AMC Engineering PLLC
18-36 42nd Street
Astoria, NY 11105
O: 718.545.0474

May 21, 2024

Rafi Alam, PM
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 11th Floor
Albany, NY 12233

Re: Soil Vapor Intrusion Re-Evaluation Report
69-02 Queens Boulevard
Site No. C241235
Queens, NY 11377

Dear Mr. Alam,

Attached is the Soil Vapor Intrusion Re-Evaluation Report for the above referenced site prepared by AMC Engineering PLLC (AMC) on behalf of the QB Development Owner LLC. This report supersedes the report submitted on April 9, 2024. In the addition to summarizing the indoor air sample results that were collected, this report includes the Data Usability Summary Report (DUSR) and updated Table of Contents.

If you have any questions or comments regarding the attached report, please do not hesitate to contact me.

Very truly yours,

Julius Oliver M. Marasigan,
AMC Engineering, PLLC

Cc: Ariel Czemerinski, AMC ariel@amc-engineering.com
Shalom Silverman, Madison Realty ssilverman@madisonrealtycapital.com

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SOIL VAPOR INTRUSION RE-EVALUATION REPORT
69-02 QUEENS BOULEVARD

Table of Contents

Background

The site is located in the Woodside section of Queens County and is comprised of two irregular shaped tax parcels identified as Block 2432, Lots 8 and 9. The site is located between Queens Boulevard to the north, 70th Street to the east, 47th Avenue to the south and 69th Street to the west. The site is approximately 1.65 acres (71,862 sf). The Track 4 portion of the site has a concrete cover with a vapor barrier installed to address potential soil vapor intrusion from the remaining contaminants in groundwater beneath the Site.

From July 11 through July 12, 2023, a total of nine air samples were collected to determine the potential of vapor intrusion into the site buildings located on the Track 1 and Track 4 areas. In Track 1, one indoor air sample (IA-T1) and one sub-slab sample (SS-T1) were collected. In Track 4, one indoor air sample (IA-T4) and one sub-slab sample (SS-T4) were collected. In the school (located in the Track 1 area), one indoor air sample in the cellar (IA-C), one indoor air sample in a second floor classroom (IA-CS), one indoor air sample in the second floor stairwell (IA-S), and one indoor air sample in the cafeteria on the third floor (IA-CAF) were collected. In conjunction with the indoor air sampling, one (1) ambient air quality sample was collected at the breathing zone in the courtyard (OA) to characterize site-specific outdoor air conditions. In addition, on August 23rd, IA-C was resampled as per the New York State Department of Health (NYSDOH), Soil Vapor Intrusion (SVI) Guidance for evaluating vapor intrusion in New York State. Indoor Air Samples were compared to *Background Concentrations from Table C1. NYSDOG 2003: Study of volatile organic chemicals in air of fuel oil heated homes* (Background Concentrations) and the applicable Matrices A, B, C, D, E, and F of the *New York State Department of Health (NYSDOH), Soil Vapor Intrusion (SVI) Guidance for evaluating vapor intrusion in New York State*. While sub-slab vapor samples were below reporting limits, the indoor air sample in the cellar space of the school (IA-C) in July 2023 and subsequent sampling in August 2023 included Methylene Chloride (IA-C 7/11/2023, 30.6 ug/m^3)(IA-C 8/23/2024, 6.42 ug/m^3), Carbon Tetrachloride (IA-C 7/11/2023, 2.65 ug/m^3)(IA-C 8/23/2023, 0.41 ug/m^3), and Vinyl Chloride (IA-C 7/11/2023, 1.1 ug/m^3)(IA-C 8/23/2023, <0.20 ug/m^3), which were reported above background. Additionally, the classroom (IA-CS) and school stairway (IA-S) samples also detected exceedances above background levels including Carbon Tetrachloride in IA-CS (0.62 ug/m^3) and trichloroethene (TCE) in IA-S (1.1 ug/m^3).

Due to the exceedances to Background Concentrations of indoor air samples IA-C, IA-S, and IA-CS, the NYSDEC issued a Comment Letter, dated January 4, 2024, requesting that the potential for soil vapor intrusion in the cellar space, the second floor classroom, and the second floor stairway of the proposed school building be re-evaluated during the heating season to determine if monitoring actions need to be taken.

Vapor Intrusion Sampling

Vapor intrusion sampling was performed at the Site in response to the NYSDEC Comment Letter, dated January 4, 2024. From March 14 through March 15, 2024, a total of four indoor air samples were collected to determine the potential of vapor intrusion (**see Figures 1 and 2).** The completed Indoor Air Quality Questionnaire is provided in **Appendix A**. In the school,

one indoor air sample in cellar (IA-C), one indoor air sample in a second-floor classroom (IA-CR) and two indoor air samples from the second-floor stairwell (IA-S, IA-S Duplicate) were collected.

Samples were collected using laboratory-certified, 6.0-liter Summa vacuum canisters equipped with laboratory-supplied regulators calibrated to collect a sample over a 24-hour period (for indoor air, sub-slab, and ambient air) in accordance with NYSDOH protocols and procedures. The nine air quality samples were submitted to Phoenix Environmental Laboratories (Manchester, CT) for volatile organic carbon (VOCs) analysis via USEPA Method TO 15.

Results, Summary, and Conclusions

The results of the sampling were compared to *Background Concentrations from Table C1. NYSDOH 2003: Study of volatile organic chemicals in air of fuel oil heated homes* (Background Concentrations) and the applicable Matrices A, B, C, D, E, and F of the *New York State Department of Health (NYSDOH), Soil Vapor Intrusion (SVI) Guidance for evaluating vapor intrusion in New York State*. The indoor air re-sampling revealed exceedances to Carbon Tetrachloride in the cellar (IA-C, 0.51 ug/m^3), a second-floor classroom (IA-CR, 0.49 ug/m^3), and in the second-floor stairwell (IA-S, 0.51 ug/m^3, IA-S Duplicate, 0.48 ug/m^3) above Background Concentrations (0.4 ug/m^3). Sub-slab vapor samples from the July 2023 sampling event did not exhibit any concentrations in exceedance to Background Concentrations. A visual inspection of the cellar was carried out and did not reveal any obvious sources for these compounds.

Lab report details are provided in **Appendix B**. **Figure 1 and Figure 2** show the indoor air sampling locations for the Site. **Table 1** illustrates the results of the indoor sampling. **Tables 2, 3, 4, 5, 6, and 7** contain the Soil Vapor/Indoor Air Matrices A, B, C, D, E and F respectively.

Although there were slight exceedances to Background Concentrations in all four samples, NYSDOH Soil Vapor/Indoor Air Matrices A, B, C, D, E, and F, and the sampling results from July 2023 and March 2024, recommended that No Further Action is required to address the compounds detected.

