

From: Rob Hoverman <rhoverman@enviroforensics.com>
Sent: Thursday, March 24, 2022 3:51 PM
To: Beggs, Tauren R - DNR
Subject: Jagemann VI Follow up
Attachments: 200032 Jagemann Results Letter 1-2022.pdf

Tauren,

I just realized I never forwarded the results letter with the updated sample location ID for SSV-12/IA-12.

Regards,

Rob Hoverman, Northern Midwest Regional Director
EnviroForensics® | N16W23390 Stone Ridge Dr, Suite G, Waukesha, WI 53188
414.630.0060 | enviroforensics.com

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February 16, 2022

Mike Jagemann
Jagemann Plating
1324 S 26th Street
Manitowoc, WI 54220

Subject: Vapor Intrusion Monitoring Results
BRTTS #: 02-36-555544

Dear Mr. Jagemann:

In accordance with Wisconsin Department of Natural Resources (WDNR) regulation NR 716.14, EnviroForensics, LLC (EnviroForensics) is providing the results of recent indoor air and sub-slab vapor samples collected from your property located at 1324 S 26th Street in Manitowoc, Wisconsin.

Indoor air and sub-slab sampling were performed as outlined in the Interim Action Documentation Report & Operation, Maintenance, & Monitoring Plan, dated November 5, 2021. The sampling plan originally scheduled for December was postponed until January 2022. The sampling event followed included the following.

Office:				
Sample IDs	Summa 8-hr IA	Passive 8-hr IA	Passive 5-day IA	Summa - Grab
IA-4	1	1	1	--
IA-5	1	1	1	--
IA-6	1	1	1	--
IA-9	1	1	1	--
SSDS Effluent	--	--	--	1

Plant:				
Sample IDs	Summa 8-Hour IA	Paired Summa SSV	Passive 8-hour IA	Passive 5-day IA
IA-1	1	1	1	1
IA-2	1	1	1	1
IA-3	1	1	1	1
IA-7	1	1	1	1
IA-8	1	1	1	1
IA-10	1	1	1	1
IA-11	1	1	1	1
IA-12	1	--	1	1

Document: 200032-0160

The plan was devised to evaluate both short term and long-term exposure potentials and show duplicability between the passive and summa canister sampling.

Twelve (12) 8-hour indoor air samples were collected in Summa canisters and paired with passive Beacon Chlorosorber™ sampling media (passive) on January 10, 2022. Twelve (12) 5-day indoor passive air samples were collected from January 10-14, 2022 and seven (7) sub slab vapor samples were collected on January 14, 2022. An effluent sample from the sub slab depressurization system was collected January 26, 2022. The sample SSV-10 was damaged in transit to the laboratory and is not listed no result is reported. **Figure 1** presents the sample locations. The vapor samples were analyzed for select VOCs for the chlorinated volatile organic compounds (CVOCs) listed in **Table 1** with summa canister samples being analyzed by US EPA Method TO-15 and passive samples analyzed by US EPA Method TO-17.

Sampling Results and Conclusions

Table 1 summarizes the sampling event results with past sample results compared to Large Commercial Vapor Action Levels (LCVALs). Three (3) of the four (4) office indoor air samples contained detections of trichloroethene (TCE) but at concentrations *below* the LCVALs. Seven (7) of the eight (8) plant indoor air samples contained detections of tetrachloroethene (PCE) but at concentrations *below* the LCVALs. Of those seven (7) samples, two (2) samples contained TCE but at concentrations *below* the LCVALs

Five (5) of the seven (7) sub-slab samples contained TCE above the Large Commercial Vapor Risk Screening Levels (LCVRSLs). Several samples contained additional breakdown products of TCE and PCE but below the LCVRSLs. The effluent sample contained all tested CVOCs, but screening levels are not applicable to such a sample. The laboratory analytical reports are also attached.

The indoor air and paired sub-slab vapor samples show the Site is adequately mitigated by the existing sub-slab depressurization system (SSDS) and plant mechanical systems

If you have any questions or concerns, please contact me at 262-290-4001 or by email at rhoverman@enviroforensics.com.

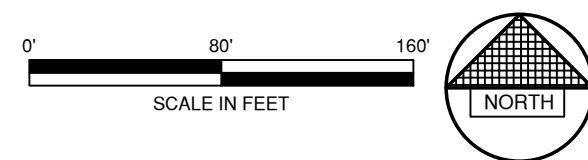
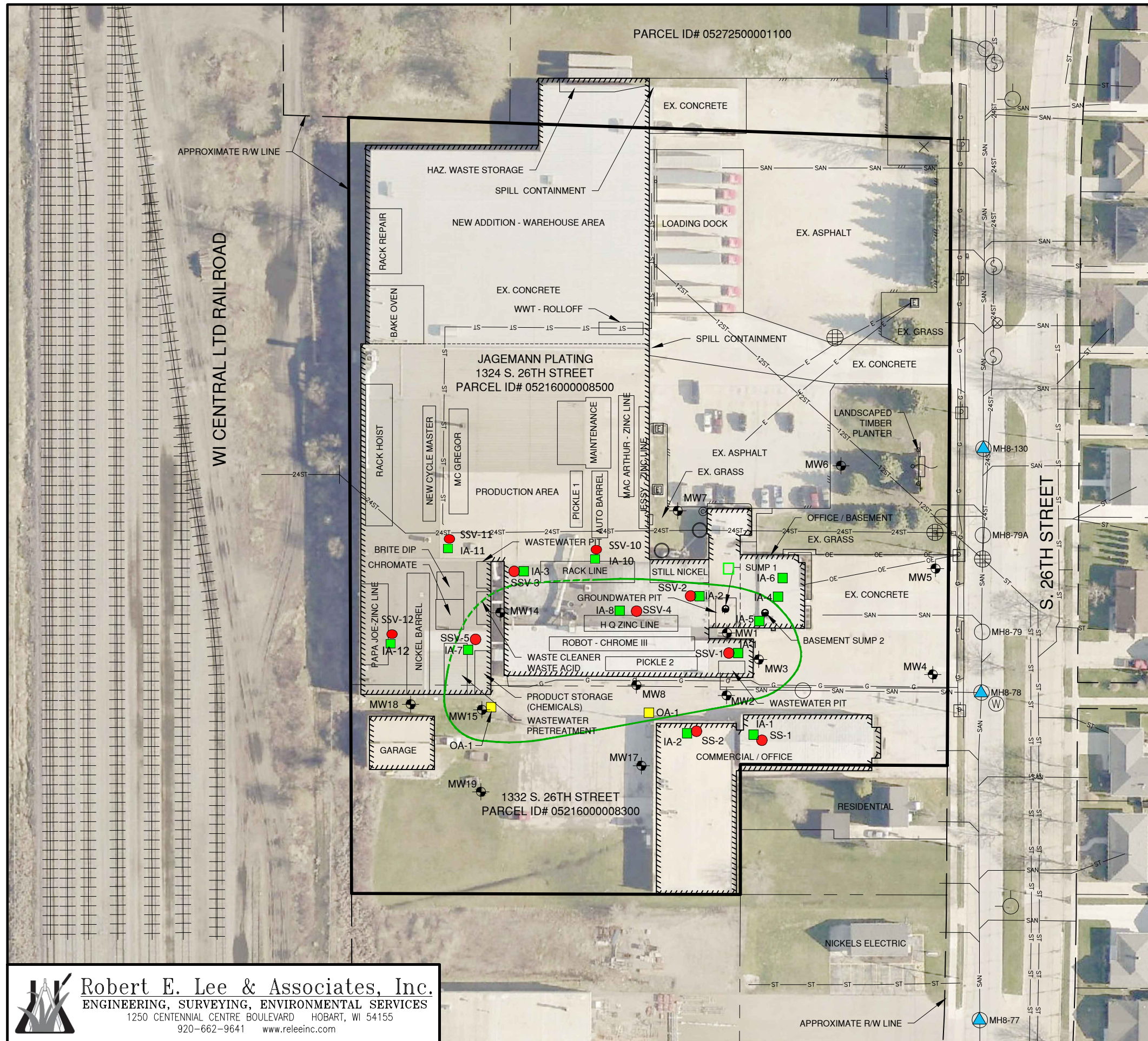
Sincerely,
EnviroForensics, LLC

A handwritten signature in blue ink, appearing to read "Rob Hoverman".

Rob Hoverman, PG
Project Manager

Attachments: Figure 1: Vapor Sample Locations
Table 1: Sample Results Summary
Laboratory Analytical Reports

Copy: Tauren Beggs, Wisconsin Department of Natural Resources



LEGEND

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

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

SITE PLAN

FIGURE 1

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

Table 1
Vapor Intrusion Analytical Results
Jagemann Plating
Manitowoc, Wisconsin
EnviroForensics Project No. 200032

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

Table 1
Vapor Intrusion Analytical Results
Jagemann Plating
Manitowoc, Wisconsin
EnviroForensics Project No. 200032

Sample Identification	Sample Location	Sample Type	Mitigation?	Date Sampled	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1-Dichloroethylene	Vinyl Chloride
SUB SLAB VAPOR										
Large Commercial Vapor Risk Screening Level					18,000	880	NL	18,000	88,000	2,800
SSV-1	Former Waste Water Treatment Plant Room	SUMMA	No	2/9/2014	NA	1,530	540	57.5	26.9	86.7
			Yes	3/27/2021	NA	461	1,100	68.3	9.9 J	7.2 J
				1/14/2022	4.6	212	111	29.2	8.3	118
SSV-2	East Side Chromium Dip Line Area	SUMMA	No	2/9/2014	NA	2,920	965	39.3	14.9 J	4.6 J
			Yes	3/27/2021	NA	6,080	1,050	67.8	ND	17.8
				1/14/2022	4.5	635	95,000	25.9	11.9	2.0
SSV-3	West Side Chromium Dip Line and Pickling Line Area	SUMMA	No	2/9/2014	NA	57.7	25.3	ND	ND	21.1
			Yes	3/27/2021	NA	8.4	8.6	<0.24	<0.19	<0.12
				1/14/2022	<2100	1,520,000	95,000	1,290 J	<991	<623
SSV-4	Central Portion of South Manufacturing Area	SUMMA	Yes	3/27/2021	NA	15,300,000	3,210,000	65,400	23,900	8,880
				5/19/2021	NA	31,700,000	6,330,000	162,000	94,100	117,000
				1/14/2022	<2100	5,150,000	1,370,000			
SSV-5	West Portion of South Manufacturing Area	SUMMA	Yes	3/27/2021	NA	9,870	1,290	344	478	1,070
				5/19/2021	NA	5,850	1,060	294	522	1,450
				1/14/2022	<1050	509,000	29,900	<603	586 J	2,380
SSV-11	North of Brite Dip	SUMMA	Yes	1/14/2022	30.7 J	65,100	1,960	27.2 J	60.3	44.9
SSV-12	Between Papa Joe Zinc Line and Nickel Barrel	SUMMA	Yes	1/14/2022	74.6	91,200	5,160	47.5	21.7 J J	9.6 J
SSDS Effluent										
EP-1	SSDS Effluent	SUMMA	Yes	1/26/2022	4.9	36.9	19.3	1.1 J	0.27 J	NA

Notes:

Results reported in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

Summa samples analyzed according to EPA Method TO-15

Passive samples analyzed according to EPA Method TO-17

The Vapor Risk Screening/Action Levels are calculated in accordance with WDNR Publication RR-800 and subsequent guidance documents.

IA = Indoor Air

OA = Outdoor Air

SSV= Sub-slab vapor

Bolded values are above detection limits

Bolded and Orange shaded concentration exceed the Large Commercial Vapor Action Level

ND = Not detected over laboratory detection limits

NA = Not Analyzed

NL = No Screening Level Established

J = Analyte concentration detected between the laboratory Reporting Limit and the laboratory Method Detection Limit

January 31, 2022

Rob Hoverman
EnviroForensics
N16 W23390 Stone Ridge Drive
Suite G
Waukesha, WI 53188

RE: Project: 200032 Jagemann-Revised Report
Pace Project No.: 10594312

Dear Rob Hoverman:

Enclosed are the analytical results for sample(s) received by the laboratory on January 13, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Minneapolis

This report was revised on January 31, 2022, to modify the analyte list.

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

Sincerely,



Carolynne Trout
carolynne.trout@pacelabs.com
1(612)607-6351
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 200032 Jagemann-Revised Report

Pace Project No.: 10594312

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab

A2LA Certification #: 2926.01*
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009*
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014*
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605*
Georgia Certification #: 959
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086*
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064*
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137*
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240*
Mississippi Certification #: MN00064

Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081*
New Jersey Certification #: MN002
New York Certification #: 11647*
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Ohio VAP Certification (1800) #: CL110*
Oklahoma Certification #: 9507*
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001*
Pennsylvania Certification #: 68-00563*
Puerto Rico Certification #: MN00064
South Carolina Certification #: 74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192*
Utah Certification #: MN00064*
Vermont Certification #: VT-027053137
Virginia Certification #: 460163*
Washington Certification #: C486*
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01
USDA Permit #: P330-19-00208
Please Note: Applicable air certifications are denoted with an asterisk ().

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 200032 Jagemann-Revised Report

Pace Project No.: 10594312

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10594312001	IA-1 (SUMMA)	Air	01/10/22 17:35	01/13/22 09:58
10594312002	IA-2 (SUMMA)	Air	01/10/22 17:24	01/13/22 09:58
10594312003	IA-3 (SUMMA)	Air	01/10/22 17:40	01/13/22 09:58
10594312004	IA-4 (SUMMA)	Air	01/10/22 16:52	01/13/22 09:58
10594312005	IA-5 (SUMMA)	Air	01/10/22 16:49	01/13/22 09:58
10594312006	IA-6 (SUMMA)	Air	01/10/22 16:46	01/13/22 09:58
10594312007	IA-7 (SUMMA)	Air	01/10/22 17:21	01/13/22 09:58
10594312008	IA-8 (SUMMA)	Air	01/10/22 17:15	01/13/22 09:58
10594312009	IA-9 (SUMMA)	Air	01/10/22 17:05	01/13/22 09:58
10594312010	IA-10 (SUMMA)	Air	01/10/22 17:44	01/13/22 09:58
10594312011	IA-11 (SUMMA)	Air	01/10/22 17:48	01/13/22 09:58
10594312012	IA-12 (SUMMA)	Air	01/10/22 18:02	01/13/22 09:58

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 200032 Jagemann-Revised Report

Pace Project No.: 10594312

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10594312001	IA-1 (SUMMA)	TO-15	AFV	6	PASI-M
10594312002	IA-2 (SUMMA)	TO-15	AFV	6	PASI-M
10594312003	IA-3 (SUMMA)	TO-15	AFV	6	PASI-M
10594312004	IA-4 (SUMMA)	TO-15	AFV	6	PASI-M
10594312005	IA-5 (SUMMA)	TO-15	AFV	6	PASI-M
10594312006	IA-6 (SUMMA)	TO-15	AFV	6	PASI-M
10594312007	IA-7 (SUMMA)	TO-15	AFV	6	PASI-M
10594312008	IA-8 (SUMMA)	TO-15	AFV	6	PASI-M
10594312009	IA-9 (SUMMA)	TO-15	AFV	6	PASI-M
10594312010	IA-10 (SUMMA)	TO-15	AFV	6	PASI-M
10594312011	IA-11 (SUMMA)	TO-15	AFV	6	PASI-M
10594312012	IA-12 (SUMMA)	TO-15	AFV	6	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 200032 Jagemann-Revised Report

Pace Project No.: 10594312

Sample: IA-1 (SUMMA)		Lab ID: 10594312001	Collected: 01/10/22 17:35	Received: 01/13/22 09:58	Matrix: Air				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15 Pace Analytical Services - Minneapolis							
1,1-Dichloroethene	<0.21	ug/m3	1.2	0.21	1.52		01/27/22 15:58	75-35-4	
cis-1,2-Dichloroethene	<0.30	ug/m3	1.2	0.30	1.52		01/27/22 15:58	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/m3	1.2	0.26	1.52		01/27/22 15:58	156-60-5	
Tetrachloroethene	<0.44	ug/m3	1.0	0.44	1.52		01/27/22 15:58	127-18-4	
Trichloroethene	<0.30	ug/m3	0.83	0.30	1.52		01/27/22 15:58	79-01-6	
Vinyl chloride	<0.13	ug/m3	0.40	0.13	1.52		01/27/22 15:58	75-01-4	

Sample: IA-2 (SUMMA)		Lab ID: 10594312002	Collected: 01/10/22 17:24	Received: 01/13/22 09:58	Matrix: Air				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15 Pace Analytical Services - Minneapolis							
1,1-Dichloroethene	<0.21	ug/m3	1.2	0.21	1.55		01/27/22 16:57	75-35-4	
cis-1,2-Dichloroethene	<0.30	ug/m3	1.2	0.30	1.55		01/27/22 16:57	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/m3	1.2	0.26	1.55		01/27/22 16:57	156-60-5	
Tetrachloroethene	<0.45	ug/m3	1.1	0.45	1.55		01/27/22 16:57	127-18-4	
Trichloroethene	<0.30	ug/m3	0.85	0.30	1.55		01/27/22 16:57	79-01-6	
Vinyl chloride	<0.13	ug/m3	0.40	0.13	1.55		01/27/22 16:57	75-01-4	

Sample: IA-3 (SUMMA)		Lab ID: 10594312003	Collected: 01/10/22 17:40	Received: 01/13/22 09:58	Matrix: Air				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15 Pace Analytical Services - Minneapolis							
1,1-Dichloroethene	<0.22	ug/m3	1.3	0.22	1.58		01/27/22 17:56	75-35-4	
cis-1,2-Dichloroethene	<0.31	ug/m3	1.3	0.31	1.58		01/27/22 17:56	156-59-2	
trans-1,2-Dichloroethene	<0.27	ug/m3	1.3	0.27	1.58		01/27/22 17:56	156-60-5	
Tetrachloroethene	<0.46	ug/m3	1.1	0.46	1.58		01/27/22 17:56	127-18-4	
Trichloroethene	<0.31	ug/m3	0.86	0.31	1.58		01/27/22 17:56	79-01-6	
Vinyl chloride	<0.14	ug/m3	0.41	0.14	1.58		01/27/22 17:56	75-01-4	

Sample: IA-4 (SUMMA)		Lab ID: 10594312004	Collected: 01/10/22 16:52	Received: 01/13/22 09:58	Matrix: Air				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15 Pace Analytical Services - Minneapolis							
1,1-Dichloroethene	<0.20	ug/m3	1.2	0.20	1.46		01/27/22 18:25	75-35-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 200032 Jagemann-Revised Report

