Feeney, John M - DNR

From: Manthey, Mark <Mark.Manthey@tetratech.com>
Sent: Monday, October 31, 2022 9:44 AM
To: Feeney, John M - DNR
Cc: Shambeau, Jay; Piotrowicz, Mark; Nolan, Julieann
Subject: Indoor Air and Soil Gas Testing Results for 225 Linwood Ter, 202 South St, and 209 South St homes
Attachments: 202 South St Peters VI Results Letter 2022-10.pdf; 209 South St Cornell VI Results Letter 2022-10.pdf; 225 Linwood Ter Tutas VI Results Letter 2022-10.pdf

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John,

I received the analytical report containing the second-round test results for the indoor air and soil gas samples collected from the 225 Linwood Terrace, 202 South St., and 209 South St. homes last week Friday (October 28). Attached are the draft letters to the property owners discussing the test results. If you have no questions or edits to the text, I plan on sending the letters to the property owners later this week.

The test results indicate no exceedances of WDNR residential vapor risk screening levels (VRSLs) in the sub-slab soil gas and that the VOCs detected in some of the indoor air samples that exceed WDNR residential vapor action levels (VALs) or most likely from indoor sources.

The collection of the third round of indoor air and soil gas samples from the 208 South Street house is scheduled to take place this week Thursday and Friday.

Mark A. Manthey, P.G. | Associate Hydrogeologist
Direct **(262) 207-3458** | Office **(262) 792-1282** | Mobile **(262) 385-7331** | Fax **(262) 792-1310** | mark.manthey@tetratech.com

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TETRA TECH

October 31, 2022

Mr. David E Peters
1958 Cecelia Drive
West Bend, WI 53090

SUBJECT: October 20, 2022 Vapor Intrusion Assessment Results, 202 South Street Property

Dear Mr. Peters,

Thank you for your recent participation in the vapor intrusion assessment of your Mother's 202 South Street property as part of the City of West Bend's remedial action of groundwater contamination of chlorinated volatile organic compounds (VOCs) on and in the vicinity of the former Gehl Co. West Plant property located on the west side of S. Forest Avenue (WDNR BRRTS #: 02-67-554753). The attached laboratory report from Pace Analytical Services, LLC contains the test results for the two indoor air samples collected from the house, the background outdoor air sample collected in the back yard of a neighbor's property whose home was also tested at the same time as your Mother's property, and the sub-slab soil gas sample collected from the sub-slab soil gas probe installed through the basement floor of the home on October 20th. The indoor air sample collected from the basement has the Sample ID of IA-B-202 South, the indoor air sample collected from the ground floor of the house has the Sample ID of IA-G-202 South, and the sub-slab soil gas sample ID is SG-202 South. The background outdoor air sample has the Sample ID of OA-1. The indoor air, background outdoor air, and sub-slab soil gas test results are provided in units of micrograms per cubic meter (ug/m^3). The name of the parameters that were tested are listed in the 'Parameters' column of the reports and the test results are listed in the 'Results' column of the reports. The LOQ column of the reports list the limit of quantitation concentration for each parameter, which is the minimum concentration that can be quantified with certainty by the laboratory. The LOD column of the reports list the limit of detection for each parameter, which is the minimum concentration of a parameter that must be present before the laboratory can detect it. The less than (<) symbol in front of a result indicates the parameter was not detected in the sample above the listed LOD.

Test Results

Several VOCs were detected in the sub-slab soil gas sample (SG-202 South Sample ID) at concentrations ranging from 0.45 ug/m^3 to 16.3 ug/m^3. None of the reported VOC detections in the sub-slab soil gas sample exceed the vapor risk screening levels (VRSLs) established by the Wisconsin Department of Natural Resources (WDNR) for residential buildings and therefore do not pose a vapor intrusion risk.

Several VOCs were detected in the background outdoor air (OA-01) and two indoor air (IA-B-202 South and IA-G-202 South) samples. Review of the outdoor air and indoor air test results shows some of the compounds (Chloromethane, Dichlorodifluoromethane, and Trichlorofluoromethane) were detected at similar concentrations, which indicates those VOCs are most likely from an outside source. The VOCs detected in the indoor air samples at higher concentrations than the outdoor air sample suggest indoor sources are the primary sources for those VOCs. Indoor sources of VOCs may include cleaning products, personal care products, aerosol spray products, deodorizers, air fresheners, scented candles, and paint.

1,4-Dichlorobenzene was detected at a reported concentration of 6.4 ug/m^3 in the indoor air sample collected from the ground floor of the house, which is higher than the WDNR residential building vapor action level (VAL) of 2.6 ug/m^3 indicating it may pose a health risk. 1,4-Dichlorobenzene was not detected in the sub-slab soil gas sample or the background outdoor air sample, which indicates the sub-slab soil gas and outdoor air are not the source of the detection in the ground floor indoor air sample. Attached is a table prepared by the WDNR

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listing common household sources of background indoor air contamination. The table lists moth balls, air deodorants, and toilet disinfectant as common sources of 1,4-Dichlorobenzene.

Conclusions

The test results indicate the low-level VOCs detected in the sub-slab soil gas sample collected from the sub-slab soil gas probe installed through the basement floor your Mother's home at 202 South Street do not pose a vapor intrusion risk and soil gas is not the source of the 1,4-Dichlorobenzene detected in the indoor air sample. The VOCs detected in the indoor air samples collected from the basement and main level of the home are therefore likely due to outdoor sources or products and items used or stored in the home. The test results were also submitted to the WDNR for review.

Additional Vapor Intrusion Testing

The WDNR requested that we collect at least one additional round of indoor air samples and another soil gas sample from the sub-slab soil gas probe to confirm the results of this sampling event and the first sampling event performed in April 2021. Tetra Tech personnel will contact you in December to schedule the next sampling event.

****

If you have any questions or concerns about the test results, please call Mr. Jay Shambeau, City of West Bend Administrator, at 262-335-5171, John Feeney of the WDNR, at 262-416-8643, or Brita Kilburg-Basnyat, Ph. D., of the Wisconsin Department of Health Services, at 608-266-2817.

Sincerely,
Tetra Tech

Mark A. Manthey, P.G.
Associate Hydrogeologist

Enclosures: Pace Analytical, LLC Laboratory Report
WDNR Table of Background Vapor Sources
cc: Jay Shambeau, City of West Bend
John Feeney, Wisconsin DNR

APPENDIX A – BACKGROUND VAPOR SOURCES

COMMON HOUSEHOLD SOURCES OF BACKGROUND INDOOR AIR CONTAMINATION LISTED BY PRODUCT
NOTE: Analysis of indoor air should be specific to the VOCs expected from soil and/or groundwater contamination. (e.g.if CVOCs are the target chemical, then items containing CVOCs should be removed from the building at least 24 hours prior to sampling.)
Fuel containers or devices using gasoline, kerosene, fuel oil and products with petroleum distillates: - paint thinner - oil-based stains and paint - aerosol or liquid insect pest products - mineral spirits - furniture polishes
Personal care products: - nail polish - nail polish remover - colognes and perfumes - rubbing alcohol - hair spray
Dry cleaned clothes, spot removers, fabric/ leather cleaners
Household Cleaners - Oven cleaners - Carpet/upholstery cleaners - Bathroom cleaner - Appliance cleaner - Citrus (orange) oil or pine oil cleaners - Furniture/floor polish
PVC cement and primer, various adhesives, contact cement, model cement
Paint stripper and adhesive (glue) removers
Degreasers and cleaning solvents, such as: - aerosol penetrating oils - brake cleaner - carburetor cleaner - commercial solvents - electronics cleaners - spray lubricants
Moth balls and moth flakes
Aerosol spray products: - paints - cosmetics - automotive products - leather treatments - pesticides
Deodorizers, air fresheners, scented trees, potpourri, and scented candles
Hobby supplies
- paints and lacquers - solvents - glues - photo darkroom chemicals

APPENDIX A – BACKGROUND VAPOR SOURCES

COMMON HOUSEHOLD SOURCES OF BACKGROUND INDOOR AIR CONTAMINATION LISTED BY CHEMICAL[1,2]	
Acetone	rubber cement, cleaning fluids, scented candles and nail polish remover
Benzene	automobile exhaust, gasoline, cigarette smoke, scented candles, scatter rugs and carpet glue
Bromomethane	soil or space fumigant
1, 3-Butadiene	automobile exhaust and residential wood combustion
2-Butanone (MEK)	automobile exhaust, printing inks, fragrance/flavoring agent in candy and perfume, paint, glue, cleaning agents and cigarette smoke
Chlorobenzene	scented candles, plastic foam insulation and paint products
Chloroethane	Refrigerant
Chloroform	generated from chlorinated water (showers)
Cyclohexane	gasoline, paint thinner, paint and varnish remover
1,4-Dichlorobenzene	moth balls, general insecticide in farming, air deodorant and toilet disinfectant
Dichlorodifluoromethane	refrigerant (CFCs) and cleaning solvent
1, 1-Dichloroethane	plastic products (food and other packaging material) and flame retardant fabrics
1,2-Dichloroethane	molded plastic objects/decorations (particularly from China), cigarette smoke, PVC and vinyl floor adhesives[3]
1, 3-Dichloropropene	fungicides
Ethylbenzene	paint, paint thinners, insecticides, wood office furniture, scented candles and gasoline
Formaldehyde	building materials (particle board), furniture, insulation and cigarette smoke
n-Heptane	gasoline, nail polishes, wood office furniture and petroleum products
n- Hexane	gasoline, rubber cement, typing correction fluid and aerosols in perfumes
Methylene chloride	hairspray, paint stripper, rug cleaners, insecticides and furniture polish
Methyl isobutyl ketone (MIBK)	paints, varnishes, dry cleaning preparations, naturally found in oranges, grapes and vinegar
Methyl *tert* butyl ether (MTBE)	gasoline (oxygenating agent)
Naphthalene	cigarette smoke, automobile exhaust, residential wood combustion, insecticides and moth balls
Styrene	cigarette smoke, automobile exhaust, fiberglass, rubber and epoxy adhesives, occurs naturally in various fruits, vegetables, nuts and meats
Tertiary butyl alcohol (TBA)	gasoline (oxygenating agent)
1,1,2,2-Tetrachloroethane	solvent, paint and rust removers, varnishes and lacquers
Tetrachloroethene (PCE)	dry cleaning, metal degreasing, adhesives and glues, insecticides, scented candles and rug cleaner
Toluene	gasoline, automobile exhaust, polishes, nail polish, synthetic fragrances, paint, scented candles, paint thinner, adhesives and cigarette smoke
1, 1, 1-Trichloroethane	spot cleaner, glues, insecticides, drain cleaners, shoe polish
Trichloroethene (TCE)	glues, adhesives, paint removers, spot removers, rug cleaning fluids, paints, metal cleaners, and automotive cleaning and degreasing products
1, 2, 4 and 1,3,5 - Trimethylbenzene	gasoline and automobile exhaust
Xylenes, total	water sealer, gasoline, automobile exhaust, markers, paint, floor polish and cigarette smoke

[1] Department of Defense (DOD). 2009. DoD Vapor Intrusion Handbook. Prepared by the Tri-Service Environmental Risk Assessment Workgroup. January 2009.

[2] New Jersey Department of Environmental Protection (NJDEP). 2016. Vapor Intrusion Technical Guidance, Appendix H. NJDEP, Site Remediation and Waste Management Program, Trenton, NJ. August, 2016. http://www.nj.gov/dep/srp/guidance/vaporintrusion/vig_appendices.pdf

[3] Kurtz, J.P. et. al. 2010. Evidence for increasing indoor sources of 1,2-dichloroethane since 2004 at two Colorado residential vapor intrusion sites. *Ground Water Monitoring and Remediation*. 30, no. 3: 107-112.

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

October 28, 2022

Mr. Mark Manthey
Tetra Tech
13555 Bishops Ct.
Suite 220
Brookfield, WI 53005

RE: Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Dear Mr. Manthey:

Enclosed are the analytical results for sample(s) received by the laboratory on October 21, 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,

Matt Ray
matt.ray@pacelabs.com
(612)607-1700
Project Manager

Enclosures

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
A2LA Certification #: 2926.01*
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab
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 (A2LA) #: R-036
North Dakota Certification (MN) #: 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 (*).

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1700 Elm Street
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ANALYTICAL RESULTS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Sample: IA-B-202 South **Lab ID: 10630732007** Collected: 10/20/22 13:00 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
Acetone	**32.4**	ug/m3	8.4	3.1	1.39		10/24/22 17:55	67-64-1	
Benzene	**0.52**	ug/m3	0.45	0.15	1.39		10/24/22 17:55	71-43-2	
Benzyl chloride	**<1.1**	ug/m3	3.7	1.1	1.39		10/24/22 17:55	100-44-7	
Bromodichloromethane	**<0.44**	ug/m3	1.9	0.44	1.39		10/24/22 17:55	75-27-4	
Bromoform	**<1.1**	ug/m3	7.3	1.1	1.39		10/24/22 17:55	75-25-2	
Bromomethane	**<0.41**	ug/m3	1.1	0.41	1.39		10/24/22 17:55	74-83-9	
1,3-Butadiene	**<0.15**	ug/m3	0.63	0.15	1.39		10/24/22 17:55	106-99-0	
2-Butanone (MEK)	**<0.52**	ug/m3	4.2	0.52	1.39		10/24/22 17:55	78-93-3	
Carbon disulfide	**<0.33**	ug/m3	0.88	0.33	1.39		10/24/22 17:55	75-15-0	
Carbon tetrachloride	**<0.58**	ug/m3	1.8	0.58	1.39		10/24/22 17:55	56-23-5	
Chlorobenzene	**<0.19**	ug/m3	1.3	0.19	1.39		10/24/22 17:55	108-90-7	
Chloroethane	**<0.28**	ug/m3	0.75	0.28	1.39		10/24/22 17:55	75-00-3	
Chloroform	**<0.19**	ug/m3	0.69	0.19	1.39		10/24/22 17:55	67-66-3	
Chloromethane	**0.82**	ug/m3	0.58	0.12	1.39		10/24/22 17:55	74-87-3	
Cyclohexane	**0.70J**	ug/m3	2.4	0.19	1.39		10/24/22 17:55	110-82-7	
Dibromochloromethane	**<0.50**	ug/m3	2.4	0.50	1.39		10/24/22 17:55	124-48-1	
1,2-Dibromoethane (EDB)	**<0.43**	ug/m3	1.1	0.43	1.39		10/24/22 17:55	106-93-4	
1,2-Dichlorobenzene	**<1.2**	ug/m3	4.3	1.2	1.39		10/24/22 17:55	95-50-1	
1,3-Dichlorobenzene	**<1.1**	ug/m3	4.3	1.1	1.39		10/24/22 17:55	541-73-1	
1,4-Dichlorobenzene	**<1.1**	ug/m3	4.3	1.1	1.39		10/24/22 17:55	106-46-7	
Dichlorodifluoromethane	**2.4**	ug/m3	1.4	0.71	1.39		10/24/22 17:55	75-71-8	
1,1-Dichloroethane	**<0.15**	ug/m3	1.1	0.15	1.39		10/24/22 17:55	75-34-3	
1,2-Dichloroethane	**<0.18**	ug/m3	1.1	0.18	1.39		10/24/22 17:55	107-06-2	
1,1-Dichloroethene	**<0.23**	ug/m3	1.1	0.23	1.39		10/24/22 17:55	75-35-4	
cis-1,2-Dichloroethene	**<0.30**	ug/m3	1.1	0.30	1.39		10/24/22 17:55	156-59-2	
trans-1,2-Dichloroethene	**<0.44**	ug/m3	1.1	0.44	1.39		10/24/22 17:55	156-60-5	
1,2-Dichloropropane	**<0.28**	ug/m3	1.3	0.28	1.39		10/24/22 17:55	78-87-5	
cis-1,3-Dichloropropene	**<0.91**	ug/m3	3.2	0.91	1.39		10/24/22 17:55	10061-01-5	
trans-1,3-Dichloropropene	**<1.1**	ug/m3	3.2	1.1	1.39		10/24/22 17:55	10061-02-6	
Dichlorotetrafluoroethane	**<0.34**	ug/m3	2.0	0.34	1.39		10/24/22 17:55	76-14-2	
Ethanol	**78.5**	ug/m3	2.7	1.3	1.39		10/24/22 17:55	64-17-5	
Ethyl acetate	**1.8**	ug/m3	1.0	0.22	1.39		10/24/22 17:55	141-78-6	
Ethylbenzene	**<0.25**	ug/m3	1.2	0.25	1.39		10/24/22 17:55	100-41-4	
4-Ethyltoluene	**<0.57**	ug/m3	3.5	0.57	1.39		10/24/22 17:55	622-96-8	
n-Heptane	**0.43J**	ug/m3	1.2	0.18	1.39		10/24/22 17:55	142-82-5	
Hexachloro-1,3-butadiene	**<2.4**	ug/m3	7.5	2.4	1.39		10/24/22 17:55	87-68-3	
n-Hexane	**<0.32**	ug/m3	1.0	0.32	1.39		10/24/22 17:55	110-54-3	
2-Hexanone	**<0.96**	ug/m3	5.8	0.96	1.39		10/24/22 17:55	591-78-6	
Methylene Chloride	**0.56J**	ug/m3	4.9	0.17	1.39		10/24/22 17:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.75**	ug/m3	5.8	0.75	1.39		10/24/22 17:55	108-10-1	
Methyl-tert-butyl ether	**<0.35**	ug/m3	5.1	0.35	1.39		10/24/22 17:55	1634-04-4	
Naphthalene	**<2.9**	ug/m3	3.7	2.9	1.39		10/24/22 17:55	91-20-3	
2-Propanol	**<1.3**	ug/m3	3.5	1.3	1.39		10/24/22 17:55	67-63-0	
Propylene	**<0.50**	ug/m3	1.2	0.50	1.39		10/24/22 17:55	115-07-1	
Styrene	**<0.58**	ug/m3	1.2	0.58	1.39		10/24/22 17:55	100-42-5	

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Sample: IA-B-202 South **Lab ID: 10630732007** Collected: 10/20/22 13:00 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
1,1,2,2-Tetrachloroethane	**<0.40**	ug/m3	1.9	0.40	1.39		10/24/22 17:55	79-34-5	
Tetrachloroethene	**<0.34**	ug/m3	0.96	0.34	1.39		10/24/22 17:55	127-18-4	
Tetrahydrofuran	**<0.26**	ug/m3	0.83	0.26	1.39		10/24/22 17:55	109-99-9	
Toluene	**2.7**	ug/m3	1.1	0.23	1.39		10/24/22 17:55	108-88-3	
1,2,4-Trichlorobenzene	**<8.0**	ug/m3	10.5	8.0	1.39		10/24/22 17:55	120-82-1	
1,1,1-Trichloroethane	**<0.25**	ug/m3	1.5	0.25	1.39		10/24/22 17:55	71-55-6	
1,1,2-Trichloroethane	**<0.36**	ug/m3	0.77	0.36	1.39		10/24/22 17:55	79-00-5	
Trichloroethene	**<0.33**	ug/m3	0.76	0.33	1.39		10/24/22 17:55	79-01-6	
Trichlorofluoromethane	**2.0**	ug/m3	1.6	0.28	1.39		10/24/22 17:55	75-69-4	
1,1,2-Trichlorotrifluoroethane	**0.72J**	ug/m3	2.2	0.32	1.39		10/24/22 17:55	76-13-1	
1,2,4-Trimethylbenzene	**<0.49**	ug/m3	1.4	0.49	1.39		10/24/22 17:55	95-63-6	
1,3,5-Trimethylbenzene	**<0.38**	ug/m3	1.4	0.38	1.39		10/24/22 17:55	108-67-8	
Vinyl acetate	**<0.24**	ug/m3	1.0	0.24	1.39		10/24/22 17:55	108-05-4	
Vinyl chloride	**<0.13**	ug/m3	0.36	0.13	1.39		10/24/22 17:55	75-01-4	
m&p-Xylene	**1.7J**	ug/m3	2.5	0.68	1.39		10/24/22 17:55	179601-23-1	
o-Xylene	**<0.25**	ug/m3	1.2	0.25	1.39		10/24/22 17:55	95-47-6	

Sample: IA-G-202 South **Lab ID: 10630732008** Collected: 10/20/22 12:55 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
Acetone	**40.8**	ug/m3	9.4	3.5	1.55		10/24/22 18:22	67-64-1	
Benzene	**0.63**	ug/m3	0.50	0.17	1.55		10/24/22 18:22	71-43-2	
Benzyl chloride	**<1.2**	ug/m3	4.1	1.2	1.55		10/24/22 18:22	100-44-7	
Bromodichloromethane	**<0.50**	ug/m3	2.1	0.50	1.55		10/24/22 18:22	75-27-4	
Bromoform	**<1.2**	ug/m3	8.1	1.2	1.55		10/24/22 18:22	75-25-2	
Bromomethane	**<0.46**	ug/m3	1.2	0.46	1.55		10/24/22 18:22	74-83-9	
1,3-Butadiene	**<0.17**	ug/m3	0.70	0.17	1.55		10/24/22 18:22	106-99-0	
2-Butanone (MEK)	**<0.58**	ug/m3	4.6	0.58	1.55		10/24/22 18:22	78-93-3	
Carbon disulfide	**<0.36**	ug/m3	0.98	0.36	1.55		10/24/22 18:22	75-15-0	
Carbon tetrachloride	**<0.65**	ug/m3	2.0	0.65	1.55		10/24/22 18:22	56-23-5	
Chlorobenzene	**<0.22**	ug/m3	1.5	0.22	1.55		10/24/22 18:22	108-90-7	
Chloroethane	**<0.32**	ug/m3	0.83	0.32	1.55		10/24/22 18:22	75-00-3	
Chloroform	**<0.21**	ug/m3	0.77	0.21	1.55		10/24/22 18:22	67-66-3	
Chloromethane	**0.79**	ug/m3	0.65	0.14	1.55		10/24/22 18:22	74-87-3	
Cyclohexane	**<0.21**	ug/m3	2.7	0.21	1.55		10/24/22 18:22	110-82-7	
Dibromochloromethane	**<0.56**	ug/m3	2.7	0.56	1.55		10/24/22 18:22	124-48-1	
1,2-Dibromoethane (EDB)	**<0.48**	ug/m3	1.2	0.48	1.55		10/24/22 18:22	106-93-4	
1,2-Dichlorobenzene	**<1.3**	ug/m3	4.7	1.3	1.55		10/24/22 18:22	95-50-1	
1,3-Dichlorobenzene	**<1.3**	ug/m3	4.7	1.3	1.55		10/24/22 18:22	541-73-1	
1,4-Dichlorobenzene	**6.4**	ug/m3	4.7	1.3	1.55		10/24/22 18:22	106-46-7	

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ANALYTICAL RESULTS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Sample: IA-G-202 South **Lab ID: 10630732008** Collected: 10/20/22 12:55 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
Dichlorodifluoromethane	**2.5**	ug/m3	1.6	0.80	1.55		10/24/22 18:22	75-71-8	
1,1-Dichloroethane	**<0.17**	ug/m3	1.3	0.17	1.55		10/24/22 18:22	75-34-3	
1,2-Dichloroethane	**<0.20**	ug/m3	1.3	0.20	1.55		10/24/22 18:22	107-06-2	
1,1-Dichloroethene	**<0.25**	ug/m3	1.2	0.25	1.55		10/24/22 18:22	75-35-4	
cis-1,2-Dichloroethene	**<0.33**	ug/m3	1.2	0.33	1.55		10/24/22 18:22	156-59-2	
trans-1,2-Dichloroethene	**<0.49**	ug/m3	1.2	0.49	1.55		10/24/22 18:22	156-60-5	
1,2-Dichloropropane	**<0.31**	ug/m3	1.5	0.31	1.55		10/24/22 18:22	78-87-5	
cis-1,3-Dichloropropene	**<1.0**	ug/m3	3.6	1.0	1.55		10/24/22 18:22	10061-01-5	
trans-1,3-Dichloropropene	**<1.2**	ug/m3	3.6	1.2	1.55		10/24/22 18:22	10061-02-6	
Dichlorotetrafluoroethane	**<0.38**	ug/m3	2.2	0.38	1.55		10/24/22 18:22	76-14-2	
Ethanol	**684**	ug/m3	3.0	1.4	1.55		10/24/22 18:22	64-17-5	E
Ethyl acetate	**3.4**	ug/m3	1.1	0.25	1.55		10/24/22 18:22	141-78-6	
Ethylbenzene	**0.82J**	ug/m3	1.4	0.28	1.55		10/24/22 18:22	100-41-4	
4-Ethyltoluene	**<0.63**	ug/m3	3.9	0.63	1.55		10/24/22 18:22	622-96-8	
n-Heptane	**0.61J**	ug/m3	1.3	0.20	1.55		10/24/22 18:22	142-82-5	
Hexachloro-1,3-butadiene	**<2.7**	ug/m3	8.4	2.7	1.55		10/24/22 18:22	87-68-3	
n-Hexane	**1.8**	ug/m3	1.1	0.36	1.55		10/24/22 18:22	110-54-3	
2-Hexanone	**<1.1**	ug/m3	6.4	1.1	1.55		10/24/22 18:22	591-78-6	
Methylene Chloride	**1.2J**	ug/m3	5.5	0.19	1.55		10/24/22 18:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.83**	ug/m3	6.4	0.83	1.55		10/24/22 18:22	108-10-1	
Methyl-tert-butyl ether	**<0.39**	ug/m3	5.7	0.39	1.55		10/24/22 18:22	1634-04-4	
Naphthalene	**<3.2**	ug/m3	4.1	3.2	1.55		10/24/22 18:22	91-20-3	
2-Propanol	**<1.5**	ug/m3	3.9	1.5	1.55		10/24/22 18:22	67-63-0	
Propylene	**<0.55**	ug/m3	1.4	0.55	1.55		10/24/22 18:22	115-07-1	
Styrene	**<0.64**	ug/m3	1.3	0.64	1.55		10/24/22 18:22	100-42-5	
1,1,2,2-Tetrachloroethane	**<0.44**	ug/m3	2.2	0.44	1.55		10/24/22 18:22	79-34-5	
Tetrachloroethene	**<0.38**	ug/m3	1.1	0.38	1.55		10/24/22 18:22	127-18-4	
Tetrahydrofuran	**<0.29**	ug/m3	0.93	0.29	1.55		10/24/22 18:22	109-99-9	
Toluene	**2.8**	ug/m3	1.2	0.25	1.55		10/24/22 18:22	108-88-3	
1,2,4-Trichlorobenzene	**<8.9**	ug/m3	11.7	8.9	1.55		10/24/22 18:22	120-82-1	
1,1,1-Trichloroethane	**<0.28**	ug/m3	1.7	0.28	1.55		10/24/22 18:22	71-55-6	
1,1,2-Trichloroethane	**<0.40**	ug/m3	0.86	0.40	1.55		10/24/22 18:22	79-00-5	
Trichloroethene	**<0.37**	ug/m3	0.85	0.37	1.55		10/24/22 18:22	79-01-6	
Trichlorofluoromethane	**1.7J**	ug/m3	1.8	0.31	1.55		10/24/22 18:22	75-69-4	
1,1,2-Trichlorotrifluoroethane	**0.68J**	ug/m3	2.4	0.35	1.55		10/24/22 18:22	76-13-1	
1,2,4-Trimethylbenzene	**1.2J**	ug/m3	1.5	0.54	1.55		10/24/22 18:22	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/m3	1.5	0.42	1.55		10/24/22 18:22	108-67-8	
Vinyl acetate	**<0.27**	ug/m3	1.1	0.27	1.55		10/24/22 18:22	108-05-4	
Vinyl chloride	**<0.15**	ug/m3	0.40	0.15	1.55		10/24/22 18:22	75-01-4	
m&p-Xylene	**2.1J**	ug/m3	2.7	0.76	1.55		10/24/22 18:22	179601-23-1	
o-Xylene	**0.72J**	ug/m3	1.4	0.28	1.55		10/24/22 18:22	95-47-6	