NYSDEC Comment Letter (01/04/2024)

SENT VIA EMAIL

January 4, 2024

QB Development Owner LLC
Zach Kadden
520 Madison Avenue, Suite 3501
New York, NY 10022

Re: 69-02 Queens Boulevard (C241235)
Soil Vapor Intrusion (SVI) Evaluation Report

Dear Mr. Kadden,

The New York State Department of Environmental Conservation (DEC), in consultation with the New York State Department of Health (DOH), has reviewed the Soil Vapor Intrusion Evaluation Report submitted on November 3, 2023, for Site 69-02 Queens Boulevard (Site No: C241235) and has the following comments.

Comments on SVI Evaluation Report

Comment 1: While sub-slab vapor samples were below reporting limits, the indoor air sample in the cellar space (IS-C-School) in July 2023 included Methylene Chloride found at 30.6 micrograms per cubic meter (ug/m3), Carbon Tetrachloride at 2.65 ug/m3, and Vinyl Chloride at 1.1 ug/m3 which are above background. While resampling a month later did show significant reductions, it is important to note that both sampling events were conducted outside the heating season which is when SVI sampling is preferred to account for “worst-case” conditions. Therefore, I recommend an additional round of sampling occur this heating season to confirm the data presented in the August 2023 sampling event.

Comment 2: The classroom (IA-CS) and school stairway (IA-S) samples, areas where it is anticipated children would be spending the most time per day, also detected exceedances above background levels including Carbon Tetrachloride at 0.62ug/m3 (Background 0.4 ug/m3) in IA-CS and trichloroethene (TCE) at 0.37 ug/m3 in IA-S (Background level >0.1 ug/m3). [Background Concentrations from Table C1. NYSDOH 2003: Study of volatile organic chemicals in air of fuel oil heated homes] These locations should be resampled in the upcoming heating season to evaluate why the concentrations of these compounds were elevated, and whether or not actions are needed to bring the concentrations to below background levels, prior to occupancy.

Comment 3: The classroom sample (IA-CS) is mislabeled on the corresponding figure as IA-CR and should be revised.

Comment 4: Summary and Conclusions**:** States that No Further Action is needed at the site based off the results of this sampling report. This section needs to be revised to indicate that resampling is needed in the upcoming heating season to complete the soil vapor intrusion evaluation requirement.

Please address the comments and submit a revised and certified workplan within 30 days. Should you have any questions regarding this matter, please email me at rafi.alam@dec.ny.gov or call me at (518)-402-8606.

Sincerely,

Rafi Alam
Project Manager, Bureau B
Department of Environmental Remediation

EC: H. Dudek – NYSDEC
S. McLaughlin - NYSDOH
A. Ghosh – NYSDOH
S. Bogardus - NYSDOH

A. Czemerinski – AMC Engineering
A. Harrington - AMC Engineering

Table 1: Indoor Air Sampling Results

Table 1: Indoor Air Sampling Results
69-02 Queens Boulevard

Phoenix Environmental Laboratories, Inc.
587 East Middle Turnpike
P.O. Box 370
Manchester, CT 06040
(860) 645-1102

Project Id : 69-02 QUEENS BLVD

				CQ28761				CQ28762				CQ28763				CQ28764			
Lab Sample Id				3/14/2024				3/14/2024				3/14/2024				3/14/2024			
Collection Date				IA-S				IA-CR				IA-C				IA-S DUP			
Client Id				Air				Air				Air				Air			
Matrix																			
	CAS	Units	Table C1 (NYSDOH 2006)	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL
Volatiles (TO15) By TO15																			
1,1,1,2-Tetrachloroethane	630-20-6	ug/m3		< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
1,1,1-Trichloroethane	71-55-6	ug/m3	2	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
1,1,2,2-Tetrachloroethane	79-34-5	ug/m3	0.2	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
1,1,2-Trichloroethane	79-00-5	ug/m3	0.2	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
1,1-Dichloroethane	75-34-3	ug/m3	0.1	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
1,1-Dichloroethene	75-35-4	ug/m3	1.4	< 0.20	0.20	U	0.20	< 0.20	0.20	U	0.20	< 0.20	0.20	U	0.20	< 0.20	0.20	U	0.20
1,2,4-Trichlorobenzene	120-82-1	ug/m3	1.3	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
1,2,4-Trimethylbenzene	95-63-6	ug/m3	4.8	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
1,2-Dibromoethane(EDB)	106-93-4	ug/m3	0.1	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
1,2-Dichlorobenzene	95-50-1	ug/m3	0.3	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
1,2-Dichloroethane	107-06-2	ug/m3	0.1	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
1,2-dichloropropane	78-87-5	ug/m3	0.4	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
1,2-Dichlorotetrafluoroethane	76-14-2	ug/m3	1	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
1,3,5-Trimethylbenzene	108-67-8	ug/m3	2	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
1,3-Butadiene	106-99-0	ug/m3		< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
1,3-Dichlorobenzene	541-73-1	ug/m3	0.3	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
1,4-Dichlorobenzene	106-46-7	ug/m3	3.7	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	1.62	1.00		1.00	< 1.00	1.00	U	1.00
1,4-Dioxane	123-91-1	ug/m3		< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
2-Hexanone(MBK)	591-78-6	ug/m3		< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
4-Ethyltoluene	622-96-8	ug/m3		< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
4-Isopropyltoluene	99-87-6	ug/m3		< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
4-Methyl-2-pentanone(MIBK)	108-10-1	ug/m3		< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Acetone	67-64-1	ug/m3	42	12.7	1.00		1.00	13.7	1.00		1.00	17.3	1.00		1.00	12.9	1.00		1.00
Acrylonitrile	107-13-1	ug/m3		< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Benzene	71-43-2	ug/m3	8.3	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Benzyl chloride	100-44-7	ug/m3		< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Bromodichloromethane	75-27-4	ug/m3		< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Bromoform	75-25-2	ug/m3		< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Bromomethane	74-83-9	ug/m3	0.3	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Carbon Disulfide	75-15-0	ug/m3		< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Carbon Tetrachloride	56-23-5	ug/m3	0.4	0.51	0.20		0.20	0.49	0.20		0.20	0.51	0.20		0.20	0.48	0.20		0.20
Chlorobenzene	108-90-7	ug/m3	0.1	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Chloroethane	75-00-3	ug/m3	0.2	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Chloroform	67-66-3	ug/m3	0.9	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Chloromethane	74-87-3	ug/m3	2	1.04	1.00		1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	1.04	1.00		1.00
Cis-1,2-Dichloroethene	156-59-2	ug/m3	0.3	< 0.20	0.20	U	0.20	< 0.20	0.20	U	0.20	< 0.20	0.20	U	0.20	< 0.20	0.20	U	0.20
cis-1,3-Dichloropropene	10061-01-5	ug/m3	0.2	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Cyclohexane	110-82-7	ug/m3	6	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Dibromochloromethane	124-48-1	ug/m3		< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Dichlorodifluoromethane	75-71-8	ug/m3	7.9	2.12	1.00		1.00	1.93	1.00		1.00	2.04	1.00		1.00	1.96	1.00		1.00
Ethanol	64-17-5	ug/m3		26.2	1.00		1.00	27.5	1.00		1.00	27.7	1.00		1.00	26	1.00		1.00
Ethyl acetate	141-78-6	ug/m3		< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Ethylbenzene	100-41-4	ug/m3	3.7	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Heptane	142-82-5	ug/m3	9.7	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Hexachlorobutadiene	87-68-3	ug/m3	0.2	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Hexane	110-54-3	ug/m3	9.5	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Isooctane	540-84-1	ug/m3	5.5	< 0.93	0.93	U	0.93	< 0.93	0.93	U	0.93	< 0.93	0.93	U	0.93	< 0.93	0.93	U	0.93
Isopropylalcohol	67-63-0	ug/m3		4.1	1.00		1.00	3.14	1.00		1.00	2.68	1.00		1.00	3.27	1.00		1.00
Isopropylbenzene	98-82-8	ug/m3	0.4	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
m,p-Xylene	179601-23-1	ug/m3	5.9	1.42	1.00		1.00	1.54	1.00		1.00	2.22	1.00		1.00	1.45	1.00		1.00
Methyl Ethyl Ketone	78-93-3	ug/m3	8.4	1.11	1.00		1.00	1.26	1.00		1.00	1.46	1.00		1.00	2.1	1.00		1.00
Methyl tert-butyl ether(MTBE)	1634-04-4	ug/m3	13	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Methylene Chloride	75-09-2	ug/m3	17	< 3.00	3.00	U	3.00	< 3.00	3.00	U	3.00	< 3.00	3.00	U	3.00	< 3.00	3.00	U	3.00
Naphthalene	91-20-3	ug/m3		< 1.05	1.05	U	1.05	< 1.05	1.05	U	1.05	< 1.05	1.05	U	1.05	< 1.05	1.05	U	1.05
n-Butylbenzene	104-51-8	ug/m3	0.6	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
o-Xylene	95-47-6	ug/m3	3.8	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Propylene	115-07-1	ug/m3		< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
sec-Butylbenzene	135-98-8	ug/m3	0.5	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Styrene	100-42-5	ug/m3	0.8	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Tetrachloroethene	127-18-4	ug/m3	1.3	0.43	0.25		0.25	0.62	0.25		0.25	0.33	0.25		0.25	0.39	0.25		0.25
Tetrahydrofuran	109-99-9	ug/m3	2.1	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Toluene	108-88-3	ug/m3	26	2.91	1.00		1.00	2.87	1.00		1.00	2.73	1.00		1.00	2.72	1.00		1.00
Trans-1,2-Dichloroethene	156-60-5	ug/m3		< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
trans-1,3-Dichloropropene	10061-02-6	ug/m3	0.1	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Trichloroethene	79-01-6	ug/m3	0.4	< 0.20	0.20	U	0.20	< 0.20	0.20	U	0.20	< 0.20	0.20	U	0.20	< 0.20	0.20	U	0.20
Trichlorofluoromethane	75-69-4	ug/m3	7.5	1.1	1.00		1.00	1.02	1.00		1.00	1.08	1.00		1.00	1.04	1.00		1.00
Trichlorotrifluoroethane	76-13-1	ug/m3		< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00	< 1.00	1.00	U	1.00
Vinyl Chloride	75-01-4	ug/m3	0.1	< 0.20	0.20	U	0.20	< 0.20	0.20	U	0.20	< 0.20	0.20	U	0.20	< 0.20	0.20	U	0.20

