochloromethane (1)	1185842	8.307				60 - 140		+/-0.50	
1,4-Difluorobenzene (1)	3131951	10.075				60 - 140		+/-0.50	
Chlorobenzene-d5 (1)	2897597	14.44				60 - 140		+/-0.50	
IN2-1220-5 (23A1507-04)									
Lab File ID: G23A017014.D				Analyzed: 01/17/23 20:32					
Bromochloromethane (1)	1065099	8.301				60 - 140		+/-0.50	
1,4-Difluorobenzene (1)	2606309	10.075				60 - 140		+/-0.50	
Chlorobenzene-d5 (1)	2420825	14.44				60 - 140		+/-0.50	
IN1-1220-5 (23A1507-05)									
Lab File ID: G23A017015.D				Analyzed: 01/17/23 21:20					
Bromochloromethane (1)	1198254	8.301				60 - 140		+/-0.50	
1,4-Difluorobenzene (1)	3119630	10.075				60 - 140		+/-0.50	
Chlorobenzene-d5 (1)	2816992	14.44				60 - 140		+/-0.50	
VPW-1220-5B (23A1507-06)									
Lab File ID: G23A017016.D				Analyzed: 01/17/23 22:07					
Bromochloromethane (1)	1184836	8.307				60 - 140		+/-0.50	
1,4-Difluorobenzene (1)	3118817	10.075				60 - 140		+/-0.50	
Chlorobenzene-d5 (1)	2856836	14.44				60 - 140		+/-0.50	

CONTINUING CALIBRATION CHECK

COMPOUND	TYPE			RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
Acetone	AIHA,NY,ME,NH
Benzene	AIHA,FL,NJ,NY,ME,NH,VA
Benzyl chloride	AIHA,FL,NJ,NY,ME,NH,VA
Bromodichloromethane	AIHA,NJ,NY,ME,NH,VA
Bromoform	AIHA,NJ,NY,ME,NH,VA
Bromomethane	AIHA,FL,NJ,NY,ME,NH
1,3-Butadiene	AIHA,NJ,NY,ME,NH,VA
2-Butanone (MEK)	AIHA,FL,NJ,NY,ME,NH,VA
Carbon Disulfide	AIHA,NJ,NY,ME,NH,VA
Carbon Tetrachloride	AIHA,FL,NJ,NY,ME,NH,VA
Chlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
Chloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Chloroform	AIHA,FL,NJ,NY,ME,NH,VA
Chloromethane	AIHA,FL,NJ,NY,ME,NH,VA
Cyclohexane	AIHA,NJ,NY,ME,NH,VA
Dibromochloromethane	AIHA,NY,ME,NH
1,2-Dibromoethane (EDB)	AIHA,NJ,NY,ME,NH
1,2-Dichlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
1,3-Dichlorobenzene	AIHA,NJ,NY,ME,NH
1,4-Dichlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
Dichlorodifluoromethane (Freon 12)	AIHA,NY,ME,NH
1,1-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,2-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1-Dichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
cis-1,2-Dichloroethylene	AIHA,FL,NY,ME,NH,VA
trans-1,2-Dichloroethylene	AIHA,NJ,NY,ME,NH,VA
1,2-Dichloropropane	AIHA,FL,NJ,NY,ME,NH,VA
cis-1,3-Dichloropropene	AIHA,FL,NJ,NY,ME,NH,VA
trans-1,3-Dichloropropene	AIHA,NY,ME,NH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	AIHA,NJ,NY,ME,NH,VA
1,4-Dioxane	AIHA,NJ,NY,ME,NH,VA
Ethanol	AIHA
Ethyl Acetate	AIHA
Ethylbenzene	AIHA,FL,NJ,NY,ME,NH,VA
4-Ethyltoluene	AIHA,NJ
Heptane	AIHA,NJ,NY,ME,NH,VA
Hexachlorobutadiene	AIHA,NJ,NY,ME,NH,VA
Hexane	AIHA,FL,NJ,NY,ME,NH,VA
2-Hexanone (MBK)	AIHA
Isopropanol	AIHA,NY,ME,NH
Methyl tert-Butyl Ether (MTBE)	AIHA,FL,NJ,NY,ME,NH,VA
Methylene Chloride	AIHA,FL,NJ,NY,ME,NH,VA
4-Methyl-2-pentanone (MIBK)	AIHA,FL,NJ,NY,ME,NH
Naphthalene	NY,ME,NH
Propene	AIHA
Styrene	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY,ME,NH,VA

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
Tetrachloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Tetrahydrofuran	AIHA
Toluene	AIHA,FL,NJ,NY,ME,NH,VA
1,2,4-Trichlorobenzene	AIHA,NJ,NY,ME,NH,VA
1,1,1-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Trichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Trichlorofluoromethane (Freon 11)	AIHA,NY,ME,NH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	AIHA,NJ,NY,ME,NH,VA
1,2,4-Trimethylbenzene	AIHA,NJ,NY,ME,NH
1,3,5-Trimethylbenzene	AIHA,NJ,NY,ME,NH
Vinyl Acetate	AIHA,FL,NJ,NY,ME,NH,VA
Vinyl Chloride	AIHA,FL,NJ,NY,ME,NH,VA
m&p-Xylene	AIHA,FL,NJ,NY,ME,NH,VA
o-Xylene	AIHA,FL,NJ,NY,ME,NH,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO 17025:2017	100033	03/1/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
FL	Florida Department of Health	E871027 NELAP	06/30/2023
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2023

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.pacelabs.com



Doc# 278 Rev 7 July 2022

Air Media Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False

Statement will be brought to the attention of the Client - State True or False

Client Clean Air

Received By CH Date 12-29-22 Time 10:04

How Were the samples received? In Cooler On Ice No Ice
In Box Ambient Melted Ice

Were samples within Temperature Compliance? Within By Gun # Actual Temp -
2-6°C By Blank # Actual Temp -

Was Custody Seal In tact? NA Were Samples Tampered with? NA
Was COC Relinquished? T Does Chain Agree With Samples? T

Are there any loose caps/valves on any samples? F
Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC Include all Pertinent Client? T Analysis? T Sampler Name? T
Information? Project? ID's? T Collection Dates/Times? T

Are Sample Labels filled out and legible?
Are there Rushes? F Who was notified?

Samples are received within holding time? T
Proper Media Used? T Individually Certified Cans? T
Are there Trip Blanks? Is there enough Volume?

Containers:	#	Size	Regulator	Duration	Accessories:			
Summa Cans	6	6 liter	5	24 hour	Nut/Ferrule		IC Train	
Tedlar Bags					Tubing			
TO-17 Tubes					T-Connector		Shipping Charges	
Radiello					Syringe			
Pufs/TO-11s					Tedlar			

Can #'s					Reg #'s				
1247					3433				
1858					3523				
1166					3327				
4617					3053				
1225					3036				
1611									
Unused Media					Pufs/TO-17's				

Comments:

FedEx® Tracking



DELIVERED

Thursday

12/29/2022 at 10:04 am

Signed for by: LARROYO

↓ Obtain Proof of delivery

How was your delivery?



DELIVERY STATUS

Delivered

↓ Shipment is 1 of 2 pieces

TRACKING ID

770897228877

FROM

PITTSBURGH, PA US

Label Created

12/28/2022 2:49 PM

PACKAGE RECEIVED BY FEDEX

PITTSBURGH, PA

12/28/2022 5:49 PM

IN TRANSIT

WINDSOR LOCKS, CT

12/29/2022 8:20 AM

OUT FOR DELIVERY

WINDSOR LOCKS, CT

12/29/2022 8:20 AM

DELIVERED

EAST LONGMEADOW, MA US

DELIVERED

12/29/2022 at 10:04 AM

↓ View travel history

Want updates on this shipment? Enter your email and we will do the rest!

YOUR EMAIL

SUBMIT

End of Appendix Section

APPENDIX E: METEOROLOGICAL DATA

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Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
1	1	10/12/22	0:00	15.1	300	7	746	59.18	29.37
2	1	10/12/22	1:00	18.1	179	11	746	64.58	29.37
3	1	10/12/22	2:00	17.7	178	10	745	63.86	29.33
4	1	10/12/22	3:00	17.4	179	9	745	63.32	29.33
5	1	10/12/22	4:00	16.9	177	10	744	62.42	29.29
6	1	10/12/22	5:00	17	179	11	744	62.6	29.29
7	1	10/12/22	6:00	16.8	181	12	743	62.24	29.25
8	1	10/12/22	7:00	16.6	184	10	743	61.88	29.25
9	1	10/12/22	8:00	16.3	186	9	743	61.34	29.25
10	1	10/12/22	9:00	16.1	181	8	742	60.98	29.21
11	1	10/12/22	10:00	15.7	180	9	742	60.26	29.21
12	1	10/12/22	11:00	16.1	179	11	741	60.98	29.17
13	1	10/12/22	12:00	16.3	180	11	740	61.34	29.13
14	1	10/12/22	13:00	17.4	176	15	739	63.32	29.09
15	1	10/12/22	14:00	18.6	177	16	738	65.48	29.06
16	1	10/12/22	15:00	18.5	176	14	737	65.3	29.02
17	1	10/12/22	16:00	19.5	178	15	737	67.1	29.02
18	1	10/12/22	17:00	20.3	179	13	736	68.54	28.98
19	1	10/12/22	18:00	20.3	188	10	736	68.54	28.98
20	1	10/12/22	19:00	19.6	186	8	737	67.28	29.02
21	1	10/12/22	20:00	19.7	196	8	736	67.46	28.98
22	1	10/12/22	21:00	18.9	226	8	736	66.02	28.98
23	1	10/12/22	22:00	17	223	7	736	62.6	28.98
24	1	10/12/22	23:00	16.9	220	6	736	62.42	28.98
1	1	10/13/22	0:00	9.1	242	3	736	48.38	28.98
2	1	10/13/22	1:00	13.3	306	7	736	55.94	28.98
3	1	10/13/22	2:00	11.9	300	7	736	53.42	28.98
4	1	10/13/22	3:00	11	298	6	736	51.8	28.98
5	1	10/13/22	4:00	10.4	301	7	736	50.72	28.98
6	1	10/13/22	5:00	10.1	272	3	736	50.18	28.98
7	1	10/13/22	6:00	10.1	243	4	736	50.18	28.98
8	1	10/13/22	7:00	10.3	237	4	736	50.54	28.98
9	1	10/13/22	8:00	10.6	230	5	736	51.08	28.98
10	1	10/13/22	9:00	10.3	214	6	736	50.54	28.98
11	1	10/13/22	10:00	10	221	7	736	50	28.98
12	1	10/13/22	11:00	10.3	236	6	736	50.54	28.98
13	1	10/13/22	12:00	11.7	252	5	736	53.06	28.98
14	1	10/13/22	13:00	13.1	241	7	736	55.58	28.98
15	1	10/13/22	14:00	13.8	246	7	736	56.84	28.98
16	1	10/13/22	15:00	14.4	242	8	736	57.92	28.98
17	1	10/13/22	16:00	14.6	239	9	737	58.28	29.02
18	1	10/13/22	17:00	14.8	258	6	737	58.64	29.02

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
19	1	10/13/22	18:00	14.1	271	5	738	57.38	29.06
20	1	10/13/22	19:00	12.9	240	4	738	55.22	29.06
21	1	10/13/22	20:00	12.2	222	5	739	53.96	29.09
22	1	10/13/22	21:00	11.8	231	6	739	53.24	29.09
23	1	10/13/22	22:00	11	218	6	739	51.8	29.09
24	1	10/13/22	23:00	10.4	246	4	739	50.72	29.09
1	1	10/14/22	0:00	13.5	161	10	739	56.3	29.09
2	1	10/14/22	1:00	8.2	218	4	738	46.76	29.06
3	1	10/14/22	2:00	7.5	212	6	738	45.5	29.06
4	1	10/14/22	3:00	7.3	217	6	738	45.14	29.06
5	1	10/14/22	4:00	6.9	222	5	738	44.42	29.06
6	1	10/14/22	5:00	6.3	216	5	739	43.34	29.09
7	1	10/14/22	6:00	5.7	225	5	739	42.26	29.09
8	1	10/14/22	7:00	5.6	225	5	739	42.08	29.09
9	1	10/14/22	8:00	5.7	222	5	740	42.26	29.13
10	1	10/14/22	9:00	6.3	220	5	740	43.34	29.13
11	1	10/14/22	10:00	7.4	222	5	740	45.32	29.13
12	1	10/14/22	11:00	9.1	219	6	739	48.38	29.09
13	1	10/14/22	12:00	10.6	188	7	739	51.08	29.09
14	1	10/14/22	13:00	11.3	173	12	738	52.34	29.06
15	1	10/14/22	14:00	11.9	174	15	738	53.42	29.06
16	1	10/14/22	15:00	13.2	177	15	738	55.76	29.06
17	1	10/14/22	16:00	15.2	191	11	738	59.36	29.06
18	1	10/14/22	17:00	16.1	212	12	739	60.98	29.09
19	1	10/14/22	18:00	15.5	219	10	740	59.9	29.13
20	1	10/14/22	19:00	14.4	217	7	740	57.92	29.13
21	1	10/14/22	20:00	13.8	204	7	739	56.84	29.09
22	1	10/14/22	21:00	12.7	148	7	739	54.86	29.09
23	1	10/14/22	22:00	12.2	139	10	738	53.96	29.06
24	1	10/14/22	23:00	12.6	141	12	737	54.68	29.02
1	1	10/15/22	0:00	8.5	221	4	737	47.3	29.02
2	1	10/15/22	1:00	14.5	185	14	737	58.1	29.02
3	1	10/15/22	2:00	14.2	187	12	736	57.56	28.98
4	1	10/15/22	3:00	13.8	207	10	736	56.84	28.98
5	1	10/15/22	4:00	12.2	207	9	737	53.96	29.02
6	1	10/15/22	5:00	11.2	228	6	738	52.16	29.06
7	1	10/15/22	6:00	10	250	5	739	50	29.09
8	1	10/15/22	7:00	9.2	256	6	740	48.56	29.13
9	1	10/15/22	8:00	8.2	290	6	740	46.76	29.13
10	1	10/15/22	9:00	7.5	270	4	741	45.5	29.17
11	1	10/15/22	10:00	7.6	297	9	742	45.68	29.21
12	1	10/15/22	11:00	8.2	295	9	742	46.76	29.21

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
13	1	10/15/22	12:00	9.5	270	6	743	49.1	29.25
14	1	10/15/22	13:00	10.3	269	6	743	50.54	29.25
15	1	10/15/22	14:00	11.2	261	6	743	52.16	29.25
16	1	10/15/22	15:00	11.2	260	5	743	52.16	29.25
17	1	10/15/22	16:00	11.8	241	6	743	53.24	29.25
18	1	10/15/22	17:00	12.2	237	6	744	53.96	29.29
19	1	10/15/22	18:00	12	239	6	744	53.6	29.29
20	1	10/15/22	19:00	11.5	232	5	744	52.7	29.29
21	1	10/15/22	20:00	10.7	213	5	744	51.26	29.29
22	1	10/15/22	21:00	9.9	207	7	744	49.82	29.29
23	1	10/15/22	22:00	9.4	211	5	744	48.92	29.29
24	1	10/15/22	23:00	8.9	218	3	744	48.02	29.29
1	1	10/16/22	0:00	9.7	292	4	743	49.46	29.25
2	1	10/16/22	1:00	7.9	222	4	743	46.22	29.25
3	1	10/16/22	2:00	7.3	215	4	743	45.14	29.25
4	1	10/16/22	3:00	6.8	215	3	743	44.24	29.25
5	1	10/16/22	4:00	6.2	204	4	743	43.16	29.25
6	1	10/16/22	5:00	6	212	3	743	42.8	29.25
7	1	10/16/22	6:00	6.1	208	3	743	42.98	29.25
8	1	10/16/22	7:00	6.8	204	4	743	44.24	29.25
9	1	10/16/22	8:00	7.6	212	4	743	45.68	29.25
10	1	10/16/22	9:00	8.1	245	3	743	46.58	29.25
11	1	10/16/22	10:00	9	246	3	743	48.2	29.25
12	1	10/16/22	11:00	10	295	3	742	50	29.21
13	1	10/16/22	12:00	11.7	304	3	741	53.06	29.17
14	1	10/16/22	13:00	13.1	276	3	741	55.58	29.17
15	1	10/16/22	14:00	14.2	305	3	741	57.56	29.17
16	1	10/16/22	15:00	15.4	296	3	741	59.72	29.17
17	1	10/16/22	16:00	15	311	6	740	59	29.13
18	1	10/16/22	17:00	14.7	314	8	740	58.46	29.13
19	1	10/16/22	18:00	14.3	311	6	740	57.74	29.13
20	1	10/16/22	19:00	13.8	311	6	740	56.84	29.13
21	1	10/16/22	20:00	13.4	302	7	740	56.12	29.13
22	1	10/16/22	21:00	12.7	304	7	740	54.86	29.13
23	1	10/16/22	22:00	11.4	300	8	740	52.52	29.13
24	1	10/16/22	23:00	10.5	293	6	739	50.9	29.09
1	1	10/17/22	0:00				738		29.06
2	1	10/17/22	1:00	9.3	247	3	738	48.74	29.06
3	1	10/17/22	2:00	9	253	3	737	48.2	29.02
4	1	10/17/22	3:00	8.8	273	4	736	47.84	28.98
5	1	10/17/22	4:00	8.3	265	3	736	46.94	28.98
6	1	10/17/22	5:00	7.7	250	4	736	45.86	28.98

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
7	1	10/17/22	6:00	7.7	250	4	736	45.86	28.98
8	1	10/17/22	7:00	7.6	258	4	736	45.68	28.98
9	1	10/17/22	8:00	6.9	250	5	736	44.42	28.98
10	1	10/17/22	9:00	6.5	253	6	735	43.7	28.94
11	1	10/17/22	10:00	6.3	257	5	735	43.34	28.94
12	1	10/17/22	11:00	6.6	251	5	735	43.88	28.94
13	1	10/17/22	12:00	6.9	250	5	735	44.42	28.94
14	1	10/17/22	13:00	7.6	259	5	735	45.68	28.94
15	1	10/17/22	14:00	6.3	243	7	734	43.34	28.90
16	1	10/17/22	15:00				735		28.94
17	1	10/17/22	16:00				736		28.98
18	1	10/17/22	17:00				736		28.98
19	1	10/17/22	18:00				736		28.98
20	1	10/17/22	19:00				736		28.98
21	1	10/17/22	20:00				736		28.98
22	1	10/17/22	21:00				737		29.02
23	1	10/17/22	22:00				737		29.02
24	1	10/17/22	23:00				737		29.02
1	1	10/18/22	0:00				737		29.02
2	1	10/18/22	1:00				737		29.02
3	1	10/18/22	2:00				737		29.02
4	1	10/18/22	3:00				737		29.02
5	1	10/18/22	4:00				737		29.02
6	1	10/18/22	5:00				737		29.02
7	1	10/18/22	6:00				737		29.02
8	1	10/18/22	7:00				737		29.02
9	1	10/18/22	8:00				737		29.02
10	1	10/18/22	9:00				737		29.02
11	1	10/18/22	10:00				737		29.02
12	1	10/18/22	11:00				737		29.02
13	1	10/18/22	12:00				737		29.02
14	1	10/18/22	13:00				737		29.02
15	1	10/18/22	14:00				737		29.02
16	1	10/18/22	15:00				737		29.02
17	1	10/18/22	16:00				737		29.02
18	1	10/18/22	17:00				737		29.02
19	1	10/18/22	18:00				737		29.02
20	1	10/18/22	19:00				737		29.02
21	1	10/18/22	20:00				737		29.02
22	1	10/18/22	21:00				738		29.06
23	1	10/18/22	22:00				738		29.06
24	1	10/18/22	23:00				738		29.06

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
1	1	10/19/22	0:00	5.4	295	5	738	41.72	29.06
2	1	10/19/22	1:00	5	254	4	738	41	29.06
3	1	10/19/22	2:00				738		29.06
4	1	10/19/22	3:00				738		29.06
5	1	10/19/22	4:00				738		29.06
6	1	10/19/22	5:00	5.1	305	9	738	41.18	29.06
7	1	10/19/22	6:00	4.8	308	9	738	40.64	29.06
8	1	10/19/22	7:00	4.6	308	8	739	40.28	29.09
9	1	10/19/22	8:00	4.7	309	8	739	40.46	29.09
10	1	10/19/22	9:00	4.8	311	10	740	40.64	29.13
11	1	10/19/22	10:00	5.1	313	9	740	41.18	29.13
12	1	10/19/22	11:00	5.5	313	10	740	41.9	29.13
13	1	10/19/22	12:00	5.6	312	10	740	42.08	29.13
14	1	10/19/22	13:00	5.6	302	8	740	42.08	29.13
15	1	10/19/22	14:00	6.1	305	11	740	42.98	29.13
16	1	10/19/22	15:00	6.5	300	10	740	43.7	29.13
17	1	10/19/22	16:00	6.6	306	11	740	43.88	29.13
18	1	10/19/22	17:00	7.4	311	8	740	45.32	29.13
19	1	10/19/22	18:00	8.5	306	9	741	47.3	29.17
20	1	10/19/22	19:00	8.5	301	9	741	47.3	29.17
21	1	10/19/22	20:00	7.5	304	11	742	45.5	29.21
22	1	10/19/22	21:00	6.7	295	7	742	44.06	29.21
23	1	10/19/22	22:00	6	287	6	742	42.8	29.21
24	1	10/19/22	23:00	5.6	296	6	741	42.08	29.17
1	1	10/20/22	0:00	5.6	174	2	741	42.08	29.17
2	1	10/20/22	1:00	5	254	4	740	41	29.13
3	1	10/20/22	2:00	4.5	230	4	740	40.1	29.13
4	1	10/20/22	3:00	4	225	5	739	39.2	29.09
5	1	10/20/22	4:00	3.8	228	5	739	38.84	29.09
6	1	10/20/22	5:00	3.4	222	5	739	38.12	29.09
7	1	10/20/22	6:00	3.1	228	6	739	37.58	29.09
8	1	10/20/22	7:00	3.2	227	6	739	37.76	29.09
9	1	10/20/22	8:00	3.2	228	6	740	37.76	29.13
10	1	10/20/22	9:00	3.4	225	7	740	38.12	29.13
11	1	10/20/22	10:00	3.7	227	6	740	38.66	29.13
12	1	10/20/22	11:00	4.3	229	6	740	39.74	29.13
13	1	10/20/22	12:00	5	233	5	741	41	29.17
14	1	10/20/22	13:00	5.5	250	4	741	41.9	29.17
15	1	10/20/22	14:00	4.3	249	4	741	39.74	29.17
16	1	10/20/22	15:00	2.9	220	7	741	37.22	29.17
17	1	10/20/22	16:00	3.2	203	10	741	37.76	29.17
18	1	10/20/22	17:00	4.8	208	9	741	40.64	29.17

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
19	1	10/20/22	18:00	5.6	209	5	741	42.08	29.17
20	1	10/20/22	19:00	5.9	198	3	742	42.62	29.21
21	1	10/20/22	20:00	5.2	108	2	742	41.36	29.21
22	1	10/20/22	21:00	4.6	115	2	742	40.28	29.21
23	1	10/20/22	22:00	4.6	101	1	742	40.28	29.21
24	1	10/20/22	23:00	5	106	2	742	41	29.21
1	1	10/21/22	0:00	14.1	184	8	742	57.38	29.21
2	1	10/21/22	1:00	7.2	206	5	741	44.96	29.17
3	1	10/21/22	2:00	7.4	204	6	741	45.32	29.17
4	1	10/21/22	3:00	7.6	203	7	741	45.68	29.17
5	1	10/21/22	4:00	7.3	205	7	741	45.14	29.17
6	1	10/21/22	5:00	6.6	206	7	742	43.88	29.21
7	1	10/21/22	6:00	6.2	206	5	742	43.16	29.21
8	1	10/21/22	7:00	6.5	204	6	742	43.7	29.21
9	1	10/21/22	8:00	7	203	7	742	44.6	29.21
10	1	10/21/22	9:00	7.8	201	9	742	46.04	29.21
11	1	10/21/22	10:00	8.9	201	8	742	48.02	29.21
12	1	10/21/22	11:00	10.7	203	9	742	51.26	29.21
13	1	10/21/22	12:00	12.2	192	9	741	53.96	29.17
14	1	10/21/22	13:00	13.1	179	11	740	55.58	29.13
15	1	10/21/22	14:00	14.6	178	12	740	58.28	29.13
16	1	10/21/22	15:00	16	178	13	740	60.8	29.13
17	1	10/21/22	16:00	17.1	179	13	740	62.78	29.13
18	1	10/21/22	17:00	18.4	179	11	740	65.12	29.13
19	1	10/21/22	18:00	19.3	186	7	740	66.74	29.13
20	1	10/21/22	19:00	18.5	183	6	741	65.3	29.17
21	1	10/21/22	20:00	17.6	185	8	741	63.68	29.17
22	1	10/21/22	21:00	16.4	184	8	742	61.52	29.21
23	1	10/21/22	22:00	15.9	184	8	742	60.62	29.21
24	1	10/21/22	23:00	15.8	192	10	742	60.44	29.21
1	1	10/22/22	0:00	17.1	170	6	742	62.78	29.21
2	1	10/22/22	1:00	13.1	181	6	743	55.58	29.25
3	1	10/22/22	2:00	12.7	179	6	743	54.86	29.25
4	1	10/22/22	3:00	12.4	180	7	743	54.32	29.25
5	1	10/22/22	4:00	12	180	7	743	53.6	29.25
6	1	10/22/22	5:00	11.9	182	10	744	53.42	29.29
7	1	10/22/22	6:00	11.4	179	9	744	52.52	29.29
8	1	10/22/22	7:00	11.3	180	11	744	52.34	29.29
9	1	10/22/22	8:00	11.1	184	9	745	51.98	29.33
10	1	10/22/22	9:00	11.2	181	8	745	52.16	29.33
11	1	10/22/22	10:00	12.2	183	8	745	53.96	29.33
12	1	10/22/22	11:00	13.4	175	9	745	56.12	29.33