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ANALYTICAL RESULTS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Sample: SG-202 South **Lab ID: 10630732009** Collected: 10/20/22 13:40 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
Acetone	**16.3**	ug/m3	10.6	3.9	1.75		10/27/22 22:45	67-64-1	
Benzene	**0.57**	ug/m3	0.57	0.19	1.75		10/27/22 22:45	71-43-2	
Benzyl chloride	**<1.3**	ug/m3	4.6	1.3	1.75		10/27/22 22:45	100-44-7	
Bromodichloromethane	**<0.56**	ug/m3	2.4	0.56	1.75		10/27/22 22:45	75-27-4	
Bromoform	**<1.4**	ug/m3	9.2	1.4	1.75		10/27/22 22:45	75-25-2	
Bromomethane	**<0.52**	ug/m3	1.4	0.52	1.75		10/27/22 22:45	74-83-9	
1,3-Butadiene	**<0.19**	ug/m3	0.79	0.19	1.75		10/27/22 22:45	106-99-0	
2-Butanone (MEK)	**3.8J**	ug/m3	5.2	0.66	1.75		10/27/22 22:45	78-93-3	
Carbon disulfide	**<0.41**	ug/m3	1.1	0.41	1.75		10/27/22 22:45	75-15-0	
Carbon tetrachloride	**<0.73**	ug/m3	2.2	0.73	1.75		10/27/22 22:45	56-23-5	
Chlorobenzene	**<0.24**	ug/m3	1.6	0.24	1.75		10/27/22 22:45	108-90-7	
Chloroethane	**<0.36**	ug/m3	0.94	0.36	1.75		10/27/22 22:45	75-00-3	
Chloroform	**<0.23**	ug/m3	0.87	0.23	1.75		10/27/22 22:45	67-66-3	
Chloromethane	**<0.15**	ug/m3	0.74	0.15	1.75		10/27/22 22:45	74-87-3	
Cyclohexane	**<0.23**	ug/m3	3.1	0.23	1.75		10/27/22 22:45	110-82-7	
Dibromochloromethane	**<0.63**	ug/m3	3.0	0.63	1.75		10/27/22 22:45	124-48-1	
1,2-Dibromoethane (EDB)	**<0.54**	ug/m3	1.4	0.54	1.75		10/27/22 22:45	106-93-4	
1,2-Dichlorobenzene	**<1.5**	ug/m3	5.4	1.5	1.75		10/27/22 22:45	95-50-1	
1,3-Dichlorobenzene	**<1.4**	ug/m3	5.4	1.4	1.75		10/27/22 22:45	541-73-1	
1,4-Dichlorobenzene	**<1.4**	ug/m3	5.4	1.4	1.75		10/27/22 22:45	106-46-7	
Dichlorodifluoromethane	**2.5**	ug/m3	1.8	0.90	1.75		10/27/22 22:45	75-71-8	
1,1-Dichloroethane	**<0.19**	ug/m3	1.4	0.19	1.75		10/27/22 22:45	75-34-3	
1,2-Dichloroethane	**<0.22**	ug/m3	1.4	0.22	1.75		10/27/22 22:45	107-06-2	
1,1-Dichloroethene	**<0.29**	ug/m3	1.4	0.29	1.75		10/27/22 22:45	75-35-4	
cis-1,2-Dichloroethene	**<0.37**	ug/m3	1.4	0.37	1.75		10/27/22 22:45	156-59-2	
trans-1,2-Dichloroethene	**<0.55**	ug/m3	1.4	0.55	1.75		10/27/22 22:45	156-60-5	
1,2-Dichloropropane	**<0.35**	ug/m3	1.6	0.35	1.75		10/27/22 22:45	78-87-5	
cis-1,3-Dichloropropene	**<1.1**	ug/m3	4.0	1.1	1.75		10/27/22 22:45	10061-01-5	
trans-1,3-Dichloropropene	**<1.4**	ug/m3	4.0	1.4	1.75		10/27/22 22:45	10061-02-6	
Dichlorotetrafluoroethane	**<0.43**	ug/m3	2.5	0.43	1.75		10/27/22 22:45	76-14-2	
Ethanol	**13.2**	ug/m3	3.4	1.6	1.75		10/27/22 22:45	64-17-5	CH
Ethyl acetate	**<0.28**	ug/m3	1.3	0.28	1.75		10/27/22 22:45	141-78-6	
Ethylbenzene	**0.45J**	ug/m3	1.5	0.31	1.75		10/27/22 22:45	100-41-4	
4-Ethyltoluene	**1.3J**	ug/m3	4.4	0.71	1.75		10/27/22 22:45	622-96-8	
n-Heptane	**0.49J**	ug/m3	1.5	0.23	1.75		10/27/22 22:45	142-82-5	
Hexachloro-1,3-butadiene	**<3.1**	ug/m3	9.5	3.1	1.75		10/27/22 22:45	87-68-3	
n-Hexane	**<0.41**	ug/m3	1.3	0.41	1.75		10/27/22 22:45	110-54-3	
2-Hexanone	**<1.2**	ug/m3	7.3	1.2	1.75		10/27/22 22:45	591-78-6	
Methylene Chloride	**<0.22**	ug/m3	6.2	0.22	1.75		10/27/22 22:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.94**	ug/m3	7.3	0.94	1.75		10/27/22 22:45	108-10-1	
Methyl-tert-butyl ether	**<0.44**	ug/m3	6.4	0.44	1.75		10/27/22 22:45	1634-04-4	
Naphthalene	**3.8J**	ug/m3	4.7	3.7	1.75		10/27/22 22:45	91-20-3	
2-Propanol	**3.9J**	ug/m3	4.4	1.7	1.75		10/27/22 22:45	67-63-0	
Propylene	**<0.62**	ug/m3	1.5	0.62	1.75		10/27/22 22:45	115-07-1	
Styrene	**7.6**	ug/m3	1.5	0.73	1.75		10/27/22 22:45	100-42-5	

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ANALYTICAL RESULTS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Sample: SG-202 South **Lab ID: 10630732009** Collected: 10/20/22 13:40 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
1,1,2,2-Tetrachloroethane	**<0.50**	ug/m3	2.4	0.50	1.75		10/27/22 22:45	79-34-5	
Tetrachloroethene	**1.1J**	ug/m3	1.2	0.43	1.75		10/27/22 22:45	127-18-4	
Tetrahydrofuran	**<0.33**	ug/m3	2.6	0.33	1.75		10/27/22 22:45	109-99-9	
Toluene	**1.1J**	ug/m3	1.3	0.28	1.75		10/27/22 22:45	108-88-3	
1,2,4-Trichlorobenzene	**<10.0**	ug/m3	13.2	10.0	1.75		10/27/22 22:45	120-82-1	
1,1,1-Trichloroethane	**3.4**	ug/m3	1.9	0.32	1.75		10/27/22 22:45	71-55-6	
1,1,2-Trichloroethane	**<0.45**	ug/m3	0.97	0.45	1.75		10/27/22 22:45	79-00-5	
Trichloroethene	**3.7**	ug/m3	0.96	0.42	1.75		10/27/22 22:45	79-01-6	
Trichlorofluoromethane	**1.6J**	ug/m3	2.0	0.35	1.75		10/27/22 22:45	75-69-4	
1,1,2-Trichlorotrifluoroethane	**0.93J**	ug/m3	2.7	0.40	1.75		10/27/22 22:45	76-13-1	
1,2,4-Trimethylbenzene	**1.2J**	ug/m3	1.7	0.61	1.75		10/27/22 22:45	95-63-6	
1,3,5-Trimethylbenzene	**1.5J**	ug/m3	1.7	0.48	1.75		10/27/22 22:45	108-67-8	
Vinyl acetate	**<0.31**	ug/m3	1.3	0.31	1.75		10/27/22 22:45	108-05-4	
Vinyl chloride	**<0.17**	ug/m3	0.46	0.17	1.75		10/27/22 22:45	75-01-4	
m&p-Xylene	**1.7J**	ug/m3	3.1	0.86	1.75		10/27/22 22:45	179601-23-1	
o-Xylene	**0.77J**	ug/m3	1.5	0.31	1.75		10/27/22 22:45	95-47-6	

Sample: OA-01 **Lab ID: 10630732010** Collected: 10/20/22 10:15 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
Acetone	**6.4J**	ug/m3	8.4	3.1	1.39		10/24/22 19:16	67-64-1	
Benzene	**<0.15**	ug/m3	0.45	0.15	1.39		10/24/22 19:16	71-43-2	
Benzyl chloride	**<1.1**	ug/m3	3.7	1.1	1.39		10/24/22 19:16	100-44-7	
Bromodichloromethane	**<0.44**	ug/m3	1.9	0.44	1.39		10/24/22 19:16	75-27-4	
Bromoform	**<1.1**	ug/m3	7.3	1.1	1.39		10/24/22 19:16	75-25-2	
Bromomethane	**<0.41**	ug/m3	1.1	0.41	1.39		10/24/22 19:16	74-83-9	
1,3-Butadiene	**<0.15**	ug/m3	0.63	0.15	1.39		10/24/22 19:16	106-99-0	
2-Butanone (MEK)	**<0.52**	ug/m3	4.2	0.52	1.39		10/24/22 19:16	78-93-3	
Carbon disulfide	**<0.33**	ug/m3	0.88	0.33	1.39		10/24/22 19:16	75-15-0	
Carbon tetrachloride	**<0.58**	ug/m3	1.8	0.58	1.39		10/24/22 19:16	56-23-5	
Chlorobenzene	**<0.19**	ug/m3	1.3	0.19	1.39		10/24/22 19:16	108-90-7	
Chloroethane	**<0.28**	ug/m3	0.75	0.28	1.39		10/24/22 19:16	75-00-3	
Chloroform	**<0.19**	ug/m3	0.69	0.19	1.39		10/24/22 19:16	67-66-3	
Chloromethane	**0.69**	ug/m3	0.58	0.12	1.39		10/24/22 19:16	74-87-3	
Cyclohexane	**<0.19**	ug/m3	2.4	0.19	1.39		10/24/22 19:16	110-82-7	
Dibromochloromethane	**<0.50**	ug/m3	2.4	0.50	1.39		10/24/22 19:16	124-48-1	
1,2-Dibromoethane (EDB)	**<0.43**	ug/m3	1.1	0.43	1.39		10/24/22 19:16	106-93-4	
1,2-Dichlorobenzene	**<1.2**	ug/m3	4.3	1.2	1.39		10/24/22 19:16	95-50-1	
1,3-Dichlorobenzene	**<1.1**	ug/m3	4.3	1.1	1.39		10/24/22 19:16	541-73-1	
1,4-Dichlorobenzene	**<1.1**	ug/m3	4.3	1.1	1.39		10/24/22 19:16	106-46-7	

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ANALYTICAL RESULTS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Sample: OA-01 **Lab ID: 10630732010** Collected: 10/20/22 10:15 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
Dichlorodifluoromethane	**2.7**	ug/m3	1.4	0.71	1.39		10/24/22 19:16	75-71-8	
1,1-Dichloroethane	**<0.15**	ug/m3	1.1	0.15	1.39		10/24/22 19:16	75-34-3	
1,2-Dichloroethane	**<0.18**	ug/m3	1.1	0.18	1.39		10/24/22 19:16	107-06-2	
1,1-Dichloroethene	**<0.23**	ug/m3	1.1	0.23	1.39		10/24/22 19:16	75-35-4	
cis-1,2-Dichloroethene	**<0.30**	ug/m3	1.1	0.30	1.39		10/24/22 19:16	156-59-2	
trans-1,2-Dichloroethene	**<0.44**	ug/m3	1.1	0.44	1.39		10/24/22 19:16	156-60-5	
1,2-Dichloropropane	**<0.28**	ug/m3	1.3	0.28	1.39		10/24/22 19:16	78-87-5	
cis-1,3-Dichloropropene	**<0.91**	ug/m3	3.2	0.91	1.39		10/24/22 19:16	10061-01-5	
trans-1,3-Dichloropropene	**<1.1**	ug/m3	3.2	1.1	1.39		10/24/22 19:16	10061-02-6	
Dichlorotetrafluoroethane	**<0.34**	ug/m3	2.0	0.34	1.39		10/24/22 19:16	76-14-2	
Ethanol	**17.2**	ug/m3	2.7	1.3	1.39		10/24/22 19:16	64-17-5	
Ethyl acetate	**<0.22**	ug/m3	1.0	0.22	1.39		10/24/22 19:16	141-78-6	
Ethylbenzene	**<0.25**	ug/m3	1.2	0.25	1.39		10/24/22 19:16	100-41-4	
4-Ethyltoluene	**<0.57**	ug/m3	3.5	0.57	1.39		10/24/22 19:16	622-96-8	
n-Heptane	**<0.18**	ug/m3	1.2	0.18	1.39		10/24/22 19:16	142-82-5	
Hexachloro-1,3-butadiene	**<2.4**	ug/m3	7.5	2.4	1.39		10/24/22 19:16	87-68-3	
n-Hexane	**<0.32**	ug/m3	1.0	0.32	1.39		10/24/22 19:16	110-54-3	
2-Hexanone	**<0.96**	ug/m3	5.8	0.96	1.39		10/24/22 19:16	591-78-6	
Methylene Chloride	**<0.17**	ug/m3	4.9	0.17	1.39		10/24/22 19:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.75**	ug/m3	5.8	0.75	1.39		10/24/22 19:16	108-10-1	
Methyl-tert-butyl ether	**<0.35**	ug/m3	5.1	0.35	1.39		10/24/22 19:16	1634-04-4	
Naphthalene	**<2.9**	ug/m3	3.7	2.9	1.39		10/24/22 19:16	91-20-3	
2-Propanol	**<1.3**	ug/m3	3.5	1.3	1.39		10/24/22 19:16	67-63-0	
Propylene	**<0.50**	ug/m3	1.2	0.50	1.39		10/24/22 19:16	115-07-1	
Styrene	**<0.58**	ug/m3	1.2	0.58	1.39		10/24/22 19:16	100-42-5	
1,1,2,2-Tetrachloroethane	**<0.40**	ug/m3	1.9	0.40	1.39		10/24/22 19:16	79-34-5	
Tetrachloroethene	**<0.34**	ug/m3	0.96	0.34	1.39		10/24/22 19:16	127-18-4	
Tetrahydrofuran	**<0.26**	ug/m3	0.83	0.26	1.39		10/24/22 19:16	109-99-9	
Toluene	**0.40J**	ug/m3	1.1	0.23	1.39		10/24/22 19:16	108-88-3	
1,2,4-Trichlorobenzene	**<8.0**	ug/m3	10.5	8.0	1.39		10/24/22 19:16	120-82-1	
1,1,1-Trichloroethane	**<0.25**	ug/m3	1.5	0.25	1.39		10/24/22 19:16	71-55-6	
1,1,2-Trichloroethane	**<0.36**	ug/m3	0.77	0.36	1.39		10/24/22 19:16	79-00-5	
Trichloroethene	**<0.33**	ug/m3	0.76	0.33	1.39		10/24/22 19:16	79-01-6	
Trichlorofluoromethane	**1.7**	ug/m3	1.6	0.28	1.39		10/24/22 19:16	75-69-4	
1,1,2-Trichlorotrifluoroethane	**<0.32**	ug/m3	2.2	0.32	1.39		10/24/22 19:16	76-13-1	
1,2,4-Trimethylbenzene	**<0.49**	ug/m3	1.4	0.49	1.39		10/24/22 19:16	95-63-6	
1,3,5-Trimethylbenzene	**<0.38**	ug/m3	1.4	0.38	1.39		10/24/22 19:16	108-67-8	
Vinyl acetate	**<0.24**	ug/m3	1.0	0.24	1.39		10/24/22 19:16	108-05-4	
Vinyl chloride	**<0.13**	ug/m3	0.36	0.13	1.39		10/24/22 19:16	75-01-4	
m&p-Xylene	**<0.68**	ug/m3	2.5	0.68	1.39		10/24/22 19:16	179601-23-1	
o-Xylene	**<0.25**	ug/m3	1.2	0.25	1.39		10/24/22 19:16	95-47-6	

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QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

QC Batch: 848879 | Analysis Method: TO-15
QC Batch Method: TO-15 | Analysis Description: TO15 MSV AIR Low Level
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10630732001, 10630732002, 10630732004, 10630732005, 10630732007, 10630732008, 10630732010

METHOD BLANK: 4490507 | Matrix: Air
Associated Lab Samples: 10630732001, 10630732002, 10630732004, 10630732005, 10630732007, 10630732008, 10630732010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	<0.090	0.56	10/24/22 12:20	
1,1,2,2-Tetrachloroethane	ug/m3	<0.14	0.70	10/24/22 12:20	
1,1,2-Trichloroethane	ug/m3	<0.13	0.28	10/24/22 12:20	
1,1,2-Trichlorotrifluoroethane	ug/m3	<0.11	0.78	10/24/22 12:20	
1,1-Dichloroethane	ug/m3	<0.054	0.41	10/24/22 12:20	
1,1-Dichloroethene	ug/m3	<0.082	0.40	10/24/22 12:20	
1,2,4-Trichlorobenzene	ug/m3	<2.9	3.8	10/24/22 12:20	
1,2,4-Trimethylbenzene	ug/m3	<0.18	0.50	10/24/22 12:20	
1,2-Dibromoethane (EDB)	ug/m3	<0.15	0.39	10/24/22 12:20	
1,2-Dichlorobenzene	ug/m3	<0.43	1.5	10/24/22 12:20	
1,2-Dichloroethane	ug/m3	<0.064	0.41	10/24/22 12:20	
1,2-Dichloropropane	ug/m3	<0.10	0.47	10/24/22 12:20	
1,3,5-Trimethylbenzene	ug/m3	<0.14	0.50	10/24/22 12:20	
1,3-Butadiene	ug/m3	<0.056	0.22	10/24/22 12:20	
1,3-Dichlorobenzene	ug/m3	<0.41	1.5	10/24/22 12:20	
1,4-Dichlorobenzene	ug/m3	<0.41	1.5	10/24/22 12:20	
2-Butanone (MEK)	ug/m3	<0.19	1.5	10/24/22 12:20	
2-Hexanone	ug/m3	<0.34	2.1	10/24/22 12:20	
2-Propanol	ug/m3	<0.48	1.2	10/24/22 12:20	
4-Ethyltoluene	ug/m3	<0.20	1.2	10/24/22 12:20	
4-Methyl-2-pentanone (MIBK)	ug/m3	<0.27	2.1	10/24/22 12:20	
Acetone	ug/m3	<1.1	3.0	10/24/22 12:20	
Benzene	ug/m3	<0.055	0.16	10/24/22 12:20	
Benzyl chloride	ug/m3	<0.38	1.3	10/24/22 12:20	
Bromodichloromethane	ug/m3	<0.16	0.68	10/24/22 12:20	
Bromoform	ug/m3	<0.39	2.6	10/24/22 12:20	
Bromomethane	ug/m3	<0.15	0.39	10/24/22 12:20	
Carbon disulfide	ug/m3	<0.12	0.32	10/24/22 12:20	
Carbon tetrachloride	ug/m3	<0.21	0.64	10/24/22 12:20	
Chlorobenzene	ug/m3	<0.070	0.47	10/24/22 12:20	
Chloroethane	ug/m3	<0.10	0.27	10/24/22 12:20	
Chloroform	ug/m3	<0.067	0.25	10/24/22 12:20	
Chloromethane	ug/m3	<0.044	0.21	10/24/22 12:20	
cis-1,2-Dichloroethene	ug/m3	<0.11	0.40	10/24/22 12:20	
cis-1,3-Dichloropropene	ug/m3	<0.33	1.2	10/24/22 12:20	
Cyclohexane	ug/m3	<0.067	0.88	10/24/22 12:20	
Dibromochloromethane	ug/m3	<0.18	0.86	10/24/22 12:20	
Dichlorodifluoromethane	ug/m3	<0.26	0.50	10/24/22 12:20	
Dichlorotetrafluoroethane	ug/m3	<0.12	0.71	10/24/22 12:20	
Ethanol	ug/m3	<0.45	0.96	10/24/22 12:20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

METHOD BLANK: 4490507 Matrix: Air

Associated Lab Samples: 10630732001, 10630732002, 10630732004, 10630732005, 10630732007, 10630732008, 10630732010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethyl acetate	ug/m3	<0.080	0.37	10/24/22 12:20	
Ethylbenzene	ug/m3	<0.090	0.44	10/24/22 12:20	
Hexachloro-1,3-butadiene	ug/m3	<0.88	2.7	10/24/22 12:20	
m&p-Xylene	ug/m3	<0.25	0.88	10/24/22 12:20	
Methyl-tert-butyl ether	ug/m3	<0.12	1.8	10/24/22 12:20	
Methylene Chloride	ug/m3	<0.062	1.8	10/24/22 12:20	
n-Heptane	ug/m3	<0.064	0.42	10/24/22 12:20	
n-Hexane	ug/m3	<0.12	0.36	10/24/22 12:20	
Naphthalene	ug/m3	<1.0	1.3	10/24/22 12:20	
o-Xylene	ug/m3	<0.089	0.44	10/24/22 12:20	
Propylene	ug/m3	<0.18	0.44	10/24/22 12:20	
Styrene	ug/m3	<0.21	0.43	10/24/22 12:20	
Tetrachloroethene	ug/m3	<0.12	0.34	10/24/22 12:20	
Tetrahydrofuran	ug/m3	<0.093	0.30	10/24/22 12:20	
Toluene	ug/m3	<0.081	0.38	10/24/22 12:20	
trans-1,2-Dichloroethene	ug/m3	<0.16	0.40	10/24/22 12:20	
trans-1,3-Dichloropropene	ug/m3	<0.39	1.2	10/24/22 12:20	
Trichloroethene	ug/m3	<0.12	0.27	10/24/22 12:20	
Trichlorofluoromethane	ug/m3	<0.10	0.57	10/24/22 12:20	
Vinyl acetate	ug/m3	<0.088	0.36	10/24/22 12:20	
Vinyl chloride	ug/m3	<0.048	0.13	10/24/22 12:20	

LABORATORY CONTROL SAMPLE: 4490508

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	57.7	50.8	88	70-130	
1,1,2,2-Tetrachloroethane	ug/m3	73.1	61.9	85	70-132	
1,1,2-Trichloroethane	ug/m3	58.2	48.8	84	70-131	
1,1,2-Trichlorotrifluoroethane	ug/m3	82.4	72.1	88	70-130	
1,1-Dichloroethane	ug/m3	43.4	36.5	84	70-130	
1,1-Dichloroethene	ug/m3	42.6	36.9	87	70-130	
1,2,4-Trichlorobenzene	ug/m3	174	143	82	70-130	
1,2,4-Trimethylbenzene	ug/m3	52.3	45.8	88	70-137	
1,2-Dibromoethane (EDB)	ug/m3	80.5	70.0	87	70-137	
1,2-Dichlorobenzene	ug/m3	63.9	56.7	89	70-131	
1,2-Dichloroethane	ug/m3	43.4	40.2	93	70-134	
1,2-Dichloropropane	ug/m3	48.7	43.7	90	70-130	
1,3,5-Trimethylbenzene	ug/m3	52.1	45.6	88	70-131	
1,3-Butadiene	ug/m3	23.5	18.8	80	70-139	
1,3-Dichlorobenzene	ug/m3	63.9	56.4	88	70-134	
1,4-Dichlorobenzene	ug/m3	64.1	57.0	89	70-131	
2-Butanone (MEK)	ug/m3	31.5	27.4	87	70-133	
2-Hexanone	ug/m3	43.4	37.2	86	70-136	
2-Propanol	ug/m3	136	110	81	65-133	

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QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