Qualifiers

U — The compound was anlayzed for but not detected at or above the MDL.
The number immediately preceding the "U" represents the PQL reporting level corrected for percent solids, weight and/or volume calculations, and dilution factors.

J — The value is estimated. This flag is used
a) on form 1 when the compound is reported above the MDL, but below the PQL, and
b) on the Tentatively Identified Compounds (TIC) form for all compounds identified.

N — The concentration is based on the response fo the nearest internal. This flag is used on the TIC form for all compounds identified.

S — This compound is a solvent that is used in the laboratory. Laboratory contamination is suspected if concentration is less than five times the reporting level.

D — The reported concentration is the result of a diluted analysis.

Q — For TICS, this compound was quantitated using a calibration curve.

(*) — See report for comment.

Result Detected
Results Exceed Table C1 (NYSDOH 2006)

Table 2-7: Soil Vapor/Indoor Air Matrices

Table 2

Soil Vapor/Indoor Air Matrix A

May 2017

Analytes Assigned:
Trichloroethene (TCE), *cis*-1,2-Dichloroethene (*c*-1,2-DCE), 1,1-Dichloroethene (1,1-DCE), Carbon Tetrachloride

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)		
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	< 0.2	0.2 to < 1	1 and above
< 6	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
6 to < 60	4. No further action	5. MONITOR	6. MITIGATE
60 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

mcg/m^3 = micrograms per cubic meter

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX A

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 0.20 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

Table 3

Soil Vapor/Indoor Air Matrix B

May 2017

Analytes Assigned:
Tetrachloroethene (PCE), 1,1,1-Trichloroethane (1,1,1-TCA), Methylene Chloride

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)		
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	< 3	3 to < 10	10 and above
< 100	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
100 to < 1,000	4. No further action	5. MONITOR	6. MITIGATE
1,000 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

mcg/m^3 = micrograms per cubic meter

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX B

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 1 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

Table 4

Soil Vapor/Indoor Air Matrix C

May 2017

Analytes Assigned:
Vinyl Chloride

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)	
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	< 0.2	0.2 and above
< 6	1. No further action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
6 to < 60	4. MONITOR	6. MITIGATE
60 and above	7. MITIGATE	9. MITIGATE

mcg/m^3 = micrograms per cubic meter

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX C

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 0.20 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

Table 5

Soil Vapor/Indoor Air Matrix D

February 2024

Analytes Assigned:
Benzene, ethylbenzene, naphthalene, cyclohexane, isooctane (2,2,4-trimethylpentane), 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, *o*-xylene

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)		
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	< 2	2 to < 10	10 and above
< 60	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) or RESAMPLE or MITIGATE
60 to < 600	4. No further action	5. MONITOR	6. MITIGATE
600 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

mcg/m^3 = micrograms per cubic meter

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) or Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation, and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building -specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX D

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 1 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion to occur is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

Table 6

Soil Vapor/Indoor Air Matrix E

February 2024

Analytes Assigned:
m-xylene, *p*-xylene, heptane, hexane

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)		
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	< 6	6 to < 20	20 and above
< 200	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) or RESAMPLE or MITIGATE
200 to < 2,000	4. No further action	5. MONITOR	6. MITIGATE
2,000 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

mcg/m^3 = micrograms per cubic meter

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) or Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation, and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building -specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX E

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 1 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion to occur is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

Table 7

Soil Vapor/Indoor Air Matrix F

February 2024

Analytes Assigned:
Toluene

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)		
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	< 10	10 to < 50	50 and above
< 300	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) or RESAMPLE or MITIGATE
300 to < 3,000	4. No further action	5. MONITOR	6. MITIGATE
3,000 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

mcg/m^3 = micrograms per cubic meter

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) or Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation, and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building -specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX F

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 1 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.