Pace Project No.: 10594312

Sample: IA-4 (SUMMA) **Lab ID: 10594312004** Collected: 01/10/22 16:52 Received: 01/13/22 09:58 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR									
Analytical Method: TO-15									
Pace Analytical Services - Minneapolis									
cis-1,2-Dichloroethene	<0.28	ug/m3	1.2	0.28	1.46		01/27/22 18:25	156-59-2	
trans-1,2-Dichloroethene	<0.25	ug/m3	1.2	0.25	1.46		01/27/22 18:25	156-60-5	
Tetrachloroethene	<0.43	ug/m3	1.0	0.43	1.46		01/27/22 18:25	127-18-4	
Trichloroethene	1.2	ug/m3	0.80	0.29	1.46		01/27/22 18:25	79-01-6	
Vinyl chloride	<0.13	ug/m3	0.38	0.13	1.46		01/27/22 18:25	75-01-4	

Sample: IA-5 (SUMMA) **Lab ID: 10594312005** Collected: 01/10/22 16:49 Received: 01/13/22 09:58 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR									
Analytical Method: TO-15									
Pace Analytical Services - Minneapolis									
1,1-Dichloroethene	<0.20	ug/m3	1.2	0.20	1.44		01/27/22 18:55	75-35-4	
cis-1,2-Dichloroethene	<0.28	ug/m3	1.2	0.28	1.44		01/27/22 18:55	156-59-2	
trans-1,2-Dichloroethene	<0.24	ug/m3	1.2	0.24	1.44		01/27/22 18:55	156-60-5	
Tetrachloroethene	<0.42	ug/m3	0.99	0.42	1.44		01/27/22 18:55	127-18-4	
Trichloroethene	0.74J	ug/m3	0.79	0.28	1.44		01/27/22 18:55	79-01-6	
Vinyl chloride	<0.12	ug/m3	0.37	0.12	1.44		01/27/22 18:55	75-01-4	

Sample: IA-6 (SUMMA) **Lab ID: 10594312006** Collected: 01/10/22 16:46 Received: 01/13/22 09:58 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR									
Analytical Method: TO-15									
Pace Analytical Services - Minneapolis									
1,1-Dichloroethene	<0.20	ug/m3	1.2	0.20	1.46		01/27/22 19:24	75-35-4	
cis-1,2-Dichloroethene	<0.28	ug/m3	1.2	0.28	1.46		01/27/22 19:24	156-59-2	
trans-1,2-Dichloroethene	<0.25	ug/m3	1.2	0.25	1.46		01/27/22 19:24	156-60-5	
Tetrachloroethene	<0.43	ug/m3	1.0	0.43	1.46		01/27/22 19:24	127-18-4	
Trichloroethene	0.79J	ug/m3	0.80	0.29	1.46		01/27/22 19:24	79-01-6	
Vinyl chloride	<0.13	ug/m3	0.38	0.13	1.46		01/27/22 19:24	75-01-4	

Sample: IA-7 (SUMMA) **Lab ID: 10594312007** Collected: 01/10/22 17:21 Received: 01/13/22 09:58 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR									
Analytical Method: TO-15									
Pace Analytical Services - Minneapolis									
1,1-Dichloroethene	<0.22	ug/m3	1.3	0.22	1.58		01/27/22 19:53	75-35-4	
cis-1,2-Dichloroethene	<0.31	ug/m3	1.3	0.31	1.58		01/27/22 19:53	156-59-2	

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ANALYTICAL RESULTS

Project: 200032 Jagemann-Revised Report

Pace Project No.: 10594312

Sample: IA-7 (SUMMA)									
		Lab ID: 10594312007	Collected: 01/10/22 17:21		Received: 01/13/22 09:58		Matrix: Air		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR									
Analytical Method: TO-15									
Pace Analytical Services - Minneapolis									
trans-1,2-Dichloroethene	<0.27	ug/m3	1.3	0.27	1.58		01/27/22 19:53	156-60-5	
Tetrachloroethene	<0.46	ug/m3	1.1	0.46	1.58		01/27/22 19:53	127-18-4	
Trichloroethene	<0.31	ug/m3	0.86	0.31	1.58		01/27/22 19:53	79-01-6	
Vinyl chloride	<0.14	ug/m3	0.41	0.14	1.58		01/27/22 19:53	75-01-4	

Sample: IA-8 (SUMMA)									
		Lab ID: 10594312008	Collected: 01/10/22 17:15		Received: 01/13/22 09:58		Matrix: Air		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR									
Analytical Method: TO-15									
Pace Analytical Services - Minneapolis									
1,1-Dichloroethene	<0.20	ug/m3	1.2	0.20	1.46		01/27/22 20:22	75-35-4	
cis-1,2-Dichloroethene	0.39J	ug/m3	1.2	0.28	1.46		01/27/22 20:22	156-59-2	
trans-1,2-Dichloroethene	<0.25	ug/m3	1.2	0.25	1.46		01/27/22 20:22	156-60-5	
Tetrachloroethene	<0.43	ug/m3	1.0	0.43	1.46		01/27/22 20:22	127-18-4	
Trichloroethene	2.4	ug/m3	0.80	0.29	1.46		01/27/22 20:22	79-01-6	
Vinyl chloride	<0.13	ug/m3	0.38	0.13	1.46		01/27/22 20:22	75-01-4	

Sample: IA-9 (SUMMA)									
		Lab ID: 10594312009	Collected: 01/10/22 17:05		Received: 01/13/22 09:58		Matrix: Air		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR									
Analytical Method: TO-15									
Pace Analytical Services - Minneapolis									
1,1-Dichloroethene	<0.19	ug/m3	1.1	0.19	1.39		01/27/22 20:52	75-35-4	
cis-1,2-Dichloroethene	<0.27	ug/m3	1.1	0.27	1.39		01/27/22 20:52	156-59-2	
trans-1,2-Dichloroethene	<0.23	ug/m3	1.1	0.23	1.39		01/27/22 20:52	156-60-5	
Tetrachloroethene	<0.41	ug/m3	0.96	0.41	1.39		01/27/22 20:52	127-18-4	
Trichloroethene	<0.27	ug/m3	0.76	0.27	1.39		01/27/22 20:52	79-01-6	
Vinyl chloride	<0.12	ug/m3	0.36	0.12	1.39		01/27/22 20:52	75-01-4	

Sample: IA-10 (SUMMA)									
		Lab ID: 10594312010	Collected: 01/10/22 17:44		Received: 01/13/22 09:58		Matrix: Air		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR									
Analytical Method: TO-15									
Pace Analytical Services - Minneapolis									
1,1-Dichloroethene	<0.21	ug/m3	1.2	0.21	1.52		01/27/22 21:21	75-35-4	
cis-1,2-Dichloroethene	<0.30	ug/m3	1.2	0.30	1.52		01/27/22 21:21	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/m3	1.2	0.26	1.52		01/27/22 21:21	156-60-5	

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ANALYTICAL RESULTS

Project: 200032 Jagemann-Revised Report

Pace Project No.: 10594312

Sample: IA-10 (SUMMA)		Lab ID: 10594312010	Collected: 01/10/22 17:44	Received: 01/13/22 09:58	Matrix: Air				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15 Pace Analytical Services - Minneapolis							
Tetrachloroethene	<0.44	ug/m3	1.0	0.44	1.52		01/27/22 21:21	127-18-4	
Trichloroethene	<0.30	ug/m3	0.83	0.30	1.52		01/27/22 21:21	79-01-6	
Vinyl chloride	<0.13	ug/m3	0.40	0.13	1.52		01/27/22 21:21	75-01-4	

Sample: IA-11 (SUMMA)		Lab ID: 10594312011	Collected: 01/10/22 17:48	Received: 01/13/22 09:58	Matrix: Air				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15 Pace Analytical Services - Minneapolis							
1,1-Dichloroethene	<0.21	ug/m3	1.2	0.21	1.55		01/27/22 21:50	75-35-4	
cis-1,2-Dichloroethene	<0.30	ug/m3	1.2	0.30	1.55		01/27/22 21:50	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/m3	1.2	0.26	1.55		01/27/22 21:50	156-60-5	
Tetrachloroethene	<0.45	ug/m3	1.1	0.45	1.55		01/27/22 21:50	127-18-4	
Trichloroethene	<0.30	ug/m3	0.85	0.30	1.55		01/27/22 21:50	79-01-6	
Vinyl chloride	<0.13	ug/m3	0.40	0.13	1.55		01/27/22 21:50	75-01-4	

Sample: IA-12 (SUMMA)		Lab ID: 10594312012	Collected: 01/10/22 18:02	Received: 01/13/22 09:58	Matrix: Air				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR		Analytical Method: TO-15 Pace Analytical Services - Minneapolis							
1,1-Dichloroethene	<0.21	ug/m3	1.2	0.21	1.52		01/27/22 22:19	75-35-4	
cis-1,2-Dichloroethene	<0.30	ug/m3	1.2	0.30	1.52		01/27/22 22:19	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/m3	1.2	0.26	1.52		01/27/22 22:19	156-60-5	
Tetrachloroethene	<0.44	ug/m3	1.0	0.44	1.52		01/27/22 22:19	127-18-4	
Trichloroethene	<0.30	ug/m3	0.83	0.30	1.52		01/27/22 22:19	79-01-6	
Vinyl chloride	4.5	ug/m3	0.40	0.13	1.52		01/27/22 22:19	75-01-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 200032 Jagemann-Revised Report
Pace Project No.: 10594312

QC Batch: 795839 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10594312001, 10594312002, 10594312003, 10594312004, 10594312005, 10594312006, 10594312007, 10594312008, 10594312009, 10594312010, 10594312011, 10594312012

METHOD BLANK: 4231522 Matrix: Air
Associated Lab Samples: 10594312001, 10594312002, 10594312003, 10594312004, 10594312005, 10594312006, 10594312007, 10594312008, 10594312009, 10594312010, 10594312011, 10594312012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/m3	<0.069	0.40	01/27/22 09:38	
cis-1,2-Dichloroethene	ug/m3	<0.098	0.40	01/27/22 09:38	
Tetrachloroethene	ug/m3	<0.15	0.34	01/27/22 09:38	
trans-1,2-Dichloroethene	ug/m3	<0.084	0.40	01/27/22 09:38	
Trichloroethene	ug/m3	<0.098	0.27	01/27/22 09:38	
Vinyl chloride	ug/m3	<0.043	0.13	01/27/22 09:38	

LABORATORY CONTROL SAMPLE: 4231523

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/m3	43.5	36.8	84	70-130	
cis-1,2-Dichloroethene	ug/m3	43.4	40.5	93	70-136	
Tetrachloroethene	ug/m3	73.4	69.5	95	70-134	
trans-1,2-Dichloroethene	ug/m3	43.6	41.1	94	70-134	
Trichloroethene	ug/m3	58.4	51.7	88	70-134	
Vinyl chloride	ug/m3	28	24.1	86	70-132	

SAMPLE DUPLICATE: 4232372

Parameter	Units	10594312001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1-Dichloroethene	ug/m3	<0.21	<0.21		25	
cis-1,2-Dichloroethene	ug/m3	<0.30	<0.30		25	
Tetrachloroethene	ug/m3	<0.44	<0.44		25	
trans-1,2-Dichloroethene	ug/m3	<0.26	<0.26		25	
Trichloroethene	ug/m3	<0.30	<0.30		25	
Vinyl chloride	ug/m3	<0.13	<0.13		25	

SAMPLE DUPLICATE: 4232373

Parameter	Units	10594312002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1-Dichloroethene	ug/m3	<0.21	<0.21		25	
cis-1,2-Dichloroethene	ug/m3	<0.30	<0.30		25	
Tetrachloroethene	ug/m3	<0.45	<0.45		25	
trans-1,2-Dichloroethene	ug/m3	<0.26	<0.26		25	

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

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QUALITY CONTROL DATA

Project: 200032 Jagemann-Revised Report
Pace Project No.: 10594312

SAMPLE DUPLICATE: 4232373

Parameter	Units	10594312002 Result	Dup Result	RPD	Max RPD	Qualifiers
Trichloroethene	ug/m3	<0.30	<0.30		25	
Vinyl chloride	ug/m3	<0.13	<0.13		25	

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

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QUALIFIERS

Project: 200032 Jagemann-Revised Report

Pace Project No.: 10594312

DEFINITIONS

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

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 200032 Jagemann-Revised Report

Pace Project No.: 10594312

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10594312001	IA-1 (SUMMA)	TO-15	795839		
10594312002	IA-2 (SUMMA)	TO-15	795839		
10594312003	IA-3 (SUMMA)	TO-15	795839		
10594312004	IA-4 (SUMMA)	TO-15	795839		
10594312005	IA-5 (SUMMA)	TO-15	795839		
10594312006	IA-6 (SUMMA)	TO-15	795839		
10594312007	IA-7 (SUMMA)	TO-15	795839		
10594312008	IA-8 (SUMMA)	TO-15	795839		
10594312009	IA-9 (SUMMA)	TO-15	795839		
10594312010	IA-10 (SUMMA)	TO-15	795839		
10594312011	IA-11 (SUMMA)	TO-15	795839		
10594312012	IA-12 (SUMMA)	TO-15	795839		

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AIR: CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

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Page: 1 of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	Program
Company: <u>Enviroforensics</u>	Report To: <u>rhoyerman@enviroforensics.com</u>	Attention: <u>accounts payable@enviroforensics.com</u>	<input type="checkbox"/> UST <input type="checkbox"/> Superfund <input type="checkbox"/> Emissions <input type="checkbox"/> Clean Air Act <input type="checkbox"/> Voluntary Clean Up <input type="checkbox"/> Dry Clean <input type="checkbox"/> RCRA <input type="checkbox"/> Other
Address: <u>2166 W 33rd St, Suite 2E, Waukesha, WI 53188</u>	Copy To:	Company Name:	
Email To: <u>rhoyerman@enviroforensics.com</u>	Purchase Order No.: <u>2021-0730</u>	Address:	Location of Sampling by State: <u>WI</u>
Phone: <u>262 290 4001</u> Fax:	Project Name: <u>Jagemann</u>	Pace Quote Reference: <u>00102925</u>	Reporting Units ug/m ³ <input checked="" type="checkbox"/> mg/m ³ <input type="checkbox"/> PPBV <input type="checkbox"/> PPMV <input type="checkbox"/> Other <input type="checkbox"/>
Requested Due Date/TAT:	Project Number: <u>200032</u>	Pace Project Manager/Sales Rep.	Report Level: <u>II, X</u> III. ___ IV. ___ Other ___
		Pace Profile #: <u>44023</u>	

ITEM #	'Section D Required Client Information AIR SAMPLE ID Sample IDs MUST BE UNIQUE	Valid Media Codes		COLLECTED				Canister Pressure (Initial Field - in Hg)	Canister Pressure (Final Field - in Hg)	Summa Can Number	Flow Control Number	Method:								Pace Lab ID
		MEDIA	CODE	COMPOSITE START		COMPOSITE - END/GRAB						PM10	3C - Fixed Gas (%)	TO-3 BTEX	TO-3M (Methane)	TO-14	TO-15 Full List VOCs	TO-15 Short List BTEX	TO-15 Short List Chlorinated	
		Tedlar Bag TB	1 Liter Summa Can 1LC	DATE	TIME	DATE	TIME													
1	IA-1 (SUMMA)	6LC		1-10-22	933	1-10-22	1735	-30	-6	2103	0384								X	001
2	IA-2 (SUMMA)				921		1724	-28	-4	1122	1407									002
3	IA-3 (SUMMA)				941		1740	-30	-5	3606	0052									003
4	IA-4 (SUMMA)				850		1652	-30	-2	2312	1276									004
5	IA-5 (SUMMA)				837		1649	-30	-2	2664	1781									005
6	IA-6 (SUMMA)				841		1646	-30	-4	0978	0891									006
7	IA-7 (SUMMA)				958		1721	-30	-6	0537	1279									007
8	IA-8 (SUMMA)				938		1715	-30	-4	2116	0372									008
9	IA-9 (SUMMA)				855		1705	-30	-2	0012	0764									009
10	IA-10 (SUMMA)				958		1744	-30	-3	0795	0089									010
11	IA-11 (SUMMA)				1007		1748	-30	-6	1257	0514									011
12	IA-12 (SUMMA)				1008		1804	-30	-5	0090	1381									012

Comments:	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Short List: 1,1 DCE, CIS 1,2 DCE, TRANS 1,2 DCE, TCE, VC	7L7L	1-12-22	1630	FedEx	1-12-22	1630	Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
				Math / Pace	1-13-22	9:58	Y/N	Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER: <u>Rebecca Brown</u>	DATE Signed (MM/DD/YY) <u>1/11/22</u>
SIGNATURE of SAMPLER: <u>7L7L</u>	

WO#: 10594312

10594312

Air Sample Condition Upon Receipt

Client Name: EnviroForensics

Project # **WO# : 10594312**

PM: CT1 **Due Date:** 01/20/22
CLIENT: EnviroForen

Courier: FedEx UPS USPS Client
 Pace Speedee Commercial

Tracking Number: 975384482910, 2921, 2932 See Exception

Custody Seal on Cooler/Box Present? Yes No

Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags Foam
 None Tin Can Other: _____

Date & Initials of Person Examining Contents: 1-13-22 WJ

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		8.
Correct Containers Used? (Tedlar bags not acceptable container for TO-15 or APH)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
Containers Intact? (visual inspection/no leaks when pressurized)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		10.
Media: <input checked="" type="checkbox"/> Air Can <input type="checkbox"/> Airbag				11. Individually Certified Cans? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N (list which samples)
Is sufficient information available to reconcile samples to the COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		12.
Do cans need to be pressurized? (DO NOT PRESSURIZE 3C or ASTM 1946!!!)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		13.

Gauge #: 10AIR26 10AIR34 10AIR35 10AIR17 10AIR47 10AIR48

Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
IA-1	2103	384	-3.5	+5					
"-2	1122	1407	-4						
"-3	3606	52	-4.5						
"-4	2312	1276	-2.5						
"-5	2664	1781	-2						
"-6	978	891	-2.5						
"-7	537	1279	-4.5						
"-8	2116	372	-2.5						
"-9	12	764	-1						
"-10	795	89	-3.5						
"-11	1257	514	-4						
"-12	90	1381	-3.5						

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: _____ Date/Time: _____
 Comments/Resolution: _____

Project Manager Review: Carolynne Hart **Date:** 1/14/22

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

February 03, 2022

Rob Hoverman
EnviroForensics
N16 W23390 Stone Ridge Drive
Suite G
Waukesha, WI 53188

RE: Project: 200032 Jagemann Plating
Pace Project No.: 10594913

Dear Rob Hoverman:

Enclosed are the analytical results for sample(s) received by the laboratory on January 19, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Minneapolis

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

Sincerely,



Carolynne Trout
carolynne.trout@pacelabs.com
1(612)607-6351
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 200032 Jagemann Plating

Pace Project No.: 10594913

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414

1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab

A2LA Certification #: 2926.01*

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009*

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014*

Arkansas DW Certification #: MN00064

Arkansas WW Certification #: 88-0680

California Certification #: 2929

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137

Florida Certification #: E87605*

Georgia Certification #: 959

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: AI-03086*

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064*

Maryland Certification #: 322

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137*

Minnesota Dept of Ag Approval: via MN 027-053-137

Minnesota Petrofund Registration #: 1240*

Mississippi Certification #: MN00064

Missouri Certification #: 10100

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081*

New Jersey Certification #: MN002

New York Certification #: 11647*

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification (1700) #: CL101

Ohio VAP Certification (1800) #: CL110*

Oklahoma Certification #: 9507*

Oregon Primary Certification #: MN300001

Oregon Secondary Certification #: MN200001*

Pennsylvania Certification #: 68-00563*

Puerto Rico Certification #: MN00064

South Carolina Certification #:74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192*

Utah Certification #: MN00064*

Vermont Certification #: VT-027053137

Virginia Certification #: 460163*

Washington Certification #: C486*

West Virginia DEP Certification #: 382

West Virginia DW Certification #: 9952 C

Wisconsin Certification #: 999407970

Wyoming UST Certification #: via A2LA 2926.01

USDA Permit #: P330-19-00208

Please Note: Applicable air certifications are denoted with an asterisk ().