LABORATORY CONTROL SAMPLE: 4490508

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Ethyltoluene	ug/m3	52.2	44.5	85	70-130	
4-Methyl-2-pentanone (MIBK)	ug/m3	43.9	40.2	92	70-130	
Acetone	ug/m3	126	106	84	60-134	
Benzene	ug/m3	34.1	30.1	88	70-130	
Benzyl chloride	ug/m3	55.4	48.0	87	70-130	
Bromodichloromethane	ug/m3	71.5	65.2	91	70-130	
Bromoform	ug/m3	110	95.6	87	70-138	
Bromomethane	ug/m3	41.1	33.4	81	68-131	
Carbon disulfide	ug/m3	33.5	28.6	85	70-130	
Carbon tetrachloride	ug/m3	66.7	61.2	92	70-132	
Chlorobenzene	ug/m3	48.8	42.5	87	70-130	
Chloroethane	ug/m3	27.9	23.1	83	70-134	
Chloroform	ug/m3	52	45.2	87	70-130	
Chloromethane	ug/m3	21.8	17.6	80	68-131	
cis-1,2-Dichloroethene	ug/m3	42.3	40.1	95	70-136	
cis-1,3-Dichloropropene	ug/m3	48.5	41.3	85	70-130	
Cyclohexane	ug/m3	36	33.2	92	70-131	
Dibromochloromethane	ug/m3	88.5	76.9	87	70-134	
Dichlorodifluoromethane	ug/m3	52.4	43.1	82	70-130	
Dichlorotetrafluoroethane	ug/m3	73.8	60.3	82	70-130	
Ethanol	ug/m3	112	86.0	77	55-145	
Ethyl acetate	ug/m3	38.4	34.7	90	70-135	
Ethylbenzene	ug/m3	46.5	40.3	87	70-133	
Hexachloro-1,3-butadiene	ug/m3	129	117	91	70-132	
m&p-Xylene	ug/m3	92	79.0	86	70-134	
Methyl-tert-butyl ether	ug/m3	37.9	32.2	85	70-131	
Methylene Chloride	ug/m3	36.6	30.8	84	65-132	
n-Heptane	ug/m3	43.4	38.9	90	70-130	
n-Hexane	ug/m3	37.6	33.0	88	70-132	
Naphthalene	ug/m3	63.5	49.9	79	70-130	
o-Xylene	ug/m3	46.2	40.0	87	70-134	
Propylene	ug/m3	18.3	14.5	79	69-133	
Styrene	ug/m3	44.9	41.0	91	70-135	
Tetrachloroethene	ug/m3	72.3	65.6	91	70-134	
Tetrahydrofuran	ug/m3	30.6	26.8	87	70-140	
Toluene	ug/m3	39.9	38.9	98	70-136	
trans-1,2-Dichloroethene	ug/m3	42.7	37.1	87	70-134	
trans-1,3-Dichloropropene	ug/m3	44.9	37.7	84	70-131	
Trichloroethene	ug/m3	57.2	55.5	97	70-134	
Trichlorofluoromethane	ug/m3	59.7	52.2	87	63-130	
Vinyl acetate	ug/m3	38.4	31.7	83	70-139	
Vinyl chloride	ug/m3	27.1	22.6	84	70-132	

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QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

SAMPLE DUPLICATE: 4491373

Parameter	Units	10630732004 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	<0.26	<0.26		25	
1,1,2,2-Tetrachloroethane	ug/m3	<0.41	<0.41		25	
1,1,2-Trichloroethane	ug/m3	<0.37	<0.37		25	
1,1,2-Trichlorotrifluoroethane	ug/m3	0.60J	0.53J		25	
1,1-Dichloroethane	ug/m3	<0.15	<0.15		25	
1,1-Dichloroethene	ug/m3	<0.24	<0.24		25	
1,2,4-Trichlorobenzene	ug/m3	<8.3	<8.3		25	
1,2,4-Trimethylbenzene	ug/m3	<0.50	<0.50		25	
1,2-Dibromoethane (EDB)	ug/m3	<0.44	<0.44		25	
1,2-Dichlorobenzene	ug/m3	<1.2	<1.2		25	
1,2-Dichloroethane	ug/m3	<0.18	0.60J		25	
1,2-Dichloropropane	ug/m3	<0.29	<0.29		25	
1,3,5-Trimethylbenzene	ug/m3	<0.39	<0.39		25	
1,3-Butadiene	ug/m3	<0.16	<0.16		25	
1,3-Dichlorobenzene	ug/m3	<1.2	<1.2		25	
1,4-Dichlorobenzene	ug/m3	<1.2	<1.2		25	
2-Butanone (MEK)	ug/m3	6.7	6.3	7	25	
2-Hexanone	ug/m3	<0.99	<0.99		25	
2-Propanol	ug/m3	26.1	26.7	2	25	
4-Ethyltoluene	ug/m3	<0.59	<0.59		25	
4-Methyl-2-pentanone (MIBK)	ug/m3	<0.77	<0.77		25	
Acetone	ug/m3	46.6	44.7	4	25	
Benzene	ug/m3	0.39J	0.40J		25	
Benzyl chloride	ug/m3	<1.1	<1.1		25	
Bromodichloromethane	ug/m3	<0.46	<0.46		25	
Bromoform	ug/m3	<1.1	<1.1		25	
Bromomethane	ug/m3	<0.43	<0.43		25	
Carbon disulfide	ug/m3	<0.34	<0.34		25	
Carbon tetrachloride	ug/m3	<0.60	<0.60		25	
Chlorobenzene	ug/m3	<0.20	<0.20		25	
Chloroethane	ug/m3	<0.30	<0.30		25	
Chloroform	ug/m3	<0.19	<0.19		25	
Chloromethane	ug/m3	0.88	0.81	9	25	
cis-1,2-Dichloroethene	ug/m3	<0.31	<0.31		25	
cis-1,3-Dichloropropene	ug/m3	<0.94	<0.94		25	
Cyclohexane	ug/m3	<0.19	<0.19		25	
Dibromochloromethane	ug/m3	<0.52	<0.52		25	
Dichlorodifluoromethane	ug/m3	2.5	2.4	1	25	
Dichlorotetrafluoroethane	ug/m3	<0.35	<0.35		25	
Ethanol	ug/m3	47.3	46.5	2	25	
Ethyl acetate	ug/m3	1.9	1.9	3	25	
Ethylbenzene	ug/m3	1.1J	1.1J		25	
Hexachloro-1,3-butadiene	ug/m3	<2.5	<2.5		25	
m&p-Xylene	ug/m3	3.7	3.8	2	25	
Methyl-tert-butyl ether	ug/m3	<0.36	<0.36		25	
Methylene Chloride	ug/m3	0.68J	0.60J		25	
n-Heptane	ug/m3	<0.19	0.28J		25	

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QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

SAMPLE DUPLICATE: 4491373

Parameter	Units	10630732004 Result	Dup Result	RPD	Max RPD	Qualifiers
n-Hexane	ug/m3	<0.33	<0.33		25	
Naphthalene	ug/m3	<3.0	<3.0		25	
o-Xylene	ug/m3	1.1J	1.1J		25	
Propylene	ug/m3	<0.51	20.1		25	
Styrene	ug/m3	<0.60	<0.60		25	
Tetrachloroethene	ug/m3	<0.36	<0.36		25	
Tetrahydrofuran	ug/m3	4.5	4.6	2	25	
Toluene	ug/m3	5.9	6.1	2	25	
trans-1,2-Dichloroethene	ug/m3	<0.46	<0.46		25	
trans-1,3-Dichloropropene	ug/m3	<1.1	<1.1		25	
Trichloroethene	ug/m3	<0.34	<0.34		25	
Trichlorofluoromethane	ug/m3	1.5J	1.7		25	
Vinyl acetate	ug/m3	<0.25	<0.25		25	
Vinyl chloride	ug/m3	<0.14	<0.14		25	

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

QC Batch: 849755
QC Batch Method: TO-15
Analysis Method: TO-15
Analysis Description: TO15 MSV AIR Low Level
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10630732003, 10630732006, 10630732009

METHOD BLANK: 4494140
Matrix: Air
Associated Lab Samples: 10630732003, 10630732006, 10630732009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	<0.18	1.1	10/27/22 09:53	
1,1,2,2-Tetrachloroethane	ug/m3	<0.29	1.4	10/27/22 09:53	
1,1,2-Trichloroethane	ug/m3	<0.26	0.56	10/27/22 09:53	
1,1,2-Trichlorotrifluoroethane	ug/m3	<0.23	1.6	10/27/22 09:53	
1,1-Dichloroethane	ug/m3	<0.11	0.82	10/27/22 09:53	
1,1-Dichloroethene	ug/m3	<0.16	0.81	10/27/22 09:53	
1,2,4-Trichlorobenzene	ug/m3	<5.7	7.5	10/27/22 09:53	
1,2,4-Trimethylbenzene	ug/m3	<0.35	1.0	10/27/22 09:53	
1,2-Dibromoethane (EDB)	ug/m3	<0.31	0.78	10/27/22 09:53	
1,2-Dichlorobenzene	ug/m3	<0.86	3.1	10/27/22 09:53	
1,2-Dichloroethane	ug/m3	<0.13	0.82	10/27/22 09:53	
1,2-Dichloropropane	ug/m3	<0.20	0.94	10/27/22 09:53	
1,3,5-Trimethylbenzene	ug/m3	<0.27	1.0	10/27/22 09:53	
1,3-Butadiene	ug/m3	<0.11	0.45	10/27/22 09:53	
1,3-Dichlorobenzene	ug/m3	<0.82	3.1	10/27/22 09:53	
1,4-Dichlorobenzene	ug/m3	<0.81	3.1	10/27/22 09:53	
2-Butanone (MEK)	ug/m3	<0.38	3.0	10/27/22 09:53	
2-Hexanone	ug/m3	<0.69	4.2	10/27/22 09:53	
2-Propanol	ug/m3	<0.96	2.5	10/27/22 09:53	
4-Ethyltoluene	ug/m3	<0.41	2.5	10/27/22 09:53	
4-Methyl-2-pentanone (MIBK)	ug/m3	<0.54	4.2	10/27/22 09:53	
Acetone	ug/m3	<2.2	6.0	10/27/22 09:53	
Benzene	ug/m3	<0.11	0.32	10/27/22 09:53	
Benzyl chloride	ug/m3	<0.77	2.6	10/27/22 09:53	
Bromodichloromethane	ug/m3	<0.32	1.4	10/27/22 09:53	
Bromoform	ug/m3	<0.78	5.2	10/27/22 09:53	
Bromomethane	ug/m3	<0.30	0.79	10/27/22 09:53	
Carbon disulfide	ug/m3	<0.23	0.63	10/27/22 09:53	
Carbon tetrachloride	ug/m3	<0.42	1.3	10/27/22 09:53	
Chlorobenzene	ug/m3	<0.14	0.94	10/27/22 09:53	
Chloroethane	ug/m3	<0.20	0.54	10/27/22 09:53	
Chloroform	ug/m3	<0.13	0.50	10/27/22 09:53	
Chloromethane	ug/m3	<0.088	0.42	10/27/22 09:53	
cis-1,2-Dichloroethene	ug/m3	<0.21	0.81	10/27/22 09:53	
cis-1,3-Dichloropropene	ug/m3	<0.65	2.3	10/27/22 09:53	
Cyclohexane	ug/m3	<0.13	1.8	10/27/22 09:53	
Dibromochloromethane	ug/m3	<0.36	1.7	10/27/22 09:53	
Dichlorodifluoromethane	ug/m3	<0.51	1.0	10/27/22 09:53	
Dichlorotetrafluoroethane	ug/m3	<0.24	1.4	10/27/22 09:53	
Ethanol	ug/m3	<0.90	1.9	10/27/22 09:53	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

METHOD BLANK: 4494140 Matrix: Air
Associated Lab Samples: 10630732003, 10630732006, 10630732009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethyl acetate	ug/m3	<0.16	0.73	10/27/22 09:53	
Ethylbenzene	ug/m3	<0.18	0.88	10/27/22 09:53	
Hexachloro-1,3-butadiene	ug/m3	<1.8	5.4	10/27/22 09:53	
m&p-Xylene	ug/m3	<0.49	1.8	10/27/22 09:53	
Methyl-tert-butyl ether	ug/m3	<0.25	3.7	10/27/22 09:53	
Methylene Chloride	ug/m3	<0.12	3.5	10/27/22 09:53	
n-Heptane	ug/m3	<0.13	0.83	10/27/22 09:53	
n-Hexane	ug/m3	<0.23	0.72	10/27/22 09:53	
Naphthalene	ug/m3	2.3J	2.7	10/27/22 09:53	
o-Xylene	ug/m3	<0.18	0.88	10/27/22 09:53	
Propylene	ug/m3	<0.36	0.88	10/27/22 09:53	
Styrene	ug/m3	<0.42	0.87	10/27/22 09:53	
Tetrachloroethene	ug/m3	<0.25	0.69	10/27/22 09:53	
Tetrahydrofuran	ug/m3	<0.19	1.5	10/27/22 09:53	MN
Toluene	ug/m3	<0.16	0.77	10/27/22 09:53	
trans-1,2-Dichloroethene	ug/m3	<0.32	0.81	10/27/22 09:53	
trans-1,3-Dichloropropene	ug/m3	<0.78	2.3	10/27/22 09:53	
Trichloroethene	ug/m3	<0.24	0.55	10/27/22 09:53	
Trichlorofluoromethane	ug/m3	<0.20	1.1	10/27/22 09:53	
Vinyl acetate	ug/m3	<0.18	0.72	10/27/22 09:53	
Vinyl chloride	ug/m3	<0.096	0.26	10/27/22 09:53	

LABORATORY CONTROL SAMPLE: 4494141

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	58	59.1	102	70-130	
1,1,2,2-Tetrachloroethane	ug/m3	72.8	85.7	118	70-132	
1,1,2-Trichloroethane	ug/m3	58.3	60.4	104	70-131	
1,1,2-Trichlorotrifluoroethane	ug/m3	81.2	81.4	100	70-130	
1,1-Dichloroethane	ug/m3	42.5	42.5	100	70-130	
1,1-Dichloroethene	ug/m3	41.9	43.0	102	70-130	
1,2,4-Trichlorobenzene	ug/m3	175	177	101	70-130	
1,2,4-Trimethylbenzene	ug/m3	52.5	62.0	118	70-137	
1,2-Dibromoethane (EDB)	ug/m3	80.5	94.1	117	70-137	
1,2-Dichlorobenzene	ug/m3	63.9	66.7	104	70-131	
1,2-Dichloroethane	ug/m3	42.4	43.4	102	70-134	
1,2-Dichloropropane	ug/m3	49.3	49.7	101	70-130	
1,3,5-Trimethylbenzene	ug/m3	52.4	58.7	112	70-131	
1,3-Butadiene	ug/m3	23.9	23.6	99	70-139	
1,3-Dichlorobenzene	ug/m3	64.2	68.4	107	70-134	
1,4-Dichlorobenzene	ug/m3	64.3	69.3	108	70-131	
2-Butanone (MEK)	ug/m3	31.3	31.4	100	70-133	
2-Hexanone	ug/m3	43.4	47.4	109	70-136	
2-Propanol	ug/m3	137	162	118	65-133	

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QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

LABORATORY CONTROL SAMPLE: 4494141

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Ethyltoluene	ug/m3	52.3	54.5	104	70-130	
4-Methyl-2-pentanone (MIBK)	ug/m3	43.6	45.4	104	70-130	
Acetone	ug/m3	127	144	113	60-134	
Benzene	ug/m3	33.8	33.4	99	70-130	
Benzyl chloride	ug/m3	55.6	56.7	102	70-130	
Bromodichloromethane	ug/m3	71.5	77.6	108	70-130	
Bromoform	ug/m3	110	112	101	70-138	
Bromomethane	ug/m3	41.4	42.1	102	68-131	
Carbon disulfide	ug/m3	33	36.1	109	70-130	
Carbon tetrachloride	ug/m3	66.7	62.5	94	70-132	
Chlorobenzene	ug/m3	49	52.9	108	70-130	
Chloroethane	ug/m3	28.1	36.3	129	70-134	
Chloroform	ug/m3	52.1	52.8	101	70-130	
Chloromethane	ug/m3	22	22.0	100	68-131	
cis-1,2-Dichloroethene	ug/m3	42.1	42.9	102	70-136	
cis-1,3-Dichloropropene	ug/m3	48.2	48.7	101	70-130	
Cyclohexane	ug/m3	36.4	35.5	98	70-131	
Dibromochloromethane	ug/m3	90.6	92.5	102	70-134	
Dichlorodifluoromethane	ug/m3	52.5	52.4	100	70-130	
Dichlorotetrafluoroethane	ug/m3	74.4	76.5	103	70-130	
Ethanol	ug/m3	113	152	135	55-145	CH
Ethyl acetate	ug/m3	38.4	41.8	109	70-135	
Ethylbenzene	ug/m3	46.2	52.3	113	70-133	
Hexachloro-1,3-butadiene	ug/m3	130	139	107	70-132	
m&p-Xylene	ug/m3	92.4	103	111	70-134	
Methyl-tert-butyl ether	ug/m3	38.3	38.1	99	70-131	
Methylene Chloride	ug/m3	36.8	38.1	103	65-132	
n-Heptane	ug/m3	43.5	43.0	99	70-130	
n-Hexane	ug/m3	37.7	35.6	94	70-132	
Naphthalene	ug/m3	63.9	63.6	100	70-130	
o-Xylene	ug/m3	46	51.9	113	70-134	
Propylene	ug/m3	18.6	18.7	100	69-133	
Styrene	ug/m3	45.3	46.8	103	70-135	
Tetrachloroethene	ug/m3	72	80.6	112	70-134	
Tetrahydrofuran	ug/m3	31.3	28.5	91	70-140	
Toluene	ug/m3	40.2	40.5	101	70-136	
trans-1,2-Dichloroethene	ug/m3	42.3	42.8	101	70-134	
trans-1,3-Dichloropropene	ug/m3	48.4	44.0	91	70-131	
Trichloroethene	ug/m3	57.2	55.7	97	70-134	
Trichlorofluoromethane	ug/m3	60.3	62.7	104	63-130	
Vinyl acetate	ug/m3	38.7	39.6	102	70-139	
Vinyl chloride	ug/m3	27.2	27.6	101	70-132	

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(612)607-1700

QUALIFIERS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

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

CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
MN	The reporting limit has been raised in accordance with Minnesota Statutes 4740.2100 Subpart 8. C, D. Reporting Limit Evaluation Rule.

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October 31, 2022

Mr. Craig Cornell
209 South Street
West Bend, WI 53095

SUBJECT: October 20, 2022 Vapor Intrusion Assessment Results

Dear Mr. Cornell,

Thank you for your recent participation in the vapor intrusion assessment of your house as part of the City of West Bend's remedial action of groundwater contamination of chlorinated volatile organic compounds (VOCs) on and in the vicinity of the former Gehl Co. West Plant property located on the west side of S. Forest Avenue (WDNR BRRTS #: 02-67-554753). The attached laboratory report from Pace Analytical Services, LLC contains the test results for the, the two indoor air samples collected from your house, the background outdoor air sample collected in the back yard your property, and the sub-slab soil gas sample collected from the sub-slab soil gas probe installed through the basement floor of your home on October 20th. The indoor air sample collected from the basement has the Sample ID of IA-B-209 South, the indoor air sample collected from the ground floor of your house has the Sample ID of IA-G-209 South, and the sub-slab soil gas sample ID is SG-209 South. The background outdoor air sample has the Sample ID of OA-1. The indoor air, background outdoor air, and sub-slab soil gas test results are provided in units of micrograms per cubic meter (ug/m^3). The name of the parameters that were tested are listed in the 'Parameters' column of the reports and the test results are listed in the 'Results' column of the reports. The LOQ column of the reports list the limit of quantitation concentration for each parameter, which is the minimum concentration that can be quantified with certainty by the laboratory. The LOD column of the reports list the limit of detection for each parameter, which is the minimum concentration of a parameter that must be present before the laboratory can detect it. The less than (<) symbol in front of a result indicates the parameter was not detected in the sample above the listed LOD.

Test Results

Several VOCs were detected in the sub-slab soil gas sample (SG-209 South Sample ID) at concentrations ranging from 0.23 ug/m^3 to 68.2 ug/m^3. None of the reported VOC detections in the sub-slab soil gas sample exceed the vapor risk screening levels (VRSLs) established by the WDNR for residential buildings and therefore do not pose a vapor intrusion risk.

Several VOCs were detected in the background outdoor air (OA-01) and two indoor air (IA-B-209 South and IA-G-209 South) samples. Review of the outdoor air and indoor air test results shows some of the compounds (Chloromethane, Dichlorodifluoromethane, and Trichlorofluoromethane) were detected at similar concentrations, which indicates those VOCs are most likely from an outside source. The VOCs detected in the indoor air samples at higher concentrations than the outdoor air sample suggest indoor sources are the primary sources for those VOCs. Indoor sources of VOCs may include cleaning products, personal care products, aerosol spray products, deodorizers, air fresheners, scented candles, and paint.

1,2-Dichloroethane was detected in the indoor air sample collected from the ground floor at a concentration that exceeds its vapor action level (VAL) established by the WDNR for residential buildings indicating it may pose a health risk. The residential VAL for 1,2-Dichloroethane is 1.1 ug/m^3 while its reported concentration in the indoor air sample collected from the ground floor was 2.6 ug/m^3. 1,2-Dichloroethane was not detected in the sub-slab soil gas sample or the background outdoor air sample, which indicates the 1,2-Dichloroethane detected in the indoor air sample is from an indoor source. Attached is a table prepared by the WDNR listing

TETRA TECH
175 N. Corporate Drive, Suite 100, Brookfield, WI 53045
Tel 262.792.1282 Fax 262.792.1310 www.tetratech.com

common household sources of background indoor air contamination. The table lists automobile exhaust, gasoline, cigarette smoke, scented candles, scatter rugs, and carpet glue as common sources of Benzene.

Conclusions

The test results indicate the low-level VOCs detected in the sub-slab soil gas sample collected from the sub-slab soil gas probe installed through the basement floor of your house do not pose a vapor intrusion risk and soil gas is not the source of the 1,2-Dichloroethane detected in the ground floor indoor air sample. The VOCs detected in the indoor air samples collected from the basement and main level of the home are therefore likely due to outdoor sources or products and items used or stored in the home. The test results were also submitted to the WDNR for review.

Additional Vapor Intrusion Testing

The WDNR requested that we collect at least one additional round of indoor air samples and another soil gas sample from the sub-slab soil gas probe to confirm the results of this sampling event and the first sampling event performed in April 2021. Tetra Tech personnel will contact you in December to schedule the next sampling event.

****

If you have any questions or concerns about the test results, please call Mr. Jay Shambeau, City of West Bend Administrator, at 262-335-5171, John Feeney of the WDNR, at 262-416-8643, or Brita Kilburg-Basnyat, Ph. D., of the Wisconsin Department of Health Services, at 608-266-2817.

Sincerely,
Tetra Tech

Mark A. Manthey, P.G.
Associate Hydrogeologist

Enclosures: Pace Analytical, LLC Laboratory Report
WDNR Table of Background Vapor Sources

cc: Jay Shambeau, City of West Bend
John Feeney, Wisconsin DNR

APPENDIX A – BACKGROUND VAPOR SOURCES

COMMON HOUSEHOLD SOURCES OF BACKGROUND INDOOR AIR CONTAMINATION LISTED BY PRODUCT
NOTE: Analysis of indoor air should be specific to the VOCs expected from soil and/or groundwater contamination. (e.g.if CVOCs are the target chemical, then items containing CVOCs should be removed from the building at least 24 hours prior to sampling.)
Fuel containers or devices using gasoline, kerosene, fuel oil and products with petroleum distillates: - paint thinner - oil-based stains and paint - aerosol or liquid insect pest products - mineral spirits - furniture polishes
Personal care products: - nail polish - nail polish remover - colognes and perfumes - rubbing alcohol - hair spray
Dry cleaned clothes, spot removers, fabric/ leather cleaners
Household Cleaners - Oven cleaners - Carpet/upholstery cleaners - Bathroom cleaner - Appliance cleaner - Citrus (orange) oil or pine oil cleaners - Furniture/floor polish
PVC cement and primer, various adhesives, contact cement, model cement
Paint stripper and adhesive (glue) removers
Degreasers and cleaning solvents, such as: - aerosol penetrating oils - brake cleaner - carburetor cleaner - commercial solvents - electronics cleaners - spray lubricants
Moth balls and moth flakes
Aerosol spray products: - paints - cosmetics - automotive products - leather treatments - pesticides
Deodorizers, air fresheners, scented trees, potpourri, and scented candles
Hobby supplies
- paints and lacquers - solvents - glues - photo darkroom chemicals

APPENDIX A – BACKGROUND VAPOR SOURCES

COMMON HOUSEHOLD SOURCES OF BACKGROUND INDOOR AIR CONTAMINATION LISTED BY CHEMICAL[1,2]	
Acetone	rubber cement, cleaning fluids, scented candles and nail polish remover
Benzene	automobile exhaust, gasoline, cigarette smoke, scented candles, scatter rugs and carpet glue
Bromomethane	soil or space fumigant
1, 3-Butadiene	automobile exhaust and residential wood combustion
2-Butanone (MEK)	automobile exhaust, printing inks, fragrance/flavoring agent in candy and perfume, paint, glue, cleaning agents and cigarette smoke
Chlorobenzene	scented candles, plastic foam insulation and paint products
Chloroethane	Refrigerant
Chloroform	generated from chlorinated water (showers)
Cyclohexane	gasoline, paint thinner, paint and varnish remover
1,4-Dichlorobenzene	moth balls, general insecticide in farming, air deodorant and toilet disinfectant
Dichlorodifluoromethane	refrigerant (CFCs) and cleaning solvent
1, 1-Dichloroethane	plastic products (food and other packaging material) and flame retardant fabrics
1,2-Dichloroethane	molded plastic objects/decorations (particularly from China), cigarette smoke, PVC and vinyl floor adhesives[3]
1, 3-Dichloropropene	fungicides
Ethylbenzene	paint, paint thinners, insecticides, wood office furniture, scented candles and gasoline
Formaldehyde	building materials (particle board), furniture, insulation and cigarette smoke
n-Heptane	gasoline, nail polishes, wood office furniture and petroleum products
n- Hexane	gasoline, rubber cement, typing correction fluid and aerosols in perfumes
Methylene chloride	hairspray, paint stripper, rug cleaners, insecticides and furniture polish
Methyl isobutyl ketone (MIBK)	paints, varnishes, dry cleaning preparations, naturally found in oranges, grapes and vinegar
Methyl *tert* butyl ether (MTBE)	gasoline (oxygenating agent)
Naphthalene	cigarette smoke, automobile exhaust, residential wood combustion, insecticides and moth balls
Styrene	cigarette smoke, automobile exhaust, fiberglass, rubber and epoxy adhesives, occurs naturally in various fruits, vegetables, nuts and meats
Tertiary butyl alcohol (TBA)	gasoline (oxygenating agent)
1,1,2,2-Tetrachloroethane	solvent, paint and rust removers, varnishes and lacquers
Tetrachloroethene (PCE)	dry cleaning, metal degreasing, adhesives and glues, insecticides, scented candles and rug cleaner
Toluene	gasoline, automobile exhaust, polishes, nail polish, synthetic fragrances, paint, scented candles, paint thinner, adhesives and cigarette smoke
1, 1, 1-Trichloroethane	spot cleaner, glues, insecticides, drain cleaners, shoe polish
Trichloroethene (TCE)	glues, adhesives, paint removers, spot removers, rug cleaning fluids, paints, metal cleaners, and automotive cleaning and degreasing products
1, 2, 4 and 1,3,5 - Trimethylbenzene	gasoline and automobile exhaust
Xylenes, total	water sealer, gasoline, automobile exhaust, markers, paint, floor polish and cigarette smoke

[1] Department of Defense (DOD). 2009. DoD Vapor Intrusion Handbook. Prepared by the Tri-Service Environmental Risk Assessment Workgroup. January 2009.