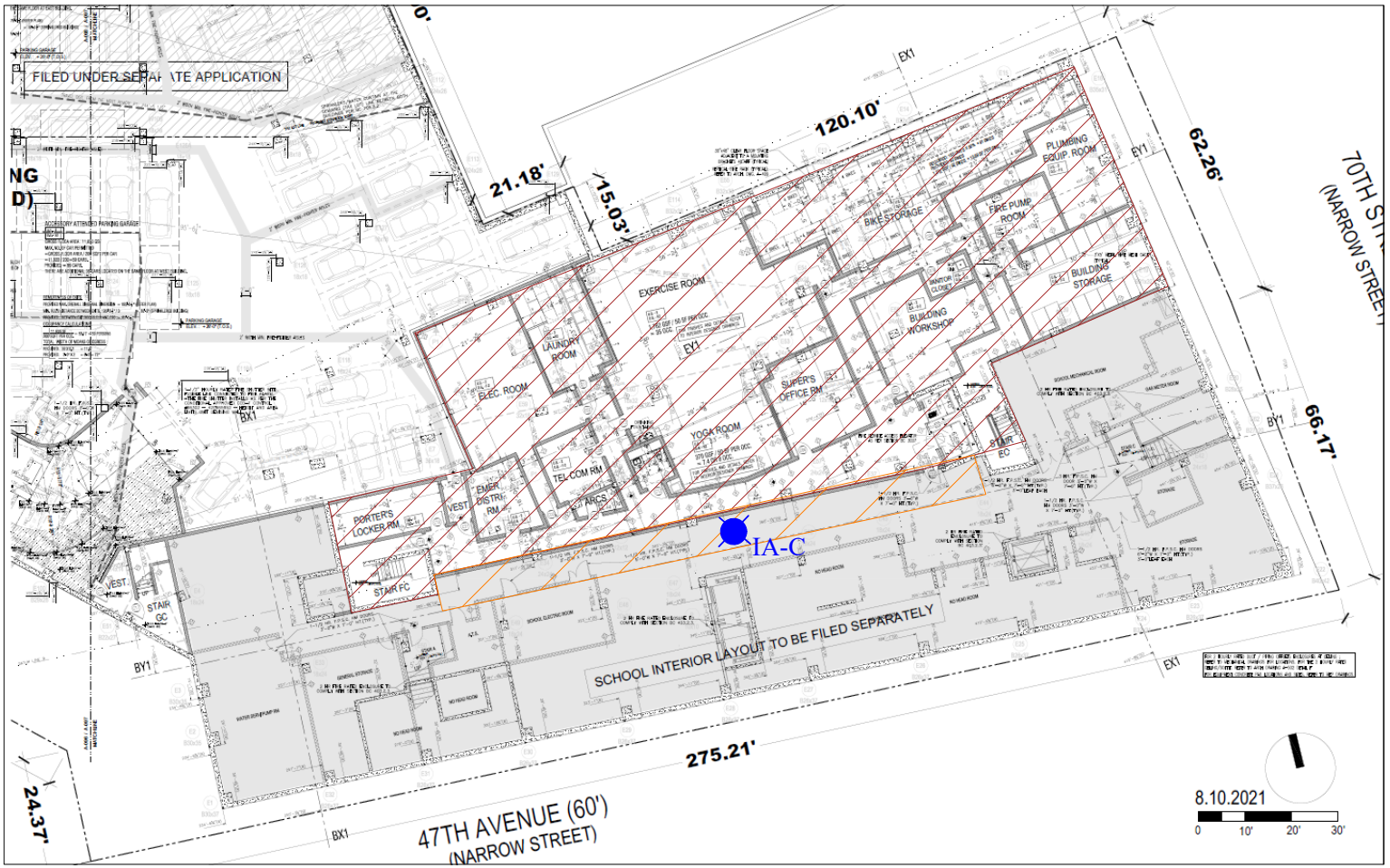
[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion to occur is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

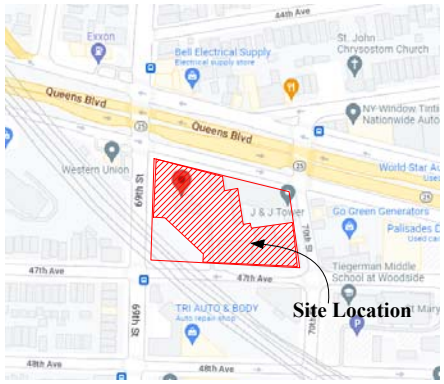
[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

Figure 1: Site Sampling Location Cellar

CELLAR





Legend:

- Indoor Air Re-Sample Location
- Track 1 Residential Building
- School Hallway

AMC ENGINEERING PLLC
18-36 42nd Street
Astoria, NY 11105
718 545-0474

PROJECT

69-02 Queens Boulevard
Queens, NY 11206

TITLE:

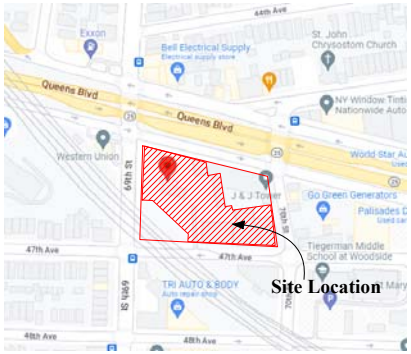
SVI and Indoor Air Sampling Location Plan

SEAL & SIGNATURE:

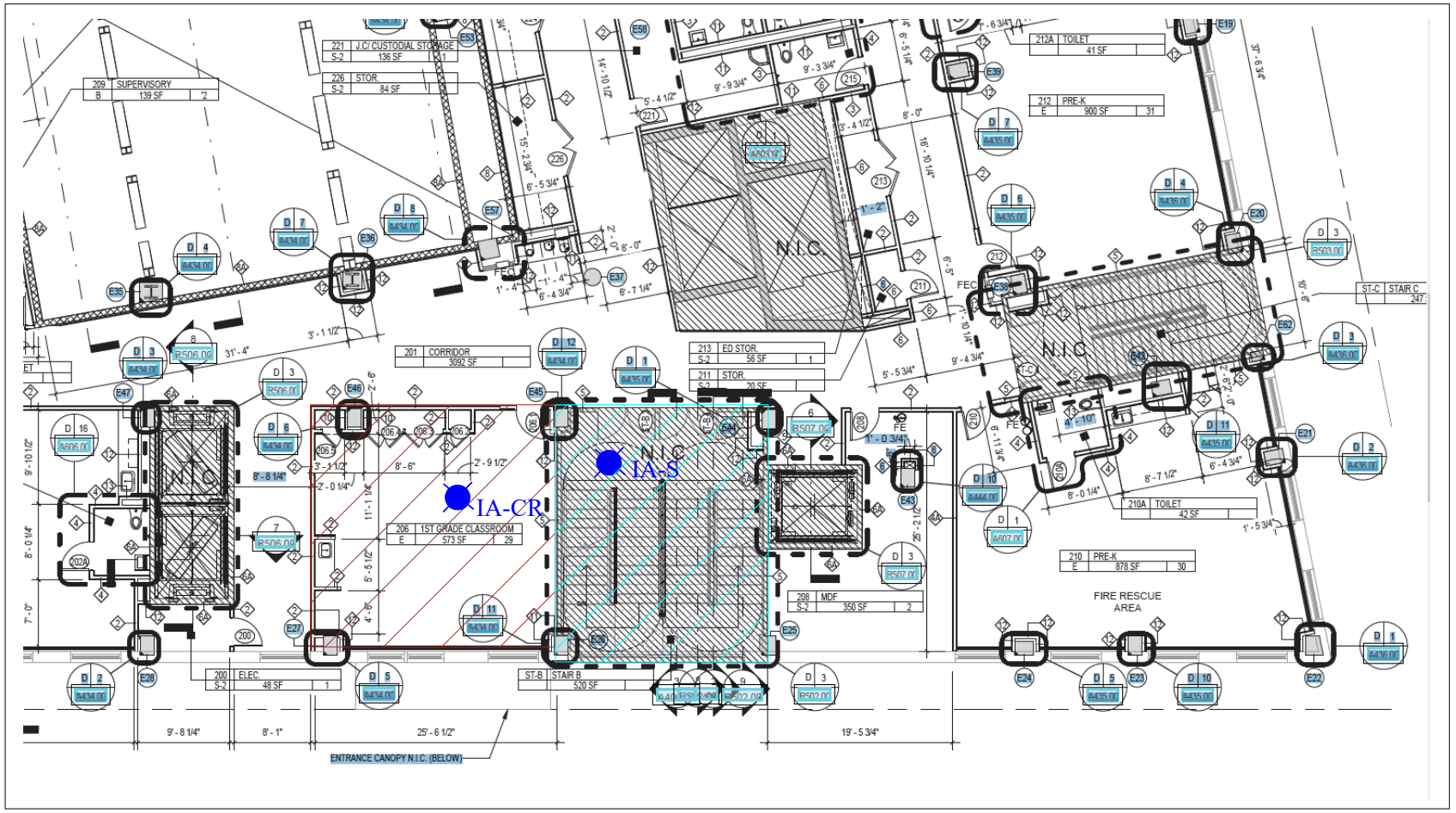
DATE: FEB 13, 2023
PROJECT No:
DRAWING BY: AH
CHK BY:
DWG No:

Figure 1

Figure 2: Site Sampling Location Second Floor



SECOND FLOOR



Legend:

- Indoor Air Re-Sample Location
- Classroom
- Stairwell

AMC ENGINEERING PLLC
18-36 42nd Street
Astoria, NY 11105
718 545-0474

PROJECT

69-02 Queens Boulevard
Queens, NY 11206

TITLE:

School:
Indoor Air Sampling
Location Plan

SEAL & SIGNATURE:

DATE: APR 10, 2023
PROJECT No:
DRAWING BY: AH
CHK BY:
DWG No:

27

Figure 2

Appendix A: Soil Vapor Intrusion – Structure Sampling Building Questionnaire

OSR – 3

NEW YORK STATE DEPARTMENT OF HEALTH INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Emma Waechter Date/Time Prepared 2/21/24 Preparer's Affiliation Engineer / AMC Phone No. 718)545-0474

Purpose of Investigation Indoor Air Evaluation

1. OCCUPANT: Interviewed:

Y / N

Last Name: Chen First Name: Bobby Address: 69-02 Queens Blvd County: Queens Home Phone: _____ Office Phone: 929)454-2998 Number of Occupants/persons at this location _____ Age of Occupants _____

2. OWNER OR LANDLORD: (Check if same as occupant ___) **Interviewed:**

Y / N (Resident Manager)

Last Name: Besim First Name: _____ Address: _____ County: _____ Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS Type of Building:

(Circle appropriate response)

Residential School Commercial/Multi-use Industrial Church Other: _____

↓ questionnaire only for school

If the property is residential, type? (Circle appropriate response)

Ranch 2-Family 3-Family Raised Ranch Split Level Colonial Cape Cod Contemporary Mobile Home Duplex Apartment House Townhouses/Condos Modular Log Home Other: apartment building

If multiple units, how many? _____

If the property is commercial, type?

Business Type(s) under construction - school Does it include residences (i.e., multi-use)? (Y) / N If yes, how many? _____

Other characteristics:

Number of floors_____ Building age_____ Is the building insulated? (Y) / N How air tight? (Tight) / Average / Not Tight

4. AIRFLOW Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

none

Airflow near source

N/A

Outdoor air infiltration

through open doors

Infiltration into air ducts

N/A

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction: wood frame concrete stone brick

b. Basement type: full crawlspace slab other _____

c. Basement floor: concrete dirt stone other _____

d. Basement floor: uncovered covered covered with _____

e. Concrete floor: unsealed sealed sealed with _____

f. Foundation walls: poured block stone other _____

g. Foundation walls: unsealed sealed sealed with _____

h. The basement is: wet damp dry moldy

i. The basement is: finished unfinished partially finished

j. Sump present? Y / N

k. Water in sump? Y / N / not applicable **Basement/Lowest level depth below grade:** 9 (feet) **Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)**

none

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply) **Type of heating system(s) used in this building: (circle all that apply – note primary)**

Hot air circulation Heat pump Hot water baseboard Space Heaters Stream radiation Radiant floor Electric baseboard Wood stove Outdoor wood boiler Other _____

The primary type of fuel used is:

Natural Gas Fuel Oil Kerosene Electric Propane Solar Wood Coal

Domestic hot water tank fueled by: _____

Boiler/furnace located in: Basement Outdoors Main Floor Other_____

Air conditioning: Central Air Window units Open Windows None

Are there air distribution ducts present? (Y) / N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

Throughout building - none in basement/ cellars

7. OCCUPANCY Is basement/lowest level occupied? Full-time Occasionally Seldom Almost Never **Level General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**

Basement school vacant 1st Floor

2nd Floor

3rd Floor

4th Floor

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? (Y) / N

b. Does the garage have a separate heating unit? Y / N / (NA)

c. Are petroleum-powered machines or vehicles Y / (N) / NA **stored in the garage** (e.g., lawnmower, atv, car) Please specify_____

d. Has the building ever had a fire? Y / (N) When?_____

e. Is a kerosene or unvented gas space heater present? Y / (N) Where? _____

f. Is there a workshop or hobby/craft area? Y / (N) Where & Type? _____

g. Is there smoking in the building? Y / (N) How frequently? _____

h. Have cleaning products been used recently? Y / (N) When & Type? _____

i. Have cosmetic products been used recently? Y / (N) When & Type? _____

j. Has painting/staining been done in the last 6 months? Y / (N) Where & When? _____

k. Is there new carpet, drapes or other textiles? Y / (N) Where & When? _____

l. Have air fresheners been used recently? Y / N When & Type? _____

m. Is there a kitchen exhaust fan? Y / N If yes, where vented? N/A

n. Is there a bathroom exhaust fan? (Y) / N If yes, where vented?_____

o. Is there a clothes dryer? (Y) / N If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y / (N) When & Type?_____