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 200032 Jagemann Plating

Pace Project No.: 10594913

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10594913001	SSV-1	Air	01/14/22 10:29	01/19/22 12:10
10594913002	SSV-2	Air	01/14/22 10:12	01/19/22 12:10
10594913003	SSV-3	Air	01/14/22 11:14	01/19/22 12:10
10594913004	SSV-4	Air	01/14/22 10:57	01/19/22 12:10
10594913005	SSV-5	Air	01/14/22 11:24	01/19/22 12:10
10594913006	SSV-12	Air	01/14/22 13:10	01/19/22 12:10
10594913007	SSV-11	Air	01/14/22 13:37	01/19/22 12:10
10594913008	SSV-10	Air	01/14/22 13:46	01/19/22 12:10
10594913009	Unused Canister #3767	Air		01/19/22 12:10

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SAMPLE ANALYTE COUNT

Project: 200032 Jagemann Plating
Pace Project No.: 10594913

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10594913001	SSV-1	TO-15	AFV	6	PASI-M
10594913002	SSV-2	TO-15	AFV	6	PASI-M
10594913003	SSV-3	TO-15	AFV	6	PASI-M
10594913004	SSV-4	TO-15	AFV	6	PASI-M
10594913005	SSV-5	TO-15	AFV	6	PASI-M
10594913006	SSV-12	TO-15	AFV	6	PASI-M
10594913007	SSV-11	TO-15	AFV	6	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 200032 Jagemann Plating

Pace Project No.: 10594913

Sample: SSV-1 Lab ID: 10594913001 Collected: 01/14/22 10:29 Received: 01/19/22 12:10 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15 Pace Analytical Services - Minneapolis									
1,1-Dichloroethene	8.3	ug/m3	1.3	0.22	1.63		02/02/22 01:51	75-35-4	
cis-1,2-Dichloroethene	111	ug/m3	39.4	9.5	48.9		02/02/22 13:00	156-59-2	
trans-1,2-Dichloroethene	29.2	ug/m3	1.3	0.27	1.63		02/02/22 01:51	156-60-5	
Tetrachloroethene	4.6	ug/m3	1.1	0.48	1.63		02/02/22 01:51	127-18-4	
Trichloroethene	212	ug/m3	26.7	9.6	48.9		02/02/22 13:00	79-01-6	
Vinyl chloride	118	ug/m3	0.42	0.14	1.63		02/02/22 01:51	75-01-4	

Sample: SSV-2 Lab ID: 10594913002 Collected: 01/14/22 10:12 Received: 01/19/22 12:10 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15 Pace Analytical Services - Minneapolis									
1,1-Dichloroethene	11.9	ug/m3	1.5	0.26	1.87		02/02/22 02:27	75-35-4	
cis-1,2-Dichloroethene	217	ug/m3	48.8	11.8	60.6		02/02/22 13:32	156-59-2	
trans-1,2-Dichloroethene	25.9	ug/m3	1.5	0.31	1.87		02/02/22 02:27	156-60-5	
Tetrachloroethene	4.5	ug/m3	1.3	0.55	1.87		02/02/22 02:27	127-18-4	
Trichloroethene	635	ug/m3	33.1	11.9	60.6		02/02/22 13:32	79-01-6	
Vinyl chloride	2.0	ug/m3	0.49	0.16	1.87		02/02/22 02:27	75-01-4	

Sample: SSV-3 Lab ID: 10594913003 Collected: 01/14/22 11:14 Received: 01/19/22 12:10 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15 Pace Analytical Services - Minneapolis									
1,1-Dichloroethene	<991	ug/m3	5790	991	7181		02/02/22 04:37	75-35-4	
cis-1,2-Dichloroethene	95000	ug/m3	5790	1400	7181		02/02/22 04:37	156-59-2	
trans-1,2-Dichloroethene	1290J	ug/m3	5790	1210	7181		02/02/22 04:37	156-60-5	
Tetrachloroethene	<2100	ug/m3	4950	2100	7181		02/02/22 04:37	127-18-4	
Trichloroethene	1520000	ug/m3	3920	1410	7181		02/02/22 04:37	79-01-6	E
Vinyl chloride	<623	ug/m3	1870	623	7181		02/02/22 04:37	75-01-4	

Sample: SSV-4 Lab ID: 10594913004 Collected: 01/14/22 10:57 Received: 01/19/22 12:10 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15 Pace Analytical Services - Minneapolis									
1,1-Dichloroethene	18300	ug/m3	5790	991	7181		02/02/22 05:10	75-35-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 200032 Jagemann Plating

Pace Project No.: 10594913

Sample: SSV-4 Lab ID: 10594913004 Collected: 01/14/22 10:57 Received: 01/19/22 12:10 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15 Pace Analytical Services - Minneapolis									
cis-1,2-Dichloroethene	1370000	ug/m3	5790	1400	7181		02/02/22 05:10	156-59-2	E
trans-1,2-Dichloroethene	23500	ug/m3	5790	1210	7181		02/02/22 05:10	156-60-5	
Tetrachloroethene	<2100	ug/m3	4950	2100	7181		02/02/22 05:10	127-18-4	
Trichloroethene	5150000	ug/m3	3920	1410	7181		02/02/22 05:10	79-01-6	E
Vinyl chloride	8760	ug/m3	1870	623	7181		02/02/22 05:10	75-01-4	

Sample: SSV-5 Lab ID: 10594913005 Collected: 01/14/22 11:24 Received: 01/19/22 12:10 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15 Pace Analytical Services - Minneapolis									
1,1-Dichloroethene	586J	ug/m3	2890	495	3590		02/02/22 04:05	75-35-4	
cis-1,2-Dichloroethene	29900	ug/m3	2890	700	3590		02/02/22 04:05	156-59-2	
trans-1,2-Dichloroethene	<603	ug/m3	2890	603	3590		02/02/22 04:05	156-60-5	
Tetrachloroethene	<1050	ug/m3	2470	1050	3590		02/02/22 04:05	127-18-4	
Trichloroethene	509000	ug/m3	1960	704	3590		02/02/22 04:05	79-01-6	
Vinyl chloride	2380	ug/m3	934	312	3590		02/02/22 04:05	75-01-4	

Sample: SSV-12 Lab ID: 10594913006 Collected: 01/14/22 13:10 Received: 01/19/22 12:10 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15 Pace Analytical Services - Minneapolis									
1,1-Dichloroethene	21.7J	ug/m3	45.2	7.7	56.1		02/02/22 03:32	75-35-4	
cis-1,2-Dichloroethene	5160	ug/m3	45.2	10.9	56.1		02/02/22 03:32	156-59-2	
trans-1,2-Dichloroethene	47.5	ug/m3	45.2	9.4	56.1		02/02/22 03:32	156-60-5	
Tetrachloroethene	74.6	ug/m3	38.7	16.4	56.1		02/02/22 03:32	127-18-4	
Trichloroethene	91200	ug/m3	1960	704	3590		02/02/22 15:59	79-01-6	
Vinyl chloride	9.6J	ug/m3	14.6	4.9	56.1		02/02/22 03:32	75-01-4	

Sample: SSV-11 Lab ID: 10594913007 Collected: 01/14/22 13:37 Received: 01/19/22 12:10 Matrix: Air									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR Analytical Method: TO-15 Pace Analytical Services - Minneapolis									
1,1-Dichloroethene	60.3	ug/m3	45.2	7.7	56.1		02/02/22 03:00	75-35-4	
cis-1,2-Dichloroethene	1960	ug/m3	45.2	10.9	56.1		02/02/22 03:00	156-59-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 200032 Jagemann Plating

Pace Project No.: 10594913

Sample: SSV-11 **Lab ID: 10594913007** Collected: 01/14/22 13:37 Received: 01/19/22 12:10 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR									
Analytical Method: TO-15									
Pace Analytical Services - Minneapolis									
trans-1,2-Dichloroethene	27.2J	ug/m3	45.2	9.4	56.1		02/02/22 03:00	156-60-5	
Tetrachloroethene	30.7J	ug/m3	38.7	16.4	56.1		02/02/22 03:00	127-18-4	
Trichloroethene	65100	ug/m3	980	352	1795		02/02/22 14:04	79-01-6	
Vinyl chloride	44.9	ug/m3	14.6	4.9	56.1		02/02/22 03:00	75-01-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 200032 Jagemann Plating

Pace Project No.: 10594913

QC Batch: 796566

Analysis Method: TO-15

QC Batch Method: TO-15

Analysis Description: TO15 MSV AIR Low Level

Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10594913001, 10594913002, 10594913003, 10594913004, 10594913005, 10594913006, 10594913007

METHOD BLANK: 4234374

Matrix: Air

Associated Lab Samples: 10594913001, 10594913002, 10594913003, 10594913004, 10594913005, 10594913006, 10594913007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/m3	<0.069	0.40	02/01/22 15:21	
cis-1,2-Dichloroethene	ug/m3	<0.098	0.40	02/01/22 15:21	
Tetrachloroethene	ug/m3	0.18J	0.34	02/01/22 15:21	
trans-1,2-Dichloroethene	ug/m3	<0.084	0.40	02/01/22 15:21	
Trichloroethene	ug/m3	<0.098	0.27	02/01/22 15:21	
Vinyl chloride	ug/m3	<0.043	0.13	02/01/22 15:21	

LABORATORY CONTROL SAMPLE: 4234375

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/m3	41.5	38.1	92	70-130	
cis-1,2-Dichloroethene	ug/m3	41	41.7	102	70-136	
Tetrachloroethene	ug/m3	69.9	68.0	97	70-134	
trans-1,2-Dichloroethene	ug/m3	40.8	39.3	96	70-134	
Trichloroethene	ug/m3	55.7	56.5	101	70-134	
Vinyl chloride	ug/m3	26.6	23.6	89	70-132	

SAMPLE DUPLICATE: 4235160

Parameter	Units	10594901005 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1-Dichloroethene	ug/m3	<1.2	<0.20		25	
cis-1,2-Dichloroethene	ug/m3	<1.2	<0.28		25	
Tetrachloroethene	ug/m3	<0.99	<0.42		25	
trans-1,2-Dichloroethene	ug/m3	<1.2	<0.24		25	
Trichloroethene	ug/m3	<0.79	<0.28		25	
Vinyl chloride	ug/m3	<0.37	<0.12		25	

SAMPLE DUPLICATE: 4235161

Parameter	Units	10594903005 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1-Dichloroethene	ug/m3	<1.1	<0.19		25	
cis-1,2-Dichloroethene	ug/m3	<1.1	<0.27		25	
Tetrachloroethene	ug/m3	<0.96	<0.41		25	
trans-1,2-Dichloroethene	ug/m3	<1.1	<0.23		25	
Trichloroethene	ug/m3	<0.76	<0.27		25	
Vinyl chloride	ug/m3	<0.36	<0.12		25	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 200032 Jagemann Plating

Pace Project No.: 10594913

DEFINITIONS

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

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E Analyte concentration exceeded the calibration range. The reported result is estimated.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 200032 Jagemann Plating

Pace Project No.: 10594913

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10594913001	SSV-1	TO-15	796566		
10594913002	SSV-2	TO-15	796566		
10594913003	SSV-3	TO-15	796566		
10594913004	SSV-4	TO-15	796566		
10594913005	SSV-5	TO-15	796566		
10594913006	SSV-12	TO-15	796566		
10594913007	SSV-11	TO-15	796566		

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AIR: CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

55639

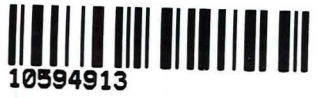
Page: 1 of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	Program
Company: <u>EnviroForensics</u>	Report To:	Attention: <u>accounts payable@enviroforensics.com</u>	<input type="checkbox"/> UST <input type="checkbox"/> Superfund <input type="checkbox"/> Emissions <input type="checkbox"/> Clean Air Act <input type="checkbox"/> Voluntary Clean Up <input type="checkbox"/> Dry Clean <input type="checkbox"/> RCRA <input type="checkbox"/> Other
Address: <u>WILKINSON 3390 STONE RIDGE WAUKESHA, WI 53188</u>	Copy To:	Company Name:	
Email To: <u>choucrman@enviroforensics.com</u>	Purchase Order No.: <u>2021-0930</u>	Pace Quote Reference: <u>00102925</u>	Location of Sampling by State: <u>WI</u>
Phone: <u>262 290 4001</u> Fax: <u>262 290 4001</u>	Project Name: <u>Jagemann Plating</u>	Pace Project Manager/Sales Rep.:	Reporting Units ug/m ³ _____ mg/m ³ _____ PPBV _____ PPMV _____ Other _____
Requested Due Date/TAT:	Project Number: <u>200032</u>	Pace Profile #: <u>44023</u>	Report Level: <input checked="" type="checkbox"/> I. <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> Other _____

ITEM #	'Section D Required Client Information AIR SAMPLE ID Sample IDs MUST BE UNIQUE	Valid Media Codes		COLLECTED				Canister Pressure (Initial Field - in Hg)	Canister Pressure (Final Field - in Hg)	Summa Can Number	Flow Control Number	Method:								Face Lab ID	
		MEDIA	CODE	COMPOSITE START		COMPOSITE - END/GRAB						PM10	3C - Fixed Gas (%)	TO-3 BTEX	TO-SM (Methane)	TO-14	TO-15 Full List VOCs	TO-15 Short List BTEX	TO-15 Short List Chlorinated		TO-15 Short List (Other)
		Tedlar Bag	TB	DATE	TIME	DATE	TIME														
1	SSV-1	1LC		1.14.22	1023	1.14.22	1029	-28	0	3932	2866								001		
2	SSV-2				1006		1012	-27	-2	0811	2730								002		
3	SSV-3				1108		1114	-28.5	-5	3546	1901								003		
4	SSV-4				1050		1057	-30	-5	3799	2894								004		
5	SSV-5				1116		1124	-30	-3	2535	1611								005		
6	SSV-12				1305		1310	-29	-3	2622	1819								006		
7	SSV-11				1331		1337	-30	-4	3528	3062								007		
8	SSV-10				1341		1344	-25	-3	3776	2685								008		

Comments:	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	<u>[Signature]</u>	1-17-22	0700	<u>[Signature]</u> FEDEX	1-19-22	1210	Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
							Y/N	Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N	Y/N

WO#: 10594913



WO#: 10594913

Air Sample Condition Upon Receipt

Client Name: ENVIRO FORENSICS

Project

PM: CT1

Due Date: 01/26/22

CLIENT: EnviroForen

Courier: FedEx UPS USPS Client
 Pace SpeeDee Commercial

Tracking Number: 9753 8448 2943, 4980 See Exception

Custody Seal on Cooler/Box Present? Yes No

Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags Foam
 None Tin Can Other:

Date & Initials of Person Examining Contents: 1-19-22 CMY

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		8.
Correct Containers Used? (Tedlar bags not acceptable container for TO-15 or APH)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
Containers Intact? (visual inspection/no leaks when pressurized)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		10. SSV-10 CAME BACK BROKEN ON IT'S NECK.
Media: <u>Air Can</u> Airbag				11. Individually Certified Cans? Y <input checked="" type="checkbox"/> N (list which samples)
Is sufficient information available to reconcile samples to the COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		12.
Do cans need to be pressurized? (DO NOT PRESSURIZE 3C or ASTM 1946!!!)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		13.

Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
SSV-1	3932	2866	10.5	110					
SSV-2	0811	2730	-5	"					
SSV-3	3546	1901	-3	"					
SSV-4	3799	2894	-3	"					
SSV-5	2535	1611	-3	"					
SSV-12	2622	1819	-3	"					
SSV-11	3528	3002	-3	"					
SSV-10	3776	2685	0	---					
UNUSEP	3767	0973	0	---					

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Carolynne Hart **Date:** 1/20/22

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

February 07, 2022

Rob Hoverman
EnviroForensics
N16 W23390 Stone Ridge Drive
Suite G
Waukesha, WI 53188

RE: Project: 200032 Jagemann Plating
Pace Project No.: 10595916

Dear Rob Hoverman:

Enclosed are the analytical results for sample(s) received by the laboratory on January 28, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Minneapolis

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

Sincerely,



Carolynne Trout
carolynne.trout@pacelabs.com
1(612)607-6351
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 200032 Jagemann Plating

Pace Project No.: 10595916

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414

1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab

A2LA Certification #: 2926.01*

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009*

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014*

Arkansas DW Certification #: MN00064

Arkansas WW Certification #: 88-0680

California Certification #: 2929

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137

Florida Certification #: E87605*

Georgia Certification #: 959

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: AI-03086*

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064*

Maryland Certification #: 322

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137*

Minnesota Dept of Ag Approval: via MN 027-053-137

Minnesota Petrofund Registration #: 1240*

Mississippi Certification #: MN00064

Missouri Certification #: 10100

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081*

New Jersey Certification #: MN002

New York Certification #: 11647*

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification (1700) #: CL101

Ohio VAP Certification (1800) #: CL110*

Oklahoma Certification #: 9507*

Oregon Primary Certification #: MN300001

Oregon Secondary Certification #: MN200001*

Pennsylvania Certification #: 68-00563*

Puerto Rico Certification #: MN00064

South Carolina Certification #: 74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192*

Utah Certification #: MN00064*

Vermont Certification #: VT-027053137

Virginia Certification #: 460163*

Washington Certification #: C486*

West Virginia DEP Certification #: 382

West Virginia DW Certification #: 9952 C

Wisconsin Certification #: 999407970

Wyoming UST Certification #: via A2LA 2926.01

USDA Permit #: P330-19-00208

Please Note: Applicable air certifications are denoted with an asterisk ().