[2] New Jersey Department of Environmental Protection (NJDEP). 2016. Vapor Intrusion Technical Guidance, Appendix H. NJDEP, Site Remediation and Waste Management Program, Trenton, NJ. August, 2016. http://www.nj.gov/dep/srp/guidance/vaporintrusion/vig_appendices.pdf

[3] Kurtz, J.P. et. al. 2010. Evidence for increasing indoor sources of 1,2-dichloroethane since 2004 at two Colorado residential vapor intrusion sites. *Ground Water Monitoring and Remediation*. 30, no. 3: 107-112.

Pace Analytical Services, LLC
1700 Elm Street
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(612)607-1700

October 28, 2022

Mr. Mark Manthey
Tetra Tech
13555 Bishops Ct.
Suite 220
Brookfield, WI 53005

RE: Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Dear Mr. Manthey:

Enclosed are the analytical results for sample(s) received by the laboratory on October 21, 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,

Matt Ray
matt.ray@pacelabs.com
(612)607-1700
Project Manager

Enclosures

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Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
A2LA Certification #: 2926.01*
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab
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 (A2LA) #: R-036
North Dakota Certification (MN) #: 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 (*).

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Sample: IA-B-209 South **Lab ID: 10630732004** Collected: 10/20/22 10:05 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
Acetone	**46.6**	ug/m3	8.7	3.2	1.44		10/24/22 15:41	67-64-1	
Benzene	**0.39J**	ug/m3	0.47	0.16	1.44		10/24/22 15:41	71-43-2	
Benzyl chloride	**<1.1**	ug/m3	3.8	1.1	1.44		10/24/22 15:41	100-44-7	
Bromodichloromethane	**<0.46**	ug/m3	2.0	0.46	1.44		10/24/22 15:41	75-27-4	
Bromoform	**<1.1**	ug/m3	7.6	1.1	1.44		10/24/22 15:41	75-25-2	
Bromomethane	**<0.43**	ug/m3	1.1	0.43	1.44		10/24/22 15:41	74-83-9	
1,3-Butadiene	**<0.16**	ug/m3	0.65	0.16	1.44		10/24/22 15:41	106-99-0	
2-Butanone (MEK)	**6.7**	ug/m3	4.3	0.54	1.44		10/24/22 15:41	78-93-3	
Carbon disulfide	**<0.34**	ug/m3	0.91	0.34	1.44		10/24/22 15:41	75-15-0	
Carbon tetrachloride	**<0.60**	ug/m3	1.8	0.60	1.44		10/24/22 15:41	56-23-5	
Chlorobenzene	**<0.20**	ug/m3	1.3	0.20	1.44		10/24/22 15:41	108-90-7	
Chloroethane	**<0.30**	ug/m3	0.77	0.30	1.44		10/24/22 15:41	75-00-3	
Chloroform	**<0.19**	ug/m3	0.71	0.19	1.44		10/24/22 15:41	67-66-3	
Chloromethane	**0.88**	ug/m3	0.60	0.13	1.44		10/24/22 15:41	74-87-3	
Cyclohexane	**<0.19**	ug/m3	2.5	0.19	1.44		10/24/22 15:41	110-82-7	
Dibromochloromethane	**<0.52**	ug/m3	2.5	0.52	1.44		10/24/22 15:41	124-48-1	
1,2-Dibromoethane (EDB)	**<0.44**	ug/m3	1.1	0.44	1.44		10/24/22 15:41	106-93-4	
1,2-Dichlorobenzene	**<1.2**	ug/m3	4.4	1.2	1.44		10/24/22 15:41	95-50-1	
1,3-Dichlorobenzene	**<1.2**	ug/m3	4.4	1.2	1.44		10/24/22 15:41	541-73-1	
1,4-Dichlorobenzene	**<1.2**	ug/m3	4.4	1.2	1.44		10/24/22 15:41	106-46-7	

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ANALYTICAL RESULTS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Sample: IA-B-209 South **Lab ID: 10630732004** Collected: 10/20/22 10:05 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
Dichlorodifluoromethane	**2.5**	ug/m3	1.5	0.74	1.44		10/24/22 15:41	75-71-8	
1,1-Dichloroethane	**<0.15**	ug/m3	1.2	0.15	1.44		10/24/22 15:41	75-34-3	
1,2-Dichloroethane	**<0.18**	ug/m3	1.2	0.18	1.44		10/24/22 15:41	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/m3	1.2	0.24	1.44		10/24/22 15:41	75-35-4	
cis-1,2-Dichloroethene	**<0.31**	ug/m3	1.2	0.31	1.44		10/24/22 15:41	156-59-2	
trans-1,2-Dichloroethene	**<0.46**	ug/m3	1.2	0.46	1.44		10/24/22 15:41	156-60-5	
1,2-Dichloropropane	**<0.29**	ug/m3	1.4	0.29	1.44		10/24/22 15:41	78-87-5	
cis-1,3-Dichloropropene	**<0.94**	ug/m3	3.3	0.94	1.44		10/24/22 15:41	10061-01-5	
trans-1,3-Dichloropropene	**<1.1**	ug/m3	3.3	1.1	1.44		10/24/22 15:41	10061-02-6	
Dichlorotetrafluoroethane	**<0.35**	ug/m3	2.0	0.35	1.44		10/24/22 15:41	76-14-2	
Ethanol	**47.3**	ug/m3	2.8	1.3	1.44		10/24/22 15:41	64-17-5	
Ethyl acetate	**1.9**	ug/m3	1.1	0.23	1.44		10/24/22 15:41	141-78-6	
Ethylbenzene	**1.1J**	ug/m3	1.3	0.26	1.44		10/24/22 15:41	100-41-4	
4-Ethyltoluene	**<0.59**	ug/m3	3.6	0.59	1.44		10/24/22 15:41	622-96-8	
n-Heptane	**<0.19**	ug/m3	1.2	0.19	1.44		10/24/22 15:41	142-82-5	
Hexachloro-1,3-butadiene	**<2.5**	ug/m3	7.8	2.5	1.44		10/24/22 15:41	87-68-3	
n-Hexane	**<0.33**	ug/m3	1.0	0.33	1.44		10/24/22 15:41	110-54-3	
2-Hexanone	**<0.99**	ug/m3	6.0	0.99	1.44		10/24/22 15:41	591-78-6	
Methylene Chloride	**0.68J**	ug/m3	5.1	0.18	1.44		10/24/22 15:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.77**	ug/m3	6.0	0.77	1.44		10/24/22 15:41	108-10-1	
Methyl-tert-butyl ether	**<0.36**	ug/m3	5.3	0.36	1.44		10/24/22 15:41	1634-04-4	
Naphthalene	**<3.0**	ug/m3	3.8	3.0	1.44		10/24/22 15:41	91-20-3	
2-Propanol	**26.1**	ug/m3	3.6	1.4	1.44		10/24/22 15:41	67-63-0	
Propylene	**<0.51**	ug/m3	1.3	0.51	1.44		10/24/22 15:41	115-07-1	
Styrene	**<0.60**	ug/m3	1.2	0.60	1.44		10/24/22 15:41	100-42-5	
1,1,2,2-Tetrachloroethane	**<0.41**	ug/m3	2.0	0.41	1.44		10/24/22 15:41	79-34-5	
Tetrachloroethene	**<0.36**	ug/m3	0.99	0.36	1.44		10/24/22 15:41	127-18-4	
Tetrahydrofuran	**4.5**	ug/m3	0.86	0.27	1.44		10/24/22 15:41	109-99-9	
Toluene	**5.9**	ug/m3	1.1	0.23	1.44		10/24/22 15:41	108-88-3	
1,2,4-Trichlorobenzene	**<8.3**	ug/m3	10.9	8.3	1.44		10/24/22 15:41	120-82-1	
1,1,1-Trichloroethane	**<0.26**	ug/m3	1.6	0.26	1.44		10/24/22 15:41	71-55-6	
1,1,2-Trichloroethane	**<0.37**	ug/m3	0.80	0.37	1.44		10/24/22 15:41	79-00-5	
Trichloroethene	**<0.34**	ug/m3	0.79	0.34	1.44		10/24/22 15:41	79-01-6	
Trichlorofluoromethane	**1.5J**	ug/m3	1.6	0.29	1.44		10/24/22 15:41	75-69-4	
1,1,2-Trichlorotrifluoroethane	**0.60J**	ug/m3	2.2	0.33	1.44		10/24/22 15:41	76-13-1	
1,2,4-Trimethylbenzene	**<0.50**	ug/m3	1.4	0.50	1.44		10/24/22 15:41	95-63-6	
1,3,5-Trimethylbenzene	**<0.39**	ug/m3	1.4	0.39	1.44		10/24/22 15:41	108-67-8	
Vinyl acetate	**<0.25**	ug/m3	1.0	0.25	1.44		10/24/22 15:41	108-05-4	
Vinyl chloride	**<0.14**	ug/m3	0.37	0.14	1.44		10/24/22 15:41	75-01-4	
m&p-Xylene	**3.7**	ug/m3	2.5	0.71	1.44		10/24/22 15:41	179601-23-1	
o-Xylene	**1.1J**	ug/m3	1.3	0.26	1.44		10/24/22 15:41	95-47-6	

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ANALYTICAL RESULTS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Sample: IA-G-209 South **Lab ID: 10630732005** Collected: 10/20/22 10:10 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
Acetone	**99.0**	ug/m3	9.4	3.5	1.55		10/24/22 16:35	67-64-1	
Benzene	**0.43J**	ug/m3	0.50	0.17	1.55		10/24/22 16:35	71-43-2	
Benzyl chloride	**<1.2**	ug/m3	4.1	1.2	1.55		10/24/22 16:35	100-44-7	
Bromodichloromethane	**<0.50**	ug/m3	2.1	0.50	1.55		10/24/22 16:35	75-27-4	
Bromoform	**<1.2**	ug/m3	8.1	1.2	1.55		10/24/22 16:35	75-25-2	
Bromomethane	**<0.46**	ug/m3	1.2	0.46	1.55		10/24/22 16:35	74-83-9	
1,3-Butadiene	**<0.17**	ug/m3	0.70	0.17	1.55		10/24/22 16:35	106-99-0	
2-Butanone (MEK)	**3.4J**	ug/m3	4.6	0.58	1.55		10/24/22 16:35	78-93-3	
Carbon disulfide	**<0.36**	ug/m3	0.98	0.36	1.55		10/24/22 16:35	75-15-0	
Carbon tetrachloride	**<0.65**	ug/m3	2.0	0.65	1.55		10/24/22 16:35	56-23-5	
Chlorobenzene	**<0.22**	ug/m3	1.5	0.22	1.55		10/24/22 16:35	108-90-7	
Chloroethane	**<0.32**	ug/m3	0.83	0.32	1.55		10/24/22 16:35	75-00-3	
Chloroform	**<0.21**	ug/m3	0.77	0.21	1.55		10/24/22 16:35	67-66-3	
Chloromethane	**<0.14**	ug/m3	0.65	0.14	1.55		10/24/22 16:35	74-87-3	
Cyclohexane	**<0.21**	ug/m3	2.7	0.21	1.55		10/24/22 16:35	110-82-7	
Dibromochloromethane	**<0.56**	ug/m3	2.7	0.56	1.55		10/24/22 16:35	124-48-1	
1,2-Dibromoethane (EDB)	**<0.48**	ug/m3	1.2	0.48	1.55		10/24/22 16:35	106-93-4	
1,2-Dichlorobenzene	**<1.3**	ug/m3	4.7	1.3	1.55		10/24/22 16:35	95-50-1	
1,3-Dichlorobenzene	**<1.3**	ug/m3	4.7	1.3	1.55		10/24/22 16:35	541-73-1	
1,4-Dichlorobenzene	**<1.3**	ug/m3	4.7	1.3	1.55		10/24/22 16:35	106-46-7	
Dichlorodifluoromethane	**<0.80**	ug/m3	1.6	0.80	1.55		10/24/22 16:35	75-71-8	
1,1-Dichloroethane	**<0.17**	ug/m3	1.3	0.17	1.55		10/24/22 16:35	75-34-3	
1,2-Dichloroethane	**2.6**	ug/m3	1.3	0.20	1.55		10/24/22 16:35	107-06-2	
1,1-Dichloroethene	**<0.25**	ug/m3	1.2	0.25	1.55		10/24/22 16:35	75-35-4	
cis-1,2-Dichloroethene	**<0.33**	ug/m3	1.2	0.33	1.55		10/24/22 16:35	156-59-2	
trans-1,2-Dichloroethene	**<0.49**	ug/m3	1.2	0.49	1.55		10/24/22 16:35	156-60-5	
1,2-Dichloropropane	**<0.31**	ug/m3	1.5	0.31	1.55		10/24/22 16:35	78-87-5	
cis-1,3-Dichloropropene	**<1.0**	ug/m3	3.6	1.0	1.55		10/24/22 16:35	10061-01-5	
trans-1,3-Dichloropropene	**<1.2**	ug/m3	3.6	1.2	1.55		10/24/22 16:35	10061-02-6	
Dichlorotetrafluoroethane	**<0.38**	ug/m3	2.2	0.38	1.55		10/24/22 16:35	76-14-2	
Ethanol	**104**	ug/m3	3.0	1.4	1.55		10/24/22 16:35	64-17-5	
Ethyl acetate	**<0.25**	ug/m3	1.1	0.25	1.55		10/24/22 16:35	141-78-6	
Ethylbenzene	**0.82J**	ug/m3	1.4	0.28	1.55		10/24/22 16:35	100-41-4	
4-Ethyltoluene	**<0.63**	ug/m3	3.9	0.63	1.55		10/24/22 16:35	622-96-8	
n-Heptane	**0.53J**	ug/m3	1.3	0.20	1.55		10/24/22 16:35	142-82-5	
Hexachloro-1,3-butadiene	**<2.7**	ug/m3	8.4	2.7	1.55		10/24/22 16:35	87-68-3	
n-Hexane	**<0.36**	ug/m3	1.1	0.36	1.55		10/24/22 16:35	110-54-3	
2-Hexanone	**<1.1**	ug/m3	6.4	1.1	1.55		10/24/22 16:35	591-78-6	
Methylene Chloride	**<0.19**	ug/m3	5.5	0.19	1.55		10/24/22 16:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.83**	ug/m3	6.4	0.83	1.55		10/24/22 16:35	108-10-1	
Methyl-tert-butyl ether	**<0.39**	ug/m3	5.7	0.39	1.55		10/24/22 16:35	1634-04-4	
Naphthalene	**<3.2**	ug/m3	4.1	3.2	1.55		10/24/22 16:35	91-20-3	
2-Propanol	**168**	ug/m3	3.9	1.5	1.55		10/24/22 16:35	67-63-0	
Propylene	**<0.55**	ug/m3	1.4	0.55	1.55		10/24/22 16:35	115-07-1	
Styrene	**<0.64**	ug/m3	1.3	0.64	1.55		10/24/22 16:35	100-42-5	

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ANALYTICAL RESULTS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Sample: IA-G-209 South **Lab ID: 10630732005** Collected: 10/20/22 10:10 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
1,1,2,2-Tetrachloroethane	**<0.44**	ug/m3	2.2	0.44	1.55		10/24/22 16:35	79-34-5	
Tetrachloroethene	**<0.38**	ug/m3	1.1	0.38	1.55		10/24/22 16:35	127-18-4	
Tetrahydrofuran	**1.5**	ug/m3	0.93	0.29	1.55		10/24/22 16:35	109-99-9	
Toluene	**3.2**	ug/m3	1.2	0.25	1.55		10/24/22 16:35	108-88-3	
1,2,4-Trichlorobenzene	**<8.9**	ug/m3	11.7	8.9	1.55		10/24/22 16:35	120-82-1	
1,1,1-Trichloroethane	**<0.28**	ug/m3	1.7	0.28	1.55		10/24/22 16:35	71-55-6	
1,1,2-Trichloroethane	**<0.40**	ug/m3	0.86	0.40	1.55		10/24/22 16:35	79-00-5	
Trichloroethene	**<0.37**	ug/m3	0.85	0.37	1.55		10/24/22 16:35	79-01-6	
Trichlorofluoromethane	**1.6J**	ug/m3	1.8	0.31	1.55		10/24/22 16:35	75-69-4	
1,1,2-Trichlorotrifluoroethane	**0.55J**	ug/m3	2.4	0.35	1.55		10/24/22 16:35	76-13-1	
1,2,4-Trimethylbenzene	**<0.54**	ug/m3	1.5	0.54	1.55		10/24/22 16:35	95-63-6	
1,3,5-Trimethylbenzene	**<0.42**	ug/m3	1.5	0.42	1.55		10/24/22 16:35	108-67-8	
Vinyl acetate	**<0.27**	ug/m3	1.1	0.27	1.55		10/24/22 16:35	108-05-4	
Vinyl chloride	**<0.15**	ug/m3	0.40	0.15	1.55		10/24/22 16:35	75-01-4	
m&p-Xylene	**2.3J**	ug/m3	2.7	0.76	1.55		10/24/22 16:35	179601-23-1	
o-Xylene	**0.80J**	ug/m3	1.4	0.28	1.55		10/24/22 16:35	95-47-6	

Sample: SG-209 South **Lab ID: 10630732006** Collected: 10/20/22 11:05 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
Acetone	**9.9J**	ug/m3	10.6	3.9	1.75		10/27/22 21:20	67-64-1	
Benzene	**0.42J**	ug/m3	0.57	0.19	1.75		10/27/22 21:20	71-43-2	
Benzyl chloride	**<1.3**	ug/m3	4.6	1.3	1.75		10/27/22 21:20	100-44-7	
Bromodichloromethane	**<0.56**	ug/m3	2.4	0.56	1.75		10/27/22 21:20	75-27-4	
Bromoform	**<1.4**	ug/m3	9.2	1.4	1.75		10/27/22 21:20	75-25-2	
Bromomethane	**<0.52**	ug/m3	1.4	0.52	1.75		10/27/22 21:20	74-83-9	
1,3-Butadiene	**<0.19**	ug/m3	0.79	0.19	1.75		10/27/22 21:20	106-99-0	
2-Butanone (MEK)	**2.0J**	ug/m3	5.2	0.66	1.75		10/27/22 21:20	78-93-3	
Carbon disulfide	**<0.41**	ug/m3	1.1	0.41	1.75		10/27/22 21:20	75-15-0	
Carbon tetrachloride	**<0.73**	ug/m3	2.2	0.73	1.75		10/27/22 21:20	56-23-5	
Chlorobenzene	**<0.24**	ug/m3	1.6	0.24	1.75		10/27/22 21:20	108-90-7	
Chloroethane	**<0.36**	ug/m3	0.94	0.36	1.75		10/27/22 21:20	75-00-3	
Chloroform	**1.5**	ug/m3	0.87	0.23	1.75		10/27/22 21:20	67-66-3	
Chloromethane	**0.39J**	ug/m3	0.74	0.15	1.75		10/27/22 21:20	74-87-3	
Cyclohexane	**<0.23**	ug/m3	3.1	0.23	1.75		10/27/22 21:20	110-82-7	
Dibromochloromethane	**<0.63**	ug/m3	3.0	0.63	1.75		10/27/22 21:20	124-48-1	
1,2-Dibromoethane (EDB)	**<0.54**	ug/m3	1.4	0.54	1.75		10/27/22 21:20	106-93-4	
1,2-Dichlorobenzene	**<1.5**	ug/m3	5.4	1.5	1.75		10/27/22 21:20	95-50-1	
1,3-Dichlorobenzene	**<1.4**	ug/m3	5.4	1.4	1.75		10/27/22 21:20	541-73-1	
1,4-Dichlorobenzene	**<1.4**	ug/m3	5.4	1.4	1.75		10/27/22 21:20	106-46-7	

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Pace Analytical Services, LLC
1700 Elm Street
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(612)607-1700

ANALYTICAL RESULTS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Sample: SG-209 South **Lab ID: 10630732006** Collected: 10/20/22 11:05 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
Dichlorodifluoromethane	**2.6**	ug/m3	1.8	0.90	1.75		10/27/22 21:20	75-71-8	
1,1-Dichloroethane	**0.23J**	ug/m3	1.4	0.19	1.75		10/27/22 21:20	75-34-3	
1,2-Dichloroethane	**<0.22**	ug/m3	1.4	0.22	1.75		10/27/22 21:20	107-06-2	
1,1-Dichloroethene	**0.29J**	ug/m3	1.4	0.29	1.75		10/27/22 21:20	75-35-4	
cis-1,2-Dichloroethene	**<0.37**	ug/m3	1.4	0.37	1.75		10/27/22 21:20	156-59-2	
trans-1,2-Dichloroethene	**<0.55**	ug/m3	1.4	0.55	1.75		10/27/22 21:20	156-60-5	
1,2-Dichloropropane	**<0.35**	ug/m3	1.6	0.35	1.75		10/27/22 21:20	78-87-5	
cis-1,3-Dichloropropene	**<1.1**	ug/m3	4.0	1.1	1.75		10/27/22 21:20	10061-01-5	
trans-1,3-Dichloropropene	**<1.4**	ug/m3	4.0	1.4	1.75		10/27/22 21:20	10061-02-6	
Dichlorotetrafluoroethane	**<0.43**	ug/m3	2.5	0.43	1.75		10/27/22 21:20	76-14-2	
Ethanol	**12.0**	ug/m3	3.4	1.6	1.75		10/27/22 21:20	64-17-5	CH
Ethyl acetate	**<0.28**	ug/m3	1.3	0.28	1.75		10/27/22 21:20	141-78-6	
Ethylbenzene	**0.47J**	ug/m3	1.5	0.31	1.75		10/27/22 21:20	100-41-4	
4-Ethyltoluene	**1.3J**	ug/m3	4.4	0.71	1.75		10/27/22 21:20	622-96-8	
n-Heptane	**0.26J**	ug/m3	1.5	0.23	1.75		10/27/22 21:20	142-82-5	
Hexachloro-1,3-butadiene	**<3.1**	ug/m3	9.5	3.1	1.75		10/27/22 21:20	87-68-3	
n-Hexane	**<0.41**	ug/m3	1.3	0.41	1.75		10/27/22 21:20	110-54-3	
2-Hexanone	**<1.2**	ug/m3	7.3	1.2	1.75		10/27/22 21:20	591-78-6	
Methylene Chloride	**<0.22**	ug/m3	6.2	0.22	1.75		10/27/22 21:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.94**	ug/m3	7.3	0.94	1.75		10/27/22 21:20	108-10-1	
Methyl-tert-butyl ether	**<0.44**	ug/m3	6.4	0.44	1.75		10/27/22 21:20	1634-04-4	
Naphthalene	**<3.7**	ug/m3	4.7	3.7	1.75		10/27/22 21:20	91-20-3	
2-Propanol	**5.9**	ug/m3	4.4	1.7	1.75		10/27/22 21:20	67-63-0	
Propylene	**<0.62**	ug/m3	1.5	0.62	1.75		10/27/22 21:20	115-07-1	
Styrene	**9.0**	ug/m3	1.5	0.73	1.75		10/27/22 21:20	100-42-5	
1,1,2,2-Tetrachloroethane	**<0.50**	ug/m3	2.4	0.50	1.75		10/27/22 21:20	79-34-5	
Tetrachloroethene	**3.0**	ug/m3	1.2	0.43	1.75		10/27/22 21:20	127-18-4	
Tetrahydrofuran	**<0.33**	ug/m3	2.6	0.33	1.75		10/27/22 21:20	109-99-9	
Toluene	**1.3J**	ug/m3	1.3	0.28	1.75		10/27/22 21:20	108-88-3	
1,2,4-Trichlorobenzene	**<10.0**	ug/m3	13.2	10.0	1.75		10/27/22 21:20	120-82-1	
1,1,1-Trichloroethane	**68.2**	ug/m3	1.9	0.32	1.75		10/27/22 21:20	71-55-6	
1,1,2-Trichloroethane	**<0.45**	ug/m3	0.97	0.45	1.75		10/27/22 21:20	79-00-5	
Trichloroethene	**8.0**	ug/m3	0.96	0.42	1.75		10/27/22 21:20	79-01-6	
Trichlorofluoromethane	**1.6J**	ug/m3	2.0	0.35	1.75		10/27/22 21:20	75-69-4	
1,1,2-Trichlorotrifluoroethane	**0.77J**	ug/m3	2.7	0.40	1.75		10/27/22 21:20	76-13-1	
1,2,4-Trimethylbenzene	**1.1J**	ug/m3	1.7	0.61	1.75		10/27/22 21:20	95-63-6	
1,3,5-Trimethylbenzene	**1.1J**	ug/m3	1.7	0.48	1.75		10/27/22 21:20	108-67-8	
Vinyl acetate	**<0.31**	ug/m3	1.3	0.31	1.75		10/27/22 21:20	108-05-4	
Vinyl chloride	**<0.17**	ug/m3	0.46	0.17	1.75		10/27/22 21:20	75-01-4	
m&p-Xylene	**1.6J**	ug/m3	3.1	0.86	1.75		10/27/22 21:20	179601-23-1	
o-Xylene	**0.76J**	ug/m3	1.5	0.31	1.75		10/27/22 21:20	95-47-6	