Are there odors in the building? Y / (N) If yes, please describe:

_____

Do any of the building occupants use solvents at work? Y / (N) e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly) (No) Yes, use dry-cleaning infrequently (monthly or less) Unknown
Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y / (N) Date of Installation: _____ **Is the system active or passive?** Active/Passive

9. WATER AND SEWAGE Water Supply: (Public Water) Drilled Well Driven Well Dug Well Other: _____
Sewage Disposal: (Public Sewer) Septic Tank Leach Field Dry Well Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency) NA

a. Provide reasons why relocation is recommended: _____

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

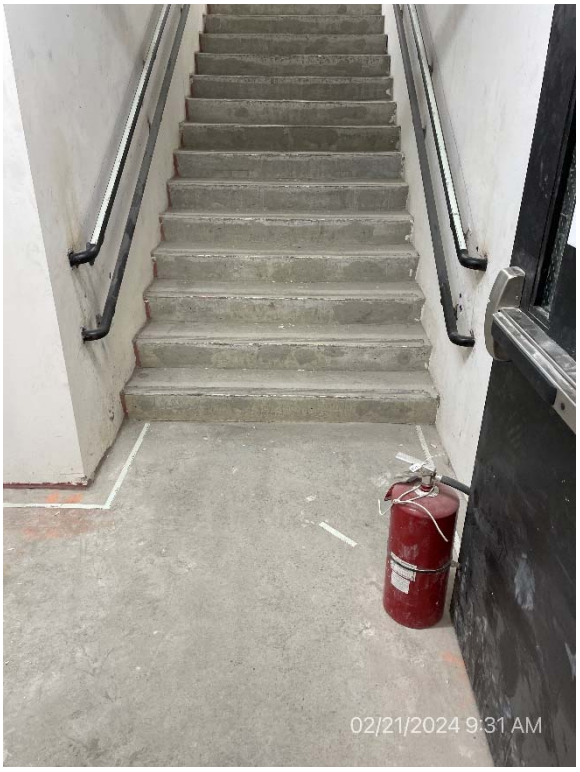
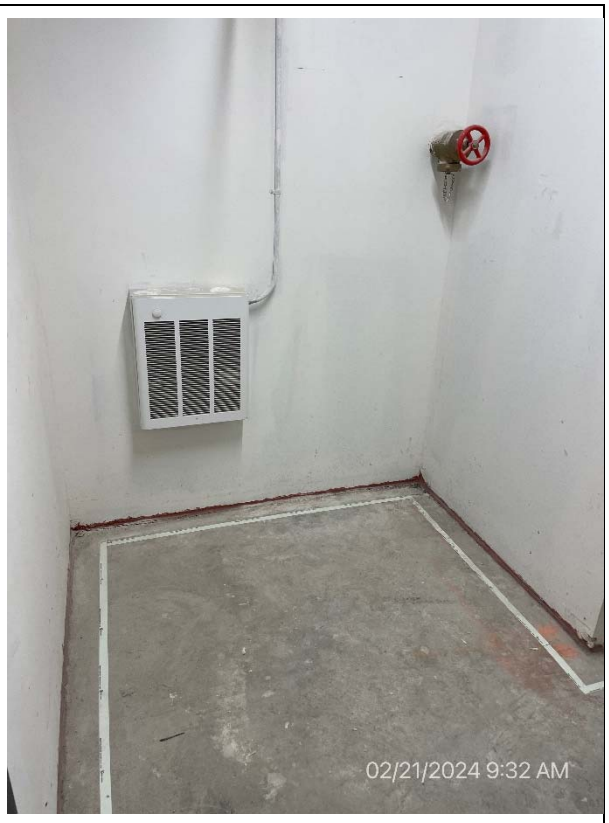
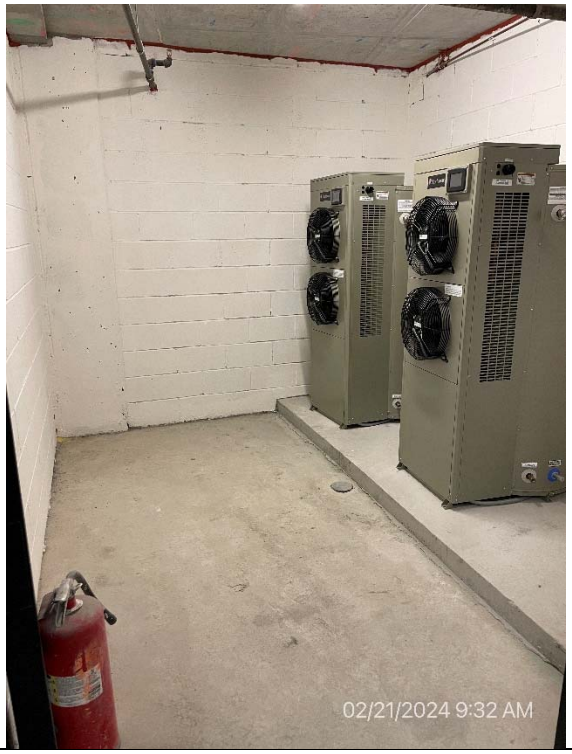
c. Responsibility for costs associated with reimbursement explained? Y / N

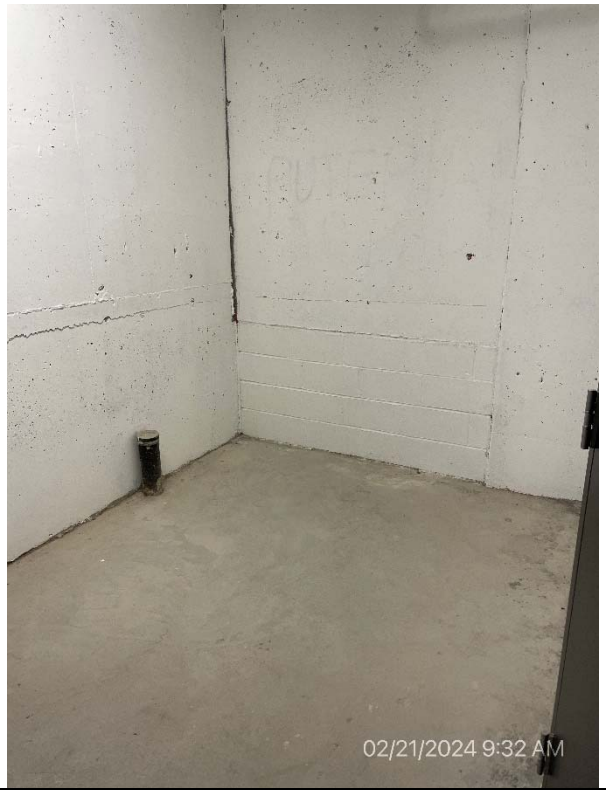
d. Relocation package provided and explained to residents? Y / N