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
13	1	10/22/22	12:00	14.6	175	10	745	58.28	29.33
14	1	10/22/22	13:00	16.2	180	14	745	61.16	29.33
15	1	10/22/22	14:00	18.3	185	14	744	64.94	29.29
16	1	10/22/22	15:00	19.8	184	13	744	67.64	29.29
17	1	10/22/22	16:00	21.3	181	12	744	70.34	29.29
18	1	10/22/22	17:00	22.1	173	11	744	71.78	29.29
19	1	10/22/22	18:00	22.2	170	9	745	71.96	29.33
20	1	10/22/22	19:00	20.9	168	8	745	69.62	29.33
21	1	10/22/22	20:00	19	165	7	746	66.2	29.37
22	1	10/22/22	21:00	18.2	167	8	746	64.76	29.37
23	1	10/22/22	22:00	17.9	166	7	747	64.22	29.41
24	1	10/22/22	23:00	17.7	165	7	747	63.86	29.41
1	1	10/23/22	0:00	15.6	121	3	747	60.08	29.41
2	1	10/23/22	1:00	16.4	163	6	747	61.52	29.41
3	1	10/23/22	2:00	16.3	183	5	747	61.34	29.41
4	1	10/23/22	3:00	15.6	178	6	747	60.08	29.41
5	1	10/23/22	4:00	14.8	171	7	748	58.64	29.45
6	1	10/23/22	5:00	14.3	173	6	748	57.74	29.45
7	1	10/23/22	6:00	13.3	147	5	748	55.94	29.45
8	1	10/23/22	7:00	13	154	5	749	55.4	29.49
9	1	10/23/22	8:00	13.4	169	7	749	56.12	29.49
10	1	10/23/22	9:00	13.3	163	6	749	55.94	29.49
11	1	10/23/22	10:00	14.8	160	6	749	58.64	29.49
12	1	10/23/22	11:00	17.2	177	8	749	62.96	29.49
13	1	10/23/22	12:00	18.9	181	8	748	66.02	29.45
14	1	10/23/22	13:00	20.6	179	7	748	69.08	29.45
15	1	10/23/22	14:00	21.7	185	7	747	71.06	29.41
16	1	10/23/22	15:00	22.6	189	8	747	72.68	29.41
17	1	10/23/22	16:00	23.3	172	9	747	73.94	29.41
18	1	10/23/22	17:00	23.5	160	11	747	74.3	29.41
19	1	10/23/22	18:00	22.7	140	12	747	72.86	29.41
20	1	10/23/22	19:00	21.6	138	10	747	70.88	29.41
21	1	10/23/22	20:00	19.6	135	8	748	67.28	29.45
22	1	10/23/22	21:00	17.6	147	3	747	63.68	29.41
23	1	10/23/22	22:00	16.2	120	4	747	61.16	29.41
24	1	10/23/22	23:00	15.4	101	2	747	59.72	29.41
1	1	10/24/22	0:00	16.6	135	6	747	61.88	29.41
2	1	10/24/22	1:00	15.6	136	6	747	60.08	29.41
3	1	10/24/22	2:00	14.7	140	4	747	58.46	29.41
4	1	10/24/22	3:00	14.6	151	3	748	58.28	29.45
5	1	10/24/22	4:00	14.2	142	3	748	57.56	29.45
6	1	10/24/22	5:00	13.6	131	2	748	56.48	29.45

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
7	1	10/24/22	6:00	12.8	88	1	748	55.04	29.45
8	1	10/24/22	7:00	12.2	129	3	748	53.96	29.45
9	1	10/24/22	8:00	12.4	153	4	748	54.32	29.45
10	1	10/24/22	9:00	13.2	159	5	748	55.76	29.45
11	1	10/24/22	10:00	14.8	172	7	748	58.64	29.45
12	1	10/24/22	11:00	17	169	8	747	62.6	29.41
13	1	10/24/22	12:00	19.2	180	7	747	66.56	29.41
14	1	10/24/22	13:00	19.9	180	9	746	67.82	29.37
15	1	10/24/22	14:00	21.5	182	9	746	70.7	29.37
16	1	10/24/22	15:00	22.3	183	10	746	72.14	29.37
17	1	10/24/22	16:00	23.5	182	10	745	74.3	29.33
18	1	10/24/22	17:00	23.4	172	9	745	74.12	29.33
19	1	10/24/22	18:00	22.8	149	9	745	73.04	29.33
20	1	10/24/22	19:00	21.2	137	9	745	70.16	29.33
21	1	10/24/22	20:00	19.7	145	7	745	67.46	29.33
22	1	10/24/22	21:00	18.2	137	5	745	64.76	29.33
23	1	10/24/22	22:00	17.5	142	6	744	63.5	29.29
24	1	10/24/22	23:00	16.8	134	5	744	62.24	29.29
1	1	10/25/22	0:00	18.7	192	7	743	65.66	29.25
2	1	10/25/22	1:00	16.7	141	5	743	62.06	29.25
3	1	10/25/22	2:00	16.7	156	6	743	62.06	29.25
4	1	10/25/22	3:00	16.4	156	4	743	61.52	29.25
5	1	10/25/22	4:00	16.3	150	5	743	61.34	29.25
6	1	10/25/22	5:00	16.9	173	6	743	62.42	29.25
7	1	10/25/22	6:00	16.2	157	5	742	61.16	29.21
8	1	10/25/22	7:00	15.7	144	5	742	60.26	29.21
9	1	10/25/22	8:00	15.1	142	5	742	59.18	29.21
10	1	10/25/22	9:00	15.1	159	5	742	59.18	29.21
11	1	10/25/22	10:00	16.1	170	8	742	60.98	29.21
12	1	10/25/22	11:00	17.6	181	11	741	63.68	29.17
13	1	10/25/22	12:00	18.1	184	11	741	64.58	29.17
14	1	10/25/22	13:00	19	186	10	740	66.2	29.13
15	1	10/25/22	14:00	20.9	174	11	739	69.62	29.09
16	1	10/25/22	15:00	22.9	179	11	738	73.22	29.06
17	1	10/25/22	16:00	22.8	158	12	738	73.04	29.06
18	1	10/25/22	17:00	22.6	140	11	738	72.68	29.06
19	1	10/25/22	18:00	22.4	152	10	738	72.32	29.06
20	1	10/25/22	19:00	22.1	153	10	738	71.78	29.06
21	1	10/25/22	20:00	21.1	144	11	737	69.98	29.02
22	1	10/25/22	21:00	20.7	144	11	737	69.26	29.02
23	1	10/25/22	22:00	20.6	151	11	738	69.08	29.06
24	1	10/25/22	23:00	20.6	172	8	737	69.08	29.02

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
1	2	10/26/22	0:00	7.9	333	9	736	46.22	28.98
2	2	10/26/22	1:00	16.8	174	2	736	62.24	28.98
3	2	10/26/22	2:00	16.5	123	0	736	61.7	28.98
4	2	10/26/22	3:00	16.4	127	1	735	61.52	28.94
5	2	10/26/22	4:00	15.9	144	1	735	60.62	28.94
6	2	10/26/22	5:00	15.2	122	2	735	59.36	28.94
7	2	10/26/22	6:00	14.8	148	4	735	58.64	28.94
8	2	10/26/22	7:00	14.5	162	6	735	58.1	28.94
9	2	10/26/22	8:00	14.3	153	6	735	57.74	28.94
10	2	10/26/22	9:00	14.6	173	9	736	58.28	28.98
11	2	10/26/22	10:00	14.4	196	7	736	57.92	28.98
12	2	10/26/22	11:00	15.3	211	7	737	59.54	29.02
13	2	10/26/22	12:00	15.5	224	6	738	59.9	29.06
14	2	10/26/22	13:00	13.6	283	7	739	56.48	29.09
15	2	10/26/22	14:00	10.9	317	13	740	51.62	29.13
16	2	10/26/22	15:00	10.4	322	12	741	50.72	29.17
17	2	10/26/22	16:00	10	317	12	743	50	29.25
18	2	10/26/22	17:00	9.6	318	12	744	49.28	29.29
19	2	10/26/22	18:00	9.2	319	12	745	48.56	29.33
20	2	10/26/22	19:00	9	325	10	746	48.2	29.37
21	2	10/26/22	20:00	9.1	321	8	747	48.38	29.41
22	2	10/26/22	21:00	8.8	326	10	747	47.84	29.41
23	2	10/26/22	22:00	8.4	334	10	748	47.12	29.45
24	2	10/26/22	23:00	8.1	335	11	749	46.58	29.49
1	2	10/27/22	0:00	8	91	3	749	46.4	29.49
2	2	10/27/22	1:00	7.7	337	8	750	45.86	29.53
3	2	10/27/22	2:00	6.9	334	9	750	44.42	29.53
4	2	10/27/22	3:00	6	337	6	751	42.8	29.57
5	2	10/27/22	4:00	5.3	348	3	752	41.54	29.61
6	2	10/27/22	5:00	4.9	334	2	752	40.82	29.61
7	2	10/27/22	6:00	4.5	292	0	753	40.1	29.65
8	2	10/27/22	7:00	4.2	314	1	754	39.56	29.69
9	2	10/27/22	8:00	3.9	317	2	754	39.02	29.69
10	2	10/27/22	9:00	3.9	328	3	755	39.02	29.72
11	2	10/27/22	10:00	5	349	4	755	41	29.72
12	2	10/27/22	11:00	6.9	30	1	755	44.42	29.72
13	2	10/27/22	12:00	8	62	2	755	46.4	29.72
14	2	10/27/22	13:00	9	76	3	755	48.2	29.72
15	2	10/27/22	14:00	9.6	100	4	755	49.28	29.72
16	2	10/27/22	15:00	10.5	64	3	755	50.9	29.72
17	2	10/27/22	16:00	10.7	75	4	755	51.26	29.72
18	2	10/27/22	17:00	10.7	75	5	755	51.26	29.72

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
19	2	10/27/22	18:00	10.2	65	4	755	50.36	29.72
20	2	10/27/22	19:00	9.6	76	3	755	49.28	29.72
21	2	10/27/22	20:00	9.2	87	1	756	48.56	29.76
22	2	10/27/22	21:00	9.2	57	1	756	48.56	29.76
23	2	10/27/22	22:00	8.6	96	3	756	47.48	29.76
24	2	10/27/22	23:00	8	96	3	756	46.4	29.76
1	2	10/28/22	0:00	8.4	112	3	756	47.12	29.76
2	2	10/28/22	1:00	8	97	3	756	46.4	29.76
3	2	10/28/22	2:00	7.8	85	3	756	46.04	29.76
4	2	10/28/22	3:00	7.9	91	3	756	46.22	29.76
5	2	10/28/22	4:00	8	84	3	756	46.4	29.76
6	2	10/28/22	5:00	8.4	81	4	756	47.12	29.76
7	2	10/28/22	6:00	8.1	87	4	756	46.58	29.76
8	2	10/28/22	7:00	8.2	84	4	756	46.76	29.76
9	2	10/28/22	8:00	8.1	80	4	757	46.58	29.80
10	2	10/28/22	9:00	8.4	72	4	757	47.12	29.80
11	2	10/28/22	10:00	9.4	73	3	757	48.92	29.80
12	2	10/28/22	11:00	10.3	71	3	757	50.54	29.80
13	2	10/28/22	12:00	10.4	61	4	756	50.72	29.76
14	2	10/28/22	13:00	11.4	86	4	756	52.52	29.76
15	2	10/28/22	14:00	12.6	86	3	755	54.68	29.72
16	2	10/28/22	15:00	13.8	63	2	755	56.84	29.72
17	2	10/28/22	16:00	14.4	81	4	755	57.92	29.72
18	2	10/28/22	17:00	14	64	5	755	57.2	29.72
19	2	10/28/22	18:00	13.5	84	4	755	56.3	29.72
20	2	10/28/22	19:00	12.4	72	3	756	54.32	29.76
21	2	10/28/22	20:00	11.1	113	4	756	51.98	29.76
22	2	10/28/22	21:00	9.7	115	2	756	49.46	29.76
23	2	10/28/22	22:00	8.9	82	1	756	48.02	29.76
24	2	10/28/22	23:00	8.7	113	2	755	47.66	29.72
1	2	10/29/22	0:00	8.9	104	1	755	48.02	29.72
2	2	10/29/22	1:00	7.9	119	3	755	46.22	29.72
3	2	10/29/22	2:00	7.6	45	1	755	45.68	29.72
4	2	10/29/22	3:00	7.3	340	1	754	45.14	29.69
5	2	10/29/22	4:00	6.1	338	2	755	42.98	29.72
6	2	10/29/22	5:00	5.5	331	2	755	41.9	29.72
7	2	10/29/22	6:00	4.9	332	3	755	40.82	29.72
8	2	10/29/22	7:00	4.7	336	3	755	40.46	29.72
9	2	10/29/22	8:00	4.1	344	4	756	39.38	29.76
10	2	10/29/22	9:00	4	342	3	756	39.2	29.76
11	2	10/29/22	10:00	6.2	28	1	755	43.16	29.72
12	2	10/29/22	11:00	7.5	62	1	755	45.5	29.72

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
13	2	10/29/22	12:00	8.7	147	1	754	47.66	29.69
14	2	10/29/22	13:00	11.6	136	2	754	52.88	29.69
15	2	10/29/22	14:00	14.9	133	1	753	58.82	29.65
16	2	10/29/22	15:00	16.3	88	1	753	61.34	29.65
17	2	10/29/22	16:00	17	91	4	753	62.6	29.65
18	2	10/29/22	17:00	16.8	82	4	752	62.24	29.61
19	2	10/29/22	18:00	16.2	84	2	752	61.16	29.61
20	2	10/29/22	19:00	14.6	118	2	752	58.28	29.61
21	2	10/29/22	20:00	13.3	140	4	752	55.94	29.61
22	2	10/29/22	21:00	11.8	129	2	752	53.24	29.61
23	2	10/29/22	22:00	10.5	118	1	751	50.9	29.57
24	2	10/29/22	23:00	9.6	119	2	751	49.28	29.57
1	2	10/30/22	0:00	12.4	108	3	751	54.32	29.57
2	2	10/30/22	1:00	9.1	356	1	750	48.38	29.53
3	2	10/30/22	2:00	8.3	337	3	750	46.94	29.53
4	2	10/30/22	3:00	7.8	342	3	749	46.04	29.49
5	2	10/30/22	4:00	7.2	334	3	749	44.96	29.49
6	2	10/30/22	5:00	6.9	332	2	749	44.42	29.49
7	2	10/30/22	6:00	6.8	343	1	749	44.24	29.49
8	2	10/30/22	7:00	6.4	340	2	749	43.52	29.49
9	2	10/30/22	8:00	7.3	359	2	749	45.14	29.49
10	2	10/30/22	9:00	7.5	336	2	748	45.5	29.45
11	2	10/30/22	10:00	7.9	358	2	748	46.22	29.45
12	2	10/30/22	11:00	10.1	37	1	747	50.18	29.41
13	2	10/30/22	12:00	12	104	1	747	53.6	29.41
14	2	10/30/22	13:00	14	70	2	746	57.2	29.37
15	2	10/30/22	14:00	14.7	69	2	745	58.46	29.33
16	2	10/30/22	15:00	15.5	82	1	745	59.9	29.33
17	2	10/30/22	16:00	15.9	67	1	745	60.62	29.33
18	2	10/30/22	17:00	15.9	61	2	745	60.62	29.33
19	2	10/30/22	18:00	15.2	65	3	745	59.36	29.33
20	2	10/30/22	19:00	14.1	93	3	745	57.38	29.33
21	2	10/30/22	20:00	13.8	115	3	744	56.84	29.29
22	2	10/30/22	21:00	13.3	124	3	744	55.94	29.29
23	2	10/30/22	22:00	12.8	117	3	744	55.04	29.29
24	2	10/30/22	23:00	12.4	70	1	743	54.32	29.25
1	2	10/31/22	0:00	15.4	209	2	743	59.72	29.25
2	2	10/31/22	1:00	12.2	111	3	743	53.96	29.25
3	2	10/31/22	2:00	12	117	1	742	53.6	29.21
4	2	10/31/22	3:00	12	65	1	742	53.6	29.21
5	2	10/31/22	4:00	12.1	85	1	742	53.78	29.21
6	2	10/31/22	5:00	12.2	87	1	742	53.96	29.21

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
7	2	10/31/22	6:00	12.5	111	2	741	54.5	29.17
8	2	10/31/22	7:00	12.7	105	2	741	54.86	29.17
9	2	10/31/22	8:00	12.9	125	3	741	55.22	29.17
10	2	10/31/22	9:00	13.2	132	3	741	55.76	29.17
11	2	10/31/22	10:00	13.6	117	2	741	56.48	29.17
12	2	10/31/22	11:00	13.9	148	2	741	57.02	29.17
13	2	10/31/22	12:00	14.6	185	4	740	58.28	29.13
14	2	10/31/22	13:00	15.1	183	5	740	59.18	29.13
15	2	10/31/22	14:00	15.6	194	5	740	60.08	29.13
16	2	10/31/22	15:00	16.3	183	5	740	61.34	29.13
17	2	10/31/22	16:00	16.9	195	4	740	62.42	29.13
18	2	10/31/22	17:00	17.2	234	3	741	62.96	29.17
19	2	10/31/22	18:00	17.3	248	3	741	63.14	29.17
20	2	10/31/22	19:00	17	232	3	741	62.6	29.17
21	2	10/31/22	20:00	16.7	210	2	742	62.06	29.21
22	2	10/31/22	21:00	16.2	188	2	742	61.16	29.21
23	2	10/31/22	22:00	15.4	184	4	742	59.72	29.21
24	2	10/31/22	23:00	15.6	200	4	742	60.08	29.21
1	2	11/1/22	0:00	13.3	228	0	742	55.94	29.21
2	2	11/1/22	1:00	15.5	218	2	743	59.9	29.25
3	2	11/1/22	2:00	15.6	240	2	743	60.08	29.25
4	2	11/1/22	3:00	15.5	273	1	743	59.9	29.25
5	2	11/1/22	4:00	15.2	236	1	744	59.36	29.29
6	2	11/1/22	5:00	14.8	284	2	745	58.64	29.33
7	2	11/1/22	6:00	14.8	308	6	745	58.64	29.33
8	2	11/1/22	7:00	14.8	309	3	746	58.64	29.37
9	2	11/1/22	8:00	14.7	302	4	747	58.46	29.41
10	2	11/1/22	9:00	14.4	307	6	747	57.92	29.41
11	2	11/1/22	10:00	13.9	305	5	748	57.02	29.45
12	2	11/1/22	11:00	14.8	300	5	748	58.64	29.45
13	2	11/1/22	12:00	16.3	295	5	748	61.34	29.45
14	2	11/1/22	13:00	18.1	274	3	748	64.58	29.45
15	2	11/1/22	14:00	19	286	5	748	66.2	29.45
16	2	11/1/22	15:00	19.5	304	6	748	67.1	29.45
17	2	11/1/22	16:00	20.2	307	5	748	68.36	29.45
18	2	11/1/22	17:00	20.3	306	6	749	68.54	29.49
19	2	11/1/22	18:00	20.1	316	5	750	68.18	29.53
20	2	11/1/22	19:00	19.3	298	2	750	66.74	29.53
21	2	11/1/22	20:00	17.9	302	1	750	64.22	29.53
22	2	11/1/22	21:00	14.9	161	1	751	58.82	29.57
23	2	11/1/22	22:00	14.4	195	0	751	57.92	29.57
24	2	11/1/22	23:00	13.8	231	0	751	56.84	29.57

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
1	2	11/2/22	0:00	12.1	165	5	752	53.78	29.61
2	2	11/2/22	1:00	12.7	225	0	752	54.86	29.61
3	2	11/2/22	2:00	11.8	241	0	752	53.24	29.61
4	2	11/2/22	3:00	11.3	234	0	752	52.34	29.61
5	2	11/2/22	4:00	10.6	268	0	752	51.08	29.61
6	2	11/2/22	5:00	10.2	318	0	752	50.36	29.61
7	2	11/2/22	6:00	9.8	300	0	753	49.64	29.65
8	2	11/2/22	7:00	9.6	308	0	753	49.28	29.65
9	2	11/2/22	8:00	9.5	314	0	753	49.1	29.65
10	2	11/2/22	9:00	9.5	326	1	754	49.1	29.69
11	2	11/2/22	10:00	11.5	190	0	754	52.7	29.69
12	2	11/2/22	11:00	13.9	159	1	754	57.02	29.69
13	2	11/2/22	12:00	15.7	149	2	753	60.26	29.65
14	2	11/2/22	13:00	17.3	172	4	753	63.14	29.65
15	2	11/2/22	14:00	17.9	175	7	752	64.22	29.61
16	2	11/2/22	15:00	18.1	173	8	752	64.58	29.61
17	2	11/2/22	16:00	18.3	170	8	752	64.94	29.61
18	2	11/2/22	17:00	18.4	176	8	752	65.12	29.61
19	2	11/2/22	18:00	17.8	180	7	752	64.04	29.61
20	2	11/2/22	19:00	16.6	179	5	752	61.88	29.61
21	2	11/2/22	20:00	15.2	175	5	752	59.36	29.61
22	2	11/2/22	21:00	14.3	170	5	752	57.74	29.61
23	2	11/2/22	22:00	13.3	172	4	752	55.94	29.61
24	2	11/2/22	23:00	12.7	168	6	752	54.86	29.61
1	2	11/3/22	0:00	13.8	165	6	748	56.84	29.45
2	2	11/3/22	1:00	11.5	144	4	752	52.7	29.61
3	2	11/3/22	2:00	11.1	144	3	752	51.98	29.61
4	2	11/3/22	3:00	10.6	146	1	752	51.08	29.61
5	2	11/3/22	4:00	10.5	174	1	752	50.9	29.61
6	2	11/3/22	5:00	10.5	174	0	752	50.9	29.61
7	2	11/3/22	6:00	10.1	124	1	752	50.18	29.61
8	2	11/3/22	7:00	9.8	151	1	752	49.64	29.61
9	2	11/3/22	8:00	9.7	124	1	752	49.46	29.61
10	2	11/3/22	9:00	9.3	134	2	752	48.74	29.61
11	2	11/3/22	10:00	10.2	144	1	752	50.36	29.61
12	2	11/3/22	11:00	12.3	209	5	752	54.14	29.61
13	2	11/3/22	12:00	14.5	182	6	752	58.1	29.61
14	2	11/3/22	13:00	16.1	168	8	751	60.98	29.57
15	2	11/3/22	14:00	16.6	173	10	750	61.88	29.53
16	2	11/3/22	15:00	16.5	168	10	750	61.7	29.53
17	2	11/3/22	16:00	17.6	175	11	750	63.68	29.53
18	2	11/3/22	17:00	18	175	11	749	64.4	29.49

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
19	2	11/3/22	18:00	18	166	9	749	64.4	29.49
20	2	11/3/22	19:00	16.9	157	7	749	62.42	29.49
21	2	11/3/22	20:00	15.5	143	6	749	59.9	29.49
22	2	11/3/22	21:00	14.5	153	6	749	58.1	29.49
23	2	11/3/22	22:00	14	151	6	749	57.2	29.49
24	2	11/3/22	23:00	13.5	154	6	749	56.3	29.49
1	2	11/4/22	0:00	17.7	180	8	743	63.86	29.25
2	2	11/4/22	1:00	14.4	172	7	748	57.92	29.45
3	2	11/4/22	2:00	14.8	192	8	748	58.64	29.45
4	2	11/4/22	3:00	14.3	191	7	748	57.74	29.45
5	2	11/4/22	4:00	13.5	175	5	747	56.3	29.41
6	2	11/4/22	5:00	13.4	180	4	747	56.12	29.41
7	2	11/4/22	6:00	13.4	174	7	747	56.12	29.41
8	2	11/4/22	7:00	13.9	181	9	747	57.02	29.41
9	2	11/4/22	8:00	13.6	179	8	747	56.48	29.41
10	2	11/4/22	9:00	13.7	176	9	747	56.66	29.41
11	2	11/4/22	10:00	14.4	176	12	747	57.92	29.41
12	2	11/4/22	11:00	15.7	185	10	747	60.26	29.41
13	2	11/4/22	12:00	16.4	174	11	747	61.52	29.41
14	2	11/4/22	13:00	18	176	11	746	64.4	29.37
15	2	11/4/22	14:00	19.7	177	13	745	67.46	29.33
16	2	11/4/22	15:00	20.7	179	14	745	69.26	29.33
17	2	11/4/22	16:00	20.9	178	13	744	69.62	29.29
18	2	11/4/22	17:00	20.5	176	14	744	68.9	29.29
19	2	11/4/22	18:00	19.9	179	14	744	67.82	29.29
20	2	11/4/22	19:00	19.5	181	14	744	67.1	29.29
21	2	11/4/22	20:00	19.3	185	10	744	66.74	29.29
22	2	11/4/22	21:00	19	185	8	744	66.2	29.29
23	2	11/4/22	22:00	18.7	185	11	743	65.66	29.25
24	2	11/4/22	23:00	18.3	180	12	743	64.94	29.25
1	2	11/5/22	0:00	17.8	236	8	743	64.04	29.25
2	2	11/5/22	1:00	17.1	179	10	742	62.78	29.21
3	2	11/5/22	2:00	16.8	181	9	742	62.24	29.21
4	2	11/5/22	3:00	16.7	181	10	741	62.06	29.17
5	2	11/5/22	4:00	16.1	178	10	741	60.98	29.17
6	2	11/5/22	5:00	16.2	178	10	741	61.16	29.17
7	2	11/5/22	6:00	16.1	179	9	741	60.98	29.17
8	2	11/5/22	7:00	16.1	182	12	741	60.98	29.17
9	2	11/5/22	8:00	16.2	184	12	741	61.16	29.17
10	2	11/5/22	9:00	16.4	182	11	740	61.52	29.13
11	2	11/5/22	10:00	16.6	178	13	739	61.88	29.09
12	2	11/5/22	11:00	17.9	182	16	739	64.22	29.09

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
13	2	11/5/22	12:00	18.7	187	15	737	65.66	29.02
14	2	11/5/22	13:00	19.5	184	17	736	67.1	28.98
15	2	11/5/22	14:00	19.2	184	17	735	66.56	28.94
16	2	11/5/22	15:00	19.9	188	15	735	67.82	28.94
17	2	11/5/22	16:00	21	184	15	735	69.8	28.94
18	2	11/5/22	17:00	21.8	188	17	735	71.24	28.94
19	2	11/5/22	18:00	20.8	184	17	736	69.44	28.98
20	2	11/5/22	19:00	22.4	195	15	736	72.32	28.98
21	2	11/5/22	20:00	21.8	212	14	737	71.24	29.02
22	2	11/5/22	21:00	21.4	220	12	738	70.52	29.06
23	2	11/5/22	22:00	20.6	229	11	739	69.08	29.09
24	2	11/5/22	23:00	19.6	233	10	740	67.28	29.13
1	2	11/6/22	0:00	16.1	235	6	741	60.98	29.17
2	2	11/6/22	1:00	14.4	232	6	741	57.92	29.17
3	2	11/6/22	2:00	13.2	222	6	742	55.76	29.21
4	2	11/6/22	3:00	12.1	224	5	742	53.78	29.21
5	2	11/6/22	4:00	11.1	222	5	743	51.98	29.25
6	2	11/6/22	5:00	10.2	234	5	744	50.36	29.29
7	2	11/6/22	6:00	9.6	222	3	744	49.28	29.29
8	2	11/6/22	7:00	9.1	204	4	745	48.38	29.33
9	2	11/6/22	8:00	8.9	202	4	745	48.02	29.33
10	2	11/6/22	9:00	10.2	200	6	745	50.36	29.33
11	2	11/6/22	10:00	12.3	197	10	745	54.14	29.33
12	2	11/6/22	11:00	13.8	195	10	745	56.84	29.33
13	2	11/6/22	12:00	14.5	187	12	745	58.1	29.33
14	2	11/6/22	13:00	15	182	12	744	59	29.29
15	2	11/6/22	14:00	16.8	203	9	744	62.24	29.29
16	2	11/6/22	15:00	18	200	9	744	64.4	29.29
17	2	11/6/22	16:00	17.3	180	12	744	63.14	29.29
18	2	11/6/22	17:00	17.3	186	8	745	63.14	29.33
19	2	11/6/22	18:00	16.6	188	6	745	61.88	29.33
20	2	11/6/22	19:00	16.4	197	7	745	61.52	29.33
21	2	11/6/22	20:00	16.1	202	6	746	60.98	29.37
22	2	11/6/22	21:00	16.1	218	5	747	60.98	29.41
23	2	11/6/22	22:00	15.8	233	4	747	60.44	29.41
24	2	11/6/22	23:00	17.8	236	8	748	64.04	29.45
1	2	11/7/22	0:00	15.1	250	3	748	59.18	29.45
2	2	11/7/22	1:00	14.2	248	4	749	57.56	29.49
3	2	11/7/22	2:00	13.4	253	3	749	56.12	29.49
4	2	11/7/22	3:00	12.9	288	4	750	55.22	29.53
5	2	11/7/22	4:00	12.5	304	10	751	54.5	29.57
6	2	11/7/22	5:00	11.9	303	9	751	53.42	29.57