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ANALYTICAL RESULTS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Sample: OA-01 **Lab ID: 10630732010** Collected: 10/20/22 10:15 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
Acetone	**6.4J**	ug/m3	8.4	3.1	1.39		10/24/22 19:16	67-64-1	
Benzene	**<0.15**	ug/m3	0.45	0.15	1.39		10/24/22 19:16	71-43-2	
Benzyl chloride	**<1.1**	ug/m3	3.7	1.1	1.39		10/24/22 19:16	100-44-7	
Bromodichloromethane	**<0.44**	ug/m3	1.9	0.44	1.39		10/24/22 19:16	75-27-4	
Bromoform	**<1.1**	ug/m3	7.3	1.1	1.39		10/24/22 19:16	75-25-2	
Bromomethane	**<0.41**	ug/m3	1.1	0.41	1.39		10/24/22 19:16	74-83-9	
1,3-Butadiene	**<0.15**	ug/m3	0.63	0.15	1.39		10/24/22 19:16	106-99-0	
2-Butanone (MEK)	**<0.52**	ug/m3	4.2	0.52	1.39		10/24/22 19:16	78-93-3	
Carbon disulfide	**<0.33**	ug/m3	0.88	0.33	1.39		10/24/22 19:16	75-15-0	
Carbon tetrachloride	**<0.58**	ug/m3	1.8	0.58	1.39		10/24/22 19:16	56-23-5	
Chlorobenzene	**<0.19**	ug/m3	1.3	0.19	1.39		10/24/22 19:16	108-90-7	
Chloroethane	**<0.28**	ug/m3	0.75	0.28	1.39		10/24/22 19:16	75-00-3	
Chloroform	**<0.19**	ug/m3	0.69	0.19	1.39		10/24/22 19:16	67-66-3	
Chloromethane	**0.69**	ug/m3	0.58	0.12	1.39		10/24/22 19:16	74-87-3	
Cyclohexane	**<0.19**	ug/m3	2.4	0.19	1.39		10/24/22 19:16	110-82-7	
Dibromochloromethane	**<0.50**	ug/m3	2.4	0.50	1.39		10/24/22 19:16	124-48-1	
1,2-Dibromoethane (EDB)	**<0.43**	ug/m3	1.1	0.43	1.39		10/24/22 19:16	106-93-4	
1,2-Dichlorobenzene	**<1.2**	ug/m3	4.3	1.2	1.39		10/24/22 19:16	95-50-1	
1,3-Dichlorobenzene	**<1.1**	ug/m3	4.3	1.1	1.39		10/24/22 19:16	541-73-1	
1,4-Dichlorobenzene	**<1.1**	ug/m3	4.3	1.1	1.39		10/24/22 19:16	106-46-7	

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ANALYTICAL RESULTS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Sample: OA-01 **Lab ID: 10630732010** Collected: 10/20/22 10:15 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
Dichlorodifluoromethane	**2.7**	ug/m3	1.4	0.71	1.39		10/24/22 19:16	75-71-8	
1,1-Dichloroethane	**<0.15**	ug/m3	1.1	0.15	1.39		10/24/22 19:16	75-34-3	
1,2-Dichloroethane	**<0.18**	ug/m3	1.1	0.18	1.39		10/24/22 19:16	107-06-2	
1,1-Dichloroethene	**<0.23**	ug/m3	1.1	0.23	1.39		10/24/22 19:16	75-35-4	
cis-1,2-Dichloroethene	**<0.30**	ug/m3	1.1	0.30	1.39		10/24/22 19:16	156-59-2	
trans-1,2-Dichloroethene	**<0.44**	ug/m3	1.1	0.44	1.39		10/24/22 19:16	156-60-5	
1,2-Dichloropropane	**<0.28**	ug/m3	1.3	0.28	1.39		10/24/22 19:16	78-87-5	
cis-1,3-Dichloropropene	**<0.91**	ug/m3	3.2	0.91	1.39		10/24/22 19:16	10061-01-5	
trans-1,3-Dichloropropene	**<1.1**	ug/m3	3.2	1.1	1.39		10/24/22 19:16	10061-02-6	
Dichlorotetrafluoroethane	**<0.34**	ug/m3	2.0	0.34	1.39		10/24/22 19:16	76-14-2	
Ethanol	**17.2**	ug/m3	2.7	1.3	1.39		10/24/22 19:16	64-17-5	
Ethyl acetate	**<0.22**	ug/m3	1.0	0.22	1.39		10/24/22 19:16	141-78-6	
Ethylbenzene	**<0.25**	ug/m3	1.2	0.25	1.39		10/24/22 19:16	100-41-4	
4-Ethyltoluene	**<0.57**	ug/m3	3.5	0.57	1.39		10/24/22 19:16	622-96-8	
n-Heptane	**<0.18**	ug/m3	1.2	0.18	1.39		10/24/22 19:16	142-82-5	
Hexachloro-1,3-butadiene	**<2.4**	ug/m3	7.5	2.4	1.39		10/24/22 19:16	87-68-3	
n-Hexane	**<0.32**	ug/m3	1.0	0.32	1.39		10/24/22 19:16	110-54-3	
2-Hexanone	**<0.96**	ug/m3	5.8	0.96	1.39		10/24/22 19:16	591-78-6	
Methylene Chloride	**<0.17**	ug/m3	4.9	0.17	1.39		10/24/22 19:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.75**	ug/m3	5.8	0.75	1.39		10/24/22 19:16	108-10-1	
Methyl-tert-butyl ether	**<0.35**	ug/m3	5.1	0.35	1.39		10/24/22 19:16	1634-04-4	
Naphthalene	**<2.9**	ug/m3	3.7	2.9	1.39		10/24/22 19:16	91-20-3	
2-Propanol	**<1.3**	ug/m3	3.5	1.3	1.39		10/24/22 19:16	67-63-0	
Propylene	**<0.50**	ug/m3	1.2	0.50	1.39		10/24/22 19:16	115-07-1	
Styrene	**<0.58**	ug/m3	1.2	0.58	1.39		10/24/22 19:16	100-42-5	
1,1,2,2-Tetrachloroethane	**<0.40**	ug/m3	1.9	0.40	1.39		10/24/22 19:16	79-34-5	
Tetrachloroethene	**<0.34**	ug/m3	0.96	0.34	1.39		10/24/22 19:16	127-18-4	
Tetrahydrofuran	**<0.26**	ug/m3	0.83	0.26	1.39		10/24/22 19:16	109-99-9	
Toluene	**0.40J**	ug/m3	1.1	0.23	1.39		10/24/22 19:16	108-88-3	
1,2,4-Trichlorobenzene	**<8.0**	ug/m3	10.5	8.0	1.39		10/24/22 19:16	120-82-1	
1,1,1-Trichloroethane	**<0.25**	ug/m3	1.5	0.25	1.39		10/24/22 19:16	71-55-6	
1,1,2-Trichloroethane	**<0.36**	ug/m3	0.77	0.36	1.39		10/24/22 19:16	79-00-5	
Trichloroethene	**<0.33**	ug/m3	0.76	0.33	1.39		10/24/22 19:16	79-01-6	
Trichlorofluoromethane	**1.7**	ug/m3	1.6	0.28	1.39		10/24/22 19:16	75-69-4	
1,1,2-Trichlorotrifluoroethane	**<0.32**	ug/m3	2.2	0.32	1.39		10/24/22 19:16	76-13-1	
1,2,4-Trimethylbenzene	**<0.49**	ug/m3	1.4	0.49	1.39		10/24/22 19:16	95-63-6	
1,3,5-Trimethylbenzene	**<0.38**	ug/m3	1.4	0.38	1.39		10/24/22 19:16	108-67-8	
Vinyl acetate	**<0.24**	ug/m3	1.0	0.24	1.39		10/24/22 19:16	108-05-4	
Vinyl chloride	**<0.13**	ug/m3	0.36	0.13	1.39		10/24/22 19:16	75-01-4	
m&p-Xylene	**<0.68**	ug/m3	2.5	0.68	1.39		10/24/22 19:16	179601-23-1	
o-Xylene	**<0.25**	ug/m3	1.2	0.25	1.39		10/24/22 19:16	95-47-6	

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QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

QC Batch: 848879 | Analysis Method: TO-15
QC Batch Method: TO-15 | Analysis Description: TO15 MSV AIR Low Level
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10630732001, 10630732002, 10630732004, 10630732005, 10630732007, 10630732008, 10630732010

METHOD BLANK: 4490507 | Matrix: Air
Associated Lab Samples: 10630732001, 10630732002, 10630732004, 10630732005, 10630732007, 10630732008, 10630732010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	<0.090	0.56	10/24/22 12:20	
1,1,2,2-Tetrachloroethane	ug/m3	<0.14	0.70	10/24/22 12:20	
1,1,2-Trichloroethane	ug/m3	<0.13	0.28	10/24/22 12:20	
1,1,2-Trichlorotrifluoroethane	ug/m3	<0.11	0.78	10/24/22 12:20	
1,1-Dichloroethane	ug/m3	<0.054	0.41	10/24/22 12:20	
1,1-Dichloroethene	ug/m3	<0.082	0.40	10/24/22 12:20	
1,2,4-Trichlorobenzene	ug/m3	<2.9	3.8	10/24/22 12:20	
1,2,4-Trimethylbenzene	ug/m3	<0.18	0.50	10/24/22 12:20	
1,2-Dibromoethane (EDB)	ug/m3	<0.15	0.39	10/24/22 12:20	
1,2-Dichlorobenzene	ug/m3	<0.43	1.5	10/24/22 12:20	
1,2-Dichloroethane	ug/m3	<0.064	0.41	10/24/22 12:20	
1,2-Dichloropropane	ug/m3	<0.10	0.47	10/24/22 12:20	
1,3,5-Trimethylbenzene	ug/m3	<0.14	0.50	10/24/22 12:20	
1,3-Butadiene	ug/m3	<0.056	0.22	10/24/22 12:20	
1,3-Dichlorobenzene	ug/m3	<0.41	1.5	10/24/22 12:20	
1,4-Dichlorobenzene	ug/m3	<0.41	1.5	10/24/22 12:20	
2-Butanone (MEK)	ug/m3	<0.19	1.5	10/24/22 12:20	
2-Hexanone	ug/m3	<0.34	2.1	10/24/22 12:20	
2-Propanol	ug/m3	<0.48	1.2	10/24/22 12:20	
4-Ethyltoluene	ug/m3	<0.20	1.2	10/24/22 12:20	
4-Methyl-2-pentanone (MIBK)	ug/m3	<0.27	2.1	10/24/22 12:20	
Acetone	ug/m3	<1.1	3.0	10/24/22 12:20	
Benzene	ug/m3	<0.055	0.16	10/24/22 12:20	
Benzyl chloride	ug/m3	<0.38	1.3	10/24/22 12:20	
Bromodichloromethane	ug/m3	<0.16	0.68	10/24/22 12:20	
Bromoform	ug/m3	<0.39	2.6	10/24/22 12:20	
Bromomethane	ug/m3	<0.15	0.39	10/24/22 12:20	
Carbon disulfide	ug/m3	<0.12	0.32	10/24/22 12:20	
Carbon tetrachloride	ug/m3	<0.21	0.64	10/24/22 12:20	
Chlorobenzene	ug/m3	<0.070	0.47	10/24/22 12:20	
Chloroethane	ug/m3	<0.10	0.27	10/24/22 12:20	
Chloroform	ug/m3	<0.067	0.25	10/24/22 12:20	
Chloromethane	ug/m3	<0.044	0.21	10/24/22 12:20	
cis-1,2-Dichloroethene	ug/m3	<0.11	0.40	10/24/22 12:20	
cis-1,3-Dichloropropene	ug/m3	<0.33	1.2	10/24/22 12:20	
Cyclohexane	ug/m3	<0.067	0.88	10/24/22 12:20	
Dibromochloromethane	ug/m3	<0.18	0.86	10/24/22 12:20	
Dichlorodifluoromethane	ug/m3	<0.26	0.50	10/24/22 12:20	
Dichlorotetrafluoroethane	ug/m3	<0.12	0.71	10/24/22 12:20	
Ethanol	ug/m3	<0.45	0.96	10/24/22 12:20	

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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QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

METHOD BLANK: 4490507 Matrix: Air
Associated Lab Samples: 10630732001, 10630732002, 10630732004, 10630732005, 10630732007, 10630732008, 10630732010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethyl acetate	ug/m3	<0.080	0.37	10/24/22 12:20	
Ethylbenzene	ug/m3	<0.090	0.44	10/24/22 12:20	
Hexachloro-1,3-butadiene	ug/m3	<0.88	2.7	10/24/22 12:20	
m&p-Xylene	ug/m3	<0.25	0.88	10/24/22 12:20	
Methyl-tert-butyl ether	ug/m3	<0.12	1.8	10/24/22 12:20	
Methylene Chloride	ug/m3	<0.062	1.8	10/24/22 12:20	
n-Heptane	ug/m3	<0.064	0.42	10/24/22 12:20	
n-Hexane	ug/m3	<0.12	0.36	10/24/22 12:20	
Naphthalene	ug/m3	<1.0	1.3	10/24/22 12:20	
o-Xylene	ug/m3	<0.089	0.44	10/24/22 12:20	
Propylene	ug/m3	<0.18	0.44	10/24/22 12:20	
Styrene	ug/m3	<0.21	0.43	10/24/22 12:20	
Tetrachloroethene	ug/m3	<0.12	0.34	10/24/22 12:20	
Tetrahydrofuran	ug/m3	<0.093	0.30	10/24/22 12:20	
Toluene	ug/m3	<0.081	0.38	10/24/22 12:20	
trans-1,2-Dichloroethene	ug/m3	<0.16	0.40	10/24/22 12:20	
trans-1,3-Dichloropropene	ug/m3	<0.39	1.2	10/24/22 12:20	
Trichloroethene	ug/m3	<0.12	0.27	10/24/22 12:20	
Trichlorofluoromethane	ug/m3	<0.10	0.57	10/24/22 12:20	
Vinyl acetate	ug/m3	<0.088	0.36	10/24/22 12:20	
Vinyl chloride	ug/m3	<0.048	0.13	10/24/22 12:20	

LABORATORY CONTROL SAMPLE: 4490508

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	57.7	50.8	88	70-130	
1,1,2,2-Tetrachloroethane	ug/m3	73.1	61.9	85	70-132	
1,1,2-Trichloroethane	ug/m3	58.2	48.8	84	70-131	
1,1,2-Trichlorotrifluoroethane	ug/m3	82.4	72.1	88	70-130	
1,1-Dichloroethane	ug/m3	43.4	36.5	84	70-130	
1,1-Dichloroethene	ug/m3	42.6	36.9	87	70-130	
1,2,4-Trichlorobenzene	ug/m3	174	143	82	70-130	
1,2,4-Trimethylbenzene	ug/m3	52.3	45.8	88	70-137	
1,2-Dibromoethane (EDB)	ug/m3	80.5	70.0	87	70-137	
1,2-Dichlorobenzene	ug/m3	63.9	56.7	89	70-131	
1,2-Dichloroethane	ug/m3	43.4	40.2	93	70-134	
1,2-Dichloropropane	ug/m3	48.7	43.7	90	70-130	
1,3,5-Trimethylbenzene	ug/m3	52.1	45.6	88	70-131	
1,3-Butadiene	ug/m3	23.5	18.8	80	70-139	
1,3-Dichlorobenzene	ug/m3	63.9	56.4	88	70-134	
1,4-Dichlorobenzene	ug/m3	64.1	57.0	89	70-131	
2-Butanone (MEK)	ug/m3	31.5	27.4	87	70-133	
2-Hexanone	ug/m3	43.4	37.2	86	70-136	
2-Propanol	ug/m3	136	110	81	65-133	

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QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

LABORATORY CONTROL SAMPLE: 4490508

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Ethyltoluene	ug/m3	52.2	44.5	85	70-130	
4-Methyl-2-pentanone (MIBK)	ug/m3	43.9	40.2	92	70-130	
Acetone	ug/m3	126	106	84	60-134	
Benzene	ug/m3	34.1	30.1	88	70-130	
Benzyl chloride	ug/m3	55.4	48.0	87	70-130	
Bromodichloromethane	ug/m3	71.5	65.2	91	70-130	
Bromoform	ug/m3	110	95.6	87	70-138	
Bromomethane	ug/m3	41.1	33.4	81	68-131	
Carbon disulfide	ug/m3	33.5	28.6	85	70-130	
Carbon tetrachloride	ug/m3	66.7	61.2	92	70-132	
Chlorobenzene	ug/m3	48.8	42.5	87	70-130	
Chloroethane	ug/m3	27.9	23.1	83	70-134	
Chloroform	ug/m3	52	45.2	87	70-130	
Chloromethane	ug/m3	21.8	17.6	80	68-131	
cis-1,2-Dichloroethene	ug/m3	42.3	40.1	95	70-136	
cis-1,3-Dichloropropene	ug/m3	48.5	41.3	85	70-130	
Cyclohexane	ug/m3	36	33.2	92	70-131	
Dibromochloromethane	ug/m3	88.5	76.9	87	70-134	
Dichlorodifluoromethane	ug/m3	52.4	43.1	82	70-130	
Dichlorotetrafluoroethane	ug/m3	73.8	60.3	82	70-130	
Ethanol	ug/m3	112	86.0	77	55-145	
Ethyl acetate	ug/m3	38.4	34.7	90	70-135	
Ethylbenzene	ug/m3	46.5	40.3	87	70-133	
Hexachloro-1,3-butadiene	ug/m3	129	117	91	70-132	
m&p-Xylene	ug/m3	92	79.0	86	70-134	
Methyl-tert-butyl ether	ug/m3	37.9	32.2	85	70-131	
Methylene Chloride	ug/m3	36.6	30.8	84	65-132	
n-Heptane	ug/m3	43.4	38.9	90	70-130	
n-Hexane	ug/m3	37.6	33.0	88	70-132	
Naphthalene	ug/m3	63.5	49.9	79	70-130	
o-Xylene	ug/m3	46.2	40.0	87	70-134	
Propylene	ug/m3	18.3	14.5	79	69-133	
Styrene	ug/m3	44.9	41.0	91	70-135	
Tetrachloroethene	ug/m3	72.3	65.6	91	70-134	
Tetrahydrofuran	ug/m3	30.6	26.8	87	70-140	
Toluene	ug/m3	39.9	38.9	98	70-136	
trans-1,2-Dichloroethene	ug/m3	42.7	37.1	87	70-134	
trans-1,3-Dichloropropene	ug/m3	44.9	37.7	84	70-131	
Trichloroethene	ug/m3	57.2	55.5	97	70-134	
Trichlorofluoromethane	ug/m3	59.7	52.2	87	63-130	
Vinyl acetate	ug/m3	38.4	31.7	83	70-139	
Vinyl chloride	ug/m3	27.1	22.6	84	70-132	

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QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

SAMPLE DUPLICATE: 4491373

Parameter	Units	10630732004 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	<0.26	<0.26		25	
1,1,2,2-Tetrachloroethane	ug/m3	<0.41	<0.41		25	
1,1,2-Trichloroethane	ug/m3	<0.37	<0.37		25	
1,1,2-Trichlorotrifluoroethane	ug/m3	0.60J	0.53J		25	
1,1-Dichloroethane	ug/m3	<0.15	<0.15		25	
1,1-Dichloroethene	ug/m3	<0.24	<0.24		25	
1,2,4-Trichlorobenzene	ug/m3	<8.3	<8.3		25	
1,2,4-Trimethylbenzene	ug/m3	<0.50	<0.50		25	
1,2-Dibromoethane (EDB)	ug/m3	<0.44	<0.44		25	
1,2-Dichlorobenzene	ug/m3	<1.2	<1.2		25	
1,2-Dichloroethane	ug/m3	<0.18	0.60J		25	
1,2-Dichloropropane	ug/m3	<0.29	<0.29		25	
1,3,5-Trimethylbenzene	ug/m3	<0.39	<0.39		25	
1,3-Butadiene	ug/m3	<0.16	<0.16		25	
1,3-Dichlorobenzene	ug/m3	<1.2	<1.2		25	
1,4-Dichlorobenzene	ug/m3	<1.2	<1.2		25	
2-Butanone (MEK)	ug/m3	6.7	6.3	7	25	
2-Hexanone	ug/m3	<0.99	<0.99		25	
2-Propanol	ug/m3	26.1	26.7	2	25	
4-Ethyltoluene	ug/m3	<0.59	<0.59		25	
4-Methyl-2-pentanone (MIBK)	ug/m3	<0.77	<0.77		25	
Acetone	ug/m3	46.6	44.7	4	25	
Benzene	ug/m3	0.39J	0.40J		25	
Benzyl chloride	ug/m3	<1.1	<1.1		25	
Bromodichloromethane	ug/m3	<0.46	<0.46		25	
Bromoform	ug/m3	<1.1	<1.1		25	
Bromomethane	ug/m3	<0.43	<0.43		25	
Carbon disulfide	ug/m3	<0.34	<0.34		25	
Carbon tetrachloride	ug/m3	<0.60	<0.60		25	
Chlorobenzene	ug/m3	<0.20	<0.20		25	
Chloroethane	ug/m3	<0.30	<0.30		25	
Chloroform	ug/m3	<0.19	<0.19		25	
Chloromethane	ug/m3	0.88	0.81	9	25	
cis-1,2-Dichloroethene	ug/m3	<0.31	<0.31		25	
cis-1,3-Dichloropropene	ug/m3	<0.94	<0.94		25	
Cyclohexane	ug/m3	<0.19	<0.19		25	
Dibromochloromethane	ug/m3	<0.52	<0.52		25	
Dichlorodifluoromethane	ug/m3	2.5	2.4	1	25	
Dichlorotetrafluoroethane	ug/m3	<0.35	<0.35		25	
Ethanol	ug/m3	47.3	46.5	2	25	
Ethyl acetate	ug/m3	1.9	1.9	3	25	
Ethylbenzene	ug/m3	1.1J	1.1J		25	
Hexachloro-1,3-butadiene	ug/m3	<2.5	<2.5		25	
m&p-Xylene	ug/m3	3.7	3.8	2	25	
Methyl-tert-butyl ether	ug/m3	<0.36	<0.36		25	
Methylene Chloride	ug/m3	0.68J	0.60J		25	
n-Heptane	ug/m3	<0.19	0.28J		25	

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QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

SAMPLE DUPLICATE: 4491373

Parameter	Units	10630732004 Result	Dup Result	RPD	Max RPD	Qualifiers
n-Hexane	ug/m3	<0.33	<0.33		25	
Naphthalene	ug/m3	<3.0	<3.0		25	
o-Xylene	ug/m3	1.1J	1.1J		25	
Propylene	ug/m3	<0.51	20.1		25	
Styrene	ug/m3	<0.60	<0.60		25	
Tetrachloroethene	ug/m3	<0.36	<0.36		25	
Tetrahydrofuran	ug/m3	4.5	4.6	2	25	
Toluene	ug/m3	5.9	6.1	2	25	
trans-1,2-Dichloroethene	ug/m3	<0.46	<0.46		25	
trans-1,3-Dichloropropene	ug/m3	<1.1	<1.1		25	
Trichloroethene	ug/m3	<0.34	<0.34		25	
Trichlorofluoromethane	ug/m3	1.5J	1.7		25	
Vinyl acetate	ug/m3	<0.25	<0.25		25	
Vinyl chloride	ug/m3	<0.14	<0.14		25	

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QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

QC Batch: 849755
QC Batch Method: TO-15
Analysis Method: TO-15
Analysis Description: TO15 MSV AIR Low Level
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10630732003, 10630732006, 10630732009

METHOD BLANK: 4494140
Matrix: Air
Associated Lab Samples: 10630732003, 10630732006, 10630732009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	<0.18	1.1	10/27/22 09:53	
1,1,2,2-Tetrachloroethane	ug/m3	<0.29	1.4	10/27/22 09:53	
1,1,2-Trichloroethane	ug/m3	<0.26	0.56	10/27/22 09:53	
1,1,2-Trichlorotrifluoroethane	ug/m3	<0.23	1.6	10/27/22 09:53	
1,1-Dichloroethane	ug/m3	<0.11	0.82	10/27/22 09:53	
1,1-Dichloroethene	ug/m3	<0.16	0.81	10/27/22 09:53	
1,2,4-Trichlorobenzene	ug/m3	<5.7	7.5	10/27/22 09:53	
1,2,4-Trimethylbenzene	ug/m3	<0.35	1.0	10/27/22 09:53	
1,2-Dibromoethane (EDB)	ug/m3	<0.31	0.78	10/27/22 09:53	
1,2-Dichlorobenzene	ug/m3	<0.86	3.1	10/27/22 09:53	
1,2-Dichloroethane	ug/m3	<0.13	0.82	10/27/22 09:53	
1,2-Dichloropropane	ug/m3	<0.20	0.94	10/27/22 09:53	
1,3,5-Trimethylbenzene	ug/m3	<0.27	1.0	10/27/22 09:53	
1,3-Butadiene	ug/m3	<0.11	0.45	10/27/22 09:53	
1,3-Dichlorobenzene	ug/m3	<0.82	3.1	10/27/22 09:53	
1,4-Dichlorobenzene	ug/m3	<0.81	3.1	10/27/22 09:53	
2-Butanone (MEK)	ug/m3	<0.38	3.0	10/27/22 09:53	
2-Hexanone	ug/m3	<0.69	4.2	10/27/22 09:53	
2-Propanol	ug/m3	<0.96	2.5	10/27/22 09:53	
4-Ethyltoluene	ug/m3	<0.41	2.5	10/27/22 09:53	
4-Methyl-2-pentanone (MIBK)	ug/m3	<0.54	4.2	10/27/22 09:53	
Acetone	ug/m3	<2.2	6.0	10/27/22 09:53	
Benzene	ug/m3	<0.11	0.32	10/27/22 09:53	
Benzyl chloride	ug/m3	<0.77	2.6	10/27/22 09:53	
Bromodichloromethane	ug/m3	<0.32	1.4	10/27/22 09:53	
Bromoform	ug/m3	<0.78	5.2	10/27/22 09:53	
Bromomethane	ug/m3	<0.30	0.79	10/27/22 09:53	
Carbon disulfide	ug/m3	<0.23	0.63	10/27/22 09:53	
Carbon tetrachloride	ug/m3	<0.42	1.3	10/27/22 09:53	
Chlorobenzene	ug/m3	<0.14	0.94	10/27/22 09:53	
Chloroethane	ug/m3	<0.20	0.54	10/27/22 09:53	
Chloroform	ug/m3	<0.13	0.50	10/27/22 09:53	
Chloromethane	ug/m3	<0.088	0.42	10/27/22 09:53	
cis-1,2-Dichloroethene	ug/m3	<0.21	0.81	10/27/22 09:53	
cis-1,3-Dichloropropene	ug/m3	<0.65	2.3	10/27/22 09:53	
Cyclohexane	ug/m3	<0.13	1.8	10/27/22 09:53	
Dibromochloromethane	ug/m3	<0.36	1.7	10/27/22 09:53	
Dichlorodifluoromethane	ug/m3	<0.51	1.0	10/27/22 09:53	
Dichlorotetrafluoroethane	ug/m3	<0.24	1.4	10/27/22 09:53	
Ethanol	ug/m3	<0.90	1.9	10/27/22 09:53	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