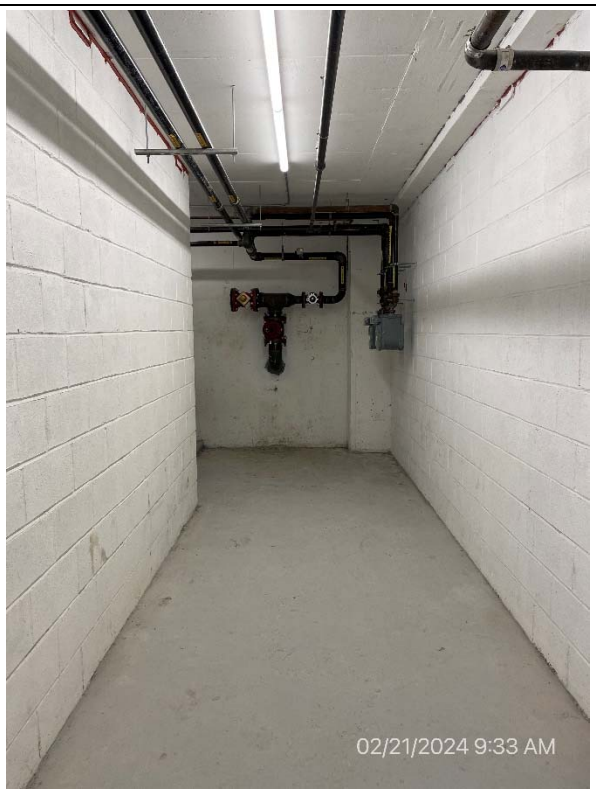
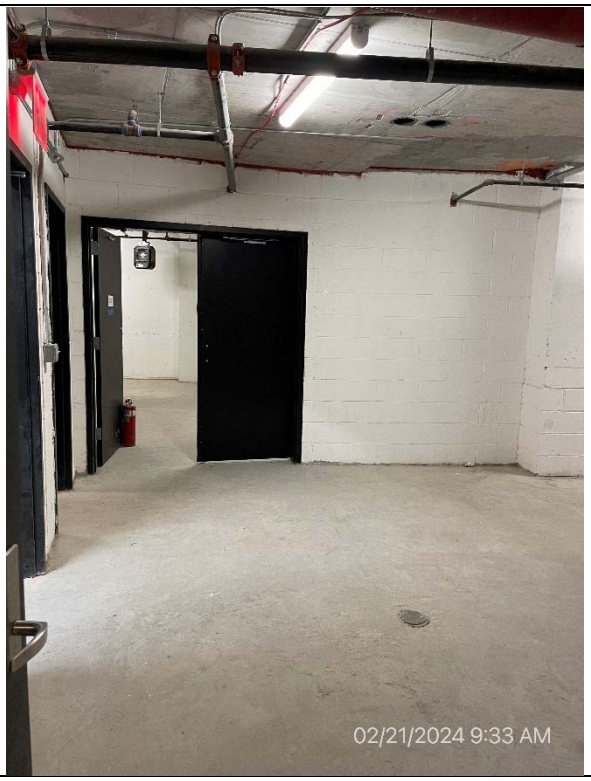
11. FLOOR PLANS

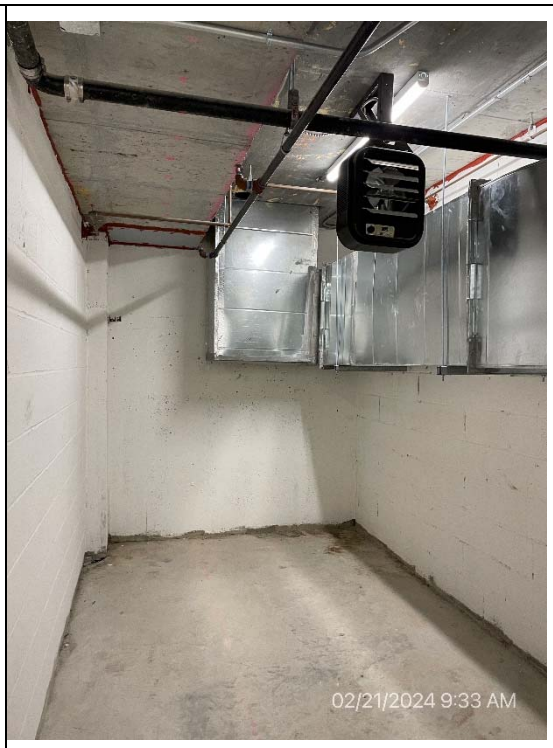
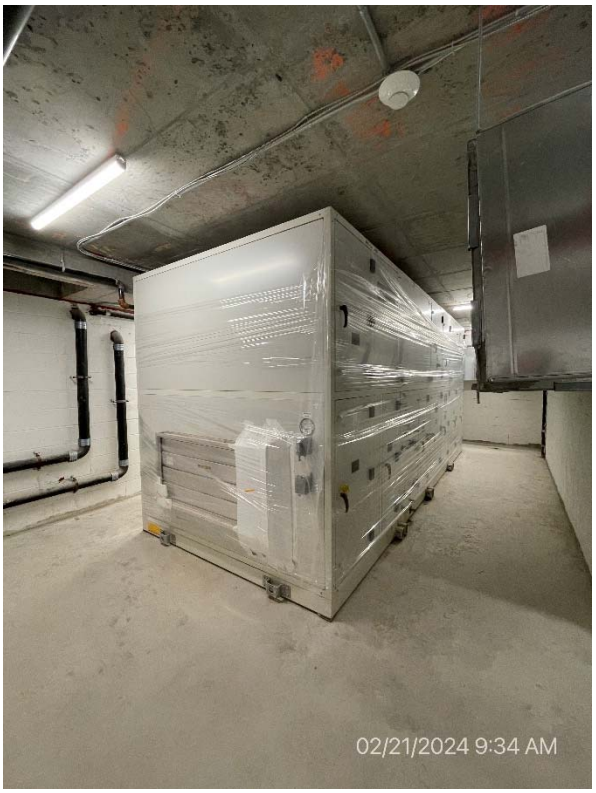
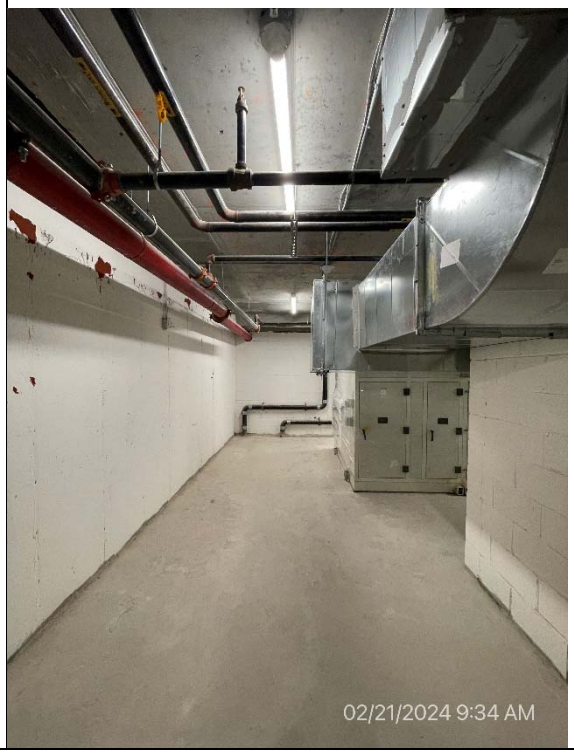
↳ refer to flwr plans