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
7	2	11/7/22	6:00	11.2	301	9	752	52.16	29.61
8	2	11/7/22	7:00	10.5	301	9	753	50.9	29.65
9	2	11/7/22	8:00	9.8	303	9	754	49.64	29.69
10	2	11/7/22	9:00	9.9	300	8	755	49.82	29.72
11	2	11/7/22	10:00	10.5	301	9	755	50.9	29.72
12	2	11/7/22	11:00	11.5	300	9	755	52.7	29.72
13	2	11/7/22	12:00	12.4	308	8	755	54.32	29.72
14	2	11/7/22	13:00	13.4	312	8	755	56.12	29.72
15	2	11/7/22	14:00	14.1	318	9	756	57.38	29.76
16	2	11/7/22	15:00	14.1	322	9	756	57.38	29.76
17	2	11/7/22	16:00	13.7	335	9	757	56.66	29.80
18	2	11/7/22	17:00	13.1	343	8	757	55.58	29.80
19	2	11/7/22	18:00	11.9	347	6	758	53.42	29.84
20	2	11/7/22	19:00	10.9	351	5	759	51.62	29.88
21	2	11/7/22	20:00	9.9	13	5	759	49.82	29.88
22	2	11/7/22	21:00	8.6	19	5	760	47.48	29.92
23	2	11/7/22	22:00	7.8	16	5	760	46.04	29.92
24	2	11/7/22	23:00	7.2	14	4	761	44.96	29.96
1	2	11/8/22	0:00	6.7	17	4	761	44.06	29.96
2	2	11/8/22	1:00	6.2	19	3	761	43.16	29.96
3	2	11/8/22	2:00	5.9	16	4	761	42.62	29.96
4	2	11/8/22	3:00	5.7	12	5	761	42.26	29.96
5	2	11/8/22	4:00	5.6	6	5	761	42.08	29.96
6	2	11/8/22	5:00	5.5	9	5	762	41.9	30.00
7	2	11/8/22	6:00	5.3	20	4	762	41.54	30.00
8	2	11/8/22	7:00	5.3	41	2	762	41.54	30.00
9	2	11/8/22	8:00	5.6	8	4	763	42.08	30.04
10	2	11/8/22	9:00	6.8	9	3	763	44.24	30.04
11	2	11/8/22	10:00	8.7	54	4	763	47.66	30.04
12	2	11/8/22	11:00	10	66	5	763	50	30.04
13	2	11/8/22	12:00	10.2	60	6	762	50.36	30.00
14	2	11/8/22	13:00	10.8	70	5	762	51.44	30.00
15	2	11/8/22	14:00	11.1	69	6	762	51.98	30.00
16	2	11/8/22	15:00	11.2	60	5	761	52.16	29.96
17	2	11/8/22	16:00	11.2	63	6	761	52.16	29.96
18	2	11/8/22	17:00	10.9	65	5	760	51.62	29.92
19	2	11/8/22	18:00	10.3	83	4	760	50.54	29.92
20	2	11/8/22	19:00	9.1	118	7	760	48.38	29.92
21	2	11/8/22	20:00	8.1	111	5	759	46.58	29.88
22	2	11/8/22	21:00	7.9	117	5	759	46.22	29.88
23	2	11/8/22	22:00	8.3	90	4	759	46.94	29.88
24	2	11/8/22	23:00	8.1	114	5	758	46.58	29.84

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
1	3	11/9/22	0:00	7.4	112	3	758	45.32	29.84
2	3	11/9/22	1:00	7.2	31	1	757	44.96	29.80
3	3	11/9/22	2:00	7.6	69	2	757	45.68	29.80
4	3	11/9/22	3:00	7.6	104	3	757	45.68	29.80
5	3	11/9/22	4:00	7.9	112	4	756	46.22	29.76
6	3	11/9/22	5:00	7.5	115	5	756	45.5	29.76
7	3	11/9/22	6:00	7.1	118	4	756	44.78	29.76
8	3	11/9/22	7:00	7.1	125	4	755	44.78	29.72
9	3	11/9/22	8:00	7.3	137	5	755	45.14	29.72
10	3	11/9/22	9:00	8.8	148	6	755	47.84	29.72
11	3	11/9/22	10:00	10.3	153	8	755	50.54	29.72
12	3	11/9/22	11:00	12.5	176	10	754	54.5	29.69
13	3	11/9/22	12:00	13.4	175	11	754	56.12	29.69
14	3	11/9/22	13:00	13.7	175	11	753	56.66	29.65
15	3	11/9/22	14:00	14.7	171	11	752	58.46	29.61
16	3	11/9/22	15:00	15.8	173	10	752	60.44	29.61
17	3	11/9/22	16:00	16.6	178	10	751	61.88	29.57
18	3	11/9/22	17:00	16.7	179	7	751	62.06	29.57
19	3	11/9/22	18:00	15.7	167	3	751	60.26	29.57
20	3	11/9/22	19:00	15	144	2	751	59	29.57
21	3	11/9/22	20:00	14.3	141	3	751	57.74	29.57
22	3	11/9/22	21:00	13.8	145	4	751	56.84	29.57
23	3	11/9/22	22:00	13.7	166	3	750	56.66	29.53
24	3	11/9/22	23:00	14.5	177	5	750	58.1	29.53
1	3	11/10/22	0:00	14.2	174	7	750	57.56	29.53
2	3	11/10/22	1:00	14.9	193	7	749	58.82	29.49
3	3	11/10/22	2:00	14.8	197	6	749	58.64	29.49
4	3	11/10/22	3:00	14.2	197	6	749	57.56	29.49
5	3	11/10/22	4:00	13.6	193	4	749	56.48	29.49
6	3	11/10/22	5:00	13.4	188	5	749	56.12	29.49
7	3	11/10/22	6:00	13.5	194	7	749	56.3	29.49
8	3	11/10/22	7:00	13.3	195	8	749	55.94	29.49
9	3	11/10/22	8:00	12.8	186	7	749	55.04	29.49
10	3	11/10/22	9:00	13.6	194	10	749	56.48	29.49
11	3	11/10/22	10:00	14.5	193	10	748	58.1	29.45
12	3	11/10/22	11:00	14.9	178	11	748	58.82	29.45
13	3	11/10/22	12:00	16.3	176	10	747	61.34	29.41
14	3	11/10/22	13:00	17.8	176	11	747	64.04	29.41
15	3	11/10/22	14:00	19	180	12	746	66.2	29.37
16	3	11/10/22	15:00	19.8	180	13	746	67.64	29.37
17	3	11/10/22	16:00	20.9	180	11	745	69.62	29.33
18	3	11/10/22	17:00	20.3	170	9	745	68.54	29.33

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
19	3	11/10/22	18:00	18.6	166	8	745	65.48	29.33
20	3	11/10/22	19:00	17.3	167	9	745	63.14	29.33
21	3	11/10/22	20:00	17.6	176	9	744	63.68	29.29
22	3	11/10/22	21:00	17.9	186	11	744	64.22	29.29
23	3	11/10/22	22:00	17.1	185	10	744	62.78	29.29
24	3	11/10/22	23:00	16.2	184	8	744	61.16	29.29
1	3	11/11/22	0:00	15.3	187	6	743	59.54	29.25
2	3	11/11/22	1:00	14.7	184	5	743	58.46	29.25
3	3	11/11/22	2:00	14.4	181	6	742	57.92	29.21
4	3	11/11/22	3:00	13.8	168	6	742	56.84	29.21
5	3	11/11/22	4:00	13.1	167	4	742	55.58	29.21
6	3	11/11/22	5:00	13	190	3	741	55.4	29.17
7	3	11/11/22	6:00	12	145	1	741	53.6	29.17
8	3	11/11/22	7:00	11.6	143	3	741	52.88	29.17
9	3	11/11/22	8:00	11.8	138	4	740	53.24	29.13
10	3	11/11/22	9:00	12.1	135	4	740	53.78	29.13
11	3	11/11/22	10:00	13.3	150	3	739	55.94	29.09
12	3	11/11/22	11:00	14.7	172	4	738	58.46	29.06
13	3	11/11/22	12:00	15.7	182	5	738	60.26	29.06
14	3	11/11/22	13:00	15.6	178	6	737	60.08	29.02
15	3	11/11/22	14:00	15.4	167	5	736	59.72	28.98
16	3	11/11/22	15:00	16	156	1	736	60.8	28.98
17	3	11/11/22	16:00	17.4	306	4	735	63.32	28.94
18	3	11/11/22	17:00	17.2	309	4	736	62.96	28.98
19	3	11/11/22	18:00	16.7	315	5	736	62.06	28.98
20	3	11/11/22	19:00	14.4	321	8	736	57.92	28.98
21	3	11/11/22	20:00	13.1	316	8	737	55.58	29.02
22	3	11/11/22	21:00	12	312	8	737	53.6	29.02
23	3	11/11/22	22:00	10.7	311	10	738	51.26	29.06
24	3	11/11/22	23:00	9.3	312	12	738	48.74	29.06
1	3	11/12/22	0:00	6.6	314	12	739	43.88	29.09
2	3	11/12/22	1:00	4.4	313	11	740	39.92	29.13
3	3	11/12/22	2:00	3.8	311	11	740	38.84	29.13
4	3	11/12/22	3:00	3.5	307	9	741	38.3	29.17
5	3	11/12/22	4:00	3	310	9	741	37.4	29.17
6	3	11/12/22	5:00	2.8	305	8	741	37.04	29.17
7	3	11/12/22	6:00	2.4	295	7	741	36.32	29.17
8	3	11/12/22	7:00	2.4	305	7	741	36.32	29.17
9	3	11/12/22	8:00	2.5	317	8	742	36.5	29.21
10	3	11/12/22	9:00	2.7	305	7	741	36.86	29.17
11	3	11/12/22	10:00	3	318	7	742	37.4	29.21
12	3	11/12/22	11:00	3.5	300	6	742	38.3	29.21

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
13	3	11/12/22	12:00	3.7	280	4	742	38.66	29.21
14	3	11/12/22	13:00	1.8	201	7	741	35.24	29.17
15	3	11/12/22	14:00	0.9	208	5	741	33.62	29.17
16	3	11/12/22	15:00	1.1	232	3	742	33.98	29.21
17	3	11/12/22	16:00	1.5	242	3	742	34.7	29.21
18	3	11/12/22	17:00	1.8	241	3	743	35.24	29.25
19	3	11/12/22	18:00	1.8	225	3	743	35.24	29.25
20	3	11/12/22	19:00	1.9	221	4	744	35.42	29.29
21	3	11/12/22	20:00	2.1	228	3	744	35.78	29.29
22	3	11/12/22	21:00	2.4	228	3	744	36.32	29.29
23	3	11/12/22	22:00	2.8	247	3	744	37.04	29.29
24	3	11/12/22	23:00	3.3	296	6	744	37.94	29.29
1	3	11/13/22	0:00	2.9	297	7	745	37.22	29.33
2	3	11/13/22	1:00	2.8	296	7	745	37.04	29.33
3	3	11/13/22	2:00	2.5	295	6	745	36.5	29.33
4	3	11/13/22	3:00	2	294	7	746	35.6	29.37
5	3	11/13/22	4:00	1.8	294	6	746	35.24	29.37
6	3	11/13/22	5:00	1.6	295	6	747	34.88	29.41
7	3	11/13/22	6:00	1.4	294	6	747	34.52	29.41
8	3	11/13/22	7:00	1.4	298	7	748	34.52	29.45
9	3	11/13/22	8:00	1.5	306	8	748	34.7	29.45
10	3	11/13/22	9:00	1.4	306	9	749	34.52	29.49
11	3	11/13/22	10:00	1.9	307	9	749	35.42	29.49
12	3	11/13/22	11:00	2.4	314	9	749	36.32	29.49
13	3	11/13/22	12:00	2.8	309	8	749	37.04	29.49
14	3	11/13/22	13:00	3.1	307	10	749	37.58	29.49
15	3	11/13/22	14:00	3.2	312	10	750	37.76	29.53
16	3	11/13/22	15:00	3.4	310	10	750	38.12	29.53
17	3	11/13/22	16:00	3.3	308	9	751	37.94	29.57
18	3	11/13/22	17:00	3.2	318	8	751	37.76	29.57
19	3	11/13/22	18:00	3.1	321	6	751	37.58	29.57
20	3	11/13/22	19:00	3	318	5	751	37.4	29.57
21	3	11/13/22	20:00	2.9	310	4	752	37.22	29.61
22	3	11/13/22	21:00	2.8	314	4	752	37.04	29.61
23	3	11/13/22	22:00	2.5	317	3	752	36.5	29.61
24	3	11/13/22	23:00	2.2	321	3	752	35.96	29.61
1	3	11/14/22	0:00	2.1	341	5	752	35.78	29.61
2	3	11/14/22	1:00	1.8	352	4	753	35.24	29.65
3	3	11/14/22	2:00	1.8	349	3	753	35.24	29.65
4	3	11/14/22	3:00	1.8	338	3	753	35.24	29.65
5	3	11/14/22	4:00	1.8	329	4	754	35.24	29.69
6	3	11/14/22	5:00	1.7	334	4	754	35.06	29.69

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
7	3	11/14/22	6:00	1.7	322	4	755	35.06	29.72
8	3	11/14/22	7:00	1.7	321	4	755	35.06	29.72
9	3	11/14/22	8:00	1.5	340	4	755	34.7	29.72
10	3	11/14/22	9:00	1.6	346	3	755	34.88	29.72
11	3	11/14/22	10:00	2	329	3	755	35.6	29.72
12	3	11/14/22	11:00	2.1	293	2	755	35.78	29.72
13	3	11/14/22	12:00	2.8	190	3	755	37.04	29.72
14	3	11/14/22	13:00	3.9	171	1	754	39.02	29.69
15	3	11/14/22	14:00	4.2	219	2	754	39.56	29.69
16	3	11/14/22	15:00	3.8	198	2	754	38.84	29.69
17	3	11/14/22	16:00	3.8	140	3	754	38.84	29.69
18	3	11/14/22	17:00	3.8	81	4	754	38.84	29.69
19	3	11/14/22	18:00	3.5	88	2	754	38.3	29.69
20	3	11/14/22	19:00	3.3	118	4	754	37.94	29.69
21	3	11/14/22	20:00	3.2	121	4	754	37.76	29.69
22	3	11/14/22	21:00	3.2	118	5	754	37.76	29.69
23	3	11/14/22	22:00	3	104	3	754	37.4	29.69
24	3	11/14/22	23:00	3.2	77	3	754	37.76	29.69
1	3	11/15/22	0:00	3.3	41	5	754	37.94	29.69
2	3	11/15/22	1:00	3.4	43	5	754	38.12	29.69
3	3	11/15/22	2:00	3.4	50	5	754	38.12	29.69
4	3	11/15/22	3:00	3.5	43	6	753	38.3	29.65
5	3	11/15/22	4:00	3.5	46	5	753	38.3	29.65
6	3	11/15/22	5:00	4	82	8	753	39.2	29.65
7	3	11/15/22	6:00	4.1	87	7	753	39.38	29.65
8	3	11/15/22	7:00	3.4	68	7	752	38.12	29.61
9	3	11/15/22	8:00	2.8	63	8	752	37.04	29.61
10	3	11/15/22	9:00	2.8	72	7	752	37.04	29.61
11	3	11/15/22	10:00	2.7	54	6	751	36.86	29.57
12	3	11/15/22	11:00	2.7	54	7	750	36.86	29.53
13	3	11/15/22	12:00	3.1	56	8	749	37.58	29.49
14	3	11/15/22	13:00	3.6	58	8	748	38.48	29.45
15	3	11/15/22	14:00	3.8	58	7	748	38.84	29.45
16	3	11/15/22	15:00	3.2	55	6	748	37.76	29.45
17	3	11/15/22	16:00	2.8	41	5	747	37.04	29.41
18	3	11/15/22	17:00	2.2	36	4	747	35.96	29.41
19	3	11/15/22	18:00	2.4	31	4	747	36.32	29.41
20	3	11/15/22	19:00	2.9	7	2	746	37.22	29.37
21	3	11/15/22	20:00	2.7	337	3	746	36.86	29.37
22	3	11/15/22	21:00	2.2	329	4	746	35.96	29.37
23	3	11/15/22	22:00	2.1	306	3	745	35.78	29.33
24	3	11/15/22	23:00	2	320	3	745	35.6	29.33

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
1	3	11/16/22	0:00	2.1	301	2	745	35.78	29.33
2	3	11/16/22	1:00	2	300	3	745	35.6	29.33
3	3	11/16/22	2:00	1.9	241	3	745	35.42	29.33
4	3	11/16/22	3:00	1.8	246	3	745	35.24	29.33
5	3	11/16/22	4:00	1.8	259	4	745	35.24	29.33
6	3	11/16/22	5:00	2.1	282	4	745	35.78	29.33
7	3	11/16/22	6:00	2.1	247	4	745	35.78	29.33
8	3	11/16/22	7:00	2.1	244	5	745	35.78	29.33
9	3	11/16/22	8:00	2.3	250	4	746	36.14	29.37
10	3	11/16/22	9:00	2.5	259	4	746	36.5	29.37
11	3	11/16/22	10:00	3.1	281	5	746	37.58	29.37
12	3	11/16/22	11:00	3.2	299	8	745	37.76	29.33
13	3	11/16/22	12:00	3.9	285	4	745	39.02	29.33
14	3	11/16/22	13:00	3.8	302	7	745	38.84	29.33
15	3	11/16/22	14:00	3.6	304	6	745	38.48	29.33
16	3	11/16/22	15:00	3.9	291	3	745	39.02	29.33
17	3	11/16/22	16:00	4	266	3	745	39.2	29.33
18	3	11/16/22	17:00	3.6	248	4	745	38.48	29.33
19	3	11/16/22	18:00	3.2	251	3	745	37.76	29.33
20	3	11/16/22	19:00	2.7	252	3	745	36.86	29.33
21	3	11/16/22	20:00	2.2	249	3	745	35.96	29.33
22	3	11/16/22	21:00	2.1	243	4	744	35.78	29.29
23	3	11/16/22	22:00	2.1	275	3	744	35.78	29.29
24	3	11/16/22	23:00	1.7	303	4	744	35.06	29.29
1	3	11/17/22	0:00	1.6	306	5	744	34.88	29.29
2	3	11/17/22	1:00	1.7	300	6	744	35.06	29.29
3	3	11/17/22	2:00	1.7	297	7	744	35.06	29.29
4	3	11/17/22	3:00	1.5	302	9	745	34.7	29.33
5	3	11/17/22	4:00	0.8	311	9	745	33.44	29.33
6	3	11/17/22	5:00	0	308	7	746	32	29.37
7	3	11/17/22	6:00	-0.8	302	7	746	30.56	29.37
8	3	11/17/22	7:00	-1.2	300	6	747	29.84	29.41
9	3	11/17/22	8:00	-1.1	291	4	747	30.02	29.41
10	3	11/17/22	9:00	-0.6	247	4	747	30.92	29.41
11	3	11/17/22	10:00	0.8	242	4	747	33.44	29.41
12	3	11/17/22	11:00	1.6	254	3	747	34.88	29.41
13	3	11/17/22	12:00	2	250	4	747	35.6	29.41
14	3	11/17/22	13:00	2	230	6	746	35.6	29.37
15	3	11/17/22	14:00	1.7	229	7	746	35.06	29.37
16	3	11/17/22	15:00	1.5	232	8	746	34.7	29.37
17	3	11/17/22	16:00	1.5	232	7	746	34.7	29.37
18	3	11/17/22	17:00	1	238	7	746	33.8	29.37

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
19	3	11/17/22	18:00	0.7	230	7	746	33.26	29.37
20	3	11/17/22	19:00	0.4	230	8	746	32.72	29.37
21	3	11/17/22	20:00	-0.2	230	7	746	31.64	29.37
22	3	11/17/22	21:00	-0.6	231	8	746	30.92	29.37
23	3	11/17/22	22:00	-1	231	8	746	30.2	29.37
24	3	11/17/22	23:00	-1.2	229	6	745	29.84	29.33
1	3	11/18/22	0:00	-0.6	227	7	745	30.92	29.33
2	3	11/18/22	1:00	-0.4	224	7	745	31.28	29.33
3	3	11/18/22	2:00	-0.2	230	7	745	31.64	29.33
4	3	11/18/22	3:00	-0.2	233	7	745	31.64	29.33
5	3	11/18/22	4:00	0	231	6	745	32	29.33
6	3	11/18/22	5:00	0.2	240	4	745	32.36	29.33
7	3	11/18/22	6:00	0.2	261	4	745	32.36	29.33
8	3	11/18/22	7:00	0.1	247	4	745	32.18	29.33
9	3	11/18/22	8:00	-0.1	248	4	745	31.82	29.33
10	3	11/18/22	9:00	-0.4	231	6	745	31.28	29.33
11	3	11/18/22	10:00	-0.6	245	5	745	30.92	29.33
12	3	11/18/22	11:00	0	253	5	745	32	29.33
13	3	11/18/22	12:00	0.3	257	6	745	32.54	29.33
14	3	11/18/22	13:00	0.5	258	5	745	32.9	29.33
15	3	11/18/22	14:00	0.3	266	5	745	32.54	29.33
16	3	11/18/22	15:00	0.5	261	5	746	32.9	29.37
17	3	11/18/22	16:00	0.1	264	6	746	32.18	29.37
18	3	11/18/22	17:00	-0.2	255	5	747	31.64	29.41
19	3	11/18/22	18:00	-0.8	248	7	747	30.56	29.41
20	3	11/18/22	19:00	-1.2	252	6	748	29.84	29.45
21	3	11/18/22	20:00	-1.6	248	6	748	29.12	29.45
22	3	11/18/22	21:00	-2.3	247	6	748	27.86	29.45
23	3	11/18/22	22:00	-2.6	244	6	748	27.32	29.45
24	3	11/18/22	23:00	-3	234	7	748	26.6	29.45
1	3	11/19/22	0:00	-3.4	235	7	748	25.88	29.45
2	3	11/19/22	1:00	-3.6	235	7	748	25.52	29.45
3	3	11/19/22	2:00	-3.8	231	8	748	25.16	29.45
4	3	11/19/22	3:00	-4.1	233	7	747	24.62	29.41
5	3	11/19/22	4:00	-4.4	237	7	747	24.08	29.41
6	3	11/19/22	5:00	-4.6	238	7	747	23.72	29.41
7	3	11/19/22	6:00	-4.7	236	7	747	23.54	29.41
8	3	11/19/22	7:00	-5	232	8	747	23	29.41
9	3	11/19/22	8:00	-5.2	221	9	747	22.64	29.41
10	3	11/19/22	9:00	-5.1	214	12	747	22.82	29.41
11	3	11/19/22	10:00	-4.7	218	11	746	23.54	29.37
12	3	11/19/22	11:00	-4	224	10	745	24.8	29.33

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
13	3	11/19/22	12:00	-3.8	214	12	744	25.16	29.29
14	3	11/19/22	13:00	-2.8	211	13	744	26.96	29.29
15	3	11/19/22	14:00	-1.8	212	12	743	28.76	29.25
16	3	11/19/22	15:00	-1.2	225	10	743	29.84	29.25
17	3	11/19/22	16:00	-1.1	231	9	743	30.02	29.25
18	3	11/19/22	17:00	-1.2	239	9	744	29.84	29.29
19	3	11/19/22	18:00	-1.5	247	7	744	29.3	29.29
20	3	11/19/22	19:00	-2	245	7	745	28.4	29.33
21	3	11/19/22	20:00	-2.5	260	5	745	27.5	29.33
22	3	11/19/22	21:00	-3.1	263	4	745	26.42	29.33
23	3	11/19/22	22:00	-4.7	301	7	745	23.54	29.33
24	3	11/19/22	23:00	-4.7	298	6	746	23.54	29.37
1	3	11/20/22	0:00	-5	306	9	747	23	29.41
2	3	11/20/22	1:00	-5.4	300	8	748	22.28	29.45
3	3	11/20/22	2:00	-5.9	302	9	748	21.38	29.45
4	3	11/20/22	3:00	-6.3	294	6	749	20.66	29.49
5	3	11/20/22	4:00	-6.9	270	4	749	19.58	29.49
6	3	11/20/22	5:00	-7.5	255	4	750	18.5	29.53
7	3	11/20/22	6:00	-7.8	257	4	751	17.96	29.57
8	3	11/20/22	7:00	-7.9	260	3	751	17.78	29.57
9	3	11/20/22	8:00	-7.3	262	3	752	18.86	29.61
10	3	11/20/22	9:00	-6.6	239	4	753	20.12	29.65
11	3	11/20/22	10:00	-5.8	245	4	753	21.56	29.65
12	3	11/20/22	11:00	-5	256	5	753	23	29.65
13	3	11/20/22	12:00	-4.7	253	5	753	23.54	29.65
14	3	11/20/22	13:00	-4.2	250	5	753	24.44	29.65
15	3	11/20/22	14:00	-3.7	250	5	753	25.34	29.65
16	3	11/20/22	15:00	-3.2	267	5	753	26.24	29.65
17	3	11/20/22	16:00	-3.1	262	4	753	26.42	29.65
18	3	11/20/22	17:00	-3.1	258	3	753	26.42	29.65
19	3	11/20/22	18:00	-3.4	243	4	753	25.88	29.65
20	3	11/20/22	19:00	-3.7	224	5	753	25.34	29.65
21	3	11/20/22	20:00	-4.2	227	4	753	24.44	29.65
22	3	11/20/22	21:00	-4.7	221	5	753	23.54	29.65
23	3	11/20/22	22:00	-5.2	215	5	752	22.64	29.61
24	3	11/20/22	23:00	-5.5	208	6	752	22.1	29.61
1	3	11/21/22	0:00	-5	209	6	752	23	29.61
2	3	11/21/22	1:00	-5.2	205	6	751	22.64	29.57
3	3	11/21/22	2:00	-4.9	206	6	751	23.18	29.57
4	3	11/21/22	3:00	-4.8	211	8	750	23.36	29.53
5	3	11/21/22	4:00	-4.7	217	8	750	23.54	29.53
6	3	11/21/22	5:00	-3.9	217	8	749	24.98	29.49