METHOD BLANK: 4494140 Matrix: Air
Associated Lab Samples: 10630732003, 10630732006, 10630732009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethyl acetate	ug/m3	<0.16	0.73	10/27/22 09:53	
Ethylbenzene	ug/m3	<0.18	0.88	10/27/22 09:53	
Hexachloro-1,3-butadiene	ug/m3	<1.8	5.4	10/27/22 09:53	
m&p-Xylene	ug/m3	<0.49	1.8	10/27/22 09:53	
Methyl-tert-butyl ether	ug/m3	<0.25	3.7	10/27/22 09:53	
Methylene Chloride	ug/m3	<0.12	3.5	10/27/22 09:53	
n-Heptane	ug/m3	<0.13	0.83	10/27/22 09:53	
n-Hexane	ug/m3	<0.23	0.72	10/27/22 09:53	
Naphthalene	ug/m3	2.3J	2.7	10/27/22 09:53	
o-Xylene	ug/m3	<0.18	0.88	10/27/22 09:53	
Propylene	ug/m3	<0.36	0.88	10/27/22 09:53	
Styrene	ug/m3	<0.42	0.87	10/27/22 09:53	
Tetrachloroethene	ug/m3	<0.25	0.69	10/27/22 09:53	
Tetrahydrofuran	ug/m3	<0.19	1.5	10/27/22 09:53	MN
Toluene	ug/m3	<0.16	0.77	10/27/22 09:53	
trans-1,2-Dichloroethene	ug/m3	<0.32	0.81	10/27/22 09:53	
trans-1,3-Dichloropropene	ug/m3	<0.78	2.3	10/27/22 09:53	
Trichloroethene	ug/m3	<0.24	0.55	10/27/22 09:53	
Trichlorofluoromethane	ug/m3	<0.20	1.1	10/27/22 09:53	
Vinyl acetate	ug/m3	<0.18	0.72	10/27/22 09:53	
Vinyl chloride	ug/m3	<0.096	0.26	10/27/22 09:53	

LABORATORY CONTROL SAMPLE: 4494141

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	58	59.1	102	70-130	
1,1,2,2-Tetrachloroethane	ug/m3	72.8	85.7	118	70-132	
1,1,2-Trichloroethane	ug/m3	58.3	60.4	104	70-131	
1,1,2-Trichlorotrifluoroethane	ug/m3	81.2	81.4	100	70-130	
1,1-Dichloroethane	ug/m3	42.5	42.5	100	70-130	
1,1-Dichloroethene	ug/m3	41.9	43.0	102	70-130	
1,2,4-Trichlorobenzene	ug/m3	175	177	101	70-130	
1,2,4-Trimethylbenzene	ug/m3	52.5	62.0	118	70-137	
1,2-Dibromoethane (EDB)	ug/m3	80.5	94.1	117	70-137	
1,2-Dichlorobenzene	ug/m3	63.9	66.7	104	70-131	
1,2-Dichloroethane	ug/m3	42.4	43.4	102	70-134	
1,2-Dichloropropane	ug/m3	49.3	49.7	101	70-130	
1,3,5-Trimethylbenzene	ug/m3	52.4	58.7	112	70-131	
1,3-Butadiene	ug/m3	23.9	23.6	99	70-139	
1,3-Dichlorobenzene	ug/m3	64.2	68.4	107	70-134	
1,4-Dichlorobenzene	ug/m3	64.3	69.3	108	70-131	
2-Butanone (MEK)	ug/m3	31.3	31.4	100	70-133	
2-Hexanone	ug/m3	43.4	47.4	109	70-136	
2-Propanol	ug/m3	137	162	118	65-133	

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QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

LABORATORY CONTROL SAMPLE: 4494141

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Ethyltoluene	ug/m3	52.3	54.5	104	70-130	
4-Methyl-2-pentanone (MIBK)	ug/m3	43.6	45.4	104	70-130	
Acetone	ug/m3	127	144	113	60-134	
Benzene	ug/m3	33.8	33.4	99	70-130	
Benzyl chloride	ug/m3	55.6	56.7	102	70-130	
Bromodichloromethane	ug/m3	71.5	77.6	108	70-130	
Bromoform	ug/m3	110	112	101	70-138	
Bromomethane	ug/m3	41.4	42.1	102	68-131	
Carbon disulfide	ug/m3	33	36.1	109	70-130	
Carbon tetrachloride	ug/m3	66.7	62.5	94	70-132	
Chlorobenzene	ug/m3	49	52.9	108	70-130	
Chloroethane	ug/m3	28.1	36.3	129	70-134	
Chloroform	ug/m3	52.1	52.8	101	70-130	
Chloromethane	ug/m3	22	22.0	100	68-131	
cis-1,2-Dichloroethene	ug/m3	42.1	42.9	102	70-136	
cis-1,3-Dichloropropene	ug/m3	48.2	48.7	101	70-130	
Cyclohexane	ug/m3	36.4	35.5	98	70-131	
Dibromochloromethane	ug/m3	90.6	92.5	102	70-134	
Dichlorodifluoromethane	ug/m3	52.5	52.4	100	70-130	
Dichlorotetrafluoroethane	ug/m3	74.4	76.5	103	70-130	
Ethanol	ug/m3	113	152	135	55-145	CH
Ethyl acetate	ug/m3	38.4	41.8	109	70-135	
Ethylbenzene	ug/m3	46.2	52.3	113	70-133	
Hexachloro-1,3-butadiene	ug/m3	130	139	107	70-132	
m&p-Xylene	ug/m3	92.4	103	111	70-134	
Methyl-tert-butyl ether	ug/m3	38.3	38.1	99	70-131	
Methylene Chloride	ug/m3	36.8	38.1	103	65-132	
n-Heptane	ug/m3	43.5	43.0	99	70-130	
n-Hexane	ug/m3	37.7	35.6	94	70-132	
Naphthalene	ug/m3	63.9	63.6	100	70-130	
o-Xylene	ug/m3	46	51.9	113	70-134	
Propylene	ug/m3	18.6	18.7	100	69-133	
Styrene	ug/m3	45.3	46.8	103	70-135	
Tetrachloroethene	ug/m3	72	80.6	112	70-134	
Tetrahydrofuran	ug/m3	31.3	28.5	91	70-140	
Toluene	ug/m3	40.2	40.5	101	70-136	
trans-1,2-Dichloroethene	ug/m3	42.3	42.8	101	70-134	
trans-1,3-Dichloropropene	ug/m3	48.4	44.0	91	70-131	
Trichloroethene	ug/m3	57.2	55.7	97	70-134	
Trichlorofluoromethane	ug/m3	60.3	62.7	104	63-130	
Vinyl acetate	ug/m3	38.7	39.6	102	70-139	
Vinyl chloride	ug/m3	27.2	27.6	101	70-132	

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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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

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

CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
MN	The reporting limit has been raised in accordance with Minnesota Statutes 4740.2100 Subpart 8. C, D. Reporting Limit Evaluation Rule.

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October 31, 2022

Mr. Paul and Mrs. Sandra Tutas
PO Box 381
West Bend, WI 53095

SUBJECT: October 20, 2022 Vapor Intrusion Assessment Results, 225 Linwood Terrace Property

Dear Mr. Tutas,

Thank you for your recent participation in the vapor intrusion assessment of your 225 Linwood Terrace property as part of the City of West Bend's remedial action of groundwater contamination of chlorinated volatile organic compounds (VOCs) on and in the vicinity of the former Gehl Co. West Plant property located on the west side of S. Forest Avenue (WDNR BRRTS #: 02-67-554753). The attached laboratory report from Pace Analytical Services, LLC contains the test results for the, the two indoor air samples collected from the house on your property, the background outdoor air sample collected in the back yard of one of your neighbors whose home was also tested at the same time as your property, and the sub-slab soil gas sample collected from the sub-slab soil gas probe installed through the basement floor of the home on October 20th. The indoor air sample collected from the basement has the Sample ID of IA-B-225 Linwood, the indoor air sample collected from the ground floor of the house has the Sample ID of IA-G-225 Linwood, and the sub-slab soil gas sample ID is SG-225 Linwood. The background outdoor air sample has the Sample ID of OA-1. The indoor air, background outdoor air, and sub-slab soil gas test results are provided in units of micrograms per cubic meter (ug/m^3). The name of the parameters that were tested are listed in the 'Parameters' column of the reports and the test results are listed in the 'Results' column of the reports. The LOQ column of the reports list the limit of quantitation concentration for each parameter, which is the minimum concentration that can be quantified with certainty by the laboratory. The LOD column of the reports list the limit of detection for each parameter, which is the minimum concentration of a parameter that must be present before the laboratory can detect it. The less than (<) symbol in front of a result indicates the parameter was not detected in the sample above the listed LOD.

Test Results

Several VOCs were detected in the sub-slab soil gas sample (SG-225 Linwood Sample ID) at concentrations ranging from 0.30 ug/m^3 to 93.8 ug/m^3. None of the reported VOC detections in the sub-slab soil gas sample exceed the vapor risk screening levels (VRSLs) established by the Wisconsin Department of Natural Resources (WDNR) for residential buildings and therefore do not pose a vapor intrusion risk.

Several VOCs were detected in the background outdoor air (OA-01) and two indoor air (IA-B-225 Linwood and IA-G-225 Linwood) samples. Review of the outdoor air and indoor air test results shows some of the compounds (Dichlorodifluoromethane and Trichlorofluoromethane) were detected at similar concentrations, which indicates those VOCs are most likely from an outside source. The VOCs detected in the indoor air samples at higher concentrations than the outdoor air sample suggest

TETRA TECH
175 N. Corporate Drive, Suite 100, Brookfield, WI 53045
Tel 262.792.1282 Fax 262.792.1310 www.tetratech.com

indoor sources are the primary sources for those VOCs. Indoor sources of VOCs may include cleaning products, personal care products, aerosol spray products, deodorizers, air fresheners, scented candles, and paint. Chloroform, Naphthalene, and 2-Popanol, which is more commonly called Isopropyl Alcohol, were detected in the indoor air samples at concentrations that exceed the vapor action levels (VALs) established by the WDNR for residential buildings indicating they may pose a health risk.

Naphthalene was detected at reported concentrations of 3.5 ug/m^3 in the indoor air sample collected from the basement and 3.4 ug/m^3 in the indoor air sample collected from ground floor of the house, which are higher than the WDNR residential VAL of 0.83 ug/m^3. Please note, the J designation next to the reported Naphthalene concentrations in the indoor air samples indicate the reported concentrations are estimated concentrations because the compound was detected between the limit of quantitation (LOQ) and limit of detection (LOD) so the actual concentration may be lower than listed concentrations. Attached is a table prepared by the WDNR listing common household sources of background indoor air contamination. The table lists cigarette smoke, automobile exhaust, insecticides, and mothballs as common sources of Naphthalene.

Chloroform was detected at a reported concentration of 1.5 ug/m^3 in the indoor air sample collected from the basement, which is a little higher than the residential VAL of 1.2 ug/m^3. The attached WDNR table lists chlorinated water as a common source of chloroform in indoor air.

Isopropyl Alcohol (2-Propanol), was detected in both indoor air samples at concentrations of 237 ug/m^3 in the indoor air sample collected from the basement and 243 ug/m^3 in the indoor air sample collected from the ground floor. The residential VAL for Isopropyl Alcohol is 210 ug/m^3. Isopropyl Alcohol is found in numerous products including paints, paint thinner, paint remover, inks, fuels, disinfectants, coatings, dyes, cements, and deicers. It can also be found in variable amounts among common household products such as medications, colognes, perfumes, toiletries, window cleaning fluids, and over-the-counter hand sanitizers.

Conclusions

The test results indicate the low-level VOCs detected in the sub-slab soil gas sample collected from the sub-slab soil gas probe installed through the basement floor of the 225 Linwood Terrace house are all below their WDNR residential VRSLs and therefore do not pose a vapor intrusion risk. The VOCs detected in the indoor air samples collected from the basement and main level of the home are therefore likely due to outdoor sources or products and items used or stored in the home. The test results were also submitted to the WDNR for review.

Additional Vapor Intrusion Testing

The WDNR requested that we collect at least one additional round of indoor air samples and another soil gas sample from the sub-slab soil gas probe to confirm the results of this sampling event and the first sampling event performed in April 2021. Tetra Tech personnel will contact you in December to schedule the next sampling event.

****

If you have any questions or concerns about the test results, please call Mr. Jay Shambeau, City of West Bend Administrator, at 262-335-5171, John Feeney of the WDNR, at 262-416-8643, or Brita Kilburg-Gasnyat, Ph. D., of the Wisconsin Department of Health Services, at 608-266-2817.

Sincerely,
Tetra Tech

Mark A. Manthey, P.G.
Associate Hydrogeologist

Enclosures: Pace Analytical, LLC Laboratory Report
WDNR Table of Background Vapor Sources

cc: Jay Shambeau, City of West Bend
John Feeney, Wisconsin DNR

APPENDIX A – BACKGROUND VAPOR SOURCES

COMMON HOUSEHOLD SOURCES OF BACKGROUND INDOOR AIR CONTAMINATION LISTED BY PRODUCT
NOTE: Analysis of indoor air should be specific to the VOCs expected from soil and/or groundwater contamination. (e.g.if CVOCs are the target chemical, then items containing CVOCs should be removed from the building at least 24 hours prior to sampling.)
Fuel containers or devices using gasoline, kerosene, fuel oil and products with petroleum distillates: - paint thinner - oil-based stains and paint - aerosol or liquid insect pest products - mineral spirits - furniture polishes
Personal care products: - nail polish - nail polish remover - colognes and perfumes - rubbing alcohol - hair spray
Dry cleaned clothes, spot removers, fabric/ leather cleaners
Household Cleaners - Oven cleaners - Carpet/upholstery cleaners - Bathroom cleaner - Appliance cleaner - Citrus (orange) oil or pine oil cleaners - Furniture/floor polish
PVC cement and primer, various adhesives, contact cement, model cement
Paint stripper and adhesive (glue) removers
Degreasers and cleaning solvents, such as: - aerosol penetrating oils - brake cleaner - carburetor cleaner - commercial solvents - electronics cleaners - spray lubricants
Moth balls and moth flakes
Aerosol spray products: - paints - cosmetics - automotive products - leather treatments - pesticides
Deodorizers, air fresheners, scented trees, potpourri, and scented candles
Hobby supplies
- paints and lacquers - solvents - glues - photo darkroom chemicals

APPENDIX A – BACKGROUND VAPOR SOURCES

COMMON HOUSEHOLD SOURCES OF BACKGROUND INDOOR AIR CONTAMINATION LISTED BY CHEMICAL[1,2]	
Acetone	rubber cement, cleaning fluids, scented candles and nail polish remover
Benzene	automobile exhaust, gasoline, cigarette smoke, scented candles, scatter rugs and carpet glue
Bromomethane	soil or space fumigant
1, 3-Butadiene	automobile exhaust and residential wood combustion
2-Butanone (MEK)	automobile exhaust, printing inks, fragrance/flavoring agent in candy and perfume, paint, glue, cleaning agents and cigarette smoke
Chlorobenzene	scented candles, plastic foam insulation and paint products
Chloroethane	Refrigerant
Chloroform	generated from chlorinated water (showers)
Cyclohexane	gasoline, paint thinner, paint and varnish remover
1,4-Dichlorobenzene	moth balls, general insecticide in farming, air deodorant and toilet disinfectant
Dichlorodifluoromethane	refrigerant (CFCs) and cleaning solvent
1, 1-Dichloroethane	plastic products (food and other packaging material) and flame retardant fabrics
1,2-Dichloroethane	molded plastic objects/decorations (particularly from China), cigarette smoke, PVC and vinyl floor adhesives[3]
1, 3-Dichloropropene	fungicides
Ethylbenzene	paint, paint thinners, insecticides, wood office furniture, scented candles and gasoline
Formaldehyde	building materials (particle board), furniture, insulation and cigarette smoke
n-Heptane	gasoline, nail polishes, wood office furniture and petroleum products
n- Hexane	gasoline, rubber cement, typing correction fluid and aerosols in perfumes
Methylene chloride	hairspray, paint stripper, rug cleaners, insecticides and furniture polish
Methyl isobutyl ketone (MIBK)	paints, varnishes, dry cleaning preparations, naturally found in oranges, grapes and vinegar
Methyl *tert* butyl ether (MTBE)	gasoline (oxygenating agent)
Naphthalene	cigarette smoke, automobile exhaust, residential wood combustion, insecticides and moth balls
Styrene	cigarette smoke, automobile exhaust, fiberglass, rubber and epoxy adhesives, occurs naturally in various fruits, vegetables, nuts and meats
Tertiary butyl alcohol (TBA)	gasoline (oxygenating agent)
1,1,2,2-Tetrachloroethane	solvent, paint and rust removers, varnishes and lacquers
Tetrachloroethene (PCE)	dry cleaning, metal degreasing, adhesives and glues, insecticides, scented candles and rug cleaner
Toluene	gasoline, automobile exhaust, polishes, nail polish, synthetic fragrances, paint, scented candles, paint thinner, adhesives and cigarette smoke
1, 1, 1-Trichloroethane	spot cleaner, glues, insecticides, drain cleaners, shoe polish
Trichloroethene (TCE)	glues, adhesives, paint removers, spot removers, rug cleaning fluids, paints, metal cleaners, and automotive cleaning and degreasing products
1, 2, 4 and 1,3,5 - Trimethylbenzene	gasoline and automobile exhaust
Xylenes, total	water sealer, gasoline, automobile exhaust, markers, paint, floor polish and cigarette smoke

[1] Department of Defense (DOD). 2009. DoD Vapor Intrusion Handbook. Prepared by the Tri-Service Environmental Risk Assessment Workgroup. January 2009.

[2] New Jersey Department of Environmental Protection (NJDEP). 2016. Vapor Intrusion Technical Guidance, Appendix H. NJDEP, Site Remediation and Waste Management Program, Trenton, NJ. August, 2016. http://www.nj.gov/dep/srp/guidance/vaporintrusion/vig_appendices.pdf

[3] Kurtz, J.P. et. al. 2010. Evidence for increasing indoor sources of 1,2-dichloroethane since 2004 at two Colorado residential vapor intrusion sites. *Ground Water Monitoring and Remediation*. 30, no. 3: 107-112.

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

October 28, 2022

Mr. Mark Manthey
Tetra Tech
13555 Bishops Ct.
Suite 220
Brookfield, WI 53005

RE: Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Dear Mr. Manthey:

Enclosed are the analytical results for sample(s) received by the laboratory on October 21, 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,

Matt Ray
matt.ray@pacelabs.com
(612)607-1700
Project Manager

Enclosures

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
A2LA Certification #: 2926.01*
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab
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 (A2LA) #: R-036
North Dakota Certification (MN) #: 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 (*).

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Sample: IA-B-225 Linwood **Lab ID: 10630732001** Collected: 10/20/22 09:10 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
Acetone	**136**	ug/m3	8.8	3.3	1.46		10/24/22 14:20	67-64-1	
Benzene	**1.1**	ug/m3	0.47	0.16	1.46		10/24/22 14:20	71-43-2	
Benzyl chloride	**<1.1**	ug/m3	3.8	1.1	1.46		10/24/22 14:20	100-44-7	
Bromodichloromethane	**<0.47**	ug/m3	2.0	0.47	1.46		10/24/22 14:20	75-27-4	
Bromoform	**<1.1**	ug/m3	7.7	1.1	1.46		10/24/22 14:20	75-25-2	
Bromomethane	**<0.43**	ug/m3	1.2	0.43	1.46		10/24/22 14:20	74-83-9	
1,3-Butadiene	**<0.16**	ug/m3	0.66	0.16	1.46		10/24/22 14:20	106-99-0	
2-Butanone (MEK)	**13.4**	ug/m3	4.4	0.55	1.46		10/24/22 14:20	78-93-3	
Carbon disulfide	**<0.34**	ug/m3	0.92	0.34	1.46		10/24/22 14:20	75-15-0	
Carbon tetrachloride	**<0.61**	ug/m3	1.9	0.61	1.46		10/24/22 14:20	56-23-5	
Chlorobenzene	**<0.20**	ug/m3	1.4	0.20	1.46		10/24/22 14:20	108-90-7	
Chloroethane	**<0.30**	ug/m3	0.78	0.30	1.46		10/24/22 14:20	75-00-3	
Chloroform	**1.5**	ug/m3	0.72	0.20	1.46		10/24/22 14:20	67-66-3	
Chloromethane	**<0.13**	ug/m3	0.61	0.13	1.46		10/24/22 14:20	74-87-3	
Cyclohexane	**<0.20**	ug/m3	2.6	0.20	1.46		10/24/22 14:20	110-82-7	
Dibromochloromethane	**<0.53**	ug/m3	2.5	0.53	1.46		10/24/22 14:20	124-48-1	
1,2-Dibromoethane (EDB)	**<0.45**	ug/m3	1.1	0.45	1.46		10/24/22 14:20	106-93-4	
1,2-Dichlorobenzene	**<1.3**	ug/m3	4.5	1.3	1.46		10/24/22 14:20	95-50-1	
1,3-Dichlorobenzene	**<1.2**	ug/m3	4.5	1.2	1.46		10/24/22 14:20	541-73-1	
1,4-Dichlorobenzene	**2.0J**	ug/m3	4.5	1.2	1.46		10/24/22 14:20	106-46-7	
Dichlorodifluoromethane	**2.0**	ug/m3	1.5	0.75	1.46		10/24/22 14:20	75-71-8	
1,1-Dichloroethane	**<0.16**	ug/m3	1.2	0.16	1.46		10/24/22 14:20	75-34-3	
1,2-Dichloroethane	**0.37J**	ug/m3	1.2	0.19	1.46		10/24/22 14:20	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/m3	1.2	0.24	1.46		10/24/22 14:20	75-35-4	
cis-1,2-Dichloroethene	**<0.31**	ug/m3	1.2	0.31	1.46		10/24/22 14:20	156-59-2	
trans-1,2-Dichloroethene	**<0.46**	ug/m3	1.2	0.46	1.46		10/24/22 14:20	156-60-5	
1,2-Dichloropropane	**<0.29**	ug/m3	1.4	0.29	1.46		10/24/22 14:20	78-87-5	
cis-1,3-Dichloropropene	**<0.95**	ug/m3	3.4	0.95	1.46		10/24/22 14:20	10061-01-5	
trans-1,3-Dichloropropene	**<1.1**	ug/m3	3.4	1.1	1.46		10/24/22 14:20	10061-02-6	
Dichlorotetrafluoroethane	**<0.35**	ug/m3	2.1	0.35	1.46		10/24/22 14:20	76-14-2	
Ethanol	**544**	ug/m3	2.8	1.3	1.46		10/24/22 14:20	64-17-5	E
Ethyl acetate	**4.3**	ug/m3	1.1	0.23	1.46		10/24/22 14:20	141-78-6	
Ethylbenzene	**1.5**	ug/m3	1.3	0.26	1.46		10/24/22 14:20	100-41-4	
4-Ethyltoluene	**1.5J**	ug/m3	3.6	0.59	1.46		10/24/22 14:20	622-96-8	
n-Heptane	**1.9**	ug/m3	1.2	0.19	1.46		10/24/22 14:20	142-82-5	
Hexachloro-1,3-butadiene	**<2.6**	ug/m3	7.9	2.6	1.46		10/24/22 14:20	87-68-3	
n-Hexane	**<0.34**	ug/m3	1.0	0.34	1.46		10/24/22 14:20	110-54-3	
2-Hexanone	**<1.0**	ug/m3	6.1	1.0	1.46		10/24/22 14:20	591-78-6	
Methylene Chloride	**<0.18**	ug/m3	5.2	0.18	1.46		10/24/22 14:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	**0.86J**	ug/m3	6.1	0.79	1.46		10/24/22 14:20	108-10-1	
Methyl-tert-butyl ether	**<0.36**	ug/m3	5.3	0.36	1.46		10/24/22 14:20	1634-04-4	
Naphthalene	**3.5J**	ug/m3	3.9	3.1	1.46		10/24/22 14:20	91-20-3	
2-Propanol	**237**	ug/m3	3.6	1.4	1.46		10/24/22 14:20	67-63-0	
Propylene	**<0.52**	ug/m3	1.3	0.52	1.46		10/24/22 14:20	115-07-1	
Styrene	**<0.61**	ug/m3	1.3	0.61	1.46		10/24/22 14:20	100-42-5	