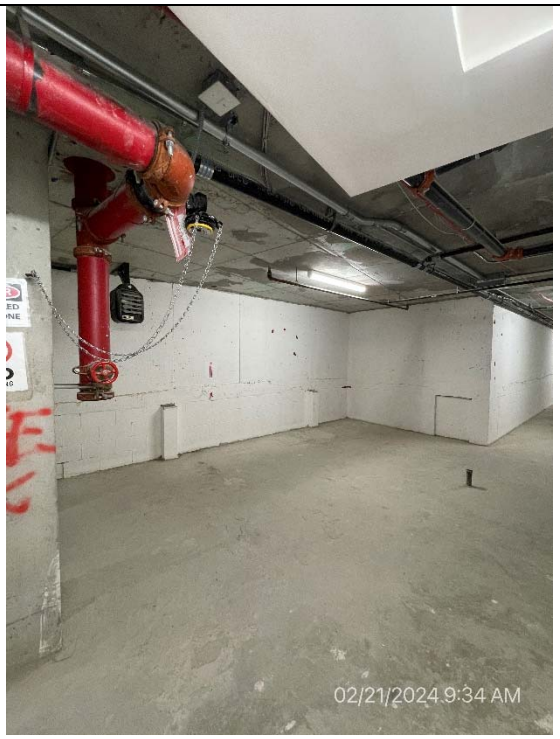
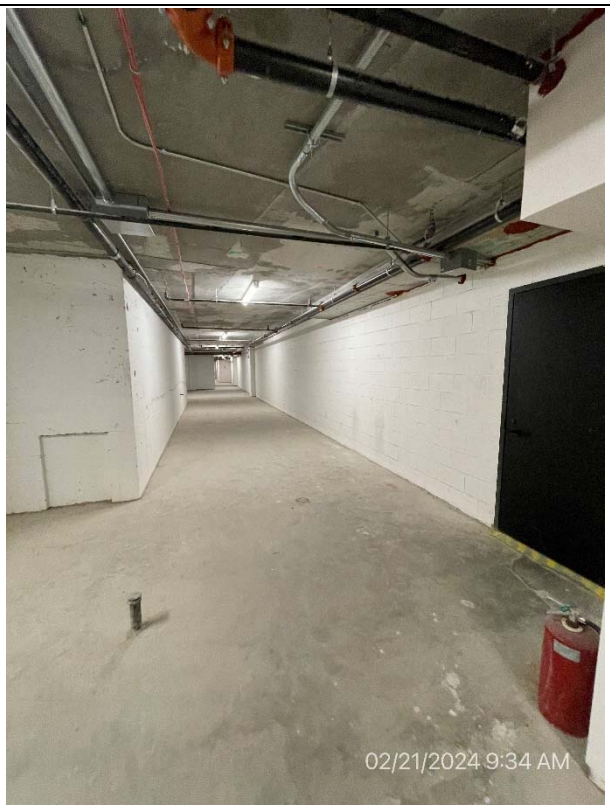
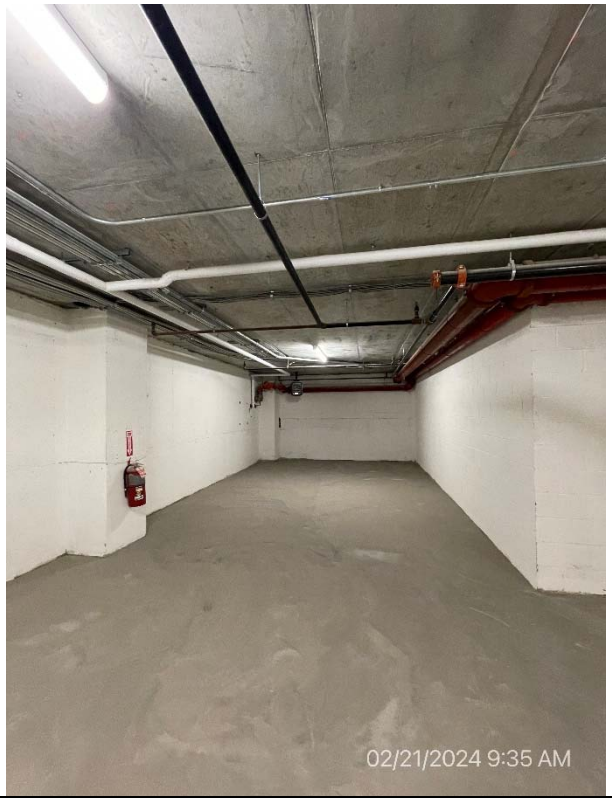
Photo Log

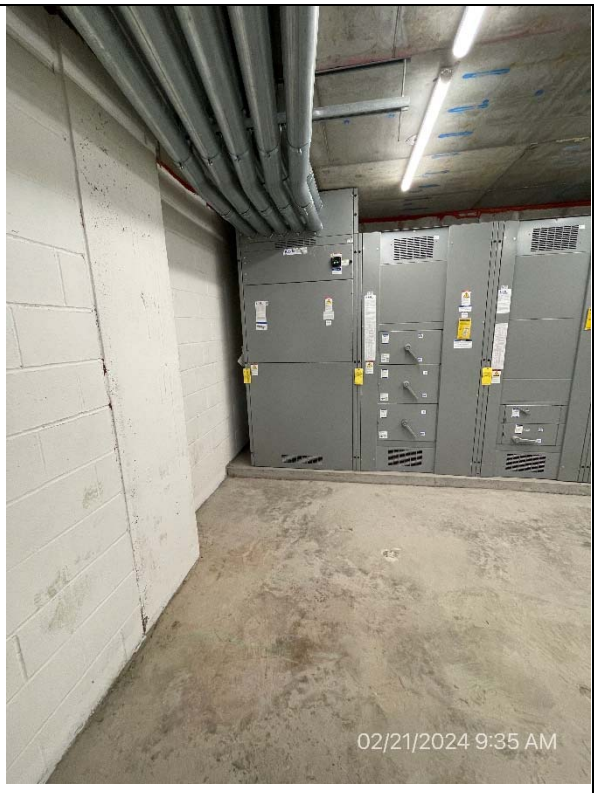