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
7	3	11/21/22	6:00	-3.2	217	8	749	26.24	29.49
8	3	11/21/22	7:00	-3.1	215	8	748	26.42	29.45
9	3	11/21/22	8:00	-2.7	214	9	748	27.14	29.45
10	3	11/21/22	9:00	-1.4	217	8	748	29.48	29.45
11	3	11/21/22	10:00	0.3	229	9	747	32.54	29.41
12	3	11/21/22	11:00	1.5	229	10	747	34.7	29.41
13	3	11/21/22	12:00	3.1	239	8	746	37.58	29.37
14	3	11/21/22	13:00	4.5	241	8	746	40.1	29.37
15	3	11/21/22	14:00	6.4	249	9	746	43.52	29.37
16	3	11/21/22	15:00	7.3	253	7	746	45.14	29.37
17	3	11/21/22	16:00	7.3	262	5	747	45.14	29.41
18	3	11/21/22	17:00	7.2	273	4	749	44.96	29.49
19	3	11/21/22	18:00	6	295	5	750	42.8	29.53
20	3	11/21/22	19:00	5	292	3	750	41	29.53
21	3	11/21/22	20:00	4.3	283	2	751	39.74	29.57
22	3	11/21/22	21:00	4.1	286	3	751	39.38	29.57
23	3	11/21/22	22:00	3.3	307	3	752	37.94	29.61
24	3	11/21/22	23:00	2.5	317	2	752	36.5	29.61
1	4	11/22/22	0:00	1.5	341	2	752	34.7	29.61
2	4	11/22/22	1:00	0.9	355	2	752	33.62	29.61
3	4	11/22/22	2:00	0.8	32	2	752	33.44	29.61
4	4	11/22/22	3:00	0.4	56	0	752	32.72	29.61
5	4	11/22/22	4:00	-0.1	137	2	752	31.82	29.61
6	4	11/22/22	5:00	-0.2	132	2	752	31.64	29.61
7	4	11/22/22	6:00	-0.5	121	2	752	31.1	29.61
8	4	11/22/22	7:00	-0.7	125	1	751	30.74	29.57
9	4	11/22/22	8:00	-0.6	130	1	751	30.92	29.57
10	4	11/22/22	9:00	0.1	154	3	751	32.18	29.57
11	4	11/22/22	10:00	1.7	202	5	751	35.06	29.57
12	4	11/22/22	11:00	3.5	212	6	750	38.3	29.53
13	4	11/22/22	12:00	5.7	221	5	749	42.26	29.49
14	4	11/22/22	13:00	7.9	246	3	749	46.22	29.49
15	4	11/22/22	14:00	9	252	3	748	48.2	29.45
16	4	11/22/22	15:00	9.6	222	5	748	49.28	29.45
17	4	11/22/22	16:00	9.8	214	5	748	49.64	29.45
18	4	11/22/22	17:00	10	215	5	749	50	29.49
19	4	11/22/22	18:00	9.1	217	4	749	48.38	29.49
20	4	11/22/22	19:00	8.8	227	3	749	47.84	29.49
21	4	11/22/22	20:00	8.5	249	3	749	47.3	29.49
22	4	11/22/22	21:00	7.7	252	3	749	45.86	29.49
23	4	11/22/22	22:00	6.7	255	2	749	44.06	29.49
24	4	11/22/22	23:00	6	251	2	749	42.8	29.49

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
1	4	11/23/22	0:00	5.5	234	2	749	41.9	29.49
2	4	11/23/22	1:00	4.3	217	2	749	39.74	29.49
3	4	11/23/22	2:00	4.1	249	1	749	39.38	29.49
4	4	11/23/22	3:00	2.8	204	2	750	37.04	29.53
5	4	11/23/22	4:00	2	192	2	750	35.6	29.53
6	4	11/23/22	5:00	1.5	175	1	750	34.7	29.53
7	4	11/23/22	6:00	0.8	151	0	750	33.44	29.53
8	4	11/23/22	7:00	0.4	114	1	750	32.72	29.53
9	4	11/23/22	8:00	0.5	125	1	750	32.9	29.53
10	4	11/23/22	9:00	1.9	133	1	751	35.42	29.57
11	4	11/23/22	10:00	3.1	154	3	751	37.58	29.57
12	4	11/23/22	11:00	4.3	155	5	751	39.74	29.57
13	4	11/23/22	12:00	6.2	146	5	750	43.16	29.53
14	4	11/23/22	13:00	7.8	151	5	750	46.04	29.53
15	4	11/23/22	14:00	9.5	167	6	749	49.1	29.49
16	4	11/23/22	15:00	10.2	171	7	749	50.36	29.49
17	4	11/23/22	16:00	10.3	182	6	750	50.54	29.53
18	4	11/23/22	17:00	9.8	161	4	750	49.64	29.53
19	4	11/23/22	18:00	8.2	155	3	750	46.76	29.53
20	4	11/23/22	19:00	7.3	146	3	750	45.14	29.53
21	4	11/23/22	20:00	6.2	151	4	750	43.16	29.53
22	4	11/23/22	21:00	5.1	167	2	750	41.18	29.53
23	4	11/23/22	22:00	4.5	127	1	751	40.1	29.57
24	4	11/23/22	23:00	4.5	151	0	751	40.1	29.57
1	4	11/24/22	0:00	4.2	102	0	751	39.56	29.57
2	4	11/24/22	1:00	3.8	47	0	751	38.84	29.57
3	4	11/24/22	2:00	3.3	136	0	751	37.94	29.57
4	4	11/24/22	3:00	3.4	153	0	751	38.12	29.57
5	4	11/24/22	4:00	2.8	139	1	751	37.04	29.57
6	4	11/24/22	5:00	2.4	134	0	751	36.32	29.57
7	4	11/24/22	6:00	2.3	155	1	751	36.14	29.57
8	4	11/24/22	7:00	2.3	144	2	751	36.14	29.57
9	4	11/24/22	8:00	2.2	132	1	751	35.96	29.57
10	4	11/24/22	9:00	2.7	169	2	751	36.86	29.57
11	4	11/24/22	10:00	5	165	3	751	41	29.57
12	4	11/24/22	11:00	7.2	182	6	750	44.96	29.53
13	4	11/24/22	12:00	8.6	180	6	749	47.48	29.49
14	4	11/24/22	13:00	9.3	171	6	748	48.74	29.45
15	4	11/24/22	14:00	10.1	172	7	748	50.18	29.45
16	4	11/24/22	15:00	11	184	7	747	51.8	29.41
17	4	11/24/22	16:00	11.3	174	5	747	52.34	29.41
18	4	11/24/22	17:00	10.9	178	3	747	51.62	29.41

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
19	4	11/24/22	18:00	9.7	167	4	746	49.46	29.37
20	4	11/24/22	19:00	9.6	173	3	746	49.28	29.37
21	4	11/24/22	20:00	9.1	190	4	746	48.38	29.37
22	4	11/24/22	21:00	9.1	223	3	745	48.38	29.33
23	4	11/24/22	22:00	9	227	4	745	48.2	29.33
24	4	11/24/22	23:00	8.2	212	5	744	46.76	29.29
1	4	11/25/22	0:00	8.5	223	6	744	47.3	29.29
2	4	11/25/22	1:00	8.7	243	4	744	47.66	29.29
3	4	11/25/22	2:00	8.5	254	3	744	47.3	29.29
4	4	11/25/22	3:00	8.8	279	4	744	47.84	29.29
5	4	11/25/22	4:00	8.9	296	7	744	48.02	29.29
6	4	11/25/22	5:00	8.9	300	9	744	48.02	29.29
7	4	11/25/22	6:00	8.5	306	9	745	47.3	29.33
8	4	11/25/22	7:00	8.1	310	9	746	46.58	29.37
9	4	11/25/22	8:00	7.8	317	8	746	46.04	29.37
10	4	11/25/22	9:00	7.4	307	8	747	45.32	29.41
11	4	11/25/22	10:00	7.3	305	10	747	45.14	29.41
12	4	11/25/22	11:00	7.6	306	10	747	45.68	29.41
13	4	11/25/22	12:00	8.2	305	9	747	46.76	29.41
14	4	11/25/22	13:00	8.9	306	10	747	48.02	29.41
15	4	11/25/22	14:00	9.8	307	10	747	49.64	29.41
16	4	11/25/22	15:00	10.3	306	10	747	50.54	29.41
17	4	11/25/22	16:00	10.5	302	9	747	50.9	29.41
18	4	11/25/22	17:00	10.2	302	9	747	50.36	29.41
19	4	11/25/22	18:00	9.5	301	6	748	49.1	29.45
20	4	11/25/22	19:00	8.8	302	6	748	47.84	29.45
21	4	11/25/22	20:00	8.2	294	5	748	46.76	29.45
22	4	11/25/22	21:00	7.4	298	6	748	45.32	29.45
23	4	11/25/22	22:00	6.6	299	6	748	43.88	29.45
24	4	11/25/22	23:00	5.7	303	6	748	42.26	29.45
1	4	11/26/22	0:00	5.1	301	4	748	41.18	29.45
2	4	11/26/22	1:00	4.5	263	2	748	40.1	29.45
3	4	11/26/22	2:00	3.6	220	2	748	38.48	29.45
4	4	11/26/22	3:00	2.5	208	3	748	36.5	29.45
5	4	11/26/22	4:00	2.4	218	3	748	36.32	29.45
6	4	11/26/22	5:00	2.4	224	3	747	36.32	29.41
7	4	11/26/22	6:00	2	220	2	748	35.6	29.45
8	4	11/26/22	7:00	1.5	212	4	747	34.7	29.41
9	4	11/26/22	8:00	1.2	208	5	747	34.16	29.41
10	4	11/26/22	9:00	1.4	201	6	747	34.52	29.41
11	4	11/26/22	10:00	3.8	213	6	747	38.84	29.41
12	4	11/26/22	11:00	6.3	208	7	746	43.34	29.37

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
13	4	11/26/22	12:00	9.5	224	5	745	49.1	29.33
14	4	11/26/22	13:00	11.7	234	5	744	53.06	29.29
15	4	11/26/22	14:00	12.5	234	5	744	54.5	29.29
16	4	11/26/22	15:00	12.6	221	7	744	54.68	29.29
17	4	11/26/22	16:00	12.2	217	7	744	53.96	29.29
18	4	11/26/22	17:00	11.5	208	7	743	52.7	29.25
19	4	11/26/22	18:00	10.1	202	7	743	50.18	29.25
20	4	11/26/22	19:00	8.9	200	5	743	48.02	29.25
21	4	11/26/22	20:00	8.1	204	4	743	46.58	29.25
22	4	11/26/22	21:00	8.1	201	5	742	46.58	29.21
23	4	11/26/22	22:00	7.9	195	7	742	46.22	29.21
24	4	11/26/22	23:00	6.6	178	6	741	43.88	29.17
1	4	11/27/22	0:00	6.6	196	3	740	43.88	29.13
2	4	11/27/22	1:00	6.1	195	4	740	42.98	29.13
3	4	11/27/22	2:00	5.9	183	4	739	42.62	29.09
4	4	11/27/22	3:00	5.9	172	4	738	42.62	29.06
5	4	11/27/22	4:00	5.6	144	3	737	42.08	29.02
6	4	11/27/22	5:00	5.8	111	3	736	42.44	28.98
7	4	11/27/22	6:00	6.1	83	2	736	42.98	28.98
8	4	11/27/22	7:00	6.2	129	2	735	43.16	28.94
9	4	11/27/22	8:00	5.4	23	3	734	41.72	28.90
10	4	11/27/22	9:00	5.5	40	4	733	41.9	28.86
11	4	11/27/22	10:00	5.9	39	5	732	42.62	28.82
12	4	11/27/22	11:00	6.4	60	5	730	43.52	28.74
13	4	11/27/22	12:00	6.3	60	7	729	43.34	28.70
14	4	11/27/22	13:00	6.3	62	6	729	43.34	28.70
15	4	11/27/22	14:00	6.2	32	5	728	43.16	28.66
16	4	11/27/22	15:00	6	0	5	729	42.8	28.70
17	4	11/27/22	16:00	5.9	7	5	730	42.62	28.74
18	4	11/27/22	17:00	5.9	344	6	731	42.62	28.78
19	4	11/27/22	18:00	5.8	331	9	732	42.44	28.82
20	4	11/27/22	19:00	5.5	334	9	733	41.9	28.86
21	4	11/27/22	20:00	5.4	335	7	734	41.72	28.90
22	4	11/27/22	21:00	5.5	325	6	735	41.9	28.94
23	4	11/27/22	22:00	5.6	318	7	736	42.08	28.98
24	4	11/27/22	23:00	5.7	318	6	737	42.26	29.02
1	4	11/28/22	0:00	5.7	325	8	738	42.26	29.06
2	4	11/28/22	1:00	5.2	336	10	739	41.36	29.09
3	4	11/28/22	2:00	4.5	334	8	739	40.1	29.09
4	4	11/28/22	3:00	4.4	324	7	740	39.92	29.13
5	4	11/28/22	4:00	4.3	319	5	741	39.74	29.17
6	4	11/28/22	5:00	4.5	321	5	741	40.1	29.17

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
7	4	11/28/22	6:00	4.5	307	4	741	40.1	29.17
8	4	11/28/22	7:00	4.4	322	4	742	39.92	29.21
9	4	11/28/22	8:00	4.3	321	4	743	39.74	29.25
10	4	11/28/22	9:00	4.5	319	4	744	40.1	29.29
11	4	11/28/22	10:00	4.8	335	4	744	40.64	29.29
12	4	11/28/22	11:00	5.2	355	3	744	41.36	29.29
13	4	11/28/22	12:00	5	289	2	744	41	29.29
14	4	11/28/22	13:00	5.1	191	2	744	41.18	29.29
15	4	11/28/22	14:00	5.4	131	2	744	41.72	29.29
16	4	11/28/22	15:00	6	221	1	744	42.8	29.29
17	4	11/28/22	16:00	5.8	203	4	745	42.44	29.33
18	4	11/28/22	17:00	5.7	176	3	745	42.26	29.33
19	4	11/28/22	18:00	5.4	205	4	745	41.72	29.33
20	4	11/28/22	19:00	5.4	204	3	745	41.72	29.33
21	4	11/28/22	20:00	5.1	171	4	746	41.18	29.37
22	4	11/28/22	21:00	5	167	4	746	41	29.37
23	4	11/28/22	22:00	4.9	175	5	746	40.82	29.37
24	4	11/28/22	23:00	5	165	6	746	41	29.37
1	4	11/29/22	0:00	5	166	6	746	41	29.37
2	4	11/29/22	1:00	5.3	181	6	746	41.54	29.37
3	4	11/29/22	2:00	5.1	145	4	746	41.18	29.37
4	4	11/29/22	3:00	5.1	160	6	746	41.18	29.37
5	4	11/29/22	4:00	5	149	6	746	41	29.37
6	4	11/29/22	5:00	5	144	6	746	41	29.37
7	4	11/29/22	6:00	5.2	150	7	746	41.36	29.37
8	4	11/29/22	7:00	5.4	152	8	746	41.72	29.37
9	4	11/29/22	8:00	5.5	142	7	746	41.9	29.37
10	4	11/29/22	9:00	5.7	143	7	746	42.26	29.37
11	4	11/29/22	10:00	6.3	148	7	745	43.34	29.33
12	4	11/29/22	11:00	7.4	154	7	745	45.32	29.33
13	4	11/29/22	12:00	8.5	153	10	744	47.3	29.29
14	4	11/29/22	13:00	9.1	160	12	743	48.38	29.25
15	4	11/29/22	14:00	9.3	163	11	742	48.74	29.21
16	4	11/29/22	15:00	9.8	156	12	741	49.64	29.17
17	4	11/29/22	16:00	10.3	146	15	741	50.54	29.17
18	4	11/29/22	17:00	10.1	148	13	740	50.18	29.13
19	4	11/29/22	18:00	9.4	140	15	740	48.92	29.13
20	4	11/29/22	19:00	10	150	11	739	50	29.09
21	4	11/29/22	20:00	10.1	143	13	737	50.18	29.02
22	4	11/29/22	21:00	10.2	151	12	736	50.36	28.98
23	4	11/29/22	22:00	11.3	162	14	736	52.34	28.98
24	4	11/29/22	23:00	10.9	168	12	735	51.62	28.94

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
1	4	11/30/22	0:00	11.4	172	12	734	52.52	28.90
2	4	11/30/22	1:00	10.7	179	11	734	51.26	28.90
3	4	11/30/22	2:00	11.2	186	10	734	52.16	28.90
4	4	11/30/22	3:00	11.6	200	8	733	52.88	28.86
5	4	11/30/22	4:00	10.9	179	10	733	51.62	28.86
6	4	11/30/22	5:00	10.8	186	10	732	51.44	28.82
7	4	11/30/22	6:00	11	231	6	734	51.8	28.90
8	4	11/30/22	7:00	8.4	294	9	735	47.12	28.94
9	4	11/30/22	8:00	4.5	303	10	736	40.1	28.98
10	4	11/30/22	9:00	3.8	303	11	737	38.84	29.02
11	4	11/30/22	10:00	3.4	299	8	738	38.12	29.06
12	4	11/30/22	11:00	2.9	289	6	739	37.22	29.09
13	4	11/30/22	12:00				740	32	29.13
14	4	11/30/22	13:00	0.8	290	7	741	33.44	29.17
15	4	11/30/22	14:00	0.6	293	8	742	33.08	29.21
16	4	11/30/22	15:00	0.9	289	7	743	33.62	29.25
17	4	11/30/22	16:00	1.1	274	5	744	33.98	29.29
18	4	11/30/22	17:00	0.7	266	6	744	33.26	29.29
19	4	11/30/22	18:00	-0.2	267	6	745	31.64	29.33
20	4	11/30/22	19:00	-0.3	268	5	746	31.46	29.37
21	4	11/30/22	20:00	-0.4	270	5	746	31.28	29.37
22	4	11/30/22	21:00	-0.3	269	5	746	31.46	29.37
23	4	11/30/22	22:00	-0.2	262	5	747	31.64	29.41
24	4	11/30/22	23:00	-0.4	261	6	747	31.28	29.41
1	4	12/1/22	0:00	-0.2	279	5	748	31.64	29.45
2	4	12/1/22	1:00	-0.3	299	8	749	31.46	29.49
3	4	12/1/22	2:00	-0.4	304	10	750	31.28	29.53
4	4	12/1/22	3:00	-0.7	308	13	751	30.74	29.57
5	4	12/1/22	4:00	-0.9	307	10	751	30.38	29.57
6	4	12/1/22	5:00	-1.2	307	10	752	29.84	29.61
7	4	12/1/22	6:00	-1.1	307	9	753	30.02	29.65
8	4	12/1/22	7:00	-1.4	307	9	754	29.48	29.69
9	4	12/1/22	8:00	-1.6	309	9	755	29.12	29.72
10	4	12/1/22	9:00	-1.5	305	6	756	29.3	29.76
11	4	12/1/22	10:00	-1	307	6	756	30.2	29.76
12	4	12/1/22	11:00	-0.6	309	8	756	30.92	29.76
13	4	12/1/22	12:00	1	298	6	756	33.8	29.76
14	4	12/1/22	13:00	2.2	277	4	756	35.96	29.76
15	4	12/1/22	14:00	3.2	267	4	756	37.76	29.76
16	4	12/1/22	15:00	3.5	242	4	755	38.3	29.72
17	4	12/1/22	16:00	3.7	230	4	755	38.66	29.72
18	4	12/1/22	17:00	3	218	5	755	37.4	29.72

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
19	4	12/1/22	18:00	1.6	209	7	755	34.88	29.72
20	4	12/1/22	19:00	1.1	223	5	755	33.98	29.72
21	4	12/1/22	20:00	0.4	211	5	755	32.72	29.72
22	4	12/1/22	21:00	0	210	7	754	32	29.69
23	4	12/1/22	22:00	-0.2	212	7	754	31.64	29.69
24	4	12/1/22	23:00	0	213	7	754	32	29.69
1	4	12/2/22	0:00	0.7	210	7	754	33.26	29.69
2	4	12/2/22	1:00	1.4	204	9	753	34.52	29.65
3	4	12/2/22	2:00	1.8	196	8	753	35.24	29.65
4	4	12/2/22	3:00	1.9	206	8	752	35.42	29.61
5	4	12/2/22	4:00	2	201	8	751	35.6	29.57
6	4	12/2/22	5:00	2.2	180	11	751	35.96	29.57
7	4	12/2/22	6:00	2.3	183	11	751	36.14	29.57
8	4	12/2/22	7:00	2.6	194	10	750	36.68	29.53
9	4	12/2/22	8:00	2.6	181	12	750	36.68	29.53
10	4	12/2/22	9:00	2.8	180	12	750	37.04	29.53
11	4	12/2/22	10:00	3.5	182	11	749	38.3	29.49
12	4	12/2/22	11:00	3.9	183	13	748	39.02	29.45
13	4	12/2/22	12:00	4.8	183	15	747	40.64	29.41
14	4	12/2/22	13:00	5.2	182	13	746	41.36	29.37
15	4	12/2/22	14:00	5.7	188	11	745	42.26	29.33
16	4	12/2/22	15:00	6.3	183	12	744	43.34	29.29
17	4	12/2/22	16:00	6.9	186	13	744	44.42	29.29
18	4	12/2/22	17:00	7.1	188	13	743	44.78	29.25
19	4	12/2/22	18:00	7.6	180	13	742	45.68	29.21
20	4	12/2/22	19:00	8.2	183	13	742	46.76	29.21
21	4	12/2/22	20:00	8.7	188	14	741	47.66	29.17
22	4	12/2/22	21:00	9	195	12	741	48.2	29.17
23	4	12/2/22	22:00	9.2	187	9	740	48.56	29.13
24	4	12/2/22	23:00	11.5	220	10	740	52.7	29.13
1	4	12/3/22	0:00	12.6	229	13	740	54.68	29.13
2	4	12/3/22	1:00	12.3	229	11	739	54.14	29.09
3	4	12/3/22	2:00	12.1	234	10	739	53.78	29.09
4	4	12/3/22	3:00	12	235	9	739	53.6	29.09
5	4	12/3/22	4:00	11.9	233	8	739	53.42	29.09
6	4	12/3/22	5:00	11.8	240	8	738	53.24	29.06
7	4	12/3/22	6:00	11.8	236	8	739	53.24	29.09
8	4	12/3/22	7:00	11.7	236	7	739	53.06	29.09
9	4	12/3/22	8:00	11.5	272	7	742	52.7	29.21
10	4	12/3/22	9:00	6.7	310	17	744	44.06	29.29
11	4	12/3/22	10:00	4.8	314	16	746	40.64	29.37
12	4	12/3/22	11:00	4.4	313	16	747	39.92	29.41

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
13	4	12/3/22	12:00	3.9	311	15	748	39.02	29.45
14	4	12/3/22	13:00	3.4	312	13	749	38.12	29.49
15	4	12/3/22	14:00	2.9	308	10	750	37.22	29.53
16	4	12/3/22	15:00	2.6	309	11	751	36.68	29.57
17	4	12/3/22	16:00	2.8	309	8	751	37.04	29.57
18	4	12/3/22	17:00	2.2	306	9	752	35.96	29.61
19	4	12/3/22	18:00	1.4	299	5	753	34.52	29.65
20	4	12/3/22	19:00	0.8	308	8	753	33.44	29.65
21	4	12/3/22	20:00	0.2	308	7	753	32.36	29.65
22	4	12/3/22	21:00	-0.2	290	3	754	31.64	29.69
23	4	12/3/22	22:00	-0.9	303	5	754	30.38	29.69
24	4	12/3/22	23:00	-1.4	307	8	754	29.48	29.69
1	4	12/4/22	0:00	-1.7	299	5	754	28.94	29.69
2	4	12/4/22	1:00	-2	304	6	753	28.4	29.65
3	4	12/4/22	2:00	-2.2	265	2	753	28.04	29.65
4	4	12/4/22	3:00	-2.6	274	2	753	27.32	29.65
5	4	12/4/22	4:00	-2.9	236	3	753	26.78	29.65
6	4	12/4/22	5:00	-3.5	231	3	752	25.7	29.61
7	4	12/4/22	6:00	-4	229	4	752	24.8	29.61
8	4	12/4/22	7:00	-4.3	234	3	751	24.26	29.57
9	4	12/4/22	8:00	-4.4	229	4	751	24.08	29.57
10	4	12/4/22	9:00	-3.8	231	4	751	25.16	29.57
11	4	12/4/22	10:00	-2	238	3	751	28.4	29.57
12	4	12/4/22	11:00	-1.1	232	6	750	30.02	29.53
13	4	12/4/22	12:00	0.2	227	6	749	32.36	29.49
14	4	12/4/22	13:00	2.1	245	4	748	35.78	29.45
15	4	12/4/22	14:00	2.6	236	6	747	36.68	29.41
16	4	12/4/22	15:00	2.8	232	6	747	37.04	29.41
17	4	12/4/22	16:00	2.7	224	7	747	36.86	29.41
18	4	12/4/22	17:00	2.2	222	7	747	35.96	29.41
19	4	12/4/22	18:00	1.6	216	7	747	34.88	29.41
20	4	12/4/22	19:00	1	213	9	747	33.8	29.41
21	4	12/4/22	20:00	0.8	215	8	747	33.44	29.41
22	4	12/4/22	21:00	0.5	219	7	746	32.9	29.37
23	4	12/4/22	22:00	0.5	229	6	746	32.9	29.37
24	4	12/4/22	23:00	0.3	221	6	746	32.54	29.37
1	4	12/5/22	0:00	0.1	220	6	745	32.18	29.33
2	4	12/5/22	1:00	-0.3	216	6	745	31.46	29.33
3	4	12/5/22	2:00	-0.4	225	5	745	31.28	29.33
4	4	12/5/22	3:00	-0.5	234	4	745	31.1	29.33
5	4	12/5/22	4:00	-0.8	224	6	745	30.56	29.33
6	4	12/5/22	5:00	-1.5	215	6	745	29.3	29.33

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
7	4	12/5/22	6:00	-1.4	219	6	745	29.48	29.33
8	4	12/5/22	7:00	-1.5	209	6	744	29.3	29.29
9	4	12/5/22	8:00	-1.4	202	6	745	29.48	29.33
10	4	12/5/22	9:00	-1.1	206	8	745	30.02	29.33
11	4	12/5/22	10:00	0.1	210	8	745	32.18	29.33
12	4	12/5/22	11:00	1.8	214	8	745	35.24	29.33
13	4	12/5/22	12:00	3.5	216	6	744	38.3	29.29
14	4	12/5/22	13:00	4.5	187	9	743	40.1	29.25
15	4	12/5/22	14:00	4.6	182	10	743	40.28	29.25
16	4	12/5/22	15:00	5.3	188	6	743	41.54	29.25
17	4	12/5/22	16:00	5.5	175	4	743	41.9	29.25
18	4	12/5/22	17:00	5.5	162	5	743	41.9	29.25
19	4	12/5/22	18:00	5.6	157	5	743	42.08	29.25
20	4	12/5/22	19:00	5.8	171	5	743	42.44	29.25
21	4	12/5/22	20:00	6.2	171	7	744	43.16	29.29
22	4	12/5/22	21:00	6.2	175	5	743	43.16	29.25
23	4	12/5/22	22:00	6.6	181	9	744	43.88	29.29
24	4	12/5/22	23:00	7	203	3	744	44.6	29.29
1	4and 5	12/6/22	0:00	6.2	170	4	744	43.16	29.29
2	4and 5	12/6/22	1:00	6.1	170	5	744	42.98	29.29
3	4and 5	12/6/22	2:00	6.1	184	3	744	42.98	29.29
4	4and 5	12/6/22	3:00	5.8	174	4	745	42.44	29.33
5	4and 5	12/6/22	4:00	5.9	176	3	744	42.62	29.29
6	4and 5	12/6/22	5:00	5.5	171	4	744	41.9	29.29
7	4and 5	12/6/22	6:00	5.3	165	4	745	41.54	29.33
8	4and 5	12/6/22	7:00	5.4	202	2	746	41.72	29.37
9	4and 5	12/6/22	8:00	5.7	126	2	746	42.26	29.37
10	4and 5	12/6/22	9:00	5.5	133	4	746	41.9	29.37
11	4and 5	12/6/22	10:00	6	142	2	746	42.8	29.37
12	4and 5	12/6/22	11:00	6.9	123	3	745	44.42	29.33
13	4and 5	12/6/22	12:00	7.7	127	8	746	45.86	29.37
14	4and 5	12/6/22	13:00	8	301	2	746	46.4	29.37
15	4and 5	12/6/22	14:00	8.3	0	2	746	46.94	29.37
16	4and 5	12/6/22	15:00	8.3	46	4	746	46.94	29.37
17	4and 5	12/6/22	16:00	7.8	77	4	746	46.04	29.37
18	4and 5	12/6/22	17:00	7.1	70	4	746	44.78	29.37
19	4and 5	12/6/22	18:00	7.1	80	4	746	44.78	29.37
20	4and 5	12/6/22	19:00	7.5	74	3	746	45.5	29.37
21	4and 5	12/6/22	20:00	7.1	73	3	746	44.78	29.37
22	4and 5	12/6/22	21:00	7	77	3	746	44.6	29.37
23	4and 5	12/6/22	22:00	6.9	57	2	746	44.42	29.37
24	4and 5	12/6/22	23:00	7	63	2	746	44.6	29.37