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Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Sample: IA-B-225 Linwood **Lab ID: 10630732001** Collected: 10/20/22 09:10 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
1,1,2,2-Tetrachloroethane	**<0.42**	ug/m3	2.0	0.42	1.46		10/24/22 14:20	79-34-5	
Tetrachloroethene	**<0.36**	ug/m3	1.0	0.36	1.46		10/24/22 14:20	127-18-4	
Tetrahydrofuran	**27.2**	ug/m3	0.88	0.27	1.46		10/24/22 14:20	109-99-9	
Toluene	**6.8**	ug/m3	1.1	0.24	1.46		10/24/22 14:20	108-88-3	
1,2,4-Trichlorobenzene	**<8.4**	ug/m3	11.0	8.4	1.46		10/24/22 14:20	120-82-1	
1,1,1-Trichloroethane	**<0.26**	ug/m3	1.6	0.26	1.46		10/24/22 14:20	71-55-6	
1,1,2-Trichloroethane	**<0.38**	ug/m3	0.81	0.38	1.46		10/24/22 14:20	79-00-5	
Trichloroethene	**<0.35**	ug/m3	0.80	0.35	1.46		10/24/22 14:20	79-01-6	
Trichlorofluoromethane	**1.4J**	ug/m3	1.7	0.29	1.46		10/24/22 14:20	75-69-4	
1,1,2-Trichlorotrifluoroethane	**0.47J**	ug/m3	2.3	0.33	1.46		10/24/22 14:20	76-13-1	
1,2,4-Trimethylbenzene	**2.0**	ug/m3	1.5	0.51	1.46		10/24/22 14:20	95-63-6	
1,3,5-Trimethylbenzene	**1.1J**	ug/m3	1.5	0.40	1.46		10/24/22 14:20	108-67-8	
Vinyl acetate	**<0.26**	ug/m3	1.0	0.26	1.46		10/24/22 14:20	108-05-4	
Vinyl chloride	**<0.14**	ug/m3	0.38	0.14	1.46		10/24/22 14:20	75-01-4	
m&p-Xylene	**4.9**	ug/m3	2.6	0.72	1.46		10/24/22 14:20	179601-23-1	
o-Xylene	**1.5**	ug/m3	1.3	0.26	1.46		10/24/22 14:20	95-47-6	

Sample: IA-G-225 Linwood **Lab ID: 10630732002** Collected: 10/20/22 09:20 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
Acetone	**228**	ug/m3	9.0	3.3	1.49		10/24/22 14:47	67-64-1	
Benzene	**0.93**	ug/m3	0.48	0.16	1.49		10/24/22 14:47	71-43-2	
Benzyl chloride	**<1.1**	ug/m3	3.9	1.1	1.49		10/24/22 14:47	100-44-7	
Bromodichloromethane	**<0.48**	ug/m3	2.0	0.48	1.49		10/24/22 14:47	75-27-4	
Bromoform	**<1.2**	ug/m3	7.8	1.2	1.49		10/24/22 14:47	75-25-2	
Bromomethane	**<0.44**	ug/m3	1.2	0.44	1.49		10/24/22 14:47	74-83-9	
1,3-Butadiene	**<0.17**	ug/m3	0.67	0.17	1.49		10/24/22 14:47	106-99-0	
2-Butanone (MEK)	**2.7J**	ug/m3	4.5	0.56	1.49		10/24/22 14:47	78-93-3	
Carbon disulfide	**<0.35**	ug/m3	0.94	0.35	1.49		10/24/22 14:47	75-15-0	
Carbon tetrachloride	**<0.62**	ug/m3	1.9	0.62	1.49		10/24/22 14:47	56-23-5	
Chlorobenzene	**<0.21**	ug/m3	1.4	0.21	1.49		10/24/22 14:47	108-90-7	
Chloroethane	**<0.31**	ug/m3	0.80	0.31	1.49		10/24/22 14:47	75-00-3	
Chloroform	**0.96**	ug/m3	0.74	0.20	1.49		10/24/22 14:47	67-66-3	
Chloromethane	**<0.13**	ug/m3	0.63	0.13	1.49		10/24/22 14:47	74-87-3	
Cyclohexane	**<0.20**	ug/m3	2.6	0.20	1.49		10/24/22 14:47	110-82-7	
Dibromochloromethane	**<0.54**	ug/m3	2.6	0.54	1.49		10/24/22 14:47	124-48-1	
1,2-Dibromoethane (EDB)	**<0.46**	ug/m3	1.2	0.46	1.49		10/24/22 14:47	106-93-4	
1,2-Dichlorobenzene	**<1.3**	ug/m3	4.6	1.3	1.49		10/24/22 14:47	95-50-1	
1,3-Dichlorobenzene	**<1.2**	ug/m3	4.6	1.2	1.49		10/24/22 14:47	541-73-1	
1,4-Dichlorobenzene	**<1.2**	ug/m3	4.6	1.2	1.49		10/24/22 14:47	106-46-7	

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ANALYTICAL RESULTS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Sample: IA-G-225 Linwood **Lab ID: 10630732002** Collected: 10/20/22 09:20 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
Dichlorodifluoromethane	**2.2**	ug/m3	1.5	0.76	1.49		10/24/22 14:47	75-71-8	
1,1-Dichloroethane	**<0.16**	ug/m3	1.2	0.16	1.49		10/24/22 14:47	75-34-3	
1,2-Dichloroethane	**0.78J**	ug/m3	1.2	0.19	1.49		10/24/22 14:47	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/m3	1.2	0.24	1.49		10/24/22 14:47	75-35-4	
cis-1,2-Dichloroethene	**<0.32**	ug/m3	1.2	0.32	1.49		10/24/22 14:47	156-59-2	
trans-1,2-Dichloroethene	**<0.47**	ug/m3	1.2	0.47	1.49		10/24/22 14:47	156-60-5	
1,2-Dichloropropane	**<0.30**	ug/m3	1.4	0.30	1.49		10/24/22 14:47	78-87-5	
cis-1,3-Dichloropropene	**<0.97**	ug/m3	3.4	0.97	1.49		10/24/22 14:47	10061-01-5	
trans-1,3-Dichloropropene	**<1.2**	ug/m3	3.4	1.2	1.49		10/24/22 14:47	10061-02-6	
Dichlorotetrafluoroethane	**<0.36**	ug/m3	2.1	0.36	1.49		10/24/22 14:47	76-14-2	
Ethanol	**1580**	ug/m3	2.9	1.3	1.49		10/24/22 14:47	64-17-5	E
Ethyl acetate	**13.8**	ug/m3	1.1	0.24	1.49		10/24/22 14:47	141-78-6	
Ethylbenzene	**1.1J**	ug/m3	1.3	0.27	1.49		10/24/22 14:47	100-41-4	
4-Ethyltoluene	**<0.61**	ug/m3	3.7	0.61	1.49		10/24/22 14:47	622-96-8	
n-Heptane	**1.4**	ug/m3	1.2	0.19	1.49		10/24/22 14:47	142-82-5	
Hexachloro-1,3-butadiene	**<2.6**	ug/m3	8.1	2.6	1.49		10/24/22 14:47	87-68-3	
n-Hexane	**<0.35**	ug/m3	1.1	0.35	1.49		10/24/22 14:47	110-54-3	
2-Hexanone	**<1.0**	ug/m3	6.2	1.0	1.49		10/24/22 14:47	591-78-6	
Methylene Chloride	**<0.19**	ug/m3	5.3	0.19	1.49		10/24/22 14:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.80**	ug/m3	6.2	0.80	1.49		10/24/22 14:47	108-10-1	
Methyl-tert-butyl ether	**<0.37**	ug/m3	5.5	0.37	1.49		10/24/22 14:47	1634-04-4	
Naphthalene	**3.4J**	ug/m3	4.0	3.1	1.49		10/24/22 14:47	91-20-3	
2-Propanol	**243**	ug/m3	3.7	1.4	1.49		10/24/22 14:47	67-63-0	
Propylene	**<0.53**	ug/m3	1.3	0.53	1.49		10/24/22 14:47	115-07-1	
Styrene	**<0.62**	ug/m3	1.3	0.62	1.49		10/24/22 14:47	100-42-5	
1,1,2,2-Tetrachloroethane	**<0.43**	ug/m3	2.1	0.43	1.49		10/24/22 14:47	79-34-5	
Tetrachloroethene	**0.51J**	ug/m3	1.0	0.37	1.49		10/24/22 14:47	127-18-4	
Tetrahydrofuran	**<0.28**	ug/m3	0.89	0.28	1.49		10/24/22 14:47	109-99-9	
Toluene	**4.3**	ug/m3	1.1	0.24	1.49		10/24/22 14:47	108-88-3	
1,2,4-Trichlorobenzene	**<8.5**	ug/m3	11.2	8.5	1.49		10/24/22 14:47	120-82-1	
1,1,1-Trichloroethane	**<0.27**	ug/m3	1.7	0.27	1.49		10/24/22 14:47	71-55-6	
1,1,2-Trichloroethane	**<0.38**	ug/m3	0.83	0.38	1.49		10/24/22 14:47	79-00-5	
Trichloroethene	**<0.36**	ug/m3	0.81	0.36	1.49		10/24/22 14:47	79-01-6	
Trichlorofluoromethane	**1.6J**	ug/m3	1.7	0.30	1.49		10/24/22 14:47	75-69-4	
1,1,2-Trichlorotrifluoroethane	**0.54J**	ug/m3	2.3	0.34	1.49		10/24/22 14:47	76-13-1	
1,2,4-Trimethylbenzene	**1.4J**	ug/m3	1.5	0.52	1.49		10/24/22 14:47	95-63-6	
1,3,5-Trimethylbenzene	**<0.41**	ug/m3	1.5	0.41	1.49		10/24/22 14:47	108-67-8	
Vinyl acetate	**<0.26**	ug/m3	1.1	0.26	1.49		10/24/22 14:47	108-05-4	
Vinyl chloride	**<0.14**	ug/m3	0.39	0.14	1.49		10/24/22 14:47	75-01-4	
m&p-Xylene	**2.9**	ug/m3	2.6	0.73	1.49		10/24/22 14:47	179601-23-1	
o-Xylene	**1.0J**	ug/m3	1.3	0.27	1.49		10/24/22 14:47	95-47-6	

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ANALYTICAL RESULTS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Sample: SG-225 Linwood **Lab ID: 10630732003** Collected: 10/20/22 10:00 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
Acetone	**8.3J**	ug/m3	10.8	4.0	1.79		10/27/22 22:02	67-64-1	
Benzene	**0.64**	ug/m3	0.58	0.20	1.79		10/27/22 22:02	71-43-2	
Benzyl chloride	**<1.4**	ug/m3	4.7	1.4	1.79		10/27/22 22:02	100-44-7	
Bromodichloromethane	**<0.57**	ug/m3	2.4	0.57	1.79		10/27/22 22:02	75-27-4	
Bromoform	**<1.4**	ug/m3	9.4	1.4	1.79		10/27/22 22:02	75-25-2	
Bromomethane	**<0.53**	ug/m3	1.4	0.53	1.79		10/27/22 22:02	74-83-9	
1,3-Butadiene	**<0.20**	ug/m3	0.81	0.20	1.79		10/27/22 22:02	106-99-0	
2-Butanone (MEK)	**1.7J**	ug/m3	5.4	0.67	1.79		10/27/22 22:02	78-93-3	
Carbon disulfide	**<0.42**	ug/m3	1.1	0.42	1.79		10/27/22 22:02	75-15-0	
Carbon tetrachloride	**<0.75**	ug/m3	2.3	0.75	1.79		10/27/22 22:02	56-23-5	
Chlorobenzene	**<0.25**	ug/m3	1.7	0.25	1.79		10/27/22 22:02	108-90-7	
Chloroethane	**<0.37**	ug/m3	0.96	0.37	1.79		10/27/22 22:02	75-00-3	
Chloroform	**34.7**	ug/m3	0.89	0.24	1.79		10/27/22 22:02	67-66-3	
Chloromethane	**0.31J**	ug/m3	0.75	0.16	1.79		10/27/22 22:02	74-87-3	
Cyclohexane	**<0.24**	ug/m3	3.1	0.24	1.79		10/27/22 22:02	110-82-7	
Dibromochloromethane	**<0.64**	ug/m3	3.1	0.64	1.79		10/27/22 22:02	124-48-1	
1,2-Dibromoethane (EDB)	**<0.55**	ug/m3	1.4	0.55	1.79		10/27/22 22:02	106-93-4	
1,2-Dichlorobenzene	**<1.5**	ug/m3	5.5	1.5	1.79		10/27/22 22:02	95-50-1	
1,3-Dichlorobenzene	**<1.5**	ug/m3	5.5	1.5	1.79		10/27/22 22:02	541-73-1	
1,4-Dichlorobenzene	**<1.5**	ug/m3	5.5	1.5	1.79		10/27/22 22:02	106-46-7	
Dichlorodifluoromethane	**2.5**	ug/m3	1.8	0.92	1.79		10/27/22 22:02	75-71-8	
1,1-Dichloroethane	**0.73J**	ug/m3	1.5	0.19	1.79		10/27/22 22:02	75-34-3	
1,2-Dichloroethane	**<0.23**	ug/m3	1.5	0.23	1.79		10/27/22 22:02	107-06-2	
1,1-Dichloroethene	**0.45J**	ug/m3	1.4	0.29	1.79		10/27/22 22:02	75-35-4	
cis-1,2-Dichloroethene	**<0.38**	ug/m3	1.4	0.38	1.79		10/27/22 22:02	156-59-2	
trans-1,2-Dichloroethene	**<0.57**	ug/m3	1.4	0.57	1.79		10/27/22 22:02	156-60-5	
1,2-Dichloropropane	**0.86J**	ug/m3	1.7	0.36	1.79		10/27/22 22:02	78-87-5	
cis-1,3-Dichloropropene	**<1.2**	ug/m3	4.1	1.2	1.79		10/27/22 22:02	10061-01-5	
trans-1,3-Dichloropropene	**<1.4**	ug/m3	4.1	1.4	1.79		10/27/22 22:02	10061-02-6	
Dichlorotetrafluoroethane	**<0.43**	ug/m3	2.5	0.43	1.79		10/27/22 22:02	76-14-2	
Ethanol	**7.9**	ug/m3	3.4	1.6	1.79		10/27/22 22:02	64-17-5	CH
Ethyl acetate	**<0.29**	ug/m3	1.3	0.29	1.79		10/27/22 22:02	141-78-6	
Ethylbenzene	**0.61J**	ug/m3	1.6	0.32	1.79		10/27/22 22:02	100-41-4	
4-Ethyltoluene	**1.4J**	ug/m3	4.5	0.73	1.79		10/27/22 22:02	622-96-8	
n-Heptane	**0.30J**	ug/m3	1.5	0.23	1.79		10/27/22 22:02	142-82-5	
Hexachloro-1,3-butadiene	**<3.2**	ug/m3	9.7	3.2	1.79		10/27/22 22:02	87-68-3	
n-Hexane	**<0.42**	ug/m3	1.3	0.42	1.79		10/27/22 22:02	110-54-3	
2-Hexanone	**<1.2**	ug/m3	7.4	1.2	1.79		10/27/22 22:02	591-78-6	
Methylene Chloride	**<0.22**	ug/m3	6.3	0.22	1.79		10/27/22 22:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.96**	ug/m3	7.4	0.96	1.79		10/27/22 22:02	108-10-1	
Methyl-tert-butyl ether	**<0.45**	ug/m3	6.6	0.45	1.79		10/27/22 22:02	1634-04-4	
Naphthalene	**3.9J**	ug/m3	4.8	3.7	1.79		10/27/22 22:02	91-20-3	
2-Propanol	**3.6J**	ug/m3	4.5	1.7	1.79		10/27/22 22:02	67-63-0	
Propylene	**<0.64**	ug/m3	1.6	0.64	1.79		10/27/22 22:02	115-07-1	
Styrene	**16.1**	ug/m3	1.6	0.74	1.79		10/27/22 22:02	100-42-5	

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ANALYTICAL RESULTS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Sample: SG-225 Linwood **Lab ID: 10630732003** Collected: 10/20/22 10:00 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
1,1,2,2-Tetrachloroethane	**<0.51**	ug/m3	2.5	0.51	1.79		10/27/22 22:02	79-34-5	
Tetrachloroethene	**3.9**	ug/m3	1.2	0.44	1.79		10/27/22 22:02	127-18-4	
Tetrahydrofuran	**<0.33**	ug/m3	2.7	0.33	1.79		10/27/22 22:02	109-99-9	
Toluene	**1.6**	ug/m3	1.4	0.29	1.79		10/27/22 22:02	108-88-3	
1,2,4-Trichlorobenzene	**<10.3**	ug/m3	13.5	10.3	1.79		10/27/22 22:02	120-82-1	
1,1,1-Trichloroethane	**93.8**	ug/m3	2.0	0.32	1.79		10/27/22 22:02	71-55-6	
1,1,2-Trichloroethane	**<0.46**	ug/m3	0.99	0.46	1.79		10/27/22 22:02	79-00-5	
Trichloroethene	**23.1**	ug/m3	0.98	0.43	1.79		10/27/22 22:02	79-01-6	
Trichlorofluoromethane	**1.8J**	ug/m3	2.0	0.36	1.79		10/27/22 22:02	75-69-4	
1,1,2-Trichlorotrifluoroethane	**1.1J**	ug/m3	2.8	0.41	1.79		10/27/22 22:02	76-13-1	
1,2,4-Trimethylbenzene	**1.5J**	ug/m3	1.8	0.63	1.79		10/27/22 22:02	95-63-6	
1,3,5-Trimethylbenzene	**1.9**	ug/m3	1.8	0.49	1.79		10/27/22 22:02	108-67-8	
Vinyl acetate	**<0.32**	ug/m3	1.3	0.32	1.79		10/27/22 22:02	108-05-4	
Vinyl chloride	**<0.17**	ug/m3	0.47	0.17	1.79		10/27/22 22:02	75-01-4	
m&p-Xylene	**2.0J**	ug/m3	3.2	0.88	1.79		10/27/22 22:02	179601-23-1	
o-Xylene	**1.1J**	ug/m3	1.6	0.32	1.79		10/27/22 22:02	95-47-6	

Received: 10/21/22 11:05 Matrix: Air

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ANALYTICAL RESULTS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Sample: OA-01 **Lab ID: 10630732010** Collected: 10/20/22 10:15 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
Acetone	**6.4J**	ug/m3	8.4	3.1	1.39		10/24/22 19:16	67-64-1	
Benzene	**<0.15**	ug/m3	0.45	0.15	1.39		10/24/22 19:16	71-43-2	
Benzyl chloride	**<1.1**	ug/m3	3.7	1.1	1.39		10/24/22 19:16	100-44-7	
Bromodichloromethane	**<0.44**	ug/m3	1.9	0.44	1.39		10/24/22 19:16	75-27-4	
Bromoform	**<1.1**	ug/m3	7.3	1.1	1.39		10/24/22 19:16	75-25-2	
Bromomethane	**<0.41**	ug/m3	1.1	0.41	1.39		10/24/22 19:16	74-83-9	
1,3-Butadiene	**<0.15**	ug/m3	0.63	0.15	1.39		10/24/22 19:16	106-99-0	
2-Butanone (MEK)	**<0.52**	ug/m3	4.2	0.52	1.39		10/24/22 19:16	78-93-3	
Carbon disulfide	**<0.33**	ug/m3	0.88	0.33	1.39		10/24/22 19:16	75-15-0	
Carbon tetrachloride	**<0.58**	ug/m3	1.8	0.58	1.39		10/24/22 19:16	56-23-5	
Chlorobenzene	**<0.19**	ug/m3	1.3	0.19	1.39		10/24/22 19:16	108-90-7	
Chloroethane	**<0.28**	ug/m3	0.75	0.28	1.39		10/24/22 19:16	75-00-3	
Chloroform	**<0.19**	ug/m3	0.69	0.19	1.39		10/24/22 19:16	67-66-3	
Chloromethane	**0.69**	ug/m3	0.58	0.12	1.39		10/24/22 19:16	74-87-3	
Cyclohexane	**<0.19**	ug/m3	2.4	0.19	1.39		10/24/22 19:16	110-82-7	
Dibromochloromethane	**<0.50**	ug/m3	2.4	0.50	1.39		10/24/22 19:16	124-48-1	
1,2-Dibromoethane (EDB)	**<0.43**	ug/m3	1.1	0.43	1.39		10/24/22 19:16	106-93-4	
1,2-Dichlorobenzene	**<1.2**	ug/m3	4.3	1.2	1.39		10/24/22 19:16	95-50-1	
1,3-Dichlorobenzene	**<1.1**	ug/m3	4.3	1.1	1.39		10/24/22 19:16	541-73-1	
1,4-Dichlorobenzene	**<1.1**	ug/m3	4.3	1.1	1.39		10/24/22 19:16	106-46-7	

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ANALYTICAL RESULTS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Sample: OA-01 **Lab ID: 10630732010** Collected: 10/20/22 10:15 Received: 10/21/22 11:05 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
	Pace Analytical Services - Minneapolis								
Dichlorodifluoromethane	**2.7**	ug/m3	1.4	0.71	1.39		10/24/22 19:16	75-71-8	
1,1-Dichloroethane	**<0.15**	ug/m3	1.1	0.15	1.39		10/24/22 19:16	75-34-3	
1,2-Dichloroethane	**<0.18**	ug/m3	1.1	0.18	1.39		10/24/22 19:16	107-06-2	
1,1-Dichloroethene	**<0.23**	ug/m3	1.1	0.23	1.39		10/24/22 19:16	75-35-4	
cis-1,2-Dichloroethene	**<0.30**	ug/m3	1.1	0.30	1.39		10/24/22 19:16	156-59-2	
trans-1,2-Dichloroethene	**<0.44**	ug/m3	1.1	0.44	1.39		10/24/22 19:16	156-60-5	
1,2-Dichloropropane	**<0.28**	ug/m3	1.3	0.28	1.39		10/24/22 19:16	78-87-5	
cis-1,3-Dichloropropene	**<0.91**	ug/m3	3.2	0.91	1.39		10/24/22 19:16	10061-01-5	
trans-1,3-Dichloropropene	**<1.1**	ug/m3	3.2	1.1	1.39		10/24/22 19:16	10061-02-6	
Dichlorotetrafluoroethane	**<0.34**	ug/m3	2.0	0.34	1.39		10/24/22 19:16	76-14-2	
Ethanol	**17.2**	ug/m3	2.7	1.3	1.39		10/24/22 19:16	64-17-5	
Ethyl acetate	**<0.22**	ug/m3	1.0	0.22	1.39		10/24/22 19:16	141-78-6	
Ethylbenzene	**<0.25**	ug/m3	1.2	0.25	1.39		10/24/22 19:16	100-41-4	
4-Ethyltoluene	**<0.57**	ug/m3	3.5	0.57	1.39		10/24/22 19:16	622-96-8	
n-Heptane	**<0.18**	ug/m3	1.2	0.18	1.39		10/24/22 19:16	142-82-5	
Hexachloro-1,3-butadiene	**<2.4**	ug/m3	7.5	2.4	1.39		10/24/22 19:16	87-68-3	
n-Hexane	**<0.32**	ug/m3	1.0	0.32	1.39		10/24/22 19:16	110-54-3	
2-Hexanone	**<0.96**	ug/m3	5.8	0.96	1.39		10/24/22 19:16	591-78-6	
Methylene Chloride	**<0.17**	ug/m3	4.9	0.17	1.39		10/24/22 19:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.75**	ug/m3	5.8	0.75	1.39		10/24/22 19:16	108-10-1	
Methyl-tert-butyl ether	**<0.35**	ug/m3	5.1	0.35	1.39		10/24/22 19:16	1634-04-4	
Naphthalene	**<2.9**	ug/m3	3.7	2.9	1.39		10/24/22 19:16	91-20-3	
2-Propanol	**<1.3**	ug/m3	3.5	1.3	1.39		10/24/22 19:16	67-63-0	
Propylene	**<0.50**	ug/m3	1.2	0.50	1.39		10/24/22 19:16	115-07-1	
Styrene	**<0.58**	ug/m3	1.2	0.58	1.39		10/24/22 19:16	100-42-5	
1,1,2,2-Tetrachloroethane	**<0.40**	ug/m3	1.9	0.40	1.39		10/24/22 19:16	79-34-5	
Tetrachloroethene	**<0.34**	ug/m3	0.96	0.34	1.39		10/24/22 19:16	127-18-4	
Tetrahydrofuran	**<0.26**	ug/m3	0.83	0.26	1.39		10/24/22 19:16	109-99-9	
Toluene	**0.40J**	ug/m3	1.1	0.23	1.39		10/24/22 19:16	108-88-3	
1,2,4-Trichlorobenzene	**<8.0**	ug/m3	10.5	8.0	1.39		10/24/22 19:16	120-82-1	
1,1,1-Trichloroethane	**<0.25**	ug/m3	1.5	0.25	1.39		10/24/22 19:16	71-55-6	
1,1,2-Trichloroethane	**<0.36**	ug/m3	0.77	0.36	1.39		10/24/22 19:16	79-00-5	
Trichloroethene	**<0.33**	ug/m3	0.76	0.33	1.39		10/24/22 19:16	79-01-6	
Trichlorofluoromethane	**1.7**	ug/m3	1.6	0.28	1.39		10/24/22 19:16	75-69-4	
1,1,2-Trichlorotrifluoroethane	**<0.32**	ug/m3	2.2	0.32	1.39		10/24/22 19:16	76-13-1	
1,2,4-Trimethylbenzene	**<0.49**	ug/m3	1.4	0.49	1.39		10/24/22 19:16	95-63-6	
1,3,5-Trimethylbenzene	**<0.38**	ug/m3	1.4	0.38	1.39		10/24/22 19:16	108-67-8	
Vinyl acetate	**<0.24**	ug/m3	1.0	0.24	1.39		10/24/22 19:16	108-05-4	
Vinyl chloride	**<0.13**	ug/m3	0.36	0.13	1.39		10/24/22 19:16	75-01-4	
m&p-Xylene	**<0.68**	ug/m3	2.5	0.68	1.39		10/24/22 19:16	179601-23-1	
o-Xylene	**<0.25**	ug/m3	1.2	0.25	1.39		10/24/22 19:16	95-47-6	

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QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

QC Batch: 848879 | Analysis Method: TO-15
QC Batch Method: TO-15 | Analysis Description: TO15 MSV AIR Low Level
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10630732001, 10630732002, 10630732004, 10630732005, 10630732007, 10630732008, 10630732010