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 200032 Jagemann Plating

Pace Project No.: 10595916

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10595916001	EP-1	Air	01/26/22 10:58	01/28/22 12:10

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 200032 Jagemann Plating
Pace Project No.: 10595916

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10595916001	EP-1	TO-15	AFV	5	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 200032 Jagemann Plating

Pace Project No.: 10595916

Sample: EP-1 **Lab ID: 10595916001** Collected: 01/26/22 10:58 Received: 01/28/22 12:10 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR									
Analytical Method: TO-15									
Pace Analytical Services - Minneapolis									
1,1-Dichloroethene	0.27J	ug/m3	1.6	0.27	1.94		02/04/22 05:24	75-35-4	
cis-1,2-Dichloroethene	19.3	ug/m3	1.6	0.38	1.94		02/04/22 05:24	156-59-2	
trans-1,2-Dichloroethene	1.1J	ug/m3	1.6	0.33	1.94		02/04/22 05:24	156-60-5	
Tetrachloroethene	4.9	ug/m3	1.3	0.57	1.94		02/04/22 05:24	127-18-4	
Trichloroethene	36.9	ug/m3	1.1	0.38	1.94		02/04/22 05:24	79-01-6	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 200032 Jagemann Plating

Pace Project No.: 10595916

QC Batch: 797100

Analysis Method: TO-15

QC Batch Method: TO-15

Analysis Description: TO15 MSV AIR Low Level

Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10595916001

METHOD BLANK: 4236356

Matrix: Air

Associated Lab Samples: 10595916001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/m3	<0.14	0.81	02/03/22 16:31	
cis-1,2-Dichloroethene	ug/m3	<0.20	0.81	02/03/22 16:31	
Tetrachloroethene	ug/m3	<0.29	0.69	02/03/22 16:31	
trans-1,2-Dichloroethene	ug/m3	<0.17	0.81	02/03/22 16:31	
Trichloroethene	ug/m3	<0.20	0.55	02/03/22 16:31	

LABORATORY CONTROL SAMPLE: 4236357

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/m3	41.5	38.2	92	70-130	
cis-1,2-Dichloroethene	ug/m3	41	43.2	105	70-136	
Tetrachloroethene	ug/m3	69.9	68.9	99	70-134	
trans-1,2-Dichloroethene	ug/m3	40.8	40.3	99	70-134	
Trichloroethene	ug/m3	55.7	57.7	104	70-134	

SAMPLE DUPLICATE: 4237127

Parameter	Units	10594898001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1-Dichloroethene	ug/m3	ND	<0.19		25	
cis-1,2-Dichloroethene	ug/m3	ND	<0.27		25	
Tetrachloroethene	ug/m3	ND	<0.41		25	
trans-1,2-Dichloroethene	ug/m3	ND	<0.23		25	
Trichloroethene	ug/m3	ND	<0.27		25	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 200032 Jagemann Plating

Pace Project No.: 10595916

DEFINITIONS

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

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 200032 Jagemann Plating

Pace Project No.: 10595916

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10595916001	EP-1	TO-15	797100		

REPORT OF LABORATORY ANALYSIS

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AIR: CHAIN-OF-CUSTODY /

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant

WO#: 10595916



55640

Page: 1 of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: <u>Enviro Forensics</u>	Report To: <u>rhovernan@enviroforensics.com</u>	Attention:
Address: <u>NIW 23390 Stone Ridge Dr</u>	Copy To:	Company Name:
<u>Whukasha, WI 53184</u>	Purchase Order No.:	Address:
Email To: <u>rhovernan@enviroforensics.com</u>	Project Name: <u>Jagemann Plating</u>	Pace Quote Reference:
Phone: Fax:	Project Number: <u>10032</u>	Pace Project Manager/Sales Rep.:
Requested Due Date/TAT:		Pace Profile #: <u>44023</u>

Program

UST Superfund Emissions Clean Air Act

Voluntary Clean Up Dry Clean RCRA Other

Location of Sampling by State: WI

Reporting Units
 ug/m³ mg/m³
 PPBV PPMV
 Other

Report Level: II. III. IV. Other

ITEM #	'Section D Required Client Information AIR SAMPLE ID Sample IDs MUST BE UNIQUE	Valid Media Codes MEDIA CODE Tedlar Bag TB 1 Liter Summa Can 1LC 6 Liter Summa Can 6LC Low Volume Puff LVP High Volume Puff HVP Other PM10	MEDIA CODE	PID Reading (Client only)	COLLECTED				Canister Pressure (Initial Field - in Hg)	Canister Pressure (Final Field - in Hg)	Summa Can Number	Flow Control Number	Method: PM10 3C - Fixed Gas (%) TO-3 BTEX TO-3M (Methane) TO-15 Full List VOCs TO-15 Short List BTEX TO-15 Short List Chlorinated	Pace Lab ID
					COMPOSITE START		COMPOSITE - END/GRAB							
					DATE	TIME	DATE	TIME						
1	EP-1		1LC		1-26-22	1053	1-26-22	1058	-28	-3	3065	3212		X 001
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														

Comments:
 Short List:
 1,1-DCE, Cis-1,2 DCE,
 Trans-1,2 DCE, TCE, VC

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
<u>RLTL</u>	<u>1-27-22</u>	<u>1200</u>	<u>FedEx</u>	<u>1-27-22</u>	<u>1200</u>		Y/N	Y/N	Y/N
			<u>[Signature]</u>	<u>1/28/22</u>	<u>12:10</u>		Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:
Rebecca Brown

SIGNATURE OF SAMPLER:
[Signature]

DATE Signed (MM/DD/YY)
1-27-22

Temp in °C
 Received on Ice
 Custody Sealed Cooler
 Samples Intact

ORIGINAL



Document Name:
Sample Condition Upon Receipt (SCUR) - Air
 Document No.:
ENV-FRM-MIN4-0113 Rev.01

Document Revised: 13Oct2021
 Page 1 of 1
 Pace Analytical Services - Minneapolis

Air Sample Condition Upon Receipt

Client Name: EnviroForensics

Project #:

WO#: 10595916

PM: CT1 Due Date: 02/04/22
 CLIENT: EnviroForen

Courier: FedEx UPS USPS Client
 Pace SpeedDee Commercial
 Tracking Number: 9753 8448 7647 See Exception
 Custody Seal on Cooler/Box Present? Yes No
 Seals Intact? Yes No
 Packing Material: Bubble Wrap Bubble Bags Foam
 None Tin Can Other:

Date & Initials of Person Examining Contents: RLG/28/22

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		8.
Correct Containers Used?				9.
(Tedlar bags not acceptable container for TO-15 or APH)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		
Containers Intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		10.
(visual inspection/no leaks when pressurized)				
Media: <u>Air Can</u> Airbag				11. Individually Certified Cans? Y <u>N</u> (list which samples)
Is sufficient information available to reconcile samples to the COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		12.
Do cans need to be pressurized? (DO NOT PRESSURIZE 3C or ASTM 1946!!!)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		13.

Gauge #: 10AIR26 10AIR34 10AIR35 10AIR17 10AIR47 10AIR48

Canisters					Canisters				
Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure	Sample Number	Can ID	Flow Controller	Initial Pressure	Final Pressure
<u>EP-1</u>	<u>3065</u>	<u>3212</u>	<u>-4</u>	<u>410</u>					

CLIENT NOTIFICATION/RESOLUTION Field Data Required? Yes No
 Person Contacted: _____ Date/Time: _____
 Comments/Resolution: _____

Project Manager Review: Casidyne Hart Date: 2/1/22

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of order, incorrect preservative, out of temp, incorrect containers).



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

CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 211108R01
Laboratory Work Order: 0006132R

Project Description:

Jageman Plating Co.
Manitowoc, WI

Client PO No.: 2021-0729

Prepared for:

Rob Hoverman

EnviroForensics

N16W23390 Stone Ridge Dr, Suite G

Waukesha, WI 53188

Ryan W. Schneider
Senior Project Manager

February 10, 2022

Report amended to add sample(s).

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

Steven C. Thornley
Laboratory Director

Peter B. Kelly
Quality Manager

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EnviroForensics N16W23390 Stone Ridge Dr, Suite G Waukesha, WI 53188	Site Name: Jageman Plating Co. Site Location: Manitowoc, WI Project Manager: Rob Hoverman	Beacon Proposal: 211108R01 Lab Work Order: 0006132 Reported: 02/10/2022
---	--	--

Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0006132-01 Sampler Type: Sorbent Tube	IA-1 (Passive 8hr)	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-02 Sampler Type: Sorbent Tube	IA-2 (Passive 8hr)	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-03 Sampler Type: Sorbent Tube	IA-3 (Passive 8hr)	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-04 Sampler Type: Sorbent Tube	IA-4 (Passive 8hr)	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-05 Sampler Type: Sorbent Tube	IA-5 (Passive 8hr)	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-06 Sampler Type: Sorbent Tube	IA-6 (Passive 8hr)	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-07 Sampler Type: Sorbent Tube	IA-7 (Passive 8hr)	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-08 Sampler Type: Sorbent Tube	IA-8 (Passive 8hr)	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-09 Sampler Type: Sorbent Tube	IA-9 (Passive 8hr)	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-10 Sampler Type: Sorbent Tube	IA-10 (Passive 8hr)	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-11 Sampler Type: Sorbent Tube	IA-11 (Passive 8hr)	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-12 Sampler Type: Sorbent Tube	IA-12 (Passive 8hr)	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-13 Sampler Type: Sorbent Tube	IA-1 (Passive 5 day)	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-14 Sampler Type: Sorbent Tube	IA-2 (Passive 5 day)	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-15 Sampler Type: Sorbent Tube	IA-3 (Passive 5 day)	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-16 Sampler Type: Sorbent Tube	IA-4 (Passive 5 day)	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-17 Sampler Type: Sorbent Tube	IA-5 (Passive 5 day)	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-18 Sampler Type: Sorbent Tube	IA-6 (Passive 5 day)	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-19 Sampler Type: Sorbent Tube	IA-7 (Passive 5 day)	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-20 Sampler Type: Sorbent Tube	IA-8 (Passive 5 day)	01/19/2022	TO-17 (Passive)	Indoor Air

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Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0006132-21 Sampler Type:	IA-9 (Passive 5 day) Sorbent Tube	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-22 Sampler Type:	IA-10 (Passive 5 day) Sorbent Tube	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-23 Sampler Type:	IA-11 (Passive 5 day) Sorbent Tube	01/19/2022	TO-17 (Passive)	Indoor Air
0006132-24 Sampler Type:	IA-12 (Passive 5 day) Sorbent Tube	01/19/2022	TO-17 (Passive)	Indoor Air

Project Completeness

Samples Received: 24
Samples Analyzed: 24

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Case Narrative

Beacon Environmental provided thermally conditioned ChloroSorbers for sampling, with analyses following U.S. EPA Method TO-17, with analytical results reported in $\mu\text{g}/\text{m}^3$. Beacon calculated concentration results using the exposure period, target analyte mass, and the following procedures detailed in ISO 16017-2, *Indoor, ambient and workplace air-Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography-Part 2: Diffusive sampling*.

Beacon reports results and reporting limits to three significant digits.

Reporting Limits (RLs) for EPA Method TO-17

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

Calibration Verification

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

Internal Standards and Surrogates

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

Blank Contamination

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

Laboratory Control Samples

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

Discussion

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

End of Case Narrative

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Site Location: Manitowoc, WI
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Analytical Results

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Summary of Compound Detections- Concentration

Lab Sample ID: 0006132-14	IA-2 (Passive 5 day) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
Tetrachloroethene	127-18-4	1.53	J	8.195	1.60	0.802	A22012018.D

Lab Sample ID: 0006132-15	IA-3 (Passive 5 day) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
Tetrachloroethene	127-18-4	2.94		8.195	1.61	0.804	A22012019.D

Lab Sample ID: 0006132-16	IA-4 (Passive 5 day) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
Trichloroethene	79-01-6	0.714	J	5.973	1.35	0.676	Ab22012005.D

Lab Sample ID: 0006132-19	IA-7 (Passive 5 day) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
Tetrachloroethene	127-18-4	0.810	J	8.195	1.61	0.803	Ab22012008.D

Lab Sample ID: 0006132-20	IA-8 (Passive 5 day) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
Trichloroethene	79-01-6	1.39		5.970	1.36	0.679	Ab22012009.D
Tetrachloroethene	127-18-4	1.71		8.198	1.61	0.803	Ab22012009.D

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Lab Work Order: 0006132
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Summary of Compound Detections- Concentration

Lab Sample ID: 0006132-22	IA-10 (Passive 5 day) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result ($\mu\text{g}/\text{m}^3$)	Q	RT	LOQ ($\mu\text{g}/\text{m}^3$)	LOD ($\mu\text{g}/\text{m}^3$)	File ID
Tetrachloroethene	127-18-4	4.31		8.195	1.61	0.804	Ab22012011.D

Lab Sample ID: 0006132-23	IA-11 (Passive 5 day) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result ($\mu\text{g}/\text{m}^3$)	Q	RT	LOQ ($\mu\text{g}/\text{m}^3$)	LOD ($\mu\text{g}/\text{m}^3$)	File ID
Tetrachloroethene	127-18-4	2.32		8.195	1.61	0.805	Ab22012012.D

Lab Sample ID: 0006132-24	IA-12 (Passive 5 day) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result ($\mu\text{g}/\text{m}^3$)	Q	RT	LOQ ($\mu\text{g}/\text{m}^3$)	LOD ($\mu\text{g}/\text{m}^3$)	File ID
Tetrachloroethene	127-18-4	0.841	J	8.195	1.61	0.806	Ab22012013.D

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Data Summary Table- Concentration

Compound	Frequency	LOD ($\mu\text{g}/\text{m}^3$)	Max Value ($\mu\text{g}/\text{m}^3$)
Trichloroethene	2	0.676	1.39
Tetrachloroethene	7	0.802	4.31

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Detailed Analytical Results

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Lab Sample ID: 0006132-01	IA-1 (Passive 8hr) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<9.42	U	9.42	18.8	01/20/2022 12:00	A22012005.D
1,1-Dichloroethene	75-35-4	<11.7	U	11.7	23.5	01/20/2022 12:00	A22012005.D
trans-1,2-Dichloroethene	156-60-5	<7.54	U	7.54	15.1	01/20/2022 12:00	A22012005.D
cis-1,2-Dichloroethene	156-59-2	<7.54	U	7.54	15.1	01/20/2022 12:00	A22012005.D
Trichloroethene	79-01-6	<8.12	U	8.12	16.2	01/20/2022 12:00	A22012005.D
Tetrachloroethene	127-18-4	<9.59	U	9.59	19.2	01/20/2022 12:00	A22012005.D
Analyte	CAS#	% Recovery	Recovery Limits	Q		Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	104%	70-130			01/20/2022 12:00	A22012005.D
Surrogate: Toluene-d8	2037-26-5	94.2%	70-130			01/20/2022 12:00	A22012005.D

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Lab Sample ID: 0006132-02	IA-2 (Passive 8hr) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<9.25	U	9.25	18.5	01/20/2022 12:28	A22012006.D
1,1-Dichloroethene	75-35-4	<11.5	U	11.5	23.0	01/20/2022 12:28	A22012006.D
trans-1,2-Dichloroethene	156-60-5	<7.40	U	7.40	14.8	01/20/2022 12:28	A22012006.D
cis-1,2-Dichloroethene	156-59-2	<7.40	U	7.40	14.8	01/20/2022 12:28	A22012006.D
Trichloroethene	79-01-6	<7.97	U	7.97	15.9	01/20/2022 12:28	A22012006.D
Tetrachloroethene	127-18-4	<9.42	U	9.42	18.8	01/20/2022 12:28	A22012006.D
<i>Analyte</i>	<i>CAS#</i>	<i>% Recovery</i>	<i>Recovery Limits</i>	<i>Q</i>		<i>Analyzed</i>	<i>File ID</i>
<i>Surrogate: 1,2-DCA-d4</i>	17060-07-0	103%	70-130			01/20/2022 12:28	A22012006.D
<i>Surrogate: Toluene-d8</i>	2037-26-5	94.2%	70-130			01/20/2022 12:28	A22012006.D

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Lab Sample ID: 0006132-03	IA-3 (Passive 8hr) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<9.42	U	9.42	18.8	01/20/2022 12:55	A22012007.D
1,1-Dichloroethene	75-35-4	<11.7	U	11.7	23.5	01/20/2022 12:55	A22012007.D
trans-1,2-Dichloroethene	156-60-5	<7.54	U	7.54	15.1	01/20/2022 12:55	A22012007.D
cis-1,2-Dichloroethene	156-59-2	<7.54	U	7.54	15.1	01/20/2022 12:55	A22012007.D
Trichloroethene	79-01-6	<8.12	U	8.12	16.2	01/20/2022 12:55	A22012007.D
Tetrachloroethene	127-18-4	<9.59	U	9.59	19.2	01/20/2022 12:55	A22012007.D
Analyte	CAS#	% Recovery	Recovery Limits	Q		Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	100%	70-130			01/20/2022 12:55	A22012007.D
Surrogate: Toluene-d8	2037-26-5	94.3%	70-130			01/20/2022 12:55	A22012007.D

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Lab Sample ID: 0006132-04	IA-4 (Passive 8hr) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<9.29	U	9.29	18.6	01/20/2022 13:23	A22012008.D
1,1-Dichloroethene	75-35-4	<11.6	U	11.6	23.1	01/20/2022 13:23	A22012008.D
trans-1,2-Dichloroethene	156-60-5	<7.43	U	7.43	14.9	01/20/2022 13:23	A22012008.D
cis-1,2-Dichloroethene	156-59-2	<7.43	U	7.43	14.9	01/20/2022 13:23	A22012008.D
Trichloroethene	79-01-6	<8.00	U	8.00	16.0	01/20/2022 13:23	A22012008.D
Tetrachloroethene	127-18-4	<9.46	U	9.46	18.9	01/20/2022 13:23	A22012008.D
Analyte	CAS#	% Recovery	Recovery Limits	Q		Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	99.3%	70-130			01/20/2022 13:23	A22012008.D
Surrogate: Toluene-d8	2037-26-5	96.2%	70-130			01/20/2022 13:23	A22012008.D

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Lab Sample ID: 0006132-05	IA-5 (Passive 8hr) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<9.38	U	9.38	18.8	01/20/2022 13:50	A22012009.D
1,1-Dichloroethene	75-35-4	<11.7	U	11.7	23.4	01/20/2022 13:50	A22012009.D
trans-1,2-Dichloroethene	156-60-5	<7.51	U	7.51	15.0	01/20/2022 13:50	A22012009.D
cis-1,2-Dichloroethene	156-59-2	<7.51	U	7.51	15.0	01/20/2022 13:50	A22012009.D
Trichloroethene	79-01-6	<8.08	U	8.08	16.2	01/20/2022 13:50	A22012009.D
Tetrachloroethene	127-18-4	<9.55	U	9.55	19.1	01/20/2022 13:50	A22012009.D
Analyte	CAS#	% Recovery	Recovery Limits	Q		Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	98.6%	70-130			01/20/2022 13:50	A22012009.D
Surrogate: Toluene-d8	2037-26-5	96.4%	70-130			01/20/2022 13:50	A22012009.D

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Lab Sample ID: 0006132-06	IA-6 (Passive 8hr) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<9.31	U	9.31	18.6	01/20/2022 14:18	A22012010.D
1,1-Dichloroethene	75-35-4	<11.6	U	11.6	23.2	01/20/2022 14:18	A22012010.D
trans-1,2-Dichloroethene	156-60-5	<7.45	U	7.45	14.9	01/20/2022 14:18	A22012010.D
cis-1,2-Dichloroethene	156-59-2	<7.45	U	7.45	14.9	01/20/2022 14:18	A22012010.D
Trichloroethene	79-01-6	<8.02	U	8.02	16.0	01/20/2022 14:18	A22012010.D
Tetrachloroethene	127-18-4	<9.48	U	9.48	19.0	01/20/2022 14:18	A22012010.D
Analyte	CAS#	% Recovery	Recovery Limits	Q		Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	98.7%	70-130			01/20/2022 14:18	A22012010.D
Surrogate: Toluene-d8	2037-26-5	95.7%	70-130			01/20/2022 14:18	A22012010.D