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
1	5	12/7/22	0:00	7.1	24	1	747	44.78	29.41
2	5	12/7/22	1:00	6.4	351	5	747	43.52	29.41
3	5	12/7/22	2:00	5.8	360	3	747	42.44	29.41
4	5	12/7/22	3:00	5.9	347	3	747	42.62	29.41
5	5	12/7/22	4:00	6.1	13	1	747	42.98	29.41
6	5	12/7/22	5:00	6.1	357	4	748	42.98	29.45
7	5	12/7/22	6:00	6	343	4	748	42.8	29.45
8	5	12/7/22	7:00	6.1	349	6	749	42.98	29.49
9	5	12/7/22	8:00	6.3	354	5	749	43.34	29.49
10	5	12/7/22	9:00	6.3	349	5	749	43.34	29.49
11	5	12/7/22	10:00	6.6	350	4	750	43.88	29.53
12	5	12/7/22	11:00	6.8	345	5	750	44.24	29.53
13	5	12/7/22	12:00	7.4	9	1	750	45.32	29.53
14	5	12/7/22	13:00	7.5	175	2	750	45.5	29.53
15	5	12/7/22	14:00	7.8	340	2	750	46.04	29.53
16	5	12/7/22	15:00	8.1	331	2	750	46.58	29.53
17	5	12/7/22	16:00	8.6	277	2	751	47.48	29.57
18	5	12/7/22	17:00	8.8	237	2	751	47.84	29.57
19	5	12/7/22	18:00	8.8	266	1	752	47.84	29.61
20	5	12/7/22	19:00	8.8	301	3	752	47.84	29.61
21	5	12/7/22	20:00	8.8	300	3	753	47.84	29.65
22	5	12/7/22	21:00	8.7	315	2	753	47.66	29.65
23	5	12/7/22	22:00	8.6	307	3	753	47.48	29.65
24	5	12/7/22	23:00	8.3	75	2	753	46.94	29.65
1	5	12/8/22	0:00	7.5	39	1	753	45.5	29.65
2	5	12/8/22	1:00	7.5	4	1	753	45.5	29.65
3	5	12/8/22	2:00	7.2	307	4	754	44.96	29.69
4	5	12/8/22	3:00	5.9	337	8	754	42.62	29.69
5	5	12/8/22	4:00	5.3	335	7	754	41.54	29.69
6	5	12/8/22	5:00	5.1	337	6	754	41.18	29.69
7	5	12/8/22	6:00	5	335	5	754	41	29.69
8	5	12/8/22	7:00	4.8	336	5	754	40.64	29.69
9	5	12/8/22	8:00	4.5	335	7	755	40.1	29.72
10	5	12/8/22	9:00	4.4	339	7	755	39.92	29.72
11	5	12/8/22	10:00	3.8	1	7	755	38.84	29.72
12	5	12/8/22	11:00	4	22	4	755	39.2	29.72
13	5	12/8/22	12:00	4.6	23	5	754	40.28	29.69
14	5	12/8/22	13:00	5.6	45	4	754	42.08	29.69
15	5	12/8/22	14:00	5.7	73	5	753	42.26	29.65
16	5	12/8/22	15:00	5.5	61	5	754	41.9	29.69
17	5	12/8/22	16:00	5.5	62	4	754	41.9	29.69
18	5	12/8/22	17:00	5.2	68	4	754	41.36	29.69

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
19	5	12/8/22	18:00	4.7	51	6	754	40.46	29.69
20	5	12/8/22	19:00	4.4	54	5	754	39.92	29.69
21	5	12/8/22	20:00	4.2	49	6	754	39.56	29.69
22	5	12/8/22	21:00	3.7	49	6	754	38.66	29.69
23	5	12/8/22	22:00	3.2	44	6	754	37.76	29.69
24	5	12/8/22	23:00	2.8	44	6	754	37.04	29.69
1	5	12/9/22	0:00	2.6	45	6	754	36.68	29.69
2	5	12/9/22	1:00	2.5	46	5	754	36.5	29.69
3	5	12/9/22	2:00	2	40	5	754	35.6	29.69
4	5	12/9/22	3:00	2	43	5	754	35.6	29.69
5	5	12/9/22	4:00	2	64	6	754	35.6	29.69
6	5	12/9/22	5:00	1.6	61	7	754	34.88	29.69
7	5	12/9/22	6:00	1.2	52	7	754	34.16	29.69
8	5	12/9/22	7:00	1.3	60	6	754	34.34	29.69
9	5	12/9/22	8:00	1.3	56	5	754	34.34	29.69
10	5	12/9/22	9:00	1.3	61	6	754	34.34	29.69
11	5	12/9/22	10:00	1.4	57	7	754	34.52	29.69
12	5	12/9/22	11:00	1.7	66	7	753	35.06	29.65
13	5	12/9/22	12:00	2	71	7	752	35.6	29.61
14	5	12/9/22	13:00	2.1	69	7	752	35.78	29.61
15	5	12/9/22	14:00	2.5	62	7	752	36.5	29.61
16	5	12/9/22	15:00	3.2	64	7	752	37.76	29.61
17	5	12/9/22	16:00	3.6	76	7	751	38.48	29.57
18	5	12/9/22	17:00	3.7	66	8	752	38.66	29.61
19	5	12/9/22	18:00	3.7	62	8	752	38.66	29.61
20	5	12/9/22	19:00	3.5	56	7	752	38.3	29.61
21	5	12/9/22	20:00	2.9	59	8	752	37.22	29.61
22	5	12/9/22	21:00	2.5	59	8	752	36.5	29.61
23	5	12/9/22	22:00	2.3	61	7	752	36.14	29.61
24	5	12/9/22	23:00	1.7	60	8	752	35.06	29.61
1	5	12/10/22	0:00	1.3	46	6	752	34.34	29.61
2	5	12/10/22	1:00	1.7	54	7	752	35.06	29.61
3	5	12/10/22	2:00	1.5	59	7	752	34.7	29.61
4	5	12/10/22	3:00	1.4	58	6	752	34.52	29.61
5	5	12/10/22	4:00	1.2	46	7	752	34.16	29.61
6	5	12/10/22	5:00	1.1	39	8	752	33.98	29.61
7	5	12/10/22	6:00	1.2	45	7	752	34.16	29.61
8	5	12/10/22	7:00	1.2	49	7	752	34.16	29.61
9	5	12/10/22	8:00	1.4	60	6	752	34.52	29.61
10	5	12/10/22	9:00	1.6	65	6	752	34.88	29.61
11	5	12/10/22	10:00	1.7	63	6	752	35.06	29.61
12	5	12/10/22	11:00	2.1	66	6	751	35.78	29.57

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
13	5	12/10/22	12:00	2.6	68	5	751	36.68	29.57
14	5	12/10/22	13:00	2.8	73	5	750	37.04	29.53
15	5	12/10/22	14:00	3.1	66	4	750	37.58	29.53
16	5	12/10/22	15:00	2.7	38	5	750	36.86	29.53
17	5	12/10/22	16:00	2.8	34	4	750	37.04	29.53
18	5	12/10/22	17:00	3.2	57	5	749	37.76	29.49
19	5	12/10/22	18:00	3.7	69	4	749	38.66	29.49
20	5	12/10/22	19:00	4.1	70	3	749	39.38	29.49
21	5	12/10/22	20:00	4.2	67	3	749	39.56	29.49
22	5	12/10/22	21:00	4.4	67	2	749	39.92	29.49
23	5	12/10/22	22:00	5.1	96	2	748	41.18	29.45
24	5	12/10/22	23:00	4.1	163	1	748	39.38	29.45
1	5	12/11/22	0:00	3.7	165	1	748	38.66	29.45
2	5	12/11/22	1:00	3.5	318	3	748	38.3	29.45
3	5	12/11/22	2:00	2.7	307	5	748	36.86	29.45
4	5	12/11/22	3:00	2.1	318	4	748	35.78	29.45
5	5	12/11/22	4:00	2	311	4	748	35.6	29.45
6	5	12/11/22	5:00	2	313	4	748	35.6	29.45
7	5	12/11/22	6:00	2.1	305	4	748	35.78	29.45
8	5	12/11/22	7:00	2.3	307	6	749	36.14	29.49
9	5	12/11/22	8:00	2.2	305	6	749	35.96	29.49
10	5	12/11/22	9:00	2.2	314	6	749	35.96	29.49
11	5	12/11/22	10:00	2.4	312	6	749	36.32	29.49
12	5	12/11/22	11:00	3.1	314	7	749	37.58	29.49
13	5	12/11/22	12:00	3.6	306	7	749	38.48	29.49
14	5	12/11/22	13:00	4.1	300	6	749	39.38	29.49
15	5	12/11/22	14:00	4.4	302	6	749	39.92	29.49
16	5	12/11/22	15:00	4.5	304	7	749	40.1	29.49
17	5	12/11/22	16:00	4.4	314	7	749	39.92	29.49
18	5	12/11/22	17:00	4.1	318	6	750	39.38	29.53
19	5	12/11/22	18:00	3.8	320	6	750	38.84	29.53
20	5	12/11/22	19:00	3.5	335	6	750	38.3	29.53
21	5	12/11/22	20:00	3	342	5	750	37.4	29.53
22	5	12/11/22	21:00	2.9	331	5	750	37.22	29.53
23	5	12/11/22	22:00	2.8	342	5	751	37.04	29.57
24	5	12/11/22	23:00	2.5	345	6	751	36.5	29.57
1	5	12/12/22	0:00	2.4	346	6	751	36.32	29.57
2	5	12/12/22	1:00	2.3	341	5	751	36.14	29.57
3	5	12/12/22	2:00	2.3	346	5	752	36.14	29.61
4	5	12/12/22	3:00	2.3	341	5	752	36.14	29.61
5	5	12/12/22	4:00	2.2	335	5	752	35.96	29.61
6	5	12/12/22	5:00	2.4	338	5	752	36.32	29.61

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
7	5	12/12/22	6:00	2.5	337	6	752	36.5	29.61
8	5	12/12/22	7:00	2.3	331	6	753	36.14	29.65
9	5	12/12/22	8:00	2.1	352	5	753	35.78	29.65
10	5	12/12/22	9:00	1.9	357	5	753	35.42	29.65
11	5	12/12/22	10:00	2.2	360	4	753	35.96	29.65
12	5	12/12/22	11:00	2.5	352	5	754	36.5	29.69
13	5	12/12/22	12:00	2.7	357	5	753	36.86	29.65
14	5	12/12/22	13:00	3.3	29	4	753	37.94	29.65
15	5	12/12/22	14:00	3.7	54	3	753	38.66	29.65
16	5	12/12/22	15:00	3.6	100	4	753	38.48	29.65
17	5	12/12/22	16:00	3.7	96	3	754	38.66	29.69
18	5	12/12/22	17:00	3.6	93	3	754	38.48	29.69
19	5	12/12/22	18:00	3	64	3	754	37.4	29.69
20	5	12/12/22	19:00	2.9	73	4	754	37.22	29.69
21	5	12/12/22	20:00	2.3	81	5	754	36.14	29.69
22	5	12/12/22	21:00	1.8	60	5	755	35.24	29.72
23	5	12/12/22	22:00	1.3	47	5	755	34.34	29.72
24	5	12/12/22	23:00	0.9	48	5	755	33.62	29.72
1	5	12/13/22	0:00	0.7	56	4	754	33.26	29.69
2	5	12/13/22	1:00	0.7	44	5	754	33.26	29.69
3	5	12/13/22	2:00	0.7	43	4	754	33.26	29.69
4	5	12/13/22	3:00	1.1	57	3	754	33.98	29.69
5	5	12/13/22	4:00	1.2	83	3	754	34.16	29.69
6	5	12/13/22	5:00	1.3	100	3	754	34.34	29.69
7	5	12/13/22	6:00	1.1	97	3	754	33.98	29.69
8	5	12/13/22	7:00	0.6	96	4	755	33.08	29.72
9	5	12/13/22	8:00	0.4	100	4	755	32.72	29.72
10	5	12/13/22	9:00	0.3	102	4	755	32.54	29.72
11	5	12/13/22	10:00	0.4	78	3	755	32.72	29.72
12	5	12/13/22	11:00	1.2	74	3	754	34.16	29.69
13	5	12/13/22	12:00	1.7	73	4	754	35.06	29.69
14	5	12/13/22	13:00	1.7	68	5	753	35.06	29.65
15	5	12/13/22	14:00	1.9	71	4	753	35.42	29.65
16	5	12/13/22	15:00	2.1	83	4	752	35.78	29.61
17	5	12/13/22	16:00	1.9	72	5	752	35.42	29.61
18	5	12/13/22	17:00	1.8	76	5	752	35.24	29.61
19	5	12/13/22	18:00	1.4	87	5	752	34.52	29.61
20	5	12/13/22	19:00	1	83	5	752	33.8	29.61
21	5	12/13/22	20:00	0.9	79	5	751	33.62	29.57
22	5	12/13/22	21:00	0.8	73	7	751	33.44	29.57
23	5	12/13/22	22:00	0.6	74	7	751	33.08	29.57
24	5	12/13/22	23:00	0.5	71	7	751	32.9	29.57

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
1	5	12/14/22	0:00	0.7	79	4	751	33.26	29.57
2	5	12/14/22	1:00	0.8	68	5	751	33.44	29.57
3	5	12/14/22	2:00	0.9	77	4	751	33.62	29.57
4	5	12/14/22	3:00	0.9	79	6	750	33.62	29.53
5	5	12/14/22	4:00	1.5	88	4	750	34.7	29.53
6	5	12/14/22	5:00	1.4	87	4	749	34.52	29.49
7	5	12/14/22	6:00	1.6	86	4	749	34.88	29.49
8	5	12/14/22	7:00	1.6	84	4	749	34.88	29.49
9	5	12/14/22	8:00	1.9	81	5	749	35.42	29.49
10	5	12/14/22	9:00	2.2	85	5	749	35.96	29.49
11	5	12/14/22	10:00	2.7	88	5	749	36.86	29.49
12	5	12/14/22	11:00	3.7	109	9	748	38.66	29.45
13	5	12/14/22	12:00	4	112	11	748	39.2	29.45
14	5	12/14/22	13:00	4.5	109	10	747	40.1	29.41
15	5	12/14/22	14:00	4.5	108	10	747	40.1	29.41
16	5	12/14/22	15:00	4.7	106	8	746	40.46	29.37
17	5	12/14/22	16:00	4.5	81	8	746	40.1	29.37
18	5	12/14/22	17:00	3.2	84	7	746	37.76	29.37
19	5	12/14/22	18:00	2.6	86	7	745	36.68	29.33
20	5	12/14/22	19:00	2.3	85	7	745	36.14	29.33
21	5	12/14/22	20:00	2.3	84	8	744	36.14	29.29
22	5	12/14/22	21:00	2.7	84	8	743	36.86	29.25
23	5	12/14/22	22:00	3.4	83	9	742	38.12	29.21
24	5	12/14/22	23:00	4.1	87	8	741	39.38	29.17
1	5	12/15/22	0:00	4.3	91	10	740	39.74	29.13
2	5	12/15/22	1:00	3.4	90	7	739	38.12	29.09
3	5	12/15/22	2:00	3.9	103	8	737	39.02	29.02
4	5	12/15/22	3:00	4.1	106	10	736	39.38	28.98
5	5	12/15/22	4:00	3.8	111	13	735	38.84	28.94
6	5	12/15/22	5:00	3.4	116	14	735	38.12	28.94
7	5	12/15/22	6:00	3.3	116	11	736	37.94	28.98
8	5	12/15/22	7:00	3.8	121	8	735	38.84	28.94
9	5	12/15/22	8:00	4.5	128	9	735	40.1	28.94
10	5	12/15/22	9:00	5.1	130	10	736	41.18	28.98
11	5	12/15/22	10:00	5.8	148	8	737	42.44	29.02
12	5	12/15/22	11:00	6.3	193	6	737	43.34	29.02
13	5	12/15/22	12:00	6.7	214	7	736	44.06	28.98
14	5	12/15/22	13:00	6.6	223	5	737	43.88	29.02
15	5	12/15/22	14:00	6.7	226	5	736	44.06	28.98
16	5	12/15/22	15:00	6.7	212	5	736	44.06	28.98
17	5	12/15/22	16:00	7	207	5	737	44.6	29.02
18	5	12/15/22	17:00	6.6	179	6	737	43.88	29.02

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
19	5	12/15/22	18:00	5.9	162	5	737	42.62	29.02
20	5	12/15/22	19:00	5.8	215	4	738	42.44	29.06
21	5	12/15/22	20:00	5.3	238	3	738	41.54	29.06
22	5	12/15/22	21:00	4.5	228	5	738	40.1	29.06
23	5	12/15/22	22:00	4	250	3	738	39.2	29.06
24	5	12/15/22	23:00	4	243	2	738	39.2	29.06
1	5	12/16/22	0:00	3.7	232	3	738	38.66	29.06
2	5	12/16/22	1:00	3.2	213	5	738	37.76	29.06
3	5	12/16/22	2:00	3	209	6	738	37.4	29.06
4	5	12/16/22	3:00	2.9	206	6	739	37.22	29.09
5	5	12/16/22	4:00	3	220	5	738	37.4	29.06
6	5	12/16/22	5:00	2.8	222	5	738	37.04	29.06
7	5	12/16/22	6:00	2.5	221	4	739	36.5	29.09
8	5	12/16/22	7:00	2	222	5	739	35.6	29.09
9	5	12/16/22	8:00	1.7	211	6	738	35.06	29.06
10	5	12/16/22	9:00	1.6	204	7	739	34.88	29.09
11	5	12/16/22	10:00	1.8	215	8	739	35.24	29.09
12	5	12/16/22	11:00	2	214	8	738	35.6	29.06
13	5	12/16/22	12:00	2	217	7	738	35.6	29.06
14	5	12/16/22	13:00	2.1	224	7	738	35.78	29.06
15	5	12/16/22	14:00	1.9	215	8	737	35.42	29.02
16	5	12/16/22	15:00	2.1	210	8	737	35.78	29.02
17	5	12/16/22	16:00	1.8	212	7	737	35.24	29.02
18	5	12/16/22	17:00	1.8	204	7	738	35.24	29.06
19	5	12/16/22	18:00	1.9	205	7	738	35.42	29.06
20	5	12/16/22	19:00	1.7	203	7	738	35.06	29.06
21	5	12/16/22	20:00	1.5	205	8	738	34.7	29.06
22	5	12/16/22	21:00	1.2	220	6	738	34.16	29.06
23	5	12/16/22	22:00	1	230	6	738	33.8	29.06
24	5	12/16/22	23:00	0.7	230	5	738	33.26	29.06
1	5	12/17/22	0:00	0.4	240	5	738	32.72	29.06
2	5	12/17/22	1:00	-0.1	240	4	737	31.82	29.02
3	5	12/17/22	2:00	-0.7	227	5	738	30.74	29.06
4	5	12/17/22	3:00	-0.9	225	5	738	30.38	29.06
5	5	12/17/22	4:00	-1	225	6	738	30.2	29.06
6	5	12/17/22	5:00	-1.2	227	6	738	29.84	29.06
7	5	12/17/22	6:00	-1.3	223	7	738	29.66	29.06
8	5	12/17/22	7:00	-1.6	228	6	738	29.12	29.06
9	5	12/17/22	8:00	-1.8	219	7	739	28.76	29.09
10	5	12/17/22	9:00	-1.6	220	6	739	29.12	29.09
11	5	12/17/22	10:00	-1.2	224	6	739	29.84	29.09
12	5	12/17/22	11:00	-0.8	223	7	738	30.56	29.06

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
13	5	12/17/22	12:00	-0.9	224	7	738	30.38	29.06
14	5	12/17/22	13:00	-0.4	234	6	738	31.28	29.06
15	5	12/17/22	14:00	-0.5	238	6	738	31.1	29.06
16	5	12/17/22	15:00	-0.6	242	5	739	30.92	29.09
17	5	12/17/22	16:00	-0.9	233	5	739	30.38	29.09
18	5	12/17/22	17:00	-1	229	5	740	30.2	29.13
19	5	12/17/22	18:00	-1.3	230	6	740	29.66	29.13
20	5	12/17/22	19:00	-1.6	233	5	740	29.12	29.13
21	5	12/17/22	20:00	-1.7	234	5	740	28.94	29.13
22	5	12/17/22	21:00	-1.6	258	4	740	29.12	29.13
23	5	12/17/22	22:00	-1.6	257	3	740	29.12	29.13
24	5	12/17/22	23:00	-1.9	257	4	741	28.58	29.17
1	5	12/18/22	0:00	-2.1	258	3	741	28.22	29.17
2	5	12/18/22	1:00	-2.4	242	4	741	27.68	29.17
3	5	12/18/22	2:00	-2.5	250	4	741	27.5	29.17
4	5	12/18/22	3:00	-2.5	248	3	742	27.5	29.21
5	5	12/18/22	4:00	-2.3	257	4	742	27.86	29.21
6	5	12/18/22	5:00	-2.3	248	3	742	27.86	29.21
7	5	12/18/22	6:00	-2.5	249	4	743	27.5	29.25
8	5	12/18/22	7:00	-2.7	242	5	743	27.14	29.25
9	5	12/18/22	8:00	-3.1	241	5	744	26.42	29.29
10	5	12/18/22	9:00	-3	255	4	744	26.6	29.29
11	5	12/18/22	10:00	-2.8	253	5	745	26.96	29.33
12	5	12/18/22	11:00	-2.6	253	4	745	27.32	29.33
13	5	12/18/22	12:00	-1.9	258	4	745	28.58	29.33
14	5	12/18/22	13:00	-1.3	263	4	746	29.66	29.37
15	5	12/18/22	14:00	-0.9	259	5	746	30.38	29.37
16	5	12/18/22	15:00	-1.2	261	4	747	29.84	29.41
17	5	12/18/22	16:00	-1.5	277	5	747	29.3	29.41
18	5	12/18/22	17:00	-2	258	5	748	28.4	29.45
19	5	12/18/22	18:00	-2.3	256	4	749	27.86	29.49
20	5	12/18/22	19:00	-2.9	257	4	749	26.78	29.49
21	5	12/18/22	20:00	-3.5	258	5	749	25.7	29.49
22	5	12/18/22	21:00	-4.1	260	5	750	24.62	29.53
23	5	12/18/22	22:00	-4.1	260	4	750	24.62	29.53
24	5	12/18/22	23:00	-3.9	257	4	750	24.98	29.53
1	5	12/19/22	0:00	-3.5	259	4	750	25.7	29.53
2	5	12/19/22	1:00	-3.3	253	4	750	26.06	29.53
3	5	12/19/22	2:00	-3	284	4	751	26.6	29.57
4	5	12/19/22	3:00	-2.8	283	4	751	26.96	29.57
5	5	12/19/22	4:00	-3	302	8	752	26.6	29.61
6	5	12/19/22	5:00	-3.2	303	8	752	26.24	29.61

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
7	5	12/19/22	6:00	-3.1	304	8	753	26.42	29.65
8	5	12/19/22	7:00	-2.8	306	8	753	26.96	29.65
9	5	12/19/22	8:00	-2.7	305	7	754	27.14	29.69
10	5	12/19/22	9:00	-2.8	319	7	754	26.96	29.69
11	5	12/19/22	10:00	-3	323	8	755	26.6	29.72
12	5	12/19/22	11:00	-3.3	318	7	755	26.06	29.72
13	5	12/19/22	12:00	-3.7	326	8	755	25.34	29.72
14	5	12/19/22	13:00	-3.8	330	8	755	25.16	29.72
15	5	12/19/22	14:00	-3.5	317	6	755	25.7	29.72
16	5	12/19/22	15:00	-3.6	324	7	756	25.52	29.76
17	5	12/19/22	16:00	-3.5	311	5	756	25.7	29.76
18	5	12/19/22	17:00	-3.5	330	5	756	25.7	29.76
19	5	12/19/22	18:00	-3.5	334	4	756	25.7	29.76
20	5	12/19/22	19:00	-3.5	321	4	757	25.7	29.80
21	5	12/19/22	20:00	-3.4	342	3	757	25.88	29.80
22	5	12/19/22	21:00	-3	332	2	757	26.6	29.80
23	5	12/19/22	22:00	-3.1	281	0	757	26.42	29.80
24	5	12/19/22	23:00	-2.6	129	1	757	27.32	29.80
1	5	12/20/22	0:00	-2.2	93	1	757	28.04	29.80
2	5	12/20/22	1:00	-2.6	132	2	757	27.32	29.80
3	5	12/20/22	2:00	-2.8	305	1	757	26.96	29.80
4	5	12/20/22	3:00	-3	147	5	757	26.6	29.80
5	5	12/20/22	4:00	-3	133	3	757	26.6	29.80
6	5	12/20/22	5:00	-3.1	131	4	757	26.42	29.80
7	5	12/20/22	6:00	-3.1	134	4	757	26.42	29.80
8	5	12/20/22	7:00	-3	142	5	756	26.6	29.76
9	5	12/20/22	8:00	-2.5	190	5	757	27.5	29.80
10	5	12/20/22	9:00	-2.4	187	8	757	27.68	29.80
11	5	12/20/22	10:00	-2.5	219	6	757	27.5	29.80
12	5	12/20/22	11:00	-2.4	214	7	757	27.68	29.80
13	5	12/20/22	12:00	-1.9	215	6	756	28.58	29.76
14	5	12/20/22	13:00	-1	199	6	755	30.2	29.72
15	5	12/20/22	14:00	-0.2	182	5	755	31.64	29.72
16	5	12/20/22	15:00	0	170	7	755	32	29.72
17	5	12/20/22	16:00	0.2	189	5	755	32.36	29.72
18	5	12/20/22	17:00	0	163	7	756	32	29.76
19	5	12/20/22	18:00	0	164	5	756	32	29.76
20	5	12/20/22	19:00	0.2	184	4	756	32.36	29.76
21	5	12/20/22	20:00	0.1	212	3	755	32.18	29.72
22	5	12/20/22	21:00	-0.1	218	3	755	31.82	29.72
23	5	12/20/22	22:00	-0.2	234	3	755	31.64	29.72
24	5	12/20/22	23:00	-0.4	247	2	755	31.28	29.72