METHOD BLANK: 4490507 | Matrix: Air
Associated Lab Samples: 10630732001, 10630732002, 10630732004, 10630732005, 10630732007, 10630732008, 10630732010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	<0.090	0.56	10/24/22 12:20	
1,1,2,2-Tetrachloroethane	ug/m3	<0.14	0.70	10/24/22 12:20	
1,1,2-Trichloroethane	ug/m3	<0.13	0.28	10/24/22 12:20	
1,1,2-Trichlorotrifluoroethane	ug/m3	<0.11	0.78	10/24/22 12:20	
1,1-Dichloroethane	ug/m3	<0.054	0.41	10/24/22 12:20	
1,1-Dichloroethene	ug/m3	<0.082	0.40	10/24/22 12:20	
1,2,4-Trichlorobenzene	ug/m3	<2.9	3.8	10/24/22 12:20	
1,2,4-Trimethylbenzene	ug/m3	<0.18	0.50	10/24/22 12:20	
1,2-Dibromoethane (EDB)	ug/m3	<0.15	0.39	10/24/22 12:20	
1,2-Dichlorobenzene	ug/m3	<0.43	1.5	10/24/22 12:20	
1,2-Dichloroethane	ug/m3	<0.064	0.41	10/24/22 12:20	
1,2-Dichloropropane	ug/m3	<0.10	0.47	10/24/22 12:20	
1,3,5-Trimethylbenzene	ug/m3	<0.14	0.50	10/24/22 12:20	
1,3-Butadiene	ug/m3	<0.056	0.22	10/24/22 12:20	
1,3-Dichlorobenzene	ug/m3	<0.41	1.5	10/24/22 12:20	
1,4-Dichlorobenzene	ug/m3	<0.41	1.5	10/24/22 12:20	
2-Butanone (MEK)	ug/m3	<0.19	1.5	10/24/22 12:20	
2-Hexanone	ug/m3	<0.34	2.1	10/24/22 12:20	
2-Propanol	ug/m3	<0.48	1.2	10/24/22 12:20	
4-Ethyltoluene	ug/m3	<0.20	1.2	10/24/22 12:20	
4-Methyl-2-pentanone (MIBK)	ug/m3	<0.27	2.1	10/24/22 12:20	
Acetone	ug/m3	<1.1	3.0	10/24/22 12:20	
Benzene	ug/m3	<0.055	0.16	10/24/22 12:20	
Benzyl chloride	ug/m3	<0.38	1.3	10/24/22 12:20	
Bromodichloromethane	ug/m3	<0.16	0.68	10/24/22 12:20	
Bromoform	ug/m3	<0.39	2.6	10/24/22 12:20	
Bromomethane	ug/m3	<0.15	0.39	10/24/22 12:20	
Carbon disulfide	ug/m3	<0.12	0.32	10/24/22 12:20	
Carbon tetrachloride	ug/m3	<0.21	0.64	10/24/22 12:20	
Chlorobenzene	ug/m3	<0.070	0.47	10/24/22 12:20	
Chloroethane	ug/m3	<0.10	0.27	10/24/22 12:20	
Chloroform	ug/m3	<0.067	0.25	10/24/22 12:20	
Chloromethane	ug/m3	<0.044	0.21	10/24/22 12:20	
cis-1,2-Dichloroethene	ug/m3	<0.11	0.40	10/24/22 12:20	
cis-1,3-Dichloropropene	ug/m3	<0.33	1.2	10/24/22 12:20	
Cyclohexane	ug/m3	<0.067	0.88	10/24/22 12:20	
Dibromochloromethane	ug/m3	<0.18	0.86	10/24/22 12:20	
Dichlorodifluoromethane	ug/m3	<0.26	0.50	10/24/22 12:20	
Dichlorotetrafluoroethane	ug/m3	<0.12	0.71	10/24/22 12:20	
Ethanol	ug/m3	<0.45	0.96	10/24/22 12:20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

METHOD BLANK: 4490507 Matrix: Air
Associated Lab Samples: 10630732001, 10630732002, 10630732004, 10630732005, 10630732007, 10630732008, 10630732010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethyl acetate	ug/m3	<0.080	0.37	10/24/22 12:20	
Ethylbenzene	ug/m3	<0.090	0.44	10/24/22 12:20	
Hexachloro-1,3-butadiene	ug/m3	<0.88	2.7	10/24/22 12:20	
m&p-Xylene	ug/m3	<0.25	0.88	10/24/22 12:20	
Methyl-tert-butyl ether	ug/m3	<0.12	1.8	10/24/22 12:20	
Methylene Chloride	ug/m3	<0.062	1.8	10/24/22 12:20	
n-Heptane	ug/m3	<0.064	0.42	10/24/22 12:20	
n-Hexane	ug/m3	<0.12	0.36	10/24/22 12:20	
Naphthalene	ug/m3	<1.0	1.3	10/24/22 12:20	
o-Xylene	ug/m3	<0.089	0.44	10/24/22 12:20	
Propylene	ug/m3	<0.18	0.44	10/24/22 12:20	
Styrene	ug/m3	<0.21	0.43	10/24/22 12:20	
Tetrachloroethene	ug/m3	<0.12	0.34	10/24/22 12:20	
Tetrahydrofuran	ug/m3	<0.093	0.30	10/24/22 12:20	
Toluene	ug/m3	<0.081	0.38	10/24/22 12:20	
trans-1,2-Dichloroethene	ug/m3	<0.16	0.40	10/24/22 12:20	
trans-1,3-Dichloropropene	ug/m3	<0.39	1.2	10/24/22 12:20	
Trichloroethene	ug/m3	<0.12	0.27	10/24/22 12:20	
Trichlorofluoromethane	ug/m3	<0.10	0.57	10/24/22 12:20	
Vinyl acetate	ug/m3	<0.088	0.36	10/24/22 12:20	
Vinyl chloride	ug/m3	<0.048	0.13	10/24/22 12:20	

LABORATORY CONTROL SAMPLE: 4490508

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	57.7	50.8	88	70-130	
1,1,2,2-Tetrachloroethane	ug/m3	73.1	61.9	85	70-132	
1,1,2-Trichloroethane	ug/m3	58.2	48.8	84	70-131	
1,1,2-Trichlorotrifluoroethane	ug/m3	82.4	72.1	88	70-130	
1,1-Dichloroethane	ug/m3	43.4	36.5	84	70-130	
1,1-Dichloroethene	ug/m3	42.6	36.9	87	70-130	
1,2,4-Trichlorobenzene	ug/m3	174	143	82	70-130	
1,2,4-Trimethylbenzene	ug/m3	52.3	45.8	88	70-137	
1,2-Dibromoethane (EDB)	ug/m3	80.5	70.0	87	70-137	
1,2-Dichlorobenzene	ug/m3	63.9	56.7	89	70-131	
1,2-Dichloroethane	ug/m3	43.4	40.2	93	70-134	
1,2-Dichloropropane	ug/m3	48.7	43.7	90	70-130	
1,3,5-Trimethylbenzene	ug/m3	52.1	45.6	88	70-131	
1,3-Butadiene	ug/m3	23.5	18.8	80	70-139	
1,3-Dichlorobenzene	ug/m3	63.9	56.4	88	70-134	
1,4-Dichlorobenzene	ug/m3	64.1	57.0	89	70-131	
2-Butanone (MEK)	ug/m3	31.5	27.4	87	70-133	
2-Hexanone	ug/m3	43.4	37.2	86	70-136	
2-Propanol	ug/m3	136	110	81	65-133	

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QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

LABORATORY CONTROL SAMPLE: 4490508

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Ethyltoluene	ug/m3	52.2	44.5	85	70-130	
4-Methyl-2-pentanone (MIBK)	ug/m3	43.9	40.2	92	70-130	
Acetone	ug/m3	126	106	84	60-134	
Benzene	ug/m3	34.1	30.1	88	70-130	
Benzyl chloride	ug/m3	55.4	48.0	87	70-130	
Bromodichloromethane	ug/m3	71.5	65.2	91	70-130	
Bromoform	ug/m3	110	95.6	87	70-138	
Bromomethane	ug/m3	41.1	33.4	81	68-131	
Carbon disulfide	ug/m3	33.5	28.6	85	70-130	
Carbon tetrachloride	ug/m3	66.7	61.2	92	70-132	
Chlorobenzene	ug/m3	48.8	42.5	87	70-130	
Chloroethane	ug/m3	27.9	23.1	83	70-134	
Chloroform	ug/m3	52	45.2	87	70-130	
Chloromethane	ug/m3	21.8	17.6	80	68-131	
cis-1,2-Dichloroethene	ug/m3	42.3	40.1	95	70-136	
cis-1,3-Dichloropropene	ug/m3	48.5	41.3	85	70-130	
Cyclohexane	ug/m3	36	33.2	92	70-131	
Dibromochloromethane	ug/m3	88.5	76.9	87	70-134	
Dichlorodifluoromethane	ug/m3	52.4	43.1	82	70-130	
Dichlorotetrafluoroethane	ug/m3	73.8	60.3	82	70-130	
Ethanol	ug/m3	112	86.0	77	55-145	
Ethyl acetate	ug/m3	38.4	34.7	90	70-135	
Ethylbenzene	ug/m3	46.5	40.3	87	70-133	
Hexachloro-1,3-butadiene	ug/m3	129	117	91	70-132	
m&p-Xylene	ug/m3	92	79.0	86	70-134	
Methyl-tert-butyl ether	ug/m3	37.9	32.2	85	70-131	
Methylene Chloride	ug/m3	36.6	30.8	84	65-132	
n-Heptane	ug/m3	43.4	38.9	90	70-130	
n-Hexane	ug/m3	37.6	33.0	88	70-132	
Naphthalene	ug/m3	63.5	49.9	79	70-130	
o-Xylene	ug/m3	46.2	40.0	87	70-134	
Propylene	ug/m3	18.3	14.5	79	69-133	
Styrene	ug/m3	44.9	41.0	91	70-135	
Tetrachloroethene	ug/m3	72.3	65.6	91	70-134	
Tetrahydrofuran	ug/m3	30.6	26.8	87	70-140	
Toluene	ug/m3	39.9	38.9	98	70-136	
trans-1,2-Dichloroethene	ug/m3	42.7	37.1	87	70-134	
trans-1,3-Dichloropropene	ug/m3	44.9	37.7	84	70-131	
Trichloroethene	ug/m3	57.2	55.5	97	70-134	
Trichlorofluoromethane	ug/m3	59.7	52.2	87	63-130	
Vinyl acetate	ug/m3	38.4	31.7	83	70-139	
Vinyl chloride	ug/m3	27.1	22.6	84	70-132	

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QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

SAMPLE DUPLICATE: 4491373

Parameter	Units	10630732004 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	<0.26	<0.26		25	
1,1,2,2-Tetrachloroethane	ug/m3	<0.41	<0.41		25	
1,1,2-Trichloroethane	ug/m3	<0.37	<0.37		25	
1,1,2-Trichlorotrifluoroethane	ug/m3	0.60J	0.53J		25	
1,1-Dichloroethane	ug/m3	<0.15	<0.15		25	
1,1-Dichloroethene	ug/m3	<0.24	<0.24		25	
1,2,4-Trichlorobenzene	ug/m3	<8.3	<8.3		25	
1,2,4-Trimethylbenzene	ug/m3	<0.50	<0.50		25	
1,2-Dibromoethane (EDB)	ug/m3	<0.44	<0.44		25	
1,2-Dichlorobenzene	ug/m3	<1.2	<1.2		25	
1,2-Dichloroethane	ug/m3	<0.18	0.60J		25	
1,2-Dichloropropane	ug/m3	<0.29	<0.29		25	
1,3,5-Trimethylbenzene	ug/m3	<0.39	<0.39		25	
1,3-Butadiene	ug/m3	<0.16	<0.16		25	
1,3-Dichlorobenzene	ug/m3	<1.2	<1.2		25	
1,4-Dichlorobenzene	ug/m3	<1.2	<1.2		25	
2-Butanone (MEK)	ug/m3	6.7	6.3	7	25	
2-Hexanone	ug/m3	<0.99	<0.99		25	
2-Propanol	ug/m3	26.1	26.7	2	25	
4-Ethyltoluene	ug/m3	<0.59	<0.59		25	
4-Methyl-2-pentanone (MIBK)	ug/m3	<0.77	<0.77		25	
Acetone	ug/m3	46.6	44.7	4	25	
Benzene	ug/m3	0.39J	0.40J		25	
Benzyl chloride	ug/m3	<1.1	<1.1		25	
Bromodichloromethane	ug/m3	<0.46	<0.46		25	
Bromoform	ug/m3	<1.1	<1.1		25	
Bromomethane	ug/m3	<0.43	<0.43		25	
Carbon disulfide	ug/m3	<0.34	<0.34		25	
Carbon tetrachloride	ug/m3	<0.60	<0.60		25	
Chlorobenzene	ug/m3	<0.20	<0.20		25	
Chloroethane	ug/m3	<0.30	<0.30		25	
Chloroform	ug/m3	<0.19	<0.19		25	
Chloromethane	ug/m3	0.88	0.81	9	25	
cis-1,2-Dichloroethene	ug/m3	<0.31	<0.31		25	
cis-1,3-Dichloropropene	ug/m3	<0.94	<0.94		25	
Cyclohexane	ug/m3	<0.19	<0.19		25	
Dibromochloromethane	ug/m3	<0.52	<0.52		25	
Dichlorodifluoromethane	ug/m3	2.5	2.4	1	25	
Dichlorotetrafluoroethane	ug/m3	<0.35	<0.35		25	
Ethanol	ug/m3	47.3	46.5	2	25	
Ethyl acetate	ug/m3	1.9	1.9	3	25	
Ethylbenzene	ug/m3	1.1J	1.1J		25	
Hexachloro-1,3-butadiene	ug/m3	<2.5	<2.5		25	
m&p-Xylene	ug/m3	3.7	3.8	2	25	
Methyl-tert-butyl ether	ug/m3	<0.36	<0.36		25	
Methylene Chloride	ug/m3	0.68J	0.60J		25	
n-Heptane	ug/m3	<0.19	0.28J		25	

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1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

SAMPLE DUPLICATE: 4491373

Parameter	Units	10630732004 Result	Dup Result	RPD	Max RPD	Qualifiers
n-Hexane	ug/m3	<0.33	<0.33		25	
Naphthalene	ug/m3	<3.0	<3.0		25	
o-Xylene	ug/m3	1.1J	1.1J		25	
Propylene	ug/m3	<0.51	20.1		25	
Styrene	ug/m3	<0.60	<0.60		25	
Tetrachloroethene	ug/m3	<0.36	<0.36		25	
Tetrahydrofuran	ug/m3	4.5	4.6	2	25	
Toluene	ug/m3	5.9	6.1	2	25	
trans-1,2-Dichloroethene	ug/m3	<0.46	<0.46		25	
trans-1,3-Dichloropropene	ug/m3	<1.1	<1.1		25	
Trichloroethene	ug/m3	<0.34	<0.34		25	
Trichlorofluoromethane	ug/m3	1.5J	1.7		25	
Vinyl acetate	ug/m3	<0.25	<0.25		25	
Vinyl chloride	ug/m3	<0.14	<0.14		25	

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QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

QC Batch: 849755
QC Batch Method: TO-15
Analysis Method: TO-15
Analysis Description: TO15 MSV AIR Low Level
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10630732003, 10630732006, 10630732009

METHOD BLANK: 4494140
Matrix: Air
Associated Lab Samples: 10630732003, 10630732006, 10630732009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	<0.18	1.1	10/27/22 09:53	
1,1,2,2-Tetrachloroethane	ug/m3	<0.29	1.4	10/27/22 09:53	
1,1,2-Trichloroethane	ug/m3	<0.26	0.56	10/27/22 09:53	
1,1,2-Trichlorotrifluoroethane	ug/m3	<0.23	1.6	10/27/22 09:53	
1,1-Dichloroethane	ug/m3	<0.11	0.82	10/27/22 09:53	
1,1-Dichloroethene	ug/m3	<0.16	0.81	10/27/22 09:53	
1,2,4-Trichlorobenzene	ug/m3	<5.7	7.5	10/27/22 09:53	
1,2,4-Trimethylbenzene	ug/m3	<0.35	1.0	10/27/22 09:53	
1,2-Dibromoethane (EDB)	ug/m3	<0.31	0.78	10/27/22 09:53	
1,2-Dichlorobenzene	ug/m3	<0.86	3.1	10/27/22 09:53	
1,2-Dichloroethane	ug/m3	<0.13	0.82	10/27/22 09:53	
1,2-Dichloropropane	ug/m3	<0.20	0.94	10/27/22 09:53	
1,3,5-Trimethylbenzene	ug/m3	<0.27	1.0	10/27/22 09:53	
1,3-Butadiene	ug/m3	<0.11	0.45	10/27/22 09:53	
1,3-Dichlorobenzene	ug/m3	<0.82	3.1	10/27/22 09:53	
1,4-Dichlorobenzene	ug/m3	<0.81	3.1	10/27/22 09:53	
2-Butanone (MEK)	ug/m3	<0.38	3.0	10/27/22 09:53	
2-Hexanone	ug/m3	<0.69	4.2	10/27/22 09:53	
2-Propanol	ug/m3	<0.96	2.5	10/27/22 09:53	
4-Ethyltoluene	ug/m3	<0.41	2.5	10/27/22 09:53	
4-Methyl-2-pentanone (MIBK)	ug/m3	<0.54	4.2	10/27/22 09:53	
Acetone	ug/m3	<2.2	6.0	10/27/22 09:53	
Benzene	ug/m3	<0.11	0.32	10/27/22 09:53	
Benzyl chloride	ug/m3	<0.77	2.6	10/27/22 09:53	
Bromodichloromethane	ug/m3	<0.32	1.4	10/27/22 09:53	
Bromoform	ug/m3	<0.78	5.2	10/27/22 09:53	
Bromomethane	ug/m3	<0.30	0.79	10/27/22 09:53	
Carbon disulfide	ug/m3	<0.23	0.63	10/27/22 09:53	
Carbon tetrachloride	ug/m3	<0.42	1.3	10/27/22 09:53	
Chlorobenzene	ug/m3	<0.14	0.94	10/27/22 09:53	
Chloroethane	ug/m3	<0.20	0.54	10/27/22 09:53	
Chloroform	ug/m3	<0.13	0.50	10/27/22 09:53	
Chloromethane	ug/m3	<0.088	0.42	10/27/22 09:53	
cis-1,2-Dichloroethene	ug/m3	<0.21	0.81	10/27/22 09:53	
cis-1,3-Dichloropropene	ug/m3	<0.65	2.3	10/27/22 09:53	
Cyclohexane	ug/m3	<0.13	1.8	10/27/22 09:53	
Dibromochloromethane	ug/m3	<0.36	1.7	10/27/22 09:53	
Dichlorodifluoromethane	ug/m3	<0.51	1.0	10/27/22 09:53	
Dichlorotetrafluoroethane	ug/m3	<0.24	1.4	10/27/22 09:53	
Ethanol	ug/m3	<0.90	1.9	10/27/22 09:53	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

METHOD BLANK: 4494140 Matrix: Air
Associated Lab Samples: 10630732003, 10630732006, 10630732009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethyl acetate	ug/m3	<0.16	0.73	10/27/22 09:53	
Ethylbenzene	ug/m3	<0.18	0.88	10/27/22 09:53	
Hexachloro-1,3-butadiene	ug/m3	<1.8	5.4	10/27/22 09:53	
m&p-Xylene	ug/m3	<0.49	1.8	10/27/22 09:53	
Methyl-tert-butyl ether	ug/m3	<0.25	3.7	10/27/22 09:53	
Methylene Chloride	ug/m3	<0.12	3.5	10/27/22 09:53	
n-Heptane	ug/m3	<0.13	0.83	10/27/22 09:53	
n-Hexane	ug/m3	<0.23	0.72	10/27/22 09:53	
Naphthalene	ug/m3	2.3J	2.7	10/27/22 09:53	
o-Xylene	ug/m3	<0.18	0.88	10/27/22 09:53	
Propylene	ug/m3	<0.36	0.88	10/27/22 09:53	
Styrene	ug/m3	<0.42	0.87	10/27/22 09:53	
Tetrachloroethene	ug/m3	<0.25	0.69	10/27/22 09:53	
Tetrahydrofuran	ug/m3	<0.19	1.5	10/27/22 09:53	MN
Toluene	ug/m3	<0.16	0.77	10/27/22 09:53	
trans-1,2-Dichloroethene	ug/m3	<0.32	0.81	10/27/22 09:53	
trans-1,3-Dichloropropene	ug/m3	<0.78	2.3	10/27/22 09:53	
Trichloroethene	ug/m3	<0.24	0.55	10/27/22 09:53	
Trichlorofluoromethane	ug/m3	<0.20	1.1	10/27/22 09:53	
Vinyl acetate	ug/m3	<0.18	0.72	10/27/22 09:53	
Vinyl chloride	ug/m3	<0.096	0.26	10/27/22 09:53	

LABORATORY CONTROL SAMPLE: 4494141

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	58	59.1	102	70-130	
1,1,2,2-Tetrachloroethane	ug/m3	72.8	85.7	118	70-132	
1,1,2-Trichloroethane	ug/m3	58.3	60.4	104	70-131	
1,1,2-Trichlorotrifluoroethane	ug/m3	81.2	81.4	100	70-130	
1,1-Dichloroethane	ug/m3	42.5	42.5	100	70-130	
1,1-Dichloroethene	ug/m3	41.9	43.0	102	70-130	
1,2,4-Trichlorobenzene	ug/m3	175	177	101	70-130	
1,2,4-Trimethylbenzene	ug/m3	52.5	62.0	118	70-137	
1,2-Dibromoethane (EDB)	ug/m3	80.5	94.1	117	70-137	
1,2-Dichlorobenzene	ug/m3	63.9	66.7	104	70-131	
1,2-Dichloroethane	ug/m3	42.4	43.4	102	70-134	
1,2-Dichloropropane	ug/m3	49.3	49.7	101	70-130	
1,3,5-Trimethylbenzene	ug/m3	52.4	58.7	112	70-131	
1,3-Butadiene	ug/m3	23.9	23.6	99	70-139	
1,3-Dichlorobenzene	ug/m3	64.2	68.4	107	70-134	
1,4-Dichlorobenzene	ug/m3	64.3	69.3	108	70-131	
2-Butanone (MEK)	ug/m3	31.3	31.4	100	70-133	
2-Hexanone	ug/m3	43.4	47.4	109	70-136	
2-Propanol	ug/m3	137	162	118	65-133	

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QUALITY CONTROL DATA

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

LABORATORY CONTROL SAMPLE: 4494141

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Ethyltoluene	ug/m3	52.3	54.5	104	70-130	
4-Methyl-2-pentanone (MIBK)	ug/m3	43.6	45.4	104	70-130	
Acetone	ug/m3	127	144	113	60-134	
Benzene	ug/m3	33.8	33.4	99	70-130	
Benzyl chloride	ug/m3	55.6	56.7	102	70-130	
Bromodichloromethane	ug/m3	71.5	77.6	108	70-130	
Bromoform	ug/m3	110	112	101	70-138	
Bromomethane	ug/m3	41.4	42.1	102	68-131	
Carbon disulfide	ug/m3	33	36.1	109	70-130	
Carbon tetrachloride	ug/m3	66.7	62.5	94	70-132	
Chlorobenzene	ug/m3	49	52.9	108	70-130	
Chloroethane	ug/m3	28.1	36.3	129	70-134	
Chloroform	ug/m3	52.1	52.8	101	70-130	
Chloromethane	ug/m3	22	22.0	100	68-131	
cis-1,2-Dichloroethene	ug/m3	42.1	42.9	102	70-136	
cis-1,3-Dichloropropene	ug/m3	48.2	48.7	101	70-130	
Cyclohexane	ug/m3	36.4	35.5	98	70-131	
Dibromochloromethane	ug/m3	90.6	92.5	102	70-134	
Dichlorodifluoromethane	ug/m3	52.5	52.4	100	70-130	
Dichlorotetrafluoroethane	ug/m3	74.4	76.5	103	70-130	
Ethanol	ug/m3	113	152	135	55-145	CH
Ethyl acetate	ug/m3	38.4	41.8	109	70-135	
Ethylbenzene	ug/m3	46.2	52.3	113	70-133	
Hexachloro-1,3-butadiene	ug/m3	130	139	107	70-132	
m&p-Xylene	ug/m3	92.4	103	111	70-134	
Methyl-tert-butyl ether	ug/m3	38.3	38.1	99	70-131	
Methylene Chloride	ug/m3	36.8	38.1	103	65-132	
n-Heptane	ug/m3	43.5	43.0	99	70-130	
n-Hexane	ug/m3	37.7	35.6	94	70-132	
Naphthalene	ug/m3	63.9	63.6	100	70-130	
o-Xylene	ug/m3	46	51.9	113	70-134	
Propylene	ug/m3	18.6	18.7	100	69-133	
Styrene	ug/m3	45.3	46.8	103	70-135	
Tetrachloroethene	ug/m3	72	80.6	112	70-134	
Tetrahydrofuran	ug/m3	31.3	28.5	91	70-140	
Toluene	ug/m3	40.2	40.5	101	70-136	
trans-1,2-Dichloroethene	ug/m3	42.3	42.8	101	70-134	
trans-1,3-Dichloropropene	ug/m3	48.4	44.0	91	70-131	
Trichloroethene	ug/m3	57.2	55.7	97	70-134	
Trichlorofluoromethane	ug/m3	60.3	62.7	104	63-130	
Vinyl acetate	ug/m3	38.7	39.6	102	70-139	
Vinyl chloride	ug/m3	27.2	27.6	101	70-132	

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(612)607-1700

QUALIFIERS

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

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

CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
MN	The reporting limit has been raised in accordance with Minnesota Statutes 4740.2100 Subpart 8. C, D. Reporting Limit Evaluation Rule.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 117-137.1010.300 City Of West
Pace Project No.: 10630732

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10630732001	**IA-B-225 Linwood**	TO-15	848879		
10630732002	**IA-G-225 Linwood**	TO-15	848879		
10630732003	**SG-225 Linwood**	TO-15	849755		
10630732004	**IA-B-209 South**	TO-15	848879		
10630732005	**IA-G-209 South**	TO-15	848879		
10630732006	**SG-209 South**	TO-15	849755		
10630732007	**IA-B-202 South**	TO-15	848879		
10630732008	**IA-G-202 South**	TO-15	848879		
10630732009	**SG-202 South**	TO-15	849755		
10630732010	**OA-01**	TO-15	848879		

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