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Lab Sample ID: 0006132-07	IA-7 (Passive 8hr) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<9.98	U	9.98	20.0	01/20/2022 14:46	A22012011.D
1,1-Dichloroethene	75-35-4	<12.4	U	12.4	24.8	01/20/2022 14:46	A22012011.D
trans-1,2-Dichloroethene	156-60-5	<7.99	U	7.99	16.0	01/20/2022 14:46	A22012011.D
cis-1,2-Dichloroethene	156-59-2	<7.99	U	7.99	16.0	01/20/2022 14:46	A22012011.D
Trichloroethene	79-01-6	<8.60	U	8.60	17.2	01/20/2022 14:46	A22012011.D
Tetrachloroethene	127-18-4	<10.2	U	10.2	20.3	01/20/2022 14:46	A22012011.D
Analyte	CAS#	% Recovery	Recovery Limits	Q		Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	104%	70-130			01/20/2022 14:46	A22012011.D
Surrogate: Toluene-d8	2037-26-5	92.5%	70-130			01/20/2022 14:46	A22012011.D

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Lab Sample ID: 0006132-08	IA-8 (Passive 8hr) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<9.85	U	9.85	19.7	01/20/2022 15:13	A22012012.D
1,1-Dichloroethene	75-35-4	<12.3	U	12.3	24.5	01/20/2022 15:13	A22012012.D
trans-1,2-Dichloroethene	156-60-5	<7.88	U	7.88	15.8	01/20/2022 15:13	A22012012.D
cis-1,2-Dichloroethene	156-59-2	<7.88	U	7.88	15.8	01/20/2022 15:13	A22012012.D
Trichloroethene	79-01-6	<8.49	U	8.49	17.0	01/20/2022 15:13	A22012012.D
Tetrachloroethene	127-18-4	<10.0	U	10.0	20.1	01/20/2022 15:13	A22012012.D
Analyte	CAS#	% Recovery	Recovery Limits	Q		Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	99.7%	70-130			01/20/2022 15:13	A22012012.D
Surrogate: Toluene-d8	2037-26-5	95.1%	70-130			01/20/2022 15:13	A22012012.D

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Lab Sample ID: 0006132-09	IA-9 (Passive 8hr) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<9.31	U	9.31	18.6	01/20/2022 15:41	A22012013.D
1,1-Dichloroethene	75-35-4	<11.6	U	11.6	23.2	01/20/2022 15:41	A22012013.D
trans-1,2-Dichloroethene	156-60-5	<7.45	U	7.45	14.9	01/20/2022 15:41	A22012013.D
cis-1,2-Dichloroethene	156-59-2	<7.45	U	7.45	14.9	01/20/2022 15:41	A22012013.D
Trichloroethene	79-01-6	<8.02	U	8.02	16.0	01/20/2022 15:41	A22012013.D
Tetrachloroethene	127-18-4	<9.48	U	9.48	19.0	01/20/2022 15:41	A22012013.D
Analyte	CAS#	% Recovery	Recovery Limits	Q		Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	101%	70-130			01/20/2022 15:41	A22012013.D
Surrogate: Toluene-d8	2037-26-5	96.9%	70-130			01/20/2022 15:41	A22012013.D

EnviroForensics N16W23390 Stone Ridge Dr, Suite G Waukesha, WI 53188	Site Name: Jageman Plating Co. Site Location: Manitowoc, WI Project Manager: Rob Hoverman	Beacon Proposal: 211108R01 Lab Work Order: 0006132 Reported: 02/10/2022
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Lab Sample ID: 0006132-10	IA-10 (Passive 8hr) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<9.62	U	9.62	19.2	01/20/2022 16:08	A22012014.D
1,1-Dichloroethene	75-35-4	<12.0	U	12.0	24.0	01/20/2022 16:08	A22012014.D
trans-1,2-Dichloroethene	156-60-5	<7.70	U	7.70	15.4	01/20/2022 16:08	A22012014.D
cis-1,2-Dichloroethene	156-59-2	<7.70	U	7.70	15.4	01/20/2022 16:08	A22012014.D
Trichloroethene	79-01-6	<8.29	U	8.29	16.6	01/20/2022 16:08	A22012014.D
Tetrachloroethene	127-18-4	<9.80	U	9.80	19.6	01/20/2022 16:08	A22012014.D

Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	101%	70-130		01/20/2022 16:08	A22012014.D
Surrogate: Toluene-d8	2037-26-5	94.9%	70-130		01/20/2022 16:08	A22012014.D

EnviroForensics N16W23390 Stone Ridge Dr, Suite G Waukesha, WI 53188	Site Name: Jageman Plating Co. Site Location: Manitowoc, WI Project Manager: Rob Hoverman	Beacon Proposal: 211108R01 Lab Work Order: 0006132 Reported: 02/10/2022
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Lab Sample ID: 0006132-11	IA-11 (Passive 8hr) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<9.66	U	9.66	19.3	01/20/2022 16:37	A22012015.D
1,1-Dichloroethene	75-35-4	<12.0	U	12.0	24.1	01/20/2022 16:37	A22012015.D
trans-1,2-Dichloroethene	156-60-5	<7.73	U	7.73	15.5	01/20/2022 16:37	A22012015.D
cis-1,2-Dichloroethene	156-59-2	<7.73	U	7.73	15.5	01/20/2022 16:37	A22012015.D
Trichloroethene	79-01-6	<8.33	U	8.33	16.7	01/20/2022 16:37	A22012015.D
Tetrachloroethene	127-18-4	<9.84	U	9.84	19.7	01/20/2022 16:37	A22012015.D
Analyte	CAS#	% Recovery	Recovery Limits	Q		Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	104%	70-130			01/20/2022 16:37	A22012015.D
Surrogate: Toluene-d8	2037-26-5	96.4%	70-130			01/20/2022 16:37	A22012015.D

EnviroForensics N16W23390 Stone Ridge Dr, Suite G Waukesha, WI 53188	Site Name: Jageman Plating Co. Site Location: Manitowoc, WI Project Manager: Rob Hoverman	Beacon Proposal: 211108R01 Lab Work Order: 0006132 Reported: 02/10/2022
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Lab Sample ID: 0006132-12	IA-12 (Passive 8hr) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<9.54	U	9.54	19.1	01/20/2022 17:05	A22012016.D
1,1-Dichloroethene	75-35-4	<11.9	U	11.9	23.7	01/20/2022 17:05	A22012016.D
trans-1,2-Dichloroethene	156-60-5	<7.63	U	7.63	15.3	01/20/2022 17:05	A22012016.D
cis-1,2-Dichloroethene	156-59-2	<7.63	U	7.63	15.3	01/20/2022 17:05	A22012016.D
Trichloroethene	79-01-6	<8.22	U	8.22	16.4	01/20/2022 17:05	A22012016.D
Tetrachloroethene	127-18-4	<9.72	U	9.72	19.4	01/20/2022 17:05	A22012016.D

Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	102%	70-130		01/20/2022 17:05	A22012016.D
Surrogate: Toluene-d8	2037-26-5	95.4%	70-130		01/20/2022 17:05	A22012016.D

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Lab Sample ID: 0006132-13	IA-1 (Passive 5 day) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.789	U	0.789	1.58	01/20/2022 17:32	A22012017.D
1,1-Dichloroethene	75-35-4	<0.982	U	0.982	1.96	01/20/2022 17:32	A22012017.D
trans-1,2-Dichloroethene	156-60-5	<0.631	U	0.631	1.26	01/20/2022 17:32	A22012017.D
cis-1,2-Dichloroethene	156-59-2	<0.631	U	0.631	1.26	01/20/2022 17:32	A22012017.D
Trichloroethene	79-01-6	<0.680	U	0.680	1.36	01/20/2022 17:32	A22012017.D
Tetrachloroethene	127-18-4	<0.803	U	0.803	1.61	01/20/2022 17:32	A22012017.D
Analyte	CAS#	% Recovery	Recovery Limits	Q		Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	102%	70-130			01/20/2022 17:32	A22012017.D
Surrogate: Toluene-d8	2037-26-5	90.0%	70-130			01/20/2022 17:32	A22012017.D

EnviroForensics N16W23390 Stone Ridge Dr, Suite G Waukesha, WI 53188	Site Name: Jageman Plating Co. Site Location: Manitowoc, WI Project Manager: Rob Hoverman	Beacon Proposal: 211108R01 Lab Work Order: 0006132 Reported: 02/10/2022
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Lab Sample ID: 0006132-14	IA-2 (Passive 5 day) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.788	U	0.788	1.58	01/20/2022 18:00	A22012018.D
1,1-Dichloroethene	75-35-4	<0.981	U	0.981	1.96	01/20/2022 18:00	A22012018.D
trans-1,2-Dichloroethene	156-60-5	<0.630	U	0.630	1.26	01/20/2022 18:00	A22012018.D
cis-1,2-Dichloroethene	156-59-2	<0.630	U	0.630	1.26	01/20/2022 18:00	A22012018.D
Trichloroethene	79-01-6	<0.679	U	0.679	1.36	01/20/2022 18:00	A22012018.D
Tetrachloroethene	127-18-4	1.53	J	0.802	1.60	01/20/2022 18:00	A22012018.D

Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	103%	70-130		01/20/2022 18:00	A22012018.D
Surrogate: Toluene-d8	2037-26-5	92.4%	70-130		01/20/2022 18:00	A22012018.D

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Lab Sample ID: 0006132-15	IA-3 (Passive 5 day) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.790	U	0.790	1.58	01/20/2022 18:28	A22012019.D
1,1-Dichloroethene	75-35-4	<0.983	U	0.983	1.97	01/20/2022 18:28	A22012019.D
trans-1,2-Dichloroethene	156-60-5	<0.632	U	0.632	1.26	01/20/2022 18:28	A22012019.D
cis-1,2-Dichloroethene	156-59-2	<0.632	U	0.632	1.26	01/20/2022 18:28	A22012019.D
Trichloroethene	79-01-6	<0.680	U	0.680	1.36	01/20/2022 18:28	A22012019.D
Tetrachloroethene	127-18-4	2.94		0.804	1.61	01/20/2022 18:28	A22012019.D

Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	101%	70-130		01/20/2022 18:28	A22012019.D
Surrogate: Toluene-d8	2037-26-5	89.6%	70-130		01/20/2022 18:28	A22012019.D

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Lab Sample ID: 0006132-16	IA-4 (Passive 5 day) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.785	U	0.785	1.57	01/20/2022 20:57	Ab22012005.D
1,1-Dichloroethene	75-35-4	<0.977	U	0.977	1.95	01/20/2022 20:57	Ab22012005.D
trans-1,2-Dichloroethene	156-60-5	<0.628	U	0.628	1.26	01/20/2022 20:57	Ab22012005.D
cis-1,2-Dichloroethene	156-59-2	<0.628	U	0.628	1.26	01/20/2022 20:57	Ab22012005.D
Trichloroethene	79-01-6	0.714	J	0.676	1.35	01/20/2022 20:57	Ab22012005.D
Tetrachloroethene	127-18-4	<0.799	U	0.799	1.60	01/20/2022 20:57	Ab22012005.D

Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	101%	70-130		01/20/2022 20:57	Ab22012005.D
Surrogate: Toluene-d8	2037-26-5	96.5%	70-130		01/20/2022 20:57	Ab22012005.D

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Lab Sample ID: 0006132-17	IA-5 (Passive 5 day) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.785	U	0.785	1.57	01/20/2022 21:25	Ab22012006.D
1,1-Dichloroethene	75-35-4	<0.977	U	0.977	1.95	01/20/2022 21:25	Ab22012006.D
trans-1,2-Dichloroethene	156-60-5	<0.628	U	0.628	1.26	01/20/2022 21:25	Ab22012006.D
cis-1,2-Dichloroethene	156-59-2	<0.628	U	0.628	1.26	01/20/2022 21:25	Ab22012006.D
Trichloroethene	79-01-6	<0.677	U	0.677	1.35	01/20/2022 21:25	Ab22012006.D
Tetrachloroethene	127-18-4	<0.800	U	0.800	1.60	01/20/2022 21:25	Ab22012006.D
Analyte	CAS#	% Recovery	Recovery Limits	Q		Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	105%	70-130			01/20/2022 21:25	Ab22012006.D
Surrogate: Toluene-d8	2037-26-5	97.8%	70-130			01/20/2022 21:25	Ab22012006.D

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Lab Sample ID: 0006132-18	IA-6 (Passive 5 day) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.786	U	0.786	1.57	01/20/2022 21:52	Ab22012007.D
1,1-Dichloroethene	75-35-4	<0.978	U	0.978	1.96	01/20/2022 21:52	Ab22012007.D
trans-1,2-Dichloroethene	156-60-5	<0.628	U	0.628	1.26	01/20/2022 21:52	Ab22012007.D
cis-1,2-Dichloroethene	156-59-2	<0.628	U	0.628	1.26	01/20/2022 21:52	Ab22012007.D
Trichloroethene	79-01-6	<0.677	U	0.677	1.35	01/20/2022 21:52	Ab22012007.D
Tetrachloroethene	127-18-4	<0.800	U	0.800	1.60	01/20/2022 21:52	Ab22012007.D

Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	102%	70-130		01/20/2022 21:52	Ab22012007.D
Surrogate: Toluene-d8	2037-26-5	96.4%	70-130		01/20/2022 21:52	Ab22012007.D

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Lab Sample ID: 0006132-19	IA-7 (Passive 5 day) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.789	U	0.789	1.58	01/20/2022 22:20	Ab22012008.D
1,1-Dichloroethene	75-35-4	<0.982	U	0.982	1.96	01/20/2022 22:20	Ab22012008.D
trans-1,2-Dichloroethene	156-60-5	<0.631	U	0.631	1.26	01/20/2022 22:20	Ab22012008.D
cis-1,2-Dichloroethene	156-59-2	<0.631	U	0.631	1.26	01/20/2022 22:20	Ab22012008.D
Trichloroethene	79-01-6	<0.680	U	0.680	1.36	01/20/2022 22:20	Ab22012008.D
Tetrachloroethene	127-18-4	0.810	J	0.803	1.61	01/20/2022 22:20	Ab22012008.D

Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	104%	70-130		01/20/2022 22:20	Ab22012008.D
Surrogate: Toluene-d8	2037-26-5	91.2%	70-130		01/20/2022 22:20	Ab22012008.D

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Lab Sample ID: 0006132-20	IA-8 (Passive 5 day) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.789	U	0.789	1.58	01/20/2022 22:47	Ab22012009.D
1,1-Dichloroethene	75-35-4	<0.981	U	0.981	1.96	01/20/2022 22:47	Ab22012009.D
trans-1,2-Dichloroethene	156-60-5	<0.631	U	0.631	1.26	01/20/2022 22:47	Ab22012009.D
cis-1,2-Dichloroethene	156-59-2	<0.631	U	0.631	1.26	01/20/2022 22:47	Ab22012009.D
Trichloroethene	79-01-6	1.39		0.679	1.36	01/20/2022 22:47	Ab22012009.D
Tetrachloroethene	127-18-4	1.71		0.803	1.61	01/20/2022 22:47	Ab22012009.D

Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	98.9%	70-130		01/20/2022 22:47	Ab22012009.D
Surrogate: Toluene-d8	2037-26-5	92.8%	70-130		01/20/2022 22:47	Ab22012009.D

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Lab Sample ID: 0006132-21	IA-9 (Passive 5 day) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.783	U	0.783	1.57	01/20/2022 23:15	Ab22012010.D
1,1-Dichloroethene	75-35-4	<0.974	U	0.974	1.95	01/20/2022 23:15	Ab22012010.D
trans-1,2-Dichloroethene	156-60-5	<0.626	U	0.626	1.25	01/20/2022 23:15	Ab22012010.D
cis-1,2-Dichloroethene	156-59-2	<0.626	U	0.626	1.25	01/20/2022 23:15	Ab22012010.D
Trichloroethene	79-01-6	<0.674	U	0.674	1.35	01/20/2022 23:15	Ab22012010.D
Tetrachloroethene	127-18-4	<0.797	U	0.797	1.59	01/20/2022 23:15	Ab22012010.D
Analyte	CAS#	% Recovery	Recovery Limits	Q		Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	103%	70-130			01/20/2022 23:15	Ab22012010.D
Surrogate: Toluene-d8	2037-26-5	97.0%	70-130			01/20/2022 23:15	Ab22012010.D

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Lab Sample ID: 0006132-22	IA-10 (Passive 5 day) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.789	U	0.789	1.58	01/20/2022 23:43	Ab22012011.D
1,1-Dichloroethene	75-35-4	<0.982	U	0.982	1.96	01/20/2022 23:43	Ab22012011.D
trans-1,2-Dichloroethene	156-60-5	<0.631	U	0.631	1.26	01/20/2022 23:43	Ab22012011.D
cis-1,2-Dichloroethene	156-59-2	<0.631	U	0.631	1.26	01/20/2022 23:43	Ab22012011.D
Trichloroethene	79-01-6	<0.680	U	0.680	1.36	01/20/2022 23:43	Ab22012011.D
Tetrachloroethene	127-18-4	4.31		0.804	1.61	01/20/2022 23:43	Ab22012011.D

Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	106%	70-130		01/20/2022 23:43	Ab22012011.D
Surrogate: Toluene-d8	2037-26-5	87.4%	70-130		01/20/2022 23:43	Ab22012011.D

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Lab Sample ID: 0006132-23	IA-11 (Passive 5 day) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.791	U	0.791	1.58	01/21/2022 00:11	Ab22012012.D
1,1-Dichloroethene	75-35-4	<0.984	U	0.984	1.97	01/21/2022 00:11	Ab22012012.D
trans-1,2-Dichloroethene	156-60-5	<0.633	U	0.633	1.27	01/21/2022 00:11	Ab22012012.D
cis-1,2-Dichloroethene	156-59-2	<0.633	U	0.633	1.27	01/21/2022 00:11	Ab22012012.D
Trichloroethene	79-01-6	<0.681	U	0.681	1.36	01/21/2022 00:11	Ab22012012.D
Tetrachloroethene	127-18-4	2.32		0.805	1.61	01/21/2022 00:11	Ab22012012.D

Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	100%	70-130		01/21/2022 00:11	Ab22012012.D
Surrogate: Toluene-d8	2037-26-5	94.7%	70-130		01/21/2022 00:11	Ab22012012.D