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
1	5	12/21/22	0:00	-0.8	295	2	755	30.56	29.72
2	5	12/21/22	1:00	-1.1	303	4	755	30.02	29.72
3	5	12/21/22	2:00	-1.6	301	4	755	29.12	29.72
4	5	12/21/22	3:00	-1.6	304	5	755	29.12	29.72
5	5	12/21/22	4:00	-1.8	323	3	756	28.76	29.76
6	5	12/21/22	5:00	-1.7	323	2	756	28.94	29.76
7	5	12/21/22	6:00	-1.5	304	2	756	29.3	29.76
8	5	12/21/22	7:00	-2.1	325	4	756	28.22	29.76
9	5	12/21/22	8:00	-3.2	325	4	756	26.24	29.76
10	5	12/21/22	9:00	-3.9	327	5	757	24.98	29.80
11	5	12/21/22	10:00	-4.1	332	5	757	24.62	29.80
12	5	12/21/22	11:00	-3.3	324	4	756	26.06	29.76
13	5	12/21/22	12:00	-2	328	2	756	28.4	29.76
14	5	12/21/22	13:00	-0.8	153	1	755	30.56	29.72
15	5	12/21/22	14:00	-0.7	166	5	755	30.74	29.72
16	5	12/21/22	15:00	-0.5	188	4	754	31.1	29.69
17	5	12/21/22	16:00	-0.1	142	3	754	31.82	29.69
18	5	12/21/22	17:00	0	99	4	754	32	29.69
19	5	12/21/22	18:00	0.2	86	3	753	32.36	29.65
20	5	12/21/22	19:00	-0.2	83	3	753	31.64	29.65
21	5	12/21/22	20:00	0.4	101	3	753	32.72	29.65
22	5	12/21/22	21:00	0.1	93	3	752	32.18	29.61
23	5	12/21/22	22:00	0.2	93	4	752	32.36	29.61
24	5	12/21/22	23:00	0.2	92	3	751	32.36	29.57
1	6	12/22/22	0:00	0.3	84	3	750	32.54	29.53
2	6	12/22/22	1:00	0.8	94	3	749	33.44	29.49
3	6	12/22/22	2:00	1.2	98	3	748	34.16	29.45
4	6	12/22/22	3:00	1.2	57	3	748	34.16	29.45
5	6	12/22/22	4:00	1.8	72	3	747	35.24	29.41
6	6	12/22/22	5:00	2.2	88	3	746	35.96	29.37
7	6	12/22/22	6:00	2.1	81	3	745	35.78	29.33
8	6	12/22/22	7:00	2.3	109	3	745	36.14	29.33
9	6	12/22/22	8:00	2.1	110	4	745	35.78	29.33
10	6	12/22/22	9:00	2.2	123	5	744	35.96	29.29
11	6	12/22/22	10:00	2.8	134	5	744	37.04	29.29
12	6	12/22/22	11:00	3.5	143	7	743	38.3	29.25
13	6	12/22/22	12:00	4.3	163	7	742	39.74	29.21
14	6	12/22/22	13:00	5	172	8	741	41	29.17
15	6	12/22/22	14:00	5.3	167	7	740	41.54	29.13
16	6	12/22/22	15:00	5.2	156	6	739	41.36	29.09
17	6	12/22/22	16:00	4.8	135	8	738	40.64	29.06
18	6	12/22/22	17:00	3.7	134	9	737	38.66	29.02

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
19	6	12/22/22	18:00	3.3	132	6	736	37.94	28.98
20	6	12/22/22	19:00	3.8	136	5	734	38.84	28.90
21	6	12/22/22	20:00	4.5	132	9	733	40.1	28.86
22	6	12/22/22	21:00	4.6	142	9	732	40.28	28.82
23	6	12/22/22	22:00	4.6	154	8	730	40.28	28.74
24	6	12/22/22	23:00	4.6	176	6	730	40.28	28.74
1	6	12/23/22	0:00	4.4	242	4	729	39.92	28.70
2	6	12/23/22	1:00	1.8	307	11	729	35.24	28.70
3	6	12/23/22	2:00	-2.7	308	12	728	27.14	28.66
4	6	12/23/22	3:00	-4.8	309	13	729	23.36	28.70
5	6	12/23/22	4:00	-6.4	307	14	729	20.48	28.70
6	6	12/23/22	5:00	-8.4	307	15	729	16.88	28.70
7	6	12/23/22	6:00	-9.7	306	15	730	14.54	28.74
8	6	12/23/22	7:00	-10.2	296	11	730	13.64	28.74
9	6	12/23/22	8:00	-11	289	10	731	12.2	28.78
10	6	12/23/22	9:00	-12.2	267	7	731	10.04	28.78
11	6	12/23/22	10:00	-13.6	247	7	732	7.52	28.82
12	6	12/23/22	11:00	-15.9	246	8	732	3.38	28.82
13	6	12/23/22	12:00	-16.5	240	9	732	2.3	28.82
14	6	12/23/22	13:00	-16.7	241	10	732	1.94	28.82
15	6	12/23/22	14:00	-16.5	240	9	733	2.3	28.86
16	6	12/23/22	15:00	-16.4	244	9	733	2.48	28.86
17	6	12/23/22	16:00	-16.3	242	9	733	2.66	28.86
18	6	12/23/22	17:00	-16.3	240	9	734	2.66	28.90
19	6	12/23/22	18:00	-16.5	241	9	734	2.3	28.90
20	6	12/23/22	19:00	-16.7	242	9	735	1.94	28.94
21	6	12/23/22	20:00	-16.7	243	8	735	1.94	28.94
22	6	12/23/22	21:00	-16.6	241	9	735	2.12	28.94
23	6	12/23/22	22:00	-16.7	239	9	735	1.94	28.94
24	6	12/23/22	23:00	-16.8	233	9	735	1.76	28.94
1	6	12/24/22	0:00	-16.8	232	9	736	1.76	28.98
2	6	12/24/22	1:00	-16.4	235	9	735	2.48	28.94
3	6	12/24/22	2:00	-16.1	233	10	735	3.02	28.94
4	6	12/24/22	3:00	-15.7	234	10	736	3.74	28.98
5	6	12/24/22	4:00	-15.6	235	9	736	3.92	28.98
6	6	12/24/22	5:00	-15.8	233	9	736	3.56	28.98
7	6	12/24/22	6:00	-15.8	235	10	736	3.56	28.98
8	6	12/24/22	7:00	-15.8	232	10	736	3.56	28.98
9	6	12/24/22	8:00	-15.9	232	9	737	3.38	29.02
10	6	12/24/22	9:00	-15.9	233	9	737	3.38	29.02
11	6	12/24/22	10:00	-15.7	237	10	738	3.74	29.06
12	6	12/24/22	11:00	-14.9	235	10	738	5.18	29.06

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
13	6	12/24/22	12:00	-14	233	10	738	6.8	29.06
14	6	12/24/22	13:00	-13.8	233	9	737	7.16	29.02
15	6	12/24/22	14:00	-13.5	224	10	738	7.7	29.06
16	6	12/24/22	15:00	-13.2	228	9	738	8.24	29.06
17	6	12/24/22	16:00	-12.7	227	9	738	9.14	29.06
18	6	12/24/22	17:00	-12.1	232	8	739	10.22	29.09
19	6	12/24/22	18:00	-11.7	231	8	738	10.94	29.06
20	6	12/24/22	19:00	-11.1	233	8	739	12.02	29.09
21	6	12/24/22	20:00	-10.5	240	6	739	13.1	29.09
22	6	12/24/22	21:00	-10.1	238	7	739	13.82	29.09
23	6	12/24/22	22:00	-9.8	234	6	739	14.36	29.09
24	6	12/24/22	23:00	-9.4	229	6	739	15.08	29.09
1	6	12/25/22	0:00	-9.2	228	6	739	15.44	29.09
2	6	12/25/22	1:00	-8.8	240	5	739	16.16	29.09
3	6	12/25/22	2:00	-8.6	245	3	739	16.52	29.09
4	6	12/25/22	3:00	-8.6	260	3	740	16.52	29.13
5	6	12/25/22	4:00	-8.4	242	3	740	16.88	29.13
6	6	12/25/22	5:00	-8.6	228	3	741	16.52	29.17
7	6	12/25/22	6:00	-8.5	221	4	741	16.7	29.17
8	6	12/25/22	7:00	-8.6	222	5	741	16.52	29.17
9	6	12/25/22	8:00	-9.2	220	6	742	15.44	29.21
10	6	12/25/22	9:00	-10.1	222	7	742	13.82	29.21
11	6	12/25/22	10:00	-10.5	225	7	743	13.1	29.25
12	6	12/25/22	11:00	-10.5	225	7	743	13.1	29.25
13	6	12/25/22	12:00	-10.1	233	7	743	13.82	29.25
14	6	12/25/22	13:00	-9.7	231	6	743	14.54	29.25
15	6	12/25/22	14:00	-9.4	224	6	743	15.08	29.25
16	6	12/25/22	15:00	-8.8	229	5	743	16.16	29.25
17	6	12/25/22	16:00	-8.5	236	5	744	16.7	29.29
18	6	12/25/22	17:00	-8.5	234	5	745	16.7	29.33
19	6	12/25/22	18:00	-8.8	232	5	745	16.16	29.33
20	6	12/25/22	19:00	-9.1	231	5	746	15.62	29.37
21	6	12/25/22	20:00	-9.6	221	6	746	14.72	29.37
22	6	12/25/22	21:00	-9.9	226	6	746	14.18	29.37
23	6	12/25/22	22:00	-10	221	6	746	14	29.37
24	6	12/25/22	23:00	-10.3	224	5	746	13.46	29.37
1	6	12/26/22	0:00	-10.2	225	5	746	13.64	29.37
2	6	12/26/22	1:00	-10.1	225	5	746	13.82	29.37
3	6	12/26/22	2:00	-9.9	219	5	747	14.18	29.41
4	6	12/26/22	3:00	-9.8	212	6	747	14.36	29.41
5	6	12/26/22	4:00	-9.5	225	5	747	14.9	29.41
6	6	12/26/22	5:00	-9.4	217	5	748	15.08	29.45

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
7	6	12/26/22	6:00	-9.1	219	4	748	15.62	29.45
8	6	12/26/22	7:00	-8.9	217	5	748	15.98	29.45
9	6	12/26/22	8:00	-8.8	228	4	748	16.16	29.45
10	6	12/26/22	9:00	-8.5	223	3	749	16.7	29.49
11	6	12/26/22	10:00	-8.1	221	4	749	17.42	29.49
12	6	12/26/22	11:00	-7.7	227	3	749	18.14	29.49
13	6	12/26/22	12:00	-7.3	217	4	748	18.86	29.45
14	6	12/26/22	13:00	-6.7	209	5	748	19.94	29.45
15	6	12/26/22	14:00	-5.6	227	4	748	21.92	29.45
16	6	12/26/22	15:00	-5.1	239	3	749	22.82	29.49
17	6	12/26/22	16:00	-4.9	240	3	749	23.18	29.49
18	6	12/26/22	17:00	-5	230	3	749	23	29.49
19	6	12/26/22	18:00	-5	220	4	749	23	29.49
20	6	12/26/22	19:00	-5	218	4	750	23	29.53
21	6	12/26/22	20:00	-5.1	221	4	750	22.82	29.53
22	6	12/26/22	21:00	-5.3	223	4	750	22.46	29.53
23	6	12/26/22	22:00	-5.3	235	3	750	22.46	29.53
24	6	12/26/22	23:00	-5.3	241	3	750	22.46	29.53
1	6	12/27/22	0:00	-5.2	243	3	750	22.64	29.53
2	6	12/27/22	1:00	-5.2	238	2	750	22.64	29.53
3	6	12/27/22	2:00	-5.3	245	2	750	22.46	29.53
4	6	12/27/22	3:00	-5.2	242	2	750	22.64	29.53
5	6	12/27/22	4:00	-5.2	230	2	750	22.64	29.53
6	6	12/27/22	5:00	-5.2	233	2	750	22.64	29.53
7	6	12/27/22	6:00	-5.6	243	2	750	21.92	29.53
8	6	12/27/22	7:00	-5.3	223	3	751	22.46	29.57
9	6	12/27/22	8:00	-5.1	217	4	751	22.82	29.57
10	6	12/27/22	9:00	-5.1	209	6	751	22.82	29.57
11	6	12/27/22	10:00	-4.9	209	5	751	23.18	29.57
12	6	12/27/22	11:00	-4.3	212	5	750	24.26	29.53
13	6	12/27/22	12:00	-3.6	202	7	750	25.52	29.53
14	6	12/27/22	13:00	-2.9	203	8	749	26.78	29.49
15	6	12/27/22	14:00	-2.4	205	9	749	27.68	29.49
16	6	12/27/22	15:00	-2.6	209	8	749	27.32	29.49
17	6	12/27/22	16:00	-3.5	207	10	748	25.7	29.45
18	6	12/27/22	17:00	-3.8	221	6	749	25.16	29.49
19	6	12/27/22	18:00	-4.1	215	6	749	24.62	29.49
20	6	12/27/22	19:00	-4	207	7	748	24.8	29.45
21	6	12/27/22	20:00	-4	205	9	748	24.8	29.45
22	6	12/27/22	21:00	-3.9	201	8	747	24.98	29.41
23	6	12/27/22	22:00	-3	192	9	747	26.6	29.41
24	6	12/27/22	23:00	-2.2	195	10	746	28.04	29.37

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
1	6	12/28/22	0:00	-1.3	201	12	745	29.66	29.33
2	6	12/28/22	1:00	-1	198	12	745	30.2	29.33
3	6	12/28/22	2:00	-0.5	204	12	745	31.1	29.33
4	6	12/28/22	3:00	-0.2	206	10	745	31.64	29.33
5	6	12/28/22	4:00	-0.1	203	11	745	31.82	29.33
6	6	12/28/22	5:00	-0.2	202	10	745	31.64	29.33
7	6	12/28/22	6:00	-0.1	202	9	745	31.82	29.33
8	6	12/28/22	7:00	-0.2	202	9	745	31.64	29.33
9	6	12/28/22	8:00	-0.3	201	8	746	31.46	29.37
10	6	12/28/22	9:00	-0.4	201	8	745	31.28	29.33
11	6	12/28/22	10:00	0.3	202	10	746	32.54	29.37
12	6	12/28/22	11:00	1.4	202	11	745	34.52	29.33
13	6	12/28/22	12:00	2.8	199	11	745	37.04	29.33
14	6	12/28/22	13:00	3.5	194	11	744	38.3	29.29
15	6	12/28/22	14:00	3.8	194	12	745	38.84	29.33
16	6	12/28/22	15:00	4.7	197	11	745	40.46	29.33
17	6	12/28/22	16:00	4.2	181	11	745	39.56	29.33
18	6	12/28/22	17:00	3.6	176	11	745	38.48	29.33
19	6	12/28/22	18:00	3.5	177	12	745	38.3	29.33
20	6	12/28/22	19:00	3.6	181	14	745	38.48	29.33
21	6	12/28/22	20:00	3.9	190	12	745	39.02	29.33
22	6	12/28/22	21:00	3.6	182	12	744	38.48	29.29
23	6	12/28/22	22:00	3.9	181	14	744	39.02	29.29
24	6	12/28/22	23:00	4.1	181	13	744	39.38	29.29
1	6	12/29/22	0:00	4.4	184	11	744	39.92	29.29
2	6	12/29/22	1:00	4.1	179	12	744	39.38	29.29
3	6	12/29/22	2:00	4.1	186	9	744	39.38	29.29
4	6	12/29/22	3:00	3.6	178	10	744	38.48	29.29
5	6	12/29/22	4:00	3.9	179	8	744	39.02	29.29
6	6	12/29/22	5:00	4.3	182	8	744	39.74	29.29
7	6	12/29/22	6:00	4	180	9	744	39.2	29.29
8	6	12/29/22	7:00	3.4	179	8	745	38.12	29.33
9	6	12/29/22	8:00	3.3	179	8	745	37.94	29.33
10	6	12/29/22	9:00	3.6	177	10	745	38.48	29.33
11	6	12/29/22	10:00	4.2	178	10	746	39.56	29.37
12	6	12/29/22	11:00	4.9	179	9	745	40.82	29.33
13	6	12/29/22	12:00	5.6	177	8	745	42.08	29.33
14	6	12/29/22	13:00	6.3	177	9	744	43.34	29.29
15	6	12/29/22	14:00	6.6	176	7	744	43.88	29.29
16	6	12/29/22	15:00	8	176	6	745	46.4	29.33
17	6	12/29/22	16:00	9	186	5	745	48.2	29.33
18	6	12/29/22	17:00	9.4	186	6	745	48.92	29.33

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
19	6	12/29/22	18:00	8.6	180	7	745	47.48	29.33
20	6	12/29/22	19:00	8.8	180	9	746	47.84	29.37
21	6	12/29/22	20:00	8.4	177	9	746	47.12	29.37
22	6	12/29/22	21:00	8.6	178	11	746	47.48	29.37
23	6	12/29/22	22:00	8.5	179	7	746	47.3	29.37
24	6	12/29/22	23:00	9	179	8	745	48.2	29.33
1	6	12/30/22	0:00	9	180	9	745	48.2	29.33
2	6	12/30/22	1:00	9.4	183	9	745	48.92	29.33
3	6	12/30/22	2:00	8.8	178	9	745	47.84	29.33
4	6	12/30/22	3:00	8.8	179	7	745	47.84	29.33
5	6	12/30/22	4:00	9.2	184	7	745	48.56	29.33
6	6	12/30/22	5:00	9	174	7	745	48.2	29.33
7	6	12/30/22	6:00	8.6	174	7	745	47.48	29.33
8	6	12/30/22	7:00	9.1	178	7	745	48.38	29.33
9	6	12/30/22	8:00	9.2	178	7	745	48.56	29.33
10	6	12/30/22	9:00	9.4	185	8	745	48.92	29.33
11	6	12/30/22	10:00	9.2	179	7	745	48.56	29.33
12	6	12/30/22	11:00	9.4	185	8	745	48.92	29.33
13	6	12/30/22	12:00	10.4	195	8	744	50.72	29.29
14	6	12/30/22	13:00	10.8	196	8	744	51.44	29.29
15	6	12/30/22	14:00	12.4	200	6	744	54.32	29.29
16	6	12/30/22	15:00	12.4	195	6	744	54.32	29.29
17	6	12/30/22	16:00	12.5	209	7	744	54.5	29.29
18	6	12/30/22	17:00	11.4	193	6	744	52.52	29.29
19	6	12/30/22	18:00	10.9	195	4	744	51.62	29.29
20	6	12/30/22	19:00	9.7	163	3	744	49.46	29.29
21	6	12/30/22	20:00	9.6	167	4	745	49.28	29.33
22	6	12/30/22	21:00	9.6	191	2	744	49.28	29.29
23	6	12/30/22	22:00	9.6	195	1	744	49.28	29.29
24	6	12/30/22	23:00	9.5	68	0	744	49.1	29.29
1	6	12/31/22	0:00	9	322	3	743	48.2	29.25
2	6	12/31/22	1:00	8.9	6	1	743	48.02	29.25
3	6	12/31/22	2:00	9.1	64	0	742	48.38	29.21
4	6	12/31/22	3:00	9	43	1	742	48.2	29.21
5	6	12/31/22	4:00	8.5	61	3	742	47.3	29.21
6	6	12/31/22	5:00	8.1	330	1	741	46.58	29.17
7	6	12/31/22	6:00	8.1	334	5	741	46.58	29.17
8	6	12/31/22	7:00	7.9	336	4	742	46.22	29.21
9	6	12/31/22	8:00	7.3	337	6	741	45.14	29.17
10	6	12/31/22	9:00	6.7	339	5	741	44.06	29.17
11	6	12/31/22	10:00	6.6	335	3	741	43.88	29.17
12	6	12/31/22	11:00	6.6	325	4	741	43.88	29.17

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
13	6	12/31/22	12:00	6.5	319	5	741	43.7	29.17
14	6	12/31/22	13:00	6.5	306	6	741	43.7	29.17
15	6	12/31/22	14:00	6.3	309	7	741	43.34	29.17
16	6	12/31/22	15:00	5.9	313	7	741	42.62	29.17
17	6	12/31/22	16:00	5.9	305	6	741	42.62	29.17
18	6	12/31/22	17:00	5.6	310	5	742	42.08	29.21
19	6	12/31/22	18:00	5.2	298	4	742	41.36	29.21
20	6	12/31/22	19:00	4.6	305	5	743	40.28	29.25
21	6	12/31/22	20:00	4.3	303	5	743	39.74	29.25
22	6	12/31/22	21:00	4.6	301	4	743	40.28	29.25
23	6	12/31/22	22:00	4.8	288	3	743	40.64	29.25
24	6	12/31/22	23:00	4.6	255	3	743	40.28	29.25
1	6	1/1/23	0:00	4	288	2	743	39.2	29.25
2	6	1/1/23	1:00	3.9	236	3	743	39.02	29.25
3	6	1/1/23	2:00	3.5	231	3	743	38.3	29.25
4	6	1/1/23	3:00	3.2	204	4	744	37.76	29.29
5	6	1/1/23	4:00	3	206	3	744	37.4	29.29
6	6	1/1/23	5:00	3.1	220	3	744	37.58	29.29
7	6	1/1/23	6:00	3	184	3	743	37.4	29.25
8	6	1/1/23	7:00	2.9	139	3	743	37.22	29.25
9	6	1/1/23	8:00	2.7	136	6	743	36.86	29.25
10	6	1/1/23	9:00	2.6	156	8	743	36.68	29.25
11	6	1/1/23	10:00	2.7	176	5	743	36.86	29.25
12	6	1/1/23	11:00	2.9	170	6	743	37.22	29.25
13	6	1/1/23	12:00	3.5	190	7	743	38.3	29.25
14	6	1/1/23	13:00	4.4	212	3	743	39.92	29.25
15	6	1/1/23	14:00	5.6	262	3	743	42.08	29.25
16	6	1/1/23	15:00	6.2	222	3	743	43.16	29.25
17	6	1/1/23	16:00	7	210	5	744	44.6	29.29
18	6	1/1/23	17:00	7.8	214	4	744	46.04	29.29
19	6	1/1/23	18:00	7.9	219	4	745	46.22	29.33
20	6	1/1/23	19:00	8.2	231	4	745	46.76	29.33
21	6	1/1/23	20:00	8.4	241	4	745	47.12	29.33
22	6	1/1/23	21:00	7.8	217	3	745	46.04	29.33
23	6	1/1/23	22:00	7.2	232	2	745	44.96	29.33
24	6	1/1/23	23:00	7.3	237	3	746	45.14	29.37
1	6	1/2/23	0:00	7.3	238	2	746	45.14	29.37
2	6	1/2/23	1:00	7.2	245	3	746	44.96	29.37
3	6	1/2/23	2:00	7	252	2	746	44.6	29.37
4	6	1/2/23	3:00	6.7	304	3	746	44.06	29.37
5	6	1/2/23	4:00	6	341	3	746	42.8	29.37
6	6	1/2/23	5:00	5.7	325	0	747	42.26	29.41

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
7	6	1/2/23	6:00	5.6	221	0	746	42.08	29.37
8	6	1/2/23	7:00	5.4	350	1	747	41.72	29.41
9	6	1/2/23	8:00	4.9	128	1	747	40.82	29.41
10	6	1/2/23	9:00	3.7	171	2	748	38.66	29.45
11	6	1/2/23	10:00	3.8	158	1	748	38.84	29.45
12	6	1/2/23	11:00	5.1	102	1	748	41.18	29.45
13	6	1/2/23	12:00	6.3	126	2	747	43.34	29.41
14	6	1/2/23	13:00	7.9	116	2	747	46.22	29.41
15	6	1/2/23	14:00	8.6	143	1	746	47.48	29.37
16	6	1/2/23	15:00	8.5	99	2	747	47.3	29.41
17	6	1/2/23	16:00	6.9	66	4	747	44.42	29.41
18	6	1/2/23	17:00	7	74	3	747	44.6	29.41
19	6	1/2/23	18:00	7.1	101	2	747	44.78	29.41
20	6	1/2/23	19:00	6.1	72	4	747	42.98	29.41
21	6	1/2/23	20:00	5.6	77	3	746	42.08	29.37
22	6	1/2/23	21:00	4.7	70	4	746	40.46	29.37
23	6	1/2/23	22:00	4.5	77	3	746	40.1	29.37
24	6	1/2/23	23:00	4.6	77	2	745	40.28	29.33
1	6	1/3/23	0:00	4.6	65	4	745	40.28	29.33
2	6	1/3/23	1:00	5	58	3	744	41	29.29
3	6	1/3/23	2:00	4.8	84	4	743	40.64	29.25
4	6	1/3/23	3:00	4.2	64	5	743	39.56	29.25
5	6	1/3/23	4:00	4.8	67	4	742	40.64	29.21
6	6	1/3/23	5:00	4.1	65	6	741	39.38	29.17
7	6	1/3/23	6:00	4.1	65	6	741	39.38	29.17
8	6	1/3/23	7:00	4.5	58	5	740	40.1	29.13
9	6	1/3/23	8:00	4.7	73	5	740	40.46	29.13
10	6	1/3/23	9:00	4.5	70	6	739	40.1	29.09
11	6	1/3/23	10:00	4.7	67	5	739	40.46	29.09
12	6	1/3/23	11:00	5.1	67	5	738	41.18	29.06
13	6	1/3/23	12:00	5.4	68	5	737	41.72	29.02
14	6	1/3/23	13:00	6.1	63	4	737	42.98	29.02
15	6	1/3/23	14:00	6.4	49	3	737	43.52	29.02
16	6	1/3/23	15:00	6.5	54	3	737	43.7	29.02
17	6	1/3/23	16:00	6.7	74	3	737	44.06	29.02
18	6	1/3/23	17:00	6.6	71	3	737	43.88	29.02
19	6	1/3/23	18:00	6.7	70	3	737	44.06	29.02
20	6	1/3/23	19:00	6.7	72	3	737	44.06	29.02
21	6	1/3/23	20:00	6.5	72	3	737	43.7	29.02
22	6	1/3/23	21:00	6.4	75	2	737	43.52	29.02
23	6	1/3/23	22:00	6.4	82	1	737	43.52	29.02
24	6	1/3/23	23:00	6.5	86	1	737	43.7	29.02