EnviroForensics N16W23390 Stone Ridge Dr, Suite G Waukesha, WI 53188	Site Name: Jageman Plating Co. Site Location: Manitowoc, WI Project Manager: Rob Hoverman	Beacon Proposal: 211108R01 Lab Work Order: 0006132 Reported: 02/10/2022
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Lab Sample ID: 0006132-24	IA-12 (Passive 5 day) Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.791	U	0.791	1.58	01/21/2022 00:39	Ab22012013.D
1,1-Dichloroethene	75-35-4	<0.985	U	0.985	1.97	01/21/2022 00:39	Ab22012013.D
trans-1,2-Dichloroethene	156-60-5	<0.633	U	0.633	1.27	01/21/2022 00:39	Ab22012013.D
cis-1,2-Dichloroethene	156-59-2	<0.633	U	0.633	1.27	01/21/2022 00:39	Ab22012013.D
Trichloroethene	79-01-6	<0.682	U	0.682	1.36	01/21/2022 00:39	Ab22012013.D
Tetrachloroethene	127-18-4	0.841	J	0.806	1.61	01/21/2022 00:39	Ab22012013.D

Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	104%	70-130		01/21/2022 00:39	Ab22012013.D
Surrogate: Toluene-d8	2037-26-5	92.0%	70-130		01/21/2022 00:39	Ab22012013.D

EnviroForensics
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Site Name: Jageman Plating Co.
Site Location: Manitowoc, WI
Project Manager: Rob Hoverman

Beacon Proposal: 211108R01
Lab Work Order: 0006132
Reported: 02/10/2022

QC Information/Summary

EnviroForensics N16W23390 Stone Ridge Dr, Suite G Waukesha, WI 53188	Site Name: Jageman Plating Co. Site Location: Manitowoc, WI Project Manager: Rob Hoverman	Beacon Proposal: 211108R01 Lab Work Order: 0006132 Reported: 02/10/2022
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Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B21J038 - Instrument: A System - File ID: A21101516.D

B21J038-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	43.7	5	2.5	ng	50.0		87.4	70-130			
1,1-Dichloroethene	46.4	5	2.5	ng	50.0		92.8	70-130			
trans-1,2-Dichloroethene	48.2	5	2.5	ng	50.0		96.3	70-130			
cis-1,2-Dichloroethene	50.9	5	2.5	ng	50.0		102	70-130			
Trichloroethene	47.7	5	2.5	ng	50.0		95.4	70-130			
Tetrachloroethene	49.4	5	2.5	ng	50.0		98.8	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	52.6			ng	50.0		105	70-130			
<i>Surrogate: Toluene-d8</i>	50.9			ng	50.0		102	70-130			

EnviroForensics N16W23390 Stone Ridge Dr, Suite G Waukesha, WI 53188	Site Name: Jageman Plating Co. Site Location: Manitowoc, WI Project Manager: Rob Hoverman	Beacon Proposal: 211108R01 Lab Work Order: 0006132 Reported: 02/10/2022
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Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B21J038 - Instrument: A System - File ID: A21101519.D

B21J038-ICB1 (Lab Blank/Initial Calibration Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<2.5	5	2.5	ng							U
1,1-Dichloroethene	<2.5	5	2.5	ng							U
trans-1,2-Dichloroethene	<2.5	5	2.5	ng							U
cis-1,2-Dichloroethene	<2.5	5	2.5	ng							U
Trichloroethene	<2.5	5	2.5	ng							U
Tetrachloroethene	<2.5	5	2.5	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	93.5			ng	100		93.5	70-130			
<i>Surrogate: Toluene-d8</i>	98.5			ng	100		98.5	70-130			

EnviroForensics
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Site Name: Jageman Plating Co.
Site Location: Manitowoc, WI
Project Manager: Rob Hoverman

Beacon Proposal: 211108R01
Lab Work Order: 0006132
Reported: 02/10/2022

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B22A056 - Batch: 22A0053 - Instrument: A System - File ID: A22012002.D
22A0053-BS1 (LCS, Calibration Source Verification)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	45.2	5	2.5	ng	50.0		90.3	70-130			
1,1-Dichloroethene	44.7	5	2.5	ng	50.0		89.3	70-130			
trans-1,2-Dichloroethene	48.2	5	2.5	ng	50.0		96.4	70-130			
cis-1,2-Dichloroethene	49.0	5	2.5	ng	50.0		98.0	70-130			
Trichloroethene	48.2	5	2.5	ng	50.0		96.4	70-130			
Tetrachloroethene	54.2	5	2.5	ng	50.0		108	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	55.5			<i>ng</i>	50.0		<i>111</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	47.9			<i>ng</i>	50.0		<i>95.8</i>	<i>70-130</i>			

EnviroForensics N16W23390 Stone Ridge Dr, Suite G Waukesha, WI 53188	Site Name: Jageman Plating Co. Site Location: Manitowoc, WI Project Manager: Rob Hoverman	Beacon Proposal: 211108R01 Lab Work Order: 0006132 Reported: 02/10/2022
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Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B22A056 - Batch: 22A0053 - Instrument: A System - File ID: A22012003.D

22A0053-BLK1 (Lab Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.783	1.57	0.783	µg/m ³							U
1,1-Dichloroethene	<0.974	1.95	0.974	µg/m ³							U
trans-1,2-Dichloroethene	<0.626	1.25	0.626	µg/m ³							U
cis-1,2-Dichloroethene	<0.626	1.25	0.626	µg/m ³							U
Trichloroethene	<0.674	1.35	0.674	µg/m ³							U
Tetrachloroethene	<0.797	1.59	0.797	µg/m ³							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>107</i>			<i>ng</i>	<i>100</i>		<i>107</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>94.4</i>			<i>ng</i>	<i>100</i>		<i>94.4</i>	<i>70-130</i>			

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Site Name: Jageman Plating Co.
Site Location: Manitowoc, WI
Project Manager: Rob Hoverman

Beacon Proposal: 211108R01
Lab Work Order: 0006132
Reported: 02/10/2022

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B22A056 - Instrument: A System - File ID: A22012004.D
B22A056-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	44.5	5	2.5	ng	50.0		89.1	70-130			
1,1-Dichloroethene	49.2	5	2.5	ng	50.0		98.3	70-130			
trans-1,2-Dichloroethene	48.5	5	2.5	ng	50.0		96.9	70-130			
cis-1,2-Dichloroethene	48.5	5	2.5	ng	50.0		96.9	70-130			
Trichloroethene	54.0	5	2.5	ng	50.0		108	70-130			
Tetrachloroethene	55.2	5	2.5	ng	50.0		110	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	55.6			<i>ng</i>	50.0		<i>111</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	48.8			<i>ng</i>	50.0		<i>97.6</i>	<i>70-130</i>			

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Site Name: Jageman Plating Co.
Site Location: Manitowoc, WI
Project Manager: Rob Hoverman

Beacon Proposal: 211108R01
Lab Work Order: 0006132
Reported: 02/10/2022

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B22A056 - Instrument: A System - File ID: A22012020.D

B22A056-CCV1 (LCS, Closing Calibration Verification)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	44.2	5	2.5	ng	50.0		88.4	70-130			
1,1-Dichloroethene	50.9	5	2.5	ng	50.0		102	70-130			
trans-1,2-Dichloroethene	49.3	5	2.5	ng	50.0		98.5	70-130			
cis-1,2-Dichloroethene	49.0	5	2.5	ng	50.0		98.1	70-130			
Trichloroethene	47.4	5	2.5	ng	50.0		94.7	70-130			
Tetrachloroethene	55.3	5	2.5	ng	50.0		111	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>53.4</i>			<i>ng</i>	<i>50.0</i>		<i>107</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>49.6</i>			<i>ng</i>	<i>50.0</i>		<i>99.2</i>	<i>70-130</i>			

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Site Name: Jageman Plating Co.
Site Location: Manitowoc, WI
Project Manager: Rob Hoverman

Beacon Proposal: 211108R01
Lab Work Order: 0006132
Reported: 02/10/2022

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B22A058 - Batch: 22A0055 - Instrument: A System - File ID: Ab22012002.D
22A0055-BS1 (LCS, Calibration Source Verification)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	42.3	5	2.5	ng	50.0		84.6	70-130			
1,1-Dichloroethene	43.9	5	2.5	ng	50.0		87.8	70-130			
trans-1,2-Dichloroethene	48.7	5	2.5	ng	50.0		97.4	70-130			
cis-1,2-Dichloroethene	48.1	5	2.5	ng	50.0		96.2	70-130			
Trichloroethene	47.3	5	2.5	ng	50.0		94.5	70-130			
Tetrachloroethene	55.7	5	2.5	ng	50.0		111	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	55.7			<i>ng</i>	50.0		<i>111</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	49.3			<i>ng</i>	50.0		<i>98.6</i>	<i>70-130</i>			

EnviroForensics N16W23390 Stone Ridge Dr, Suite G Waukesha, WI 53188	Site Name: Jageman Plating Co. Site Location: Manitowoc, WI Project Manager: Rob Hoverman	Beacon Proposal: 211108R01 Lab Work Order: 0006132 Reported: 02/10/2022
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Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B22A058 - Batch: 22A0055 - Instrument: A System - File ID: Ab22012003.D

22A0055-BLK1 (Lab Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.783	1.57	0.783	µg/m ³							U
1,1-Dichloroethene	<0.974	1.95	0.974	µg/m ³							U
trans-1,2-Dichloroethene	<0.626	1.25	0.626	µg/m ³							U
cis-1,2-Dichloroethene	<0.626	1.25	0.626	µg/m ³							U
Trichloroethene	<0.674	1.35	0.674	µg/m ³							U
Tetrachloroethene	<0.797	1.59	0.797	µg/m ³							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>104</i>			<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>96.5</i>			<i>ng</i>	<i>100</i>		<i>96.5</i>	<i>70-130</i>			

EnviroForensics N16W23390 Stone Ridge Dr, Suite G Waukesha, WI 53188	Site Name: Jageman Plating Co. Site Location: Manitowoc, WI Project Manager: Rob Hoverman	Beacon Proposal: 211108R01 Lab Work Order: 0006132 Reported: 02/10/2022
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Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B22A058 - Instrument: A System - File ID: Ab22012004.D

B22A058-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	42.8	5	2.5	ng	50.0		85.5	70-130			
1,1-Dichloroethene	45.5	5	2.5	ng	50.0		91.0	70-130			
trans-1,2-Dichloroethene	48.2	5	2.5	ng	50.0		96.5	70-130			
cis-1,2-Dichloroethene	49.3	5	2.5	ng	50.0		98.5	70-130			
Trichloroethene	51.5	5	2.5	ng	50.0		103	70-130			
Tetrachloroethene	55.9	5	2.5	ng	50.0		112	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>55.1</i>			<i>ng</i>	<i>50.0</i>		<i>110</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>49.9</i>			<i>ng</i>	<i>50.0</i>		<i>99.8</i>	<i>70-130</i>			

EnviroForensics
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Site Name: Jageman Plating Co.
Site Location: Manitowoc, WI
Project Manager: Rob Hoverman

Beacon Proposal: 211108R01
Lab Work Order: 0006132
Reported: 02/10/2022

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B22A058 - Instrument: A System - File ID: Ab22012014.D
B22A058-CCV1 (LCS, Closing Calibration Verification)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	42.1	5	2.5	ng	50.0		84.2	70-130			
1,1-Dichloroethene	43.3	5	2.5	ng	50.0		86.6	70-130			
trans-1,2-Dichloroethene	48.6	5	2.5	ng	50.0		97.2	70-130			
cis-1,2-Dichloroethene	49.3	5	2.5	ng	50.0		98.6	70-130			
Trichloroethene	49.3	5	2.5	ng	50.0		98.6	70-130			
Tetrachloroethene	55.5	5	2.5	ng	50.0		111	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	55.7			<i>ng</i>	50.0		<i>111</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	49.3			<i>ng</i>	50.0		<i>98.6</i>	<i>70-130</i>			

EnviroForensics N16W23390 Stone Ridge Dr, Suite G Waukesha, WI 53188	Site Name: Jageman Plating Co. Site Location: Manitowoc, WI Project Manager: Rob Hoverman	Beacon Proposal: 211108R01 Lab Work Order: 0006132 Reported: 02/10/2022
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TO-17 (Passive) - LCS/LCSD Quality Control Summary

LCS: 22A0053-BS1 File ID: A22012002.D
LCSD: B22A056-ICV1 File ID: A22012004.D

Analyzed: 1/20/22 10:59
 Analyzed: 1/20/22 10:01

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	45.16	90.32	50	44.53	89.10	70-130	1.40	30	
1,1-Dichloroethene	75-35-4	44.65	89.3	50	49.17	98.30	70-130	9.64	30	
trans-1,2-Dichloroethene	156-60-5	48.18	96.36	50	48.45	96.90	70-130	0.56	30	
cis-1,2-Dichloroethene	156-59-2	49.01	98.02	50	48.45	96.90	70-130	1.15	30	
Trichloroethene	79-01-6	48.18	96.36	50	53.98	108.00	70-130	11.35	30	
Tetrachloroethene	127-18-4	54.21	108.42	50	55.22	110.00	70-130	1.85	30	

EnviroForensics N16W23390 Stone Ridge Dr, Suite G Waukesha, WI 53188	Site Name: Jageman Plating Co. Site Location: Manitowoc, WI Project Manager: Rob Hoverman	Beacon Proposal: 211108R01 Lab Work Order: 0006132 Reported: 02/10/2022
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TO-17 (Passive) - LCS/LCSD Quality Control Summary

LCS: 22A0055-BS1 File ID: Ab22012002.D
LCSD: B22A058-ICV1 File ID: Ab22012004.D

Analyzed: 1/20/22 20:30
 Analyzed: 1/20/22 19:41

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	42.32	84.64	50	42.77	85.50	70-130	1.06	30	
1,1-Dichloroethene	75-35-4	43.89	87.78	50	45.49	91.00	70-130	3.58	30	
trans-1,2-Dichloroethene	156-60-5	48.69	97.38	50	48.24	96.50	70-130	0.93	30	
cis-1,2-Dichloroethene	156-59-2	48.09	96.18	50	49.26	98.50	70-130	2.40	30	
Trichloroethene	79-01-6	47.27	94.54	50	51.51	103.00	70-130	8.58	30	
Tetrachloroethene	127-18-4	55.68	111.36	50	55.92	112.00	70-130	0.43	30	

EnviroForensics
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Site Name: Jageman Plating Co.
Site Location: Manitowoc, WI
Project Manager: Rob Hoverman

Beacon Proposal: 211108R01
Lab Work Order: 0006132
Reported: 02/10/2022

Additional QC Information

EnviroForensics N16W23390 Stone Ridge Dr, Suite G Waukesha, WI 53188	Site Name: Jageman Plating Co. Site Location: Manitowoc, WI Project Manager: Rob Hoverman	Beacon Proposal: 211108R01 Lab Work Order: 0006132 Reported: 02/10/2022
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Sample Result Calculation Summary (Concentration)
TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
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Lab ID: 0006132-01 **Sample Name:** IA-1 (Passive 8hr) **̄ Temp (°C):** 8.00

Vinyl Chloride	481	1.00	0.568	U	U	A22012005.D
1,1-Dichloroethene	481	1.00	0.457	U	U	A22012005.D
trans-1,2-Dichloroethene	481	1.00	0.710	U	U	A22012005.D
cis-1,2-Dichloroethene	481	1.00	0.710	U	U	A22012005.D
Trichloroethene	481	1.00	0.659	U	U	A22012005.D
Tetrachloroethene	481	1.00	0.558	U	U	A22012005.D

Lab ID: 0006132-02 **Sample Name:** IA-2 (Passive 8hr) **̄ Temp (°C):** 8.00

Vinyl Chloride	490	1.00	0.568	U	U	A22012006.D
1,1-Dichloroethene	490	1.00	0.457	U	U	A22012006.D
trans-1,2-Dichloroethene	490	1.00	0.710	U	U	A22012006.D
cis-1,2-Dichloroethene	490	1.00	0.710	U	U	A22012006.D
Trichloroethene	490	1.00	0.659	U	U	A22012006.D
Tetrachloroethene	490	1.00	0.558	U	U	A22012006.D

Lab ID: 0006132-03 **Sample Name:** IA-3 (Passive 8hr) **̄ Temp (°C):** 8.00

Vinyl Chloride	481	1.00	0.568	U	U	A22012007.D
1,1-Dichloroethene	481	1.00	0.457	U	U	A22012007.D
trans-1,2-Dichloroethene	481	1.00	0.710	U	U	A22012007.D
cis-1,2-Dichloroethene	481	1.00	0.710	U	U	A22012007.D
Trichloroethene	481	1.00	0.659	U	U	A22012007.D
Tetrachloroethene	481	1.00	0.558	U	U	A22012007.D

Lab ID: 0006132-04 **Sample Name:** IA-4 (Passive 8hr) **̄ Temp (°C):** 8.00

Vinyl Chloride	488	1.00	0.568	U	U	A22012008.D
1,1-Dichloroethene	488	1.00	0.457	U	U	A22012008.D
trans-1,2-Dichloroethene	488	1.00	0.710	U	U	A22012008.D
cis-1,2-Dichloroethene	488	1.00	0.710	U	U	A22012008.D
Trichloroethene	488	1.00	0.659	U	U	A22012008.D
Tetrachloroethene	488	1.00	0.558	U	U	A22012008.D

Lab ID: 0006132-05 **Sample Name:** IA-5 (Passive 8hr) **̄ Temp (°C):** 8.00

Vinyl Chloride	483	1.00	0.568	U	U	A22012009.D
1,1-Dichloroethene	483	1.00	0.457	U	U	A22012009.D
trans-1,2-Dichloroethene	483	1.00	0.710	U	U	A22012009.D
cis-1,2-Dichloroethene	483	1.00	0.710	U	U	A22012009.D
Trichloroethene	483	1.00	0.659	U	U	A22012009.D
Tetrachloroethene	483	1.00	0.558	U	U	A22012009.D

EnviroForensics N16W23390 Stone Ridge Dr, Suite G Waukesha, WI 53188	Site Name: Jageman Plating Co. Site Location: Manitowoc, WI Project Manager: Rob Hoverman	Beacon Proposal: 211108R01 Lab Work Order: 0006132 Reported: 02/10/2022
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Sample Result Calculation Summary (Concentration)
TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m ³	File ID
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Lab ID: 0006132-06	Sample Name: IA-6 (Passive 8hr)	̄ Temp (°C): 8.00
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Vinyl Chloride	487	1.00	0.568	U	U	A22012010.D
1,1-Dichloroethene	487	1.00	0.457	U	U	A22012010.D
trans-1,2-Dichloroethene	487	1.00	0.710	U	U	A22012010.D
cis-1,2-Dichloroethene	487	1.00	0.710	U	U	A22012010.D
Trichloroethene	487	1.00	0.659	U	U	A22012010.D
Tetrachloroethene	487	1.00	0.558	U	U	A22012010.D

Lab ID: 0006132-07	Sample Name: IA-7 (Passive 8hr)	̄ Temp (°C): 8.00
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Vinyl Chloride	454	1.00	0.568	U	U	A22012011.D
1,1-Dichloroethene	454	1.00	0.457	U	U	A22012011.D
trans-1,2-Dichloroethene	454	1.00	0.710	U	U	A22012011.D
cis-1,2-Dichloroethene	454	1.00	0.710	U	U	A22012011.D
Trichloroethene	454	1.00	0.659	U	U	A22012011.D
Tetrachloroethene	454	1.00	0.558	U	U	A22012011.D

Lab ID: 0006132-08	Sample Name: IA-8 (Passive 8hr)	̄ Temp (°C): 8.00
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Vinyl Chloride	460	1.00	0.568	U	U	A22012012.D
1,1-Dichloroethene	460	1.00	0.457	U	U	A22012012.D
trans-1,2-Dichloroethene	460	1.00	0.710	U	U	A22012012.D
cis-1,2-Dichloroethene	460	1.00	0.710	U	U	A22012012.D
Trichloroethene	460	1.00	0.659	U	U	A22012012.D
Tetrachloroethene	460	1.00	0.558	U	U	A22012012.D

Lab ID: 0006132-09	Sample Name: IA-9 (Passive 8hr)	̄ Temp (°C): 8.00
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Vinyl Chloride	487	1.00	0.568	U	U	A22012013.D
1,1-Dichloroethene	487	1.00	0.457	U	U	A22012013.D
trans-1,2-Dichloroethene	487	1.00	0.710	U	U	A22012013.D
cis-1,2-Dichloroethene	487	1.00	0.710	U	U	A22012013.D
Trichloroethene	487	1.00	0.659	U	U	A22012013.D
Tetrachloroethene	487	1.00	0.558	U	U	A22012013.D

Lab ID: 0006132-10	Sample Name: IA-10 (Passive 8hr)	̄ Temp (°C): 8.00
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Vinyl Chloride	471	1.00	0.568	U	U	A22012014.D
1,1-Dichloroethene	471	1.00	0.457	U	U	A22012014.D
trans-1,2-Dichloroethene	471	1.00	0.710	U	U	A22012014.D
cis-1,2-Dichloroethene	471	1.00	0.710	U	U	A22012014.D
Trichloroethene	471	1.00	0.659	U	U	A22012014.D
Tetrachloroethene	471	1.00	0.558	U	U	A22012014.D

EnviroForensics N16W23390 Stone Ridge Dr, Suite G Waukesha, WI 53188	Site Name: Jageman Plating Co. Site Location: Manitowoc, WI Project Manager: Rob Hoverman	Beacon Proposal: 211108R01 Lab Work Order: 0006132 Reported: 02/10/2022
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Sample Result Calculation Summary (Concentration)
TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m ³	File ID
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Lab ID: 0006132-11	Sample Name: IA-11 (Passive 8hr)	̄ Temp (°C): 8.00				
Vinyl Chloride	469	1.00	0.568	U	U	A22012015.D
1,1-Dichloroethene	469	1.00	0.457	U	U	A22012015.D
trans-1,2-Dichloroethene	469	1.00	0.710	U	U	A22012015.D
cis-1,2-Dichloroethene	469	1.00	0.710	U	U	A22012015.D
Trichloroethene	469	1.00	0.659	U	U	A22012015.D
Tetrachloroethene	469	1.00	0.558	U	U	A22012015.D

Lab ID: 0006132-12	Sample Name: IA-12 (Passive 8hr)	̄ Temp (°C): 8.00				
Vinyl Chloride	475	1.00	0.568	U	U	A22012016.D
1,1-Dichloroethene	475	1.00	0.457	U	U	A22012016.D
trans-1,2-Dichloroethene	475	1.00	0.710	U	U	A22012016.D
cis-1,2-Dichloroethene	475	1.00	0.710	U	U	A22012016.D
Trichloroethene	475	1.00	0.659	U	U	A22012016.D
Tetrachloroethene	475	1.00	0.558	U	U	A22012016.D

Lab ID: 0006132-13	Sample Name: IA-1 (Passive 5 day)	̄ Temp (°C): 8.00				
Vinyl Chloride	5,746	1.00	0.568	U	U	A22012017.D
1,1-Dichloroethene	5,746	1.00	0.457	U	U	A22012017.D
trans-1,2-Dichloroethene	5,746	1.00	0.710	U	U	A22012017.D
cis-1,2-Dichloroethene	5,746	1.00	0.710	U	U	A22012017.D
Trichloroethene	5,746	1.00	0.659	U	U	A22012017.D
Tetrachloroethene	5,746	1.00	0.558	U	U	A22012017.D

Lab ID: 0006132-14	Sample Name: IA-2 (Passive 5 day)	̄ Temp (°C): 8.00				
Vinyl Chloride	5,751	1.00	0.568	U	U	A22012018.D
1,1-Dichloroethene	5,751	1.00	0.457	U	U	A22012018.D
trans-1,2-Dichloroethene	5,751	1.00	0.710	U	U	A22012018.D
cis-1,2-Dichloroethene	5,751	1.00	0.710	U	U	A22012018.D
Trichloroethene	5,751	1.00	0.659	U	U	A22012018.D
Tetrachloroethene	5,751	1.00	0.558	4.78	1.53	A22012018.D

Lab ID: 0006132-15	Sample Name: IA-3 (Passive 5 day)	̄ Temp (°C): 8.00				
Vinyl Chloride	5,739	1.00	0.568	U	U	A22012019.D
1,1-Dichloroethene	5,739	1.00	0.457	U	U	A22012019.D
trans-1,2-Dichloroethene	5,739	1.00	0.710	U	U	A22012019.D
cis-1,2-Dichloroethene	5,739	1.00	0.710	U	U	A22012019.D
Trichloroethene	5,739	1.00	0.659	U	U	A22012019.D
Tetrachloroethene	5,739	1.00	0.558	9.13	2.94	A22012019.D

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Site Name: Jageman Plating Co.
Site Location: Manitowoc, WI
Project Manager: Rob Hoverman

Beacon Proposal: 211108R01
Lab Work Order: 0006132
Reported: 02/10/2022

Sample Result Calculation Summary (Concentration)
TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m ³	File ID
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Lab ID: 0006132-16 **Sample Name:** IA-4 (Passive 5 day) **̄ Temp (°C):** 8.00

Vinyl Chloride	5,773	1.00	0.568	U	U	Ab22012005.D
1,1-Dichloroethene	5,773	1.00	0.457	U	U	Ab22012005.D
trans-1,2-Dichloroethene	5,773	1.00	0.710	U	U	Ab22012005.D
cis-1,2-Dichloroethene	5,773	1.00	0.710	U	U	Ab22012005.D
Trichloroethene	5,773	1.00	0.659	2.64	0.714	Ab22012005.D
Tetrachloroethene	5,773	1.00	0.558	U	U	Ab22012005.D

Lab ID: 0006132-17 **Sample Name:** IA-5 (Passive 5 day) **̄ Temp (°C):** 8.00

Vinyl Chloride	5,771	1.00	0.568	U	U	Ab22012006.D
1,1-Dichloroethene	5,771	1.00	0.457	U	U	Ab22012006.D
trans-1,2-Dichloroethene	5,771	1.00	0.710	U	U	Ab22012006.D
cis-1,2-Dichloroethene	5,771	1.00	0.710	U	U	Ab22012006.D
Trichloroethene	5,771	1.00	0.659	U	U	Ab22012006.D
Tetrachloroethene	5,771	1.00	0.558	U	U	Ab22012006.D

Lab ID: 0006132-18 **Sample Name:** IA-6 (Passive 5 day) **̄ Temp (°C):** 8.00

Vinyl Chloride	5,770	1.00	0.568	U	U	Ab22012007.D
1,1-Dichloroethene	5,770	1.00	0.457	U	U	Ab22012007.D
trans-1,2-Dichloroethene	5,770	1.00	0.710	U	U	Ab22012007.D
cis-1,2-Dichloroethene	5,770	1.00	0.710	U	U	Ab22012007.D
Trichloroethene	5,770	1.00	0.659	U	U	Ab22012007.D
Tetrachloroethene	5,770	1.00	0.558	U	U	Ab22012007.D

Lab ID: 0006132-19 **Sample Name:** IA-7 (Passive 5 day) **̄ Temp (°C):** 8.00

Vinyl Chloride	5,745	1.00	0.568	U	U	Ab22012008.D
1,1-Dichloroethene	5,745	1.00	0.457	U	U	Ab22012008.D
trans-1,2-Dichloroethene	5,745	1.00	0.710	U	U	Ab22012008.D
cis-1,2-Dichloroethene	5,745	1.00	0.710	U	U	Ab22012008.D
Trichloroethene	5,745	1.00	0.659	U	U	Ab22012008.D
Tetrachloroethene	5,745	1.00	0.558	2.52	0.810	Ab22012008.D

Lab ID: 0006132-20 **Sample Name:** IA-8 (Passive 5 day) **̄ Temp (°C):** 8.00

Vinyl Chloride	5,747	1.00	0.568	U	U	Ab22012009.D
1,1-Dichloroethene	5,747	1.00	0.457	U	U	Ab22012009.D
trans-1,2-Dichloroethene	5,747	1.00	0.710	U	U	Ab22012009.D
cis-1,2-Dichloroethene	5,747	1.00	0.710	U	U	Ab22012009.D
Trichloroethene	5,747	1.00	0.659	5.12	1.39	Ab22012009.D
Tetrachloroethene	5,747	1.00	0.558	5.31	1.71	Ab22012009.D

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Sample Result Calculation Summary (Concentration)
TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m ³	File ID
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Lab ID: 0006132-21	Sample Name: IA-9 (Passive 5 day)	̄ Temp (°C): 8.00
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Vinyl Chloride	5,792	1.00	0.568	U	U	Ab22012010.D
1,1-Dichloroethene	5,792	1.00	0.457	U	U	Ab22012010.D
trans-1,2-Dichloroethene	5,792	1.00	0.710	U	U	Ab22012010.D
cis-1,2-Dichloroethene	5,792	1.00	0.710	U	U	Ab22012010.D
Trichloroethene	5,792	1.00	0.659	U	U	Ab22012010.D
Tetrachloroethene	5,792	1.00	0.558	U	U	Ab22012010.D

Lab ID: 0006132-22	Sample Name: IA-10 (Passive 5 day)	̄ Temp (°C): 8.00
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Vinyl Chloride	5,743	1.00	0.568	U	U	Ab22012011.D
1,1-Dichloroethene	5,743	1.00	0.457	U	U	Ab22012011.D
trans-1,2-Dichloroethene	5,743	1.00	0.710	U	U	Ab22012011.D
cis-1,2-Dichloroethene	5,743	1.00	0.710	U	U	Ab22012011.D
Trichloroethene	5,743	1.00	0.659	U	U	Ab22012011.D
Tetrachloroethene	5,743	1.00	0.558	13.40	4.31	Ab22012011.D

Lab ID: 0006132-23	Sample Name: IA-11 (Passive 5 day)	̄ Temp (°C): 8.00
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Vinyl Chloride	5,732	1.00	0.568	U	U	Ab22012012.D
1,1-Dichloroethene	5,732	1.00	0.457	U	U	Ab22012012.D
trans-1,2-Dichloroethene	5,732	1.00	0.710	U	U	Ab22012012.D
cis-1,2-Dichloroethene	5,732	1.00	0.710	U	U	Ab22012012.D
Trichloroethene	5,732	1.00	0.659	U	U	Ab22012012.D
Tetrachloroethene	5,732	1.00	0.558	7.20	2.32	Ab22012012.D

Lab ID: 0006132-24	Sample Name: IA-12 (Passive 5 day)	̄ Temp (°C): 8.00
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Vinyl Chloride	5,729	1.00	0.568	U	U	Ab22012013.D
1,1-Dichloroethene	5,729	1.00	0.457	U	U	Ab22012013.D
trans-1,2-Dichloroethene	5,729	1.00	0.710	U	U	Ab22012013.D
cis-1,2-Dichloroethene	5,729	1.00	0.710	U	U	Ab22012013.D
Trichloroethene	5,729	1.00	0.659	U	U	Ab22012013.D
Tetrachloroethene	5,729	1.00	0.558	2.61	0.841	Ab22012013.D

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Waukesha, WI 53188**Site Name:** Jageman Plating Co.
Site Location: Manitowoc, WI
Project Manager: Rob Hoverman**Beacon Proposal:** 211108R01
Lab Work Order: 0006132
Reported: 02/10/2022

Calculations:

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

$$U_c = U * \left(\frac{T_s + 273.15}{T_u + 273.15} \right)^{1/2}$$

where: C = concentration ($\mu\text{g}/\text{m}^3$)
M = mass (ng)
DF = dilution factor
U_c = uptake rate (ml/min), corrected
t = sampling time (minutes)
U = compound specific uptake rate
T_u = uptake rate study temperature
T_s = sample average temperature

Note: T_u is 16.65°C*Reference: Federal Register/Vol. 79, No. 125/June 30, 2014*

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Method Detection and Reporting Limit Calculations (Concentration)
TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng)		C Calculated (µg/m³)	
				LOQ	LOD	LOQ	LOD

Lab ID: 0006132-01	Sample Name: IA-1 (Passive 8hr)	̄ Temp (°C): 8.00					
Vinyl Chloride	481	1.00	0.568	5.0	2.50	18.8	9.42
1,1-Dichloroethene	481	1.00	0.457	5.0	2.50	23.5	11.7
trans-1,2-Dichloroethene	481	1.00	0.710	5.0	2.50	15.1	7.54
cis-1,2-Dichloroethene	481	1.00	0.710	5.0	2.50	15.1	7.54
Trichloroethene	481	1.00	0.659	5.0	2.50	16.2	8.12
Tetrachloroethene	481	1.00	0.558	5.0	2.50	19.2	9.59

Lab ID: 0006132-02	Sample Name: IA-2 (Passive 8hr)	̄ Temp (°C): 8.00					
Vinyl Chloride	490	1.00	0.568	5.0	2.50	18.5	9.25
1,1-Dichloroethene	490	1.00	0.457	5.0	2.50	23.0	11.5
trans-1,2-Dichloroethene	490	1.00	0.710	5.0	2.50	14.8	7.40
cis-1,2-Dichloroethene	490	1.00	0.710	5.0	2.50	14.8	7.40
Trichloroethene	490	1.00	0.659	5.0	2.50	15.9	7.97
Tetrachloroethene	490	1.00	0.558	5.0	2.50	18.8	9.42

Lab ID: 0006132-03	Sample Name: IA-3 (Passive 8hr)	̄ Temp (°C): 8.00					
Vinyl Chloride	481	1.00	0.568	5.0	2.50	18.8	9.42
1,1-Dichloroethene	481	1.00	0.457	5.0	2.50	23.5	11.7
trans-1,2-Dichloroethene	481	1.00	0.710	5.0	2.50	15.1	7.54
cis-1,2-Dichloroethene	481	1.00	0.710	5.0	2.50	15.1	7.54
Trichloroethene	481	1.00	0.659	5.0	2.50	16.2	8.12
Tetrachloroethene	481	1.00	0.558	5.0	2.50	19.2	9.59

Lab ID: 0006132-04	Sample Name: IA-4 (Passive 8hr)	̄ Temp (°C): 8.00					
Vinyl Chloride	488	1.00	0.568	5.0	2.50	18.6	9.29
1,1-Dichloroethene	488	1.00	0.457	5.0	2.50	23.1	11.6
trans-1,2-Dichloroethene	488	1.00	0.710	5.0	2.50	14.9	7.43
cis-1,2-Dichloroethene	488	1.00	0.710	5.0	2.50	14.9	7.43
Trichloroethene	488	1.00	0.659	5.0	2.50	16.0	8.00
Tetrachloroethene	488	1.00	0.558	5.0	2.50	18.9	9.46

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Method Detection and Reporting Limit Calculations (Concentration)
TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng)		C Calculated (µg/m³)	
				LOQ	LOD	LOQ	LOD

Lab ID: 0006132-05	Sample Name: IA-5 (Passive 8hr)	̄ Temp (°C): 8.00					
Vinyl Chloride	483	1.00	0.568	5.0	2.50	18.8	9.38
1,1-Dichloroethene	483	1.00	0.457	5.0	2.50	23.4	11.7
trans-1,2-Dichloroethene	483	1.00	0.710	5.0	2.50	15.0	7.51
cis-1,2-Dichloroethene	483	1.00	0.710	5.0	2.50	15.0	7.51
Trichloroethene	483	1.00	0.659	5.0	2.50	16.2	8.08
Tetrachloroethene	483	1.00	0.558	5.0	2.50	19.1	9.55

Lab ID: 0006132-06	Sample Name: IA-6 (Passive 8hr)	̄ Temp (°C): 8.00					
Vinyl Chloride	487	1.00	0.568	5.0	2.50	18.6	9.31
1,1-Dichloroethene	487	1.00	0.457	5.0	2.50	23.2	11.6
trans-1,2-Dichloroethene	487	1.00	0.710	5.0	2.50	14.9	7.45
cis-1,2-Dichloroethene	487	1.00	0.710	5.0	2.50	14.9	7.45
Trichloroethene	487	1.00	0.659	5.0	2.50	16.0	8.02
Tetrachloroethene	487	1.00	0.558	5.0	2.50	19.0	9.48

Lab ID: 0006132-07	Sample Name: IA-7 (Passive 8hr)	̄ Temp (°C): 8.00					
Vinyl Chloride	454	1.00	0.568	5.0	2.50	20.0	9.98
1,1-Dichloroethene	454	1.00	0.457	5.0	2.50	24.8	12.4
trans-1,2-Dichloroethene	454	1.00	0.710	5.0	2.50	16.0	7.99
cis-1,2-Dichloroethene	454	1.00	0.710	5.0	2.50	16.0	7.99
Trichloroethene	454	1.00	0.659	5.0	2.50	17.2	8.60
Tetrachloroethene	454	1.00	0.558	5.0	2.50	20.3	10.2

Lab ID: 0006132-08	Sample Name: IA-8 (Passive 8hr)	̄ Temp (°C): 8.00					
Vinyl Chloride	460	1.00	0.568	5.0	2.50	19.7	9.85
1,1-Dichloroethene	460	1.00	0.457	5.0	2.50	24.5	12.3
trans-1,2-Dichloroethene	460	1.00	0.710	5.0	2.50	15.8	7.88
cis-1,2-Dichloroethene	460	1.00	0.710	5.0	2.50	15.8	7.88
Trichloroethene	460	1.00	0.659	5.0	2.50	17.0	8.49
Tetrachloroethene	460	1.00	0.558	5.0	2.50	20.1	10.0

EnviroForensics N16W23390 Stone Ridge Dr, Suite G Waukesha, WI 53188	Site Name: Jageman Plating Co. Site Location: Manitowoc, WI Project Manager: Rob Hoverman	Beacon Proposal: 211108R01 Lab Work Order: 0006132 Reported: 02/10/2022
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Method Detection and Reporting Limit Calculations (Concentration)
TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng)		C Calculated (µg/m³)	
				LOQ	LOD	LOQ	LOD