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
1	6	1/4/23	0:00	6.6	110	1	737	43.88	29.02
2	6	1/4/23	1:00	6.5	130	1	737	43.7	29.02
3	6	1/4/23	2:00	6.5	131	2	737	43.7	29.02
4	6	1/4/23	3:00	6.8	126	3	737	44.24	29.02
5	6	1/4/23	4:00	7.4	124	1	737	45.32	29.02
6	6	1/4/23	5:00	7.5	128	1	737	45.5	29.02
7	6	1/4/23	6:00	7.6	91	1	737	45.68	29.02
8	6	1/4/23	7:00	8.1	135	3	737	46.58	29.02
9	6	1/4/23	8:00	9	165	5	737	48.2	29.02
10	6	1/4/23	9:00	9.8	168	7	737	49.64	29.02
11	6	1/4/23	10:00	10	152	3	737	50	29.02
12	6	1/4/23	11:00	10.9	165	3	737	51.62	29.02
13	6	1/4/23	12:00	11.5	161	5	736	52.7	28.98
14	6	1/4/23	13:00	12.4	187	5	735	54.32	28.94
15	6	1/4/23	14:00	12.6	190	6	735	54.68	28.94
16	6	1/4/23	15:00	12	164	5	735	53.6	28.94
17	6	1/4/23	16:00	12.5	195	3	736	54.5	28.98
18	6	1/4/23	17:00	12.2	303	9	736	53.96	28.98
19	6	1/4/23	18:00	10.3	299	6	738	50.54	29.06
20	6	1/4/23	19:00	9.7	281	3	739	49.46	29.09
21	6	1/4/23	20:00	8.7	247	5	740	47.66	29.13
22	6	1/4/23	21:00	7.6	230	6	740	45.68	29.13
23	6	1/4/23	22:00	6.9	233	6	740	44.42	29.13
24	6	1/4/23	23:00	5.6	243	5	741	42.08	29.17
1	6	1/5/23	0:00	4.8	242	5	742	40.64	29.21
2	6	1/5/23	1:00	4.3	237	5	742	39.74	29.21
3	6	1/5/23	2:00	4	234	5	742	39.2	29.21
4	6	1/5/23	3:00	4	227	5	742	39.2	29.21
5	6	1/5/23	4:00	3.3	215	6	742	37.94	29.21
6	6	1/5/23	5:00	3	217	5	742	37.4	29.21
7	6	1/5/23	6:00	3	210	6	742	37.4	29.21
8	6	1/5/23	7:00	3	201	6	742	37.4	29.21
9	6	1/5/23	8:00	3.1	204	7	742	37.58	29.21
10	6	1/5/23	9:00	3.1	202	6	742	37.58	29.21
11	6	1/5/23	10:00	3	185	6	742	37.4	29.21
12	6	1/5/23	11:00	3.2	176	8	742	37.76	29.21
13	6	1/5/23	12:00	3.7	175	9	742	38.66	29.21
14	6	1/5/23	13:00	4	173	9	741	39.2	29.17
15	6	1/5/23	14:00	4.2	177	9	741	39.56	29.17
16	6	1/5/23	15:00	4.4	169	8	741	39.92	29.17
17	6	1/5/23	16:00	3.9	199	7	742	39.02	29.21
18	6	1/5/23	17:00	4.4	209	7	742	39.92	29.21

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
19	6	1/5/23	18:00	4.2	209	6	742	39.56	29.21
20	6	1/5/23	19:00	3.6	219	6	743	38.48	29.25
21	6	1/5/23	20:00	2.6	250	4	743	36.68	29.25
22	6	1/5/23	21:00	2.3	224	4	743	36.14	29.25
23	6	1/5/23	22:00	2	232	4	743	35.6	29.25
24	6	1/5/23	23:00	1.8	228	4	743	35.24	29.25
1	7	1/6/23	0:00	1.6	237	4	743	34.88	29.25
2	7	1/6/23	1:00	1.5	241	4	743	34.7	29.25
3	7	1/6/23	2:00	1.6	240	4	744	34.88	29.29
4	7	1/6/23	3:00	1.6	239	4	744	34.88	29.29
5	7	1/6/23	4:00	1.7	240	4	744	35.06	29.29
6	7	1/6/23	5:00	1.6	252	2	745	34.88	29.33
7	7	1/6/23	6:00	1.7	250	2	745	35.06	29.33
8	7	1/6/23	7:00	1.7	229	4	746	35.06	29.37
9	7	1/6/23	8:00	1.3	229	4	746	34.34	29.37
10	7	1/6/23	9:00	1.3	223	4	747	34.34	29.41
11	7	1/6/23	10:00	1.7	235	4	747	35.06	29.41
12	7	1/6/23	11:00	2.1	241	5	747	35.78	29.41
13	7	1/6/23	12:00	2.6	238	6	747	36.68	29.41
14	7	1/6/23	13:00	3.4	243	4	747	38.12	29.41
15	7	1/6/23	14:00	3.6	241	5	747	38.48	29.41
16	7	1/6/23	15:00	3.6	247	3	747	38.48	29.41
17	7	1/6/23	16:00	3.3	243	4	748	37.94	29.45
18	7	1/6/23	17:00	3.1	244	3	748	37.58	29.45
19	7	1/6/23	18:00	3.2	242	4	749	37.76	29.49
20	7	1/6/23	19:00	3	242	4	749	37.4	29.49
21	7	1/6/23	20:00	2.8	243	4	749	37.04	29.49
22	7	1/6/23	21:00	2.6	240	5	750	36.68	29.53
23	7	1/6/23	22:00	2	244	3	750	35.6	29.53
24	7	1/6/23	23:00	2	282	2	750	35.6	29.53
1	7	1/7/23	0:00	2	280	2	750	35.6	29.53
2	7	1/7/23	1:00	1.6	294	5	750	34.88	29.53
3	7	1/7/23	2:00	1.5	296	6	750	34.7	29.53
4	7	1/7/23	3:00	1.6	296	5	750	34.88	29.53
5	7	1/7/23	4:00	1.5	294	4	750	34.7	29.53
6	7	1/7/23	5:00	1.4	299	5	751	34.52	29.57
7	7	1/7/23	6:00	1.3	303	6	751	34.34	29.57
8	7	1/7/23	7:00	1.3	306	5	751	34.34	29.57
9	7	1/7/23	8:00	1.4	302	5	752	34.52	29.61
10	7	1/7/23	9:00	1.3	304	5	752	34.34	29.61
11	7	1/7/23	10:00	1	329	5	753	33.8	29.65
12	7	1/7/23	11:00	1.2	338	6	753	34.16	29.65

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
13	7	1/7/23	12:00	1	325	6	753	33.8	29.65
14	7	1/7/23	13:00	0.5	334	8	753	32.9	29.65
15	7	1/7/23	14:00	0.6	334	8	753	33.08	29.65
16	7	1/7/23	15:00	0.5	336	6	754	32.9	29.69
17	7	1/7/23	16:00	0.5	335	4	754	32.9	29.69
18	7	1/7/23	17:00	0.6	332	3	754	33.08	29.69
19	7	1/7/23	18:00	0.4	345	3	754	32.72	29.69
20	7	1/7/23	19:00	0.3	348	3	755	32.54	29.72
21	7	1/7/23	20:00	0.1	338	2	755	32.18	29.72
22	7	1/7/23	21:00	0.2	356	2	755	32.36	29.72
23	7	1/7/23	22:00	0.2	334	2	755	32.36	29.72
24	7	1/7/23	23:00	0.1	353	1	755	32.18	29.72
1	7	1/8/23	0:00	-0.3	203	1	755	31.46	29.72
2	7	1/8/23	1:00	-0.4	206	2	754	31.28	29.69
3	7	1/8/23	2:00	-0.4	264	1	754	31.28	29.69
4	7	1/8/23	3:00	-0.4	204	2	754	31.28	29.69
5	7	1/8/23	4:00	-0.4	201	2	754	31.28	29.69
6	7	1/8/23	5:00	-0.5	163	3	753	31.1	29.65
7	7	1/8/23	6:00	-0.5	142	2	753	31.1	29.65
8	7	1/8/23	7:00	-0.5	201	3	753	31.1	29.65
9	7	1/8/23	8:00	-0.4	167	2	752	31.28	29.61
10	7	1/8/23	9:00	-0.3	213	2	752	31.46	29.61
11	7	1/8/23	10:00	0	234	2	752	32	29.61
12	7	1/8/23	11:00	0.1	221	3	751	32.18	29.57
13	7	1/8/23	12:00	0.5	224	3	751	32.9	29.57
14	7	1/8/23	13:00	0.7	238	3	750	33.26	29.53
15	7	1/8/23	14:00	0.9	238	3	749	33.62	29.49
16	7	1/8/23	15:00	0.8	298	3	749	33.44	29.49
17	7	1/8/23	16:00	0.5	313	4	748	32.9	29.45
18	7	1/8/23	17:00	0.4	316	4	748	32.72	29.45
19	7	1/8/23	18:00	0.1	310	4	748	32.18	29.45
20	7	1/8/23	19:00	0.1	287	2	748	32.18	29.45
21	7	1/8/23	20:00	-0.2	304	4	748	31.64	29.45
22	7	1/8/23	21:00	-0.7	305	5	748	30.74	29.45
23	7	1/8/23	22:00	-0.8	308	5	748	30.56	29.45
24	7	1/8/23	23:00	-1.1	306	7	748	30.02	29.45
1	7	1/9/23	0:00	-1.2	303	6	748	29.84	29.45
2	7	1/9/23	1:00	-1.2	306	6	747	29.84	29.41
3	7	1/9/23	2:00	-1.2	302	7	747	29.84	29.41
4	7	1/9/23	3:00	-1	299	6	747	30.2	29.41
5	7	1/9/23	4:00	-0.8	289	3	747	30.56	29.41
6	7	1/9/23	5:00	-1	246	2	747	30.2	29.41

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
7	7	1/9/23	6:00	-1.2	242	4	747	29.84	29.41
8	7	1/9/23	7:00	-1.6	227	4	748	29.12	29.45
9	7	1/9/23	8:00	-1.8	236	5	748	28.76	29.45
10	7	1/9/23	9:00	-1.7	248	4	748	28.94	29.45
11	7	1/9/23	10:00	-1	247	4	748	30.2	29.45
12	7	1/9/23	11:00	0.2	248	4	748	32.36	29.45
13	7	1/9/23	12:00	1.6	241	4	747	34.88	29.41
14	7	1/9/23	13:00	2.8	237	4	746	37.04	29.37
15	7	1/9/23	14:00	3.8	227	6	746	38.84	29.37
16	7	1/9/23	15:00	4.4	230	5	746	39.92	29.37
17	7	1/9/23	16:00	4.6	225	6	746	40.28	29.37
18	7	1/9/23	17:00	4.3	221	5	746	39.74	29.37
19	7	1/9/23	18:00	3.5	213	5	746	38.3	29.37
20	7	1/9/23	19:00	2.8	214	5	746	37.04	29.37
21	7	1/9/23	20:00	2.2	216	5	746	35.96	29.37
22	7	1/9/23	21:00	1.7	214	5	746	35.06	29.37
23	7	1/9/23	22:00	1.1	205	5	746	33.98	29.37
24	7	1/9/23	23:00	0.9	208	4	746	33.62	29.37
1	7	1/10/23	0:00	1.1	225	3	746	33.98	29.37
2	7	1/10/23	1:00	0.4	206	2	746	32.72	29.37
3	7	1/10/23	2:00	0.2	194	4	746	32.36	29.37
4	7	1/10/23	3:00	0.4	199	3	746	32.72	29.37
5	7	1/10/23	4:00	0.8	178	1	745	33.44	29.33
6	7	1/10/23	5:00	0.4	146	2	745	32.72	29.33
7	7	1/10/23	6:00	1.1	109	2	745	33.98	29.33
8	7	1/10/23	7:00	0.6	117	3	745	33.08	29.33
9	7	1/10/23	8:00	1.2	91	2	745	34.16	29.33
10	7	1/10/23	9:00	1.5	111	3	745	34.7	29.33
11	7	1/10/23	10:00	0.8	143	3	745	33.44	29.33
12	7	1/10/23	11:00	2.8	99	3	745	37.04	29.33
13	7	1/10/23	12:00	3.6	68	3	744	38.48	29.29
14	7	1/10/23	13:00	4.4	63	4	744	39.92	29.29
15	7	1/10/23	14:00	4.2	62	4	744	39.56	29.29
16	7	1/10/23	15:00	4.7	61	3	744	40.46	29.29
17	7	1/10/23	16:00	4.5	64	5	744	40.1	29.29
18	7	1/10/23	17:00	4.1	63	5	745	39.38	29.33
19	7	1/10/23	18:00	3.9	103	5	745	39.02	29.33
20	7	1/10/23	19:00	4	107	4	745	39.2	29.33
21	7	1/10/23	20:00	4	89	3	745	39.2	29.33
22	7	1/10/23	21:00	2.9	70	5	745	37.22	29.33
23	7	1/10/23	22:00	2.8	97	3	745	37.04	29.33
24	7	1/10/23	23:00	2.3	108	3	746	36.14	29.37

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
1	7	1/11/23	0:00	2.4	101	3	745	36.32	29.33
2	7	1/11/23	1:00	2	101	4	745	35.6	29.33
3	7	1/11/23	2:00	2	105	4	745	35.6	29.33
4	7	1/11/23	3:00	1.8	107	5	745	35.24	29.33
5	7	1/11/23	4:00	1.9	101	6	745	35.42	29.33
6	7	1/11/23	5:00	2	106	5	745	35.6	29.33
7	7	1/11/23	6:00	2.2	103	4	744	35.96	29.29
8	7	1/11/23	7:00	1.8	110	6	744	35.24	29.29
9	7	1/11/23	8:00	2	109	5	744	35.6	29.29
10	7	1/11/23	9:00	2.4	106	3	744	36.32	29.29
11	7	1/11/23	10:00	3	105	4	744	37.4	29.29
12	7	1/11/23	11:00	2.9	113	6	744	37.22	29.29
13	7	1/11/23	12:00	4.1	130	6	743	39.38	29.25
14	7	1/11/23	13:00	5	132	5	742	41	29.21
15	7	1/11/23	14:00	5.6	129	5	742	42.08	29.21
16	7	1/11/23	15:00	6.7	114	4	742	44.06	29.21
17	7	1/11/23	16:00	7.3	98	3	742	45.14	29.21
18	7	1/11/23	17:00	7.1	95	4	742	44.78	29.21
19	7	1/11/23	18:00	6.3	102	4	742	43.34	29.21
20	7	1/11/23	19:00	5.2	113	5	741	41.36	29.17
21	7	1/11/23	20:00	5	110	5	741	41	29.17
22	7	1/11/23	21:00	5.2	106	4	741	41.36	29.17
23	7	1/11/23	22:00	5.7	110	3	741	42.26	29.17
24	7	1/11/23	23:00	5.5	132	5	741	41.9	29.17
1	7	1/12/23	0:00	5.2	139	4	740	41.36	29.13
2	7	1/12/23	1:00	5.8	135	2	740	42.44	29.13
3	7	1/12/23	2:00	6	189	4	740	42.8	29.13
4	7	1/12/23	3:00	6	209	3	741	42.8	29.17
5	7	1/12/23	4:00	6.5	222	3	740	43.7	29.13
6	7	1/12/23	5:00	6.5	304	3	740	43.7	29.13
7	7	1/12/23	6:00	6.1	304	3	741	42.98	29.17
8	7	1/12/23	7:00	6	321	3	741	42.8	29.17
9	7	1/12/23	8:00	6	337	3	741	42.8	29.17
10	7	1/12/23	9:00	6	349	5	741	42.8	29.17
11	7	1/12/23	10:00	6	11	5	741	42.8	29.17
12	7	1/12/23	11:00	5.6	7	6	740	42.08	29.13
13	7	1/12/23	12:00	5.4	360	6	740	41.72	29.13
14	7	1/12/23	13:00	5.2	10	6	739	41.36	29.09
15	7	1/12/23	14:00	5	5	8	739	41	29.09
16	7	1/12/23	15:00	4.3	2	10	739	39.74	29.09
17	7	1/12/23	16:00	3.9	360	11	739	39.02	29.09
18	7	1/12/23	17:00	3.8	356	10	739	38.84	29.09

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
19	7	1/12/23	18:00	3.5	349	13	740	38.3	29.13
20	7	1/12/23	19:00	3.4	347	11	740	38.12	29.13
21	7	1/12/23	20:00	3.2	342	13	741	37.76	29.17
22	7	1/12/23	21:00	2.8	349	14	741	37.04	29.17
23	7	1/12/23	22:00	2.4	349	14	741	36.32	29.17
24	7	1/12/23	23:00	1.7	343	13	742	35.06	29.21
1	7	1/13/23	0:00	1.6	339	13	742	34.88	29.21
2	7	1/13/23	1:00	1.5	338	12	742	34.7	29.21
3	7	1/13/23	2:00	1	336	14	742	33.8	29.21
4	7	1/13/23	3:00	0.6	338	14	743	33.08	29.25
5	7	1/13/23	4:00	0.2	338	13	743	32.36	29.25
6	7	1/13/23	5:00	-0.3	340	14	744	31.46	29.29
7	7	1/13/23	6:00	-0.7	338	13	744	30.74	29.29
8	7	1/13/23	7:00	-0.8	334	12	745	30.56	29.33
9	7	1/13/23	8:00	-0.9	332	12	745	30.38	29.33
10	7	1/13/23	9:00	-1.1	336	12	746	30.02	29.37
11	7	1/13/23	10:00	-1.1	341	13	746	30.02	29.37
12	7	1/13/23	11:00	-1.2	341	12	746	29.84	29.37
13	7	1/13/23	12:00	-1.3	341	12	746	29.66	29.37
14	7	1/13/23	13:00	-1.4	337	13	746	29.48	29.37
15	7	1/13/23	14:00	-1.5	340	12	746	29.3	29.37
16	7	1/13/23	15:00	-1.2	340	12	746	29.84	29.37
17	7	1/13/23	16:00	-1.2	339	14	747	29.84	29.41
18	7	1/13/23	17:00	-1.3	342	14	747	29.66	29.41
19	7	1/13/23	18:00	-1.6	340	14	748	29.12	29.45
20	7	1/13/23	19:00	-1.7	343	12	748	28.94	29.45
21	7	1/13/23	20:00	-2	342	14	749	28.4	29.49
22	7	1/13/23	21:00	-2.2	346	10	749	28.04	29.49
23	7	1/13/23	22:00	-2.6	356	10	749	27.32	29.49
24	7	1/13/23	23:00	-3	346	9	749	26.6	29.49
1	7	1/14/23	0:00	-3.4	346	9	749	25.88	29.49
2	7	1/14/23	1:00	-3.7	359	8	749	25.34	29.49
3	7	1/14/23	2:00	-4.2	343	11	749	24.44	29.49
4	7	1/14/23	3:00	-4.7	346	12	749	23.54	29.49
5	7	1/14/23	4:00	-4.8	336	10	750	23.36	29.53
6	7	1/14/23	5:00	-5	338	8	750	23	29.53
7	7	1/14/23	6:00	-5.1	331	8	750	22.82	29.53
8	7	1/14/23	7:00	-5.3	331	9	751	22.46	29.57
9	7	1/14/23	8:00	-5.4	339	8	751	22.28	29.57
10	7	1/14/23	9:00	-5.4	334	7	751	22.28	29.57
11	7	1/14/23	10:00	-5.2	335	6	751	22.64	29.57
12	7	1/14/23	11:00	-4.7	329	6	751	23.54	29.57

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
13	7	1/14/23	12:00	-4.1	325	5	751	24.62	29.57
14	7	1/14/23	13:00	-3.3	309	5	751	26.06	29.57
15	7	1/14/23	14:00	-2.5	311	5	751	27.5	29.57
16	7	1/14/23	15:00	-1.6	316	4	751	29.12	29.57
17	7	1/14/23	16:00	-1.1	320	5	751	30.02	29.57
18	7	1/14/23	17:00	-0.7	321	3	751	30.74	29.57
19	7	1/14/23	18:00	-0.9	324	3	752	30.38	29.61
20	7	1/14/23	19:00	-1.2	337	1	752	29.84	29.61
21	7	1/14/23	20:00	-1.6	337	1	752	29.12	29.61
22	7	1/14/23	21:00	-1.9	3	1	752	28.58	29.61
23	7	1/14/23	22:00	-2.2	22	2	752	28.04	29.61
24	7	1/14/23	23:00	-1.5	85	2	751	29.3	29.57
1	7	1/15/23	0:00	-1.4	108	2	751	29.48	29.57
2	7	1/15/23	1:00	-3	151	1	751	26.6	29.57
3	7	1/15/23	2:00	-2.8	82	1	752	26.96	29.61
4	7	1/15/23	3:00	-3.4	158	0	752	25.88	29.61
5	7	1/15/23	4:00	-3.8	31	1	752	25.16	29.61
6	7	1/15/23	5:00	-3.3	120	1	752	26.06	29.61
7	7	1/15/23	6:00	-3.7	128	1	752	25.34	29.61
8	7	1/15/23	7:00	-4.3	132	3	753	24.26	29.65
9	7	1/15/23	8:00	-4.1	163	1	753	24.62	29.65
10	7	1/15/23	9:00	-3.4	136	2	753	25.88	29.65
11	7	1/15/23	10:00	-2.7	142	5	753	27.14	29.65
12	7	1/15/23	11:00	-1.2	168	7	753	29.84	29.65
13	7	1/15/23	12:00	-0.2	171	9	752	31.64	29.61
14	7	1/15/23	13:00	0.2	175	7	751	32.36	29.57
15	7	1/15/23	14:00	0.7	177	8	751	33.26	29.57
16	7	1/15/23	15:00	0.8	172	8	751	33.44	29.57
17	7	1/15/23	16:00	0.7	175	7	751	33.26	29.57
18	7	1/15/23	17:00	0.4	161	7	750	32.72	29.53
19	7	1/15/23	18:00	-0.2	136	8	750	31.64	29.53
20	7	1/15/23	19:00	-1	132	8	750	30.2	29.53
21	7	1/15/23	20:00	-1.5	135	7	750	29.3	29.53
22	7	1/15/23	21:00	-1.7	135	6	749	28.94	29.49
23	7	1/15/23	22:00	-1.8	127	6	749	28.76	29.49
24	7	1/15/23	23:00	-1.7	127	5	749	28.94	29.49
1	7	1/16/23	0:00	-1.6	130	6	749	29.12	29.49
2	7	1/16/23	1:00	-1.7	128	4	749	28.94	29.49
3	7	1/16/23	2:00	-1.2	111	4	749	29.84	29.49
4	7	1/16/23	3:00	-1	127	4	748	30.2	29.45
5	7	1/16/23	4:00	-1	132	5	747	30.2	29.41
6	7	1/16/23	5:00	-0.7	129	8	747	30.74	29.41

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
7	7	1/16/23	6:00	-0.7	134	7	747	30.74	29.41
8	7	1/16/23	7:00	-1.1	138	5	747	30.02	29.41
9	7	1/16/23	8:00	-1.4	130	5	747	29.48	29.41
10	7	1/16/23	9:00	-1.3	134	8	746	29.66	29.37
11	7	1/16/23	10:00	-0.1	133	9	746	31.82	29.37
12	7	1/16/23	11:00	1.6	144	9	745	34.88	29.33
13	7	1/16/23	12:00	3	151	8	744	37.4	29.29
14	7	1/16/23	13:00	3.8	141	8	743	38.84	29.25
15	7	1/16/23	14:00	3.9	141	8	742	39.02	29.21
16	7	1/16/23	15:00	3.4	130	10	741	38.12	29.17
17	7	1/16/23	16:00	4	137	9	741	39.2	29.17
18	7	1/16/23	17:00	4.2	142	9	740	39.56	29.13
19	7	1/16/23	18:00	3.9	134	10	740	39.02	29.13
20	7	1/16/23	19:00	2.8	138	10	739	37.04	29.09
21	7	1/16/23	20:00	2.4	139	13	738	36.32	29.06
22	7	1/16/23	21:00	2.5	143	11	738	36.5	29.06
23	7	1/16/23	22:00	2.5	150	9	737	36.5	29.02
24	7	1/16/23	23:00	2.4	156	8	736	36.32	28.98
1	7	1/17/23	0:00	2.5	159	8	736	36.5	28.98
2	7	1/17/23	1:00	2.9	158	7	735	37.22	28.94
3	7	1/17/23	2:00	3.2	163	7	735	37.76	28.94
4	7	1/17/23	3:00	3.6	168	8	734	38.48	28.90
5	7	1/17/23	4:00	4	168	8	734	39.2	28.90
6	7	1/17/23	5:00	4.3	167	8	733	39.74	28.86
7	7	1/17/23	6:00	4.6	162	7	733	40.28	28.86
8	7	1/17/23	7:00	4.9	176	7	733	40.82	28.86
9	7	1/17/23	8:00	6.2	194	7	733	43.16	28.86
10	7	1/17/23	9:00	7	193	6	733	44.6	28.86
11	7	1/17/23	10:00	7.4	192	9	733	45.32	28.86
12	7	1/17/23	11:00	8.7	204	7	733	47.66	28.86
13	7	1/17/23	12:00	10	220	7	733	50	28.86
14	7	1/17/23	13:00	9.2	235	6	732	48.56	28.82
15	7	1/17/23	14:00	8.4	241	5	732	47.12	28.82
16	7	1/17/23	15:00	7.7	245	4	733	45.86	28.86
17	7	1/17/23	16:00	7	250	5	734	44.6	28.90
18	7	1/17/23	17:00	6.5	248	4	734	43.7	28.90
19	7	1/17/23	18:00	6	257	5	735	42.8	28.94
20	7	1/17/23	19:00	5.6	256	4	736	42.08	28.98
21	7	1/17/23	20:00	5	253	4	736	41	28.98
22	7	1/17/23	21:00	4.8	248	4	737	40.64	29.02
23	7	1/17/23	22:00	5	244	4	737	41	29.02
24	7	1/17/23	23:00	5.1	248	4	738	41.18	29.06

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
1	7	1/18/23	0:00	5.2	267	5	738	41.36	29.06
2	7	1/18/23	1:00	5.2	277	5	739	41.36	29.09
3	7	1/18/23	2:00	5	298	9	739	41	29.09
4	7	1/18/23	3:00	4.9	291	7	740	40.82	29.13
5	7	1/18/23	4:00	4.9	279	4	741	40.82	29.17
6	7	1/18/23	5:00	4.9	265	4	741	40.82	29.17
7	7	1/18/23	6:00	4.9	266	3	742	40.82	29.21
8	7	1/18/23	7:00	4.7	272	3	743	40.46	29.25
9	7	1/18/23	8:00	4.5	283	4	743	40.1	29.25
10	7	1/18/23	9:00	4.5	293	6	744	40.1	29.29
11	7	1/18/23	10:00	4.9	289	5	744	40.82	29.29
12	7	1/18/23	11:00	5.8	288	4	744	42.44	29.29
13	7	1/18/23	12:00	5.9	297	5	744	42.62	29.29
14	7	1/18/23	13:00	6.1	303	6	744	42.98	29.29
15	7	1/18/23	14:00	6.2	292	4	744	43.16	29.29
16	7	1/18/23	15:00	5.7	304	6	745	42.26	29.33
17	7	1/18/23	16:00	5.3	306	6	745	41.54	29.33
18	7	1/18/23	17:00	5.1	331	4	746	41.18	29.37
19	7	1/18/23	18:00	4.8	334	5	745	40.64	29.33
20	7	1/18/23	19:00	4.7	350	4	746	40.46	29.37
21	7	1/18/23	20:00	5.2	84	1	745	41.36	29.33
22	7	1/18/23	21:00	5.1	89	3	745	41.18	29.33
23	7	1/18/23	22:00	5	104	4	744	41	29.29
24	7	1/18/23	23:00	4.2	71	4	744	39.56	29.29
1	7	1/19/23	0:00	3.9	76	5	743	39.02	29.25
2	7	1/19/23	1:00	3.9	103	5	742	39.02	29.21
3	7	1/19/23	2:00	3.5	92	5	741	38.3	29.17
4	7	1/19/23	3:00	3.1	103	7	741	37.58	29.17
5	7	1/19/23	4:00	3.2	81	5	739	37.76	29.09
6	7	1/19/23	5:00	2.8	84	6	737	37.04	29.02
7	7	1/19/23	6:00	3.3	102	9	736	37.94	28.98
8	7	1/19/23	7:00	3.4	105	10	735	38.12	28.94
9	7	1/19/23	8:00	3.5	107	10	735	38.3	28.94
10	7	1/19/23	9:00	3.6	114	11	734	38.48	28.90
11	7	1/19/23	10:00	4.1	115	8	733	39.38	28.86
12	7	1/19/23	11:00	4.6	117	6	733	40.28	28.86
13	7	1/19/23	12:00	5.2	162	5	733	41.36	28.86
14	7	1/19/23	13:00	6.1	212	6	732	42.98	28.82
15	7	1/19/23	14:00	7.2	245	4	732	44.96	28.82
16	7	1/19/23	15:00	8.1	233	4	732	46.58	28.82
17	7	1/19/23	16:00	8.8	235	3	732	47.84	28.82
18	7	1/19/23	17:00	9.1	239	2	732	48.38	28.82