Lab ID: 0006132-09	Sample Name: IA-9 (Passive 8hr)	̄ Temp (°C): 8.00					
Vinyl Chloride	487	1.00	0.568	5.0	2.50	18.6	9.31
1,1-Dichloroethene	487	1.00	0.457	5.0	2.50	23.2	11.6
trans-1,2-Dichloroethene	487	1.00	0.710	5.0	2.50	14.9	7.45
cis-1,2-Dichloroethene	487	1.00	0.710	5.0	2.50	14.9	7.45
Trichloroethene	487	1.00	0.659	5.0	2.50	16.0	8.02
Tetrachloroethene	487	1.00	0.558	5.0	2.50	19.0	9.48

Lab ID: 0006132-10	Sample Name: IA-10 (Passive 8hr)	̄ Temp (°C): 8.00					
Vinyl Chloride	471	1.00	0.568	5.0	2.50	19.2	9.62
1,1-Dichloroethene	471	1.00	0.457	5.0	2.50	24.0	12.0
trans-1,2-Dichloroethene	471	1.00	0.710	5.0	2.50	15.4	7.70
cis-1,2-Dichloroethene	471	1.00	0.710	5.0	2.50	15.4	7.70
Trichloroethene	471	1.00	0.659	5.0	2.50	16.6	8.29
Tetrachloroethene	471	1.00	0.558	5.0	2.50	19.6	9.80

Lab ID: 0006132-11	Sample Name: IA-11 (Passive 8hr)	̄ Temp (°C): 8.00					
Vinyl Chloride	469	1.00	0.568	5.0	2.50	19.3	9.66
1,1-Dichloroethene	469	1.00	0.457	5.0	2.50	24.1	12.0
trans-1,2-Dichloroethene	469	1.00	0.710	5.0	2.50	15.5	7.73
cis-1,2-Dichloroethene	469	1.00	0.710	5.0	2.50	15.5	7.73
Trichloroethene	469	1.00	0.659	5.0	2.50	16.7	8.33
Tetrachloroethene	469	1.00	0.558	5.0	2.50	19.7	9.84

Lab ID: 0006132-12	Sample Name: IA-12 (Passive 8hr)	̄ Temp (°C): 8.00					
Vinyl Chloride	475	1.00	0.568	5.0	2.50	19.1	9.54
1,1-Dichloroethene	475	1.00	0.457	5.0	2.50	23.7	11.9
trans-1,2-Dichloroethene	475	1.00	0.710	5.0	2.50	15.3	7.63
cis-1,2-Dichloroethene	475	1.00	0.710	5.0	2.50	15.3	7.63
Trichloroethene	475	1.00	0.659	5.0	2.50	16.4	8.22
Tetrachloroethene	475	1.00	0.558	5.0	2.50	19.4	9.72

EnviroForensics N16W23390 Stone Ridge Dr, Suite G Waukesha, WI 53188	Site Name: Jageman Plating Co. Site Location: Manitowoc, WI Project Manager: Rob Hoverman	Beacon Proposal: 211108R01 Lab Work Order: 0006132 Reported: 02/10/2022
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Method Detection and Reporting Limit Calculations (Concentration)
TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng)		C Calculated (µg/m³)	
				LOQ	LOD	LOQ	LOD

Lab ID: 0006132-13	Sample Name: IA-1 (Passive 5 day)	̄ Temp (°C): 8.00					
Vinyl Chloride	5,746	1.00	0.568	5.0	2.50	1.58	0.789
1,1-Dichloroethene	5,746	1.00	0.457	5.0	2.50	1.96	0.982
trans-1,2-Dichloroethene	5,746	1.00	0.710	5.0	2.50	1.26	0.631
cis-1,2-Dichloroethene	5,746	1.00	0.710	5.0	2.50	1.26	0.631
Trichloroethene	5,746	1.00	0.659	5.0	2.50	1.36	0.680
Tetrachloroethene	5,746	1.00	0.558	5.0	2.50	1.61	0.803

Lab ID: 0006132-14	Sample Name: IA-2 (Passive 5 day)	̄ Temp (°C): 8.00					
Vinyl Chloride	5,751	1.00	0.568	5.0	2.50	1.58	0.788
1,1-Dichloroethene	5,751	1.00	0.457	5.0	2.50	1.96	0.981
trans-1,2-Dichloroethene	5,751	1.00	0.710	5.0	2.50	1.26	0.630
cis-1,2-Dichloroethene	5,751	1.00	0.710	5.0	2.50	1.26	0.630
Trichloroethene	5,751	1.00	0.659	5.0	2.50	1.36	0.679
Tetrachloroethene	5,751	1.00	0.558	5.0	2.50	1.60	0.802

Lab ID: 0006132-15	Sample Name: IA-3 (Passive 5 day)	̄ Temp (°C): 8.00					
Vinyl Chloride	5,739	1.00	0.568	5.0	2.50	1.58	0.790
1,1-Dichloroethene	5,739	1.00	0.457	5.0	2.50	1.97	0.983
trans-1,2-Dichloroethene	5,739	1.00	0.710	5.0	2.50	1.26	0.632
cis-1,2-Dichloroethene	5,739	1.00	0.710	5.0	2.50	1.26	0.632
Trichloroethene	5,739	1.00	0.659	5.0	2.50	1.36	0.680
Tetrachloroethene	5,739	1.00	0.558	5.0	2.50	1.61	0.804

Lab ID: 0006132-16	Sample Name: IA-4 (Passive 5 day)	̄ Temp (°C): 8.00					
Vinyl Chloride	5,773	1.00	0.568	5.0	2.50	1.57	0.785
1,1-Dichloroethene	5,773	1.00	0.457	5.0	2.50	1.95	0.977
trans-1,2-Dichloroethene	5,773	1.00	0.710	5.0	2.50	1.26	0.628
cis-1,2-Dichloroethene	5,773	1.00	0.710	5.0	2.50	1.26	0.628
Trichloroethene	5,773	1.00	0.659	5.0	2.50	1.35	0.676
Tetrachloroethene	5,773	1.00	0.558	5.0	2.50	1.60	0.799

EnviroForensics N16W23390 Stone Ridge Dr, Suite G Waukesha, WI 53188	Site Name: Jageman Plating Co. Site Location: Manitowoc, WI Project Manager: Rob Hoverman	Beacon Proposal: 211108R01 Lab Work Order: 0006132 Reported: 02/10/2022
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Method Detection and Reporting Limit Calculations (Concentration)
TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng)		C Calculated (µg/m³)	
				LOQ	LOD	LOQ	LOD

Lab ID: 0006132-17	Sample Name: IA-5 (Passive 5 day)	̄ Temp (°C): 8.00					
Vinyl Chloride	5,771	1.00	0.568	5.0	2.50	1.57	0.785
1,1-Dichloroethene	5,771	1.00	0.457	5.0	2.50	1.95	0.977
trans-1,2-Dichloroethene	5,771	1.00	0.710	5.0	2.50	1.26	0.628
cis-1,2-Dichloroethene	5,771	1.00	0.710	5.0	2.50	1.26	0.628
Trichloroethene	5,771	1.00	0.659	5.0	2.50	1.35	0.677
Tetrachloroethene	5,771	1.00	0.558	5.0	2.50	1.60	0.800

Lab ID: 0006132-18	Sample Name: IA-6 (Passive 5 day)	̄ Temp (°C): 8.00					
Vinyl Chloride	5,770	1.00	0.568	5.0	2.50	1.57	0.786
1,1-Dichloroethene	5,770	1.00	0.457	5.0	2.50	1.96	0.978
trans-1,2-Dichloroethene	5,770	1.00	0.710	5.0	2.50	1.26	0.628
cis-1,2-Dichloroethene	5,770	1.00	0.710	5.0	2.50	1.26	0.628
Trichloroethene	5,770	1.00	0.659	5.0	2.50	1.35	0.677
Tetrachloroethene	5,770	1.00	0.558	5.0	2.50	1.60	0.800

Lab ID: 0006132-19	Sample Name: IA-7 (Passive 5 day)	̄ Temp (°C): 8.00					
Vinyl Chloride	5,745	1.00	0.568	5.0	2.50	1.58	0.789
1,1-Dichloroethene	5,745	1.00	0.457	5.0	2.50	1.96	0.982
trans-1,2-Dichloroethene	5,745	1.00	0.710	5.0	2.50	1.26	0.631
cis-1,2-Dichloroethene	5,745	1.00	0.710	5.0	2.50	1.26	0.631
Trichloroethene	5,745	1.00	0.659	5.0	2.50	1.36	0.680
Tetrachloroethene	5,745	1.00	0.558	5.0	2.50	1.61	0.803

Lab ID: 0006132-20	Sample Name: IA-8 (Passive 5 day)	̄ Temp (°C): 8.00					
Vinyl Chloride	5,747	1.00	0.568	5.0	2.50	1.58	0.789
1,1-Dichloroethene	5,747	1.00	0.457	5.0	2.50	1.96	0.981
trans-1,2-Dichloroethene	5,747	1.00	0.710	5.0	2.50	1.26	0.631
cis-1,2-Dichloroethene	5,747	1.00	0.710	5.0	2.50	1.26	0.631
Trichloroethene	5,747	1.00	0.659	5.0	2.50	1.36	0.679
Tetrachloroethene	5,747	1.00	0.558	5.0	2.50	1.61	0.803

EnviroForensics N16W23390 Stone Ridge Dr, Suite G Waukesha, WI 53188	Site Name: Jageman Plating Co. Site Location: Manitowoc, WI Project Manager: Rob Hoverman	Beacon Proposal: 211108R01 Lab Work Order: 0006132 Reported: 02/10/2022
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Method Detection and Reporting Limit Calculations (Concentration)
TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng)		C Calculated (µg/m³)	
				LOQ	LOD	LOQ	LOD

Lab ID: 0006132-21	Sample Name: IA-9 (Passive 5 day)	̄ Temp (°C): 8.00					
Vinyl Chloride	5,792	1.00	0.568	5.0	2.50	1.57	0.783
1,1-Dichloroethene	5,792	1.00	0.457	5.0	2.50	1.95	0.974
trans-1,2-Dichloroethene	5,792	1.00	0.710	5.0	2.50	1.25	0.626
cis-1,2-Dichloroethene	5,792	1.00	0.710	5.0	2.50	1.25	0.626
Trichloroethene	5,792	1.00	0.659	5.0	2.50	1.35	0.674
Tetrachloroethene	5,792	1.00	0.558	5.0	2.50	1.59	0.797

Lab ID: 0006132-22	Sample Name: IA-10 (Passive 5 day)	̄ Temp (°C): 8.00					
Vinyl Chloride	5,743	1.00	0.568	5.0	2.50	1.58	0.789
1,1-Dichloroethene	5,743	1.00	0.457	5.0	2.50	1.96	0.982
trans-1,2-Dichloroethene	5,743	1.00	0.710	5.0	2.50	1.26	0.631
cis-1,2-Dichloroethene	5,743	1.00	0.710	5.0	2.50	1.26	0.631
Trichloroethene	5,743	1.00	0.659	5.0	2.50	1.36	0.680
Tetrachloroethene	5,743	1.00	0.558	5.0	2.50	1.61	0.804

Lab ID: 0006132-23	Sample Name: IA-11 (Passive 5 day)	̄ Temp (°C): 8.00					
Vinyl Chloride	5,732	1.00	0.568	5.0	2.50	1.58	0.791
1,1-Dichloroethene	5,732	1.00	0.457	5.0	2.50	1.97	0.984
trans-1,2-Dichloroethene	5,732	1.00	0.710	5.0	2.50	1.27	0.633
cis-1,2-Dichloroethene	5,732	1.00	0.710	5.0	2.50	1.27	0.633
Trichloroethene	5,732	1.00	0.659	5.0	2.50	1.36	0.681
Tetrachloroethene	5,732	1.00	0.558	5.0	2.50	1.61	0.805

Lab ID: 0006132-24	Sample Name: IA-12 (Passive 5 day)	̄ Temp (°C): 8.00					
Vinyl Chloride	5,729	1.00	0.568	5.0	2.50	1.58	0.791
1,1-Dichloroethene	5,729	1.00	0.457	5.0	2.50	1.97	0.985
trans-1,2-Dichloroethene	5,729	1.00	0.710	5.0	2.50	1.27	0.633
cis-1,2-Dichloroethene	5,729	1.00	0.710	5.0	2.50	1.27	0.633
Trichloroethene	5,729	1.00	0.659	5.0	2.50	1.36	0.682
Tetrachloroethene	5,729	1.00	0.558	5.0	2.50	1.61	0.806

EnviroForensics N16W23390 Stone Ridge Dr, Suite G Waukesha, WI 53188	Site Name: Jageman Plating Co. Site Location: Manitowoc, WI Project Manager: Rob Hoverman	Beacon Proposal: 211108R01 Lab Work Order: 0006132 Reported: 02/10/2022
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Laboratory Certification List

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	01/31/2023	
DoD-ELAP	L20-532-R1	United States Department of Defense Environmental Laboratory Accreditation	12/31/2022	
ISO/IEC 17025:2017	L20-532	General Requirements for the competence of Testing and Calibration Laboratories	12/31/2022	
NEFAP	72690/L20-533	TNI National Environmental Field Activities Program (NEFAP)	12/31/2022	
NY-NELAC	12097	New York Department of Health	04/01/2022	
Utah-NELAC	MD010912021-9	Utah Department of Health	12/31/2022	

EnviroForensics
N16W23390 Stone Ridge Dr, Suite G
Waukesha, WI 53188

Site Name: Jageman Plating Co.
Site Location: Manitowoc, WI
Project Manager: Rob Hoverman

Beacon Proposal: 211108R01
Lab Work Order: 0006132
Reported: 02/10/2022

Qualifiers/Notes and Definitions

General Definitions:

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

Sample/Sample Receipt Qualifiers and Notes:

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

EnviroForensics
N16W23390 Stone Ridge Dr, Suite G
Waukesha, WI 53188

Site Name: Jageman Plating Co.
Site Location: Manitowoc, WI
Project Manager: Rob Hoverman

Beacon Proposal: 211108R01
Lab Work Order: 0006132
Reported: 02/10/2022

Sample Management Records

Client Information		Project Manager: <u>Rob Haxerman</u>	Client PO:								
Company: <u>Enviroforensics</u>		Project Name: <u>Jagemann Plating</u>	Turn around time (check one):								
Address: <u>1160523390 Stone Ridge Dr Suite G</u>		Location: <u>Manitowish, WI</u>	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush (specify) ___ days								
City / State / Zip: <u>Waukesha, WI 53188</u>		Submitted by: <u>R Brown</u>	Analysis:								
Phone: <u>262-290-4001</u>		Email: <u>rhaxerman@enviroforensics.com</u>	<input checked="" type="checkbox"/> Method TO-17 <input type="checkbox"/> Method 325								
Location ID	Tube ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Target Compounds	INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS
IA-1 (Passive 8hr)	G0165097	1-10-22	930	1-10-22	1731	8°C	SEE WORK ORDER	X			
IA-2 (Passive 8hr)	G1065038		920		1730		FOR SHORT LIST				
IA-3 (Passive 8hr)	G1064249		940		1741						
IA-4 (Passive 8hr)	G0165010		847		1655						
IA-5 (Passive 8hr)	G0164632		845		1648						
IA-6 (Passive 8hr)	G0164948		840		1647						
IA-7 (Passive 8hr)	H0199697		946		1770						
IA-8 (Passive 8hr)	M1103031		936		1716						
IA-9 (Passive 8hr)	G0163216		857		1704						
IA-10 (Passive 8hr)	G0164105		954		1745						
IA-11 (Passive 8hr)	G0164574		1001		1750						
IA-12 (Passive 8hr)	G0164143	↓	1005	↓	1800	↓		↓			
IA-1 (Passive 5 day)	H0199689	1-10-22	929	1-14-22	915	↓					
IA-2 (Passive 5 day)	G0165092	↓	919	↓	910	↓					
IA-3 (Passive 5 day)	G0164555	↓	941	↓	920	↓					
Special Notes / Instructions:											
SHORTLIST PER WORK ORDER											
Relinquished by (signature): <u>[Signature]</u>		Date / Time: <u>1/17/22 0700</u>		Received by (signature): <u>FEDEx</u>		Date / Time:					
Relinquished by (signature):		Date / Time:		Received by (signature): <u>[Signature]</u>		Date / Time: <u>1/19/22 14:00</u>					
For Lab Use Only		Beacon Job No: <u>6132</u>		Beacon Proposal: <u>211108R01</u>							
Courier Name: <u>FedEx</u>		Shipment Condition: <u>Good</u>		Custody Seal Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> n/a		Custody Seal No: <u>—</u>					

Client Information		Project Manager: <i>R. Hoversman</i>		Client PO:		INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS
Company: <i>ENVIRO FORENSICS</i>	Project Name: <i>Jagwanna Plating</i>	Turn around time (check one): <input type="checkbox"/> Normal <input type="checkbox"/> Rush (specify) ___ days							
Address: <i>N16W23390 STONE RIDGE DR</i>	Location: <i>Manitowoc WI</i>	Analysis: <input checked="" type="checkbox"/> Method TO-17 <input type="checkbox"/> Method 325							
City / State / Zip: <i>Waukesha WI 53158</i>	Submitted by: <i>R. Hoversman</i>								
Phone: <i>262-890-4001</i>	Email: <i>rhoversman@enviroforensics.com</i>								
Location ID	Tube ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Target Compounds		
<i>IA-4 (PASSIVE 5 DAY)</i>	<i>G0165049</i>	<i>1-10-22</i>	<i>847</i>	<i>1-14-22</i>	<i>900</i>	<i>8°C</i>	<i>SHORT LIST PER</i>	<i>X</i>	
<i>IA-5 (PASSIVE 5 DAY)</i>	<i>G0163708</i>		<i>845</i>		<i>856</i>		<i>WORK ORDER</i>		
<i>IA-6 (PASSIVE 5 DAY)</i>	<i>G0163205</i>		<i>840</i>		<i>850</i>				
<i>IA-7 (PASSIVE 5 DAY)</i>	<i>H0199691</i>		<i>945</i>		<i>930</i>				
<i>IA-9 (PASSIVE 5 DAY)</i>	<i>G1063255</i>		<i>937</i>		<i>924</i>				
<i>IA-9 (PASSIVE 5 DAY)</i>	<i>G0164141</i>		<i>856</i>		<i>928</i>				
<i>IA-10 (PASSIVE 5 DAY)</i>	<i>H0199687</i>		<i>955</i>		<i>938</i>				
<i>IA-11 (PASSIVE 5 DAY)</i>	<i>G0165090</i>		<i>1000</i>		<i>932</i>				
<i>IA-12 (PASSIVE 5 DAY)</i>	<i>G0163230</i>		<i>1006</i>		<i>935</i>				
Special Notes / Instructions: <i>SHORT LIST PER WORK ORDER</i>									
Relinquished by (signature): <i>R/H</i>	Date / Time: <i>1/17/22 0700</i>	Received by (signature): <i>FEDE</i>	Date / Time:						
Relinquished by (signature):	Date / Time:	Received by (signature):	Date / Time:						
For Lab Use Only	Beacon Job No:	Beacon Proposal: <i>211108R01</i>							
Courier Name:	Shipment Condition:	Custody Seal Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> n/a	Custody Seal No:						