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
19	7	1/19/23	18:00	9	330	1	732	48.2	28.82
20	7	1/19/23	19:00	8.5	335	3	732	47.3	28.82
21	7	1/19/23	20:00	7.6	145	2	733	45.68	28.86
22	7	1/19/23	21:00	6.5	207	6	734	43.7	28.90
23	7	1/19/23	22:00	5.4	251	4	734	41.72	28.90
24	7	1/19/23	23:00	4.7	239	5	734	40.46	28.90
1	8	1/20/23	0:00	4.5	247	4	735	40.1	28.94
2	8	1/20/23	1:00	4.5	249	3	735	40.1	28.94
3	8	1/20/23	2:00	4.5	247	4	736	40.1	28.98
4	8	1/20/23	3:00	4.3	252	4	737	39.74	29.02
5	8	1/20/23	4:00	3.9	280	4	737	39.02	29.02
6	8	1/20/23	5:00	3.7	285	5	738	38.66	29.06
7	8	1/20/23	6:00	3.1	291	7	739	37.58	29.09
8	8	1/20/23	7:00	2.9	296	8	740	37.22	29.13
9	8	1/20/23	8:00	3.1	276	4	741	37.58	29.17
10	8	1/20/23	9:00	3	294	7	741	37.4	29.17
11	8	1/20/23	10:00	2.8	296	9	742	37.04	29.21
12	8	1/20/23	11:00	3.2	294	7	742	37.76	29.21
13	8	1/20/23	12:00	3.7	274	4	743	38.66	29.25
14	8	1/20/23	13:00	3.7	294	7	743	38.66	29.25
15	8	1/20/23	14:00	3.8	301	8	743	38.84	29.25
16	8	1/20/23	15:00	3.7	300	8	744	38.66	29.29
17	8	1/20/23	16:00	3.6	299	7	745	38.48	29.33
18	8	1/20/23	17:00	3.4	302	8	746	38.12	29.37
19	8	1/20/23	18:00	3.2	304	8	746	37.76	29.37
20	8	1/20/23	19:00	2.9	313	8	747	37.22	29.41
21	8	1/20/23	20:00	2.4	319	8	747	36.32	29.41
22	8	1/20/23	21:00	2	316	8	748	35.6	29.45
23	8	1/20/23	22:00	1.9	315	7	748	35.42	29.45
24	8	1/20/23	23:00	1.7	309	6	748	35.06	29.45
1	8	1/21/23	0:00	1.6	318	5	748	34.88	29.45
2	8	1/21/23	1:00	1.5	310	4	749	34.7	29.49
3	8	1/21/23	2:00	1.4	306	4	749	34.52	29.49
4	8	1/21/23	3:00	1.2	306	4	749	34.16	29.49
5	8	1/21/23	4:00	1.1	304	5	749	33.98	29.49
6	8	1/21/23	5:00	0.8	314	6	749	33.44	29.49
7	8	1/21/23	6:00	0.5	319	5	750	32.9	29.53
8	8	1/21/23	7:00	0.5	309	3	750	32.9	29.53
9	8	1/21/23	8:00	0.7	304	2	750	33.26	29.53
10	8	1/21/23	9:00	0.9	241	1	750	33.62	29.53
11	8	1/21/23	10:00	1.1	229	2	750	33.98	29.53
12	8	1/21/23	11:00	1.2	206	5	750	34.16	29.53

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
13	8	1/21/23	12:00	1.5	224	4	750	34.7	29.53
14	8	1/21/23	13:00	1.5	225	4	749	34.7	29.49
15	8	1/21/23	14:00	1.3	220	5	748	34.34	29.45
16	8	1/21/23	15:00	1.4	224	5	749	34.52	29.49
17	8	1/21/23	16:00	1.6	228	4	749	34.88	29.49
18	8	1/21/23	17:00	1.2	227	4	749	34.16	29.49
19	8	1/21/23	18:00	1	210	5	749	33.8	29.49
20	8	1/21/23	19:00	1	217	4	748	33.8	29.45
21	8	1/21/23	20:00	0.9	211	5	748	33.62	29.45
22	8	1/21/23	21:00	0.7	207	6	748	33.26	29.45
23	8	1/21/23	22:00	0.6	214	5	748	33.08	29.45
24	8	1/21/23	23:00	0.5	207	5	747	32.9	29.41
1	8	1/22/23	0:00	0.4	206	5	747	32.72	29.41
2	8	1/22/23	1:00	0.4	233	3	746	32.72	29.37
3	8	1/22/23	2:00	0.4	235	3	746	32.72	29.37
4	8	1/22/23	3:00	0.3	235	2	745	32.54	29.33
5	8	1/22/23	4:00	0.2	196	2	745	32.36	29.33
6	8	1/22/23	5:00	0.3	218	2	745	32.54	29.33
7	8	1/22/23	6:00	0.3	279	1	744	32.54	29.29
8	8	1/22/23	7:00	0.8	114	2	744	33.44	29.29
9	8	1/22/23	8:00	1.1	131	2	743	33.98	29.25
10	8	1/22/23	9:00	0.5	99	2	743	32.9	29.25
11	8	1/22/23	10:00	0	115	4	743	32	29.25
12	8	1/22/23	11:00	-0.4	134	5	743	31.28	29.25
13	8	1/22/23	12:00	0.2	129	4	742	32.36	29.21
14	8	1/22/23	13:00	0.5	119	2	741	32.9	29.17
15	8	1/22/23	14:00	0.4	66	1	740	32.72	29.13
16	8	1/22/23	15:00	0.5	17	1	741	32.9	29.17
17	8	1/22/23	16:00	1	60	1	741	33.8	29.17
18	8	1/22/23	17:00	0.6	19	2	741	33.08	29.17
19	8	1/22/23	18:00	0.5	23	2	741	32.9	29.17
20	8	1/22/23	19:00	1.1	66	1	741	33.98	29.17
21	8	1/22/23	20:00	0.2	17	2	741	32.36	29.17
22	8	1/22/23	21:00	0	348	2	741	32	29.17
23	8	1/22/23	22:00	-0.1	340	4	741	31.82	29.17
24	8	1/22/23	23:00	-0.1	350	5	741	31.82	29.17
1	8	1/23/23	0:00	-0.5	346	4	741	31.1	29.17
2	8	1/23/23	1:00	-0.8	333	4	741	30.56	29.17
3	8	1/23/23	2:00	-0.6	334	5	741	30.92	29.17
4	8	1/23/23	3:00	-0.7	330	6	741	30.74	29.17
5	8	1/23/23	4:00	-0.6	322	5	742	30.92	29.21
6	8	1/23/23	5:00	-0.5	319	6	742	31.1	29.21

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
7	8	1/23/23	6:00	-0.4	324	6	743	31.28	29.25
8	8	1/23/23	7:00	-0.2	320	4	743	31.64	29.25
9	8	1/23/23	8:00	0	320	5	743	32	29.25
10	8	1/23/23	9:00	0.1	318	6	744	32.18	29.29
11	8	1/23/23	10:00	0.3	312	7	745	32.54	29.33
12	8	1/23/23	11:00	0.5	308	9	745	32.9	29.33
13	8	1/23/23	12:00	0.7	311	6	745	33.26	29.33
14	8	1/23/23	13:00	0.8	305	6	744	33.44	29.29
15	8	1/23/23	14:00	1.2	285	4	744	34.16	29.29
16	8	1/23/23	15:00	1.6	251	4	745	34.88	29.33
17	8	1/23/23	16:00	1.3	250	4	745	34.34	29.33
18	8	1/23/23	17:00	1.3	242	4	745	34.34	29.33
19	8	1/23/23	18:00	0.7	250	5	746	33.26	29.37
20	8	1/23/23	19:00	-0.2	250	5	746	31.64	29.37
21	8	1/23/23	20:00	-0.8	255	3	746	30.56	29.37
22	8	1/23/23	21:00	-0.9	239	6	746	30.38	29.37
23	8	1/23/23	22:00	-1.2	245	5	745	29.84	29.33
24	8	1/23/23	23:00	-1.2	226	6	745	29.84	29.33
1	8	1/24/23	0:00	-1.3	221	6	745	29.66	29.33
2	8	1/24/23	1:00	-1.1	226	7	745	30.02	29.33
3	8	1/24/23	2:00	-0.9	233	6	746	30.38	29.37
4	8	1/24/23	3:00	-0.6	229	5	746	30.92	29.37
5	8	1/24/23	4:00	-0.2	233	4	747	31.64	29.41
6	8	1/24/23	5:00	0.5	256	4	747	32.9	29.41
7	8	1/24/23	6:00	1	282	4	748	33.8	29.45
8	8	1/24/23	7:00	0.5	291	4	749	32.9	29.49
9	8	1/24/23	8:00	0.1	267	3	749	32.18	29.49
10	8	1/24/23	9:00	-0.1	246	3	750	31.82	29.53
11	8	1/24/23	10:00	0.8	249	3	750	33.44	29.53
12	8	1/24/23	11:00	1.6	252	4	750	34.88	29.53
13	8	1/24/23	12:00	2.5	251	4	750	36.5	29.53
14	8	1/24/23	13:00	3.2	269	3	749	37.76	29.49
15	8	1/24/23	14:00	3.8	234	3	749	38.84	29.49
16	8	1/24/23	15:00	4.4	223	4	750	39.92	29.53
17	8	1/24/23	16:00	4.2	198	6	749	39.56	29.49
18	8	1/24/23	17:00	3.3	188	7	750	37.94	29.53
19	8	1/24/23	18:00	2.1	179	9	750	35.78	29.53
20	8	1/24/23	19:00	1.4	199	7	750	34.52	29.53
21	8	1/24/23	20:00	0.7	202	6	750	33.26	29.53
22	8	1/24/23	21:00	0.5	205	5	750	32.9	29.53
23	8	1/24/23	22:00	0.9	234	2	749	33.62	29.49
24	8	1/24/23	23:00	0.9	228	2	749	33.62	29.49

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
1	8	1/25/23	0:00	0.8	189	1	748	33.44	29.45
2	8	1/25/23	1:00	0.6	138	4	748	33.08	29.45
3	8	1/25/23	2:00	1.3	106	3	748	34.34	29.45
4	8	1/25/23	3:00	0.9	128	5	747	33.62	29.41
5	8	1/25/23	4:00	1.3	116	5	746	34.34	29.37
6	8	1/25/23	5:00	1.5	103	4	745	34.7	29.33
7	8	1/25/23	6:00	1	109	4	744	33.8	29.29
8	8	1/25/23	7:00	1.1	105	4	743	33.98	29.25
9	8	1/25/23	8:00	1.4	104	5	742	34.52	29.21
10	8	1/25/23	9:00	1.5	101	6	741	34.7	29.17
11	8	1/25/23	10:00	1.7	87	4	740	35.06	29.13
12	8	1/25/23	11:00	1.3	75	6	737	34.34	29.02
13	8	1/25/23	12:00	1.1	74	8	735	33.98	28.94
14	8	1/25/23	13:00	1	68	9	734	33.8	28.90
15	8	1/25/23	14:00	0.9	63	10	732	33.62	28.82
16	8	1/25/23	15:00	1	61	9	732	33.8	28.82
17	8	1/25/23	16:00	1.1	49	7	732	33.98	28.82
18	8	1/25/23	17:00	0.8	22	6	732	33.44	28.82
19	8	1/25/23	18:00	0.4	358	8	732	32.72	28.82
20	8	1/25/23	19:00	0.2	350	10	732	32.36	28.82
21	8	1/25/23	20:00	0.4	335	9	733	32.72	28.86
22	8	1/25/23	21:00	0.5	319	7	733	32.9	28.86
23	8	1/25/23	22:00	0.6	298	5	734	33.08	28.90
24	8	1/25/23	23:00	0.7	297	6	734	33.26	28.90
1	8	1/26/23	0:00	0.6	302	7	735	33.08	28.94
2	8	1/26/23	1:00	0.5	290	5	735	32.9	28.94
3	8	1/26/23	2:00	0.6	284	4	736	33.08	28.98
4	8	1/26/23	3:00	0.5	287	4	737	32.9	29.02
5	8	1/26/23	4:00	0.2	285	4	737	32.36	29.02
6	8	1/26/23	5:00	0.1	289	4	738	32.18	29.06
7	8	1/26/23	6:00	0	303	6	738	32	29.06
8	8	1/26/23	7:00	-0.2	295	4	739	31.64	29.09
9	8	1/26/23	8:00	-0.2	280	3	739	31.64	29.09
10	8	1/26/23	9:00	-0.3	281	4	740	31.46	29.13
11	8	1/26/23	10:00	-0.3	288	4	740	31.46	29.13
12	8	1/26/23	11:00	-0.1	292	4	740	31.82	29.13
13	8	1/26/23	12:00	0.2	293	4	740	32.36	29.13
14	8	1/26/23	13:00	0.5	284	3	740	32.9	29.13
15	8	1/26/23	14:00	0.8	246	3	740	33.44	29.13
16	8	1/26/23	15:00	1.2	245	3	741	34.16	29.17
17	8	1/26/23	16:00	1.3	275	2	741	34.34	29.17
18	8	1/26/23	17:00	1.3	239	3	741	34.34	29.17

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
19	8	1/26/23	18:00	1.2	230	3	742	34.16	29.21
20	8	1/26/23	19:00	0.5	201	6	742	32.9	29.21
21	8	1/26/23	20:00	0.2	234	5	742	32.36	29.21
22	8	1/26/23	21:00	-0.3	243	4	743	31.46	29.25
23	8	1/26/23	22:00	-0.9	247	4	743	30.38	29.25
24	8	1/26/23	23:00	-1.7	239	4	743	28.94	29.25
1	8	1/27/23	0:00	-2.5	235	5	744	27.5	29.29
2	8	1/27/23	1:00	-3.3	238	4	744	26.06	29.29
3	8	1/27/23	2:00	-4	242	4	744	24.8	29.29
4	8	1/27/23	3:00	-4.4	245	4	745	24.08	29.33
5	8	1/27/23	4:00	-4.8	248	4	745	23.36	29.33
6	8	1/27/23	5:00	-4.8	242	5	745	23.36	29.33
7	8	1/27/23	6:00	-5.1	224	6	745	22.82	29.33
8	8	1/27/23	7:00	-5.2	224	5	746	22.64	29.37
9	8	1/27/23	8:00	-5.3	221	5	746	22.46	29.37
10	8	1/27/23	9:00	-5.2	225	5	746	22.64	29.37
11	8	1/27/23	10:00	-5.3	210	7	746	22.46	29.37
12	8	1/27/23	11:00	-5.1	210	9	745	22.82	29.33
13	8	1/27/23	12:00	-4	212	10	744	24.8	29.29
14	8	1/27/23	13:00	-3.2	200	13	743	26.24	29.25
15	8	1/27/23	14:00	-2.1	189	14	742	28.22	29.21
16	8	1/27/23	15:00	-1.2	188	16	741	29.84	29.17
17	8	1/27/23	16:00	-0.6	186	16	740	30.92	29.13
18	8	1/27/23	17:00	-0.1	190	16	740	31.82	29.13
19	8	1/27/23	18:00	-0.4	199	18	740	31.28	29.13
20	8	1/27/23	19:00	-0.3	199	16	740	31.46	29.13
21	8	1/27/23	20:00	0.4	203	13	740	32.72	29.13
22	8	1/27/23	21:00	1.3	212	9	740	34.34	29.13
23	8	1/27/23	22:00	2.1	227	7	740	35.78	29.13
24	8	1/27/23	23:00	2.6	227	6	740	36.68	29.13
1	8	1/28/23	0:00	2.8	226	6	741	37.04	29.17
2	8	1/28/23	1:00	3.1	249	6	742	37.58	29.21
3	8	1/28/23	2:00	2.4	272	6	744	36.32	29.29
4	8	1/28/23	3:00	1	300	10	745	33.8	29.33
5	8	1/28/23	4:00	0.2	287	7	746	32.36	29.37
6	8	1/28/23	5:00	-0.5	298	8	746	31.1	29.37
7	8	1/28/23	6:00	-0.9	295	6	747	30.38	29.41
8	8	1/28/23	7:00	-1.5	292	4	748	29.3	29.45
9	8	1/28/23	8:00	-1.6	255	3	749	29.12	29.49
10	8	1/28/23	9:00	-1.9	226	2	750	28.58	29.53
11	8	1/28/23	10:00	-1.8	245	3	751	28.76	29.57
12	8	1/28/23	11:00	-1.5	244	3	751	29.3	29.57

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
13	8	1/28/23	12:00	-1.1	239	3	750	30.02	29.53
14	8	1/28/23	13:00	-0.9	216	5	750	30.38	29.53
15	8	1/28/23	14:00	-0.5	221	4	750	31.1	29.53
16	8	1/28/23	15:00	-0.8	216	4	750	30.56	29.53
17	8	1/28/23	16:00	-0.6	222	3	750	30.92	29.53
18	8	1/28/23	17:00	-0.3	327	2	750	31.46	29.53
19	8	1/28/23	18:00	-0.5	23	2	750	31.1	29.53
20	8	1/28/23	19:00	-0.3	93	3	750	31.46	29.53
21	8	1/28/23	20:00	-0.6	114	3	749	30.92	29.49
22	8	1/28/23	21:00	-0.5	70	4	749	31.1	29.49
23	8	1/28/23	22:00	-0.4	64	6	748	31.28	29.45
24	8	1/28/23	23:00	-0.2	81	5	748	31.64	29.45
1	8	1/29/23	0:00	-0.2	88	4	747	31.64	29.41
2	8	1/29/23	1:00	-0.2	72	5	746	31.64	29.37
3	8	1/29/23	2:00	-0.3	63	5	746	31.46	29.37
4	8	1/29/23	3:00	-0.2	67	4	746	31.64	29.37
5	8	1/29/23	4:00	0	83	3	745	32	29.33
6	8	1/29/23	5:00	0.7	103	2	745	33.26	29.33
7	8	1/29/23	6:00	0.1	122	2	744	32.18	29.29
8	8	1/29/23	7:00	0.1	118	1	745	32.18	29.33
9	8	1/29/23	8:00	0.2	336	4	745	32.36	29.33
10	8	1/29/23	9:00	-0.1	333	5	746	31.82	29.37
11	8	1/29/23	10:00	-0.7	335	5	746	30.74	29.37
12	8	1/29/23	11:00	-0.6	331	5	747	30.92	29.41
13	8	1/29/23	12:00	-0.2	327	7	747	31.64	29.41
14	8	1/29/23	13:00	0.3	329	9	747	32.54	29.41
15	8	1/29/23	14:00	0.5	344	8	748	32.9	29.45
16	8	1/29/23	15:00	0.3	356	9	748	32.54	29.45
17	8	1/29/23	16:00	-0.3	10	6	749	31.46	29.49
18	8	1/29/23	17:00	-0.5	21	5	749	31.1	29.49
19	8	1/29/23	18:00	-0.5	34	4	750	31.1	29.53
20	8	1/29/23	19:00	-0.7	13	4	751	30.74	29.57
21	8	1/29/23	20:00	-0.7	45	4	751	30.74	29.57
22	8	1/29/23	21:00	-1.2	2	5	752	29.84	29.61
23	8	1/29/23	22:00	-1.7	5	5	751	28.94	29.57
24	8	1/29/23	23:00	-2	27	4	751	28.4	29.57
1	8	1/30/23	0:00	-1.9	47	4	751	28.58	29.57
2	8	1/30/23	1:00	-1.7	75	3	750	28.94	29.53
3	8	1/30/23	2:00	-1.8	54	2	750	28.76	29.53
4	8	1/30/23	3:00	-2.4	349	3	751	27.68	29.57
5	8	1/30/23	4:00	-2.5	336	3	750	27.5	29.53
6	8	1/30/23	5:00	-2	103	1	750	28.4	29.53

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
7	8	1/30/23	6:00	-1.3	115	2	750	29.66	29.53
8	8	1/30/23	7:00	-2.1	349	2	751	28.22	29.57
9	8	1/30/23	8:00	-2.6	346	3	751	27.32	29.57
10	8	1/30/23	9:00	-2.6	334	4	751	27.32	29.57
11	8	1/30/23	10:00	-2.7	323	5	751	27.14	29.57
12	8	1/30/23	11:00	-2.4	317	5	751	27.68	29.57
13	8	1/30/23	12:00	-2.4	315	8	750	27.68	29.53
14	8	1/30/23	13:00	-2.3	313	7	750	27.86	29.53
15	8	1/30/23	14:00	-2.2	306	7	750	28.04	29.53
16	8	1/30/23	15:00	-2.5	308	8	750	27.5	29.53
17	8	1/30/23	16:00	-3.4	312	10	751	25.88	29.57
18	8	1/30/23	17:00	-3.8	310	9	751	25.16	29.57
19	8	1/30/23	18:00	-4.4	313	9	752	24.08	29.61
20	8	1/30/23	19:00	-5.1	314	9	752	22.82	29.61
21	8	1/30/23	20:00	-6	314	9	752	21.2	29.61
22	8	1/30/23	21:00	-7.3	312	10	753	18.86	29.65
23	8	1/30/23	22:00	-8.3	306	8	753	17.06	29.65
24	8	1/30/23	23:00	-8.8	307	8	753	16.16	29.65
1	8	1/31/23	0:00	-10	319	10	754	14	29.69
2	8	1/31/23	1:00	-11.1	317	9	754	12.02	29.69
3	8	1/31/23	2:00	-11.7	320	7	754	10.94	29.69
4	8	1/31/23	3:00	-12	317	5	754	10.4	29.69
5	8	1/31/23	4:00	-12.2	315	5	755	10.04	29.72
6	8	1/31/23	5:00	-12.3	314	4	755	9.86	29.72
7	8	1/31/23	6:00	-12.4	313	4	755	9.68	29.72
8	8	1/31/23	7:00	-12.5	318	4	755	9.5	29.72
9	8	1/31/23	8:00	-12.5	312	4	755	9.5	29.72
10	8	1/31/23	9:00	-12.3	311	3	755	9.86	29.72
11	8	1/31/23	10:00	-11.5	303	3	755	11.3	29.72
12	8	1/31/23	11:00	-10.8	305	3	755	12.56	29.72
13	8	1/31/23	12:00	-9.7	310	2	754	14.54	29.69
14	8	1/31/23	13:00	-8.4	228	1	753	16.88	29.65
15	8	1/31/23	14:00	-7.9	233	2	753	17.78	29.65
16	8	1/31/23	15:00	-7.4	298	4	752	18.68	29.61
17	8	1/31/23	16:00	-7	314	4	752	19.4	29.61
18	8	1/31/23	17:00	-6.8	321	6	752	19.76	29.61
19	8	1/31/23	18:00	-6.8	311	5	752	19.76	29.61
20	8	1/31/23	19:00	-7	314	3	752	19.4	29.61
21	8	1/31/23	20:00	-7.3	284	3	753	18.86	29.65
22	8	1/31/23	21:00	-8	248	2	753	17.6	29.65
23	8	1/31/23	22:00	-8.2	221	2	753	17.24	29.65
24	8	1/31/23	23:00	-8.7	220	4	752	16.34	29.61

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
1	8	2/1/23	0:00	-9.1	243	2	753	15.62	29.65
2	8	2/1/23	1:00	-9.5	261	2	753	14.9	29.65
3	8	2/1/23	2:00	-9.7	254	1	753	14.54	29.65
4	8	2/1/23	3:00	-9.7	250	3	753	14.54	29.65
5	8	2/1/23	4:00	-10.2	241	3	753	13.64	29.65
6	8	2/1/23	5:00	-10.5	251	3	753	13.1	29.65
7	8	2/1/23	6:00	-10.7	244	4	753	12.74	29.65
8	8	2/1/23	7:00	-11	234	3	753	12.2	29.65
9	8	2/1/23	8:00	-11	243	2	754	12.2	29.69
10	8	2/1/23	9:00	-10.2	240	3	754	13.64	29.69
11	8	2/1/23	10:00	-8.3	243	2	754	17.06	29.69
12	8	2/1/23	11:00	-6.7	242	3	754	19.94	29.69
13	8	2/1/23	12:00	-5.6	214	5	754	21.92	29.69
14	8	2/1/23	13:00	-4.6	214	6	753	23.72	29.65
15	8	2/1/23	14:00	-3.8	226	5	753	25.16	29.65
16	8	2/1/23	15:00	-3.4	222	6	752	25.88	29.61
17	8	2/1/23	16:00	-3.5	216	7	752	25.7	29.61
18	8	2/1/23	17:00	-3.5	225	5	752	25.7	29.61
19	8	2/1/23	18:00	-4.4	231	4	752	24.08	29.61
20	8	2/1/23	19:00	-5.4	224	5	752	22.28	29.61
21	8	2/1/23	20:00	-5.9	224	4	752	21.38	29.61
22	8	2/1/23	21:00	-6.2	225	4	751	20.84	29.57
23	8	2/1/23	22:00	-6.3	223	4	751	20.66	29.57
24	8	2/1/23	23:00	-6.5	222	5	751	20.3	29.57
1	8	2/2/23	0:00	-6.7	226	3	751	19.94	29.57
2	8	2/2/23	1:00	-6.8	229	4	750	19.76	29.53
3	8	2/2/23	2:00	-6.3	229	4	750	20.66	29.53
4	8	2/2/23	3:00	-6.4	225	5	749	20.48	29.49
5	8	2/2/23	4:00	-6.4	228	4	749	20.48	29.49
6	8	2/2/23	5:00	-6.6	228	4	748	20.12	29.45
7	8	2/2/23	6:00	-6.7	224	5	748	19.94	29.45
8	8	2/2/23	7:00	-6.4	232	5	748	20.48	29.45
9	8	2/2/23	8:00	-6.3	228	4	747	20.66	29.41
10	8	2/2/23	9:00	-5.7	218	7	747	21.74	29.41
11	8	2/2/23	10:00	-4.1	224	6	746	24.62	29.37
12	8	2/2/23	11:00	-2.5	228	6	745	27.5	29.33
13	8	2/2/23	12:00	-1.1	225	7	744	30.02	29.29
14	8	2/2/23	13:00	-0.2	229	7	744	31.64	29.29
15	8	2/2/23	14:00	0.9	238	6	743	33.62	29.25
16	8	2/2/23	15:00	1.4	237	7	743	34.52	29.25
17	8	2/2/23	16:00	1.8	252	6	743	35.24	29.25
18	8	2/2/23	17:00	1.8	260	4	743	35.24	29.25

Michigan Air Quality: Real-time Data (deqmiar.org) - Detroit Southwest Station

Hour	Run	Date	Time	Temperature °C	WD (degree)	WS (m/s)	Pressure (mm Hg)	Temperature °F	Pressure (in Hg)
19	8	2/2/23	18:00	1.8	281	4	744	35.24	29.29
20	8	2/2/23	19:00	1	308	9	745	33.8	29.33
21	8	2/2/23	20:00	-0.9	325	15	746	30.38	29.37
22	8	2/2/23	21:00	-3.1	332	16	747	26.42	29.41
23	8	2/2/23	22:00	-4.2	329	13	748	24.44	29.45
24	8	2/2/23	23:00	-5.9	339	13	749	21.38	29.49

End of Appendix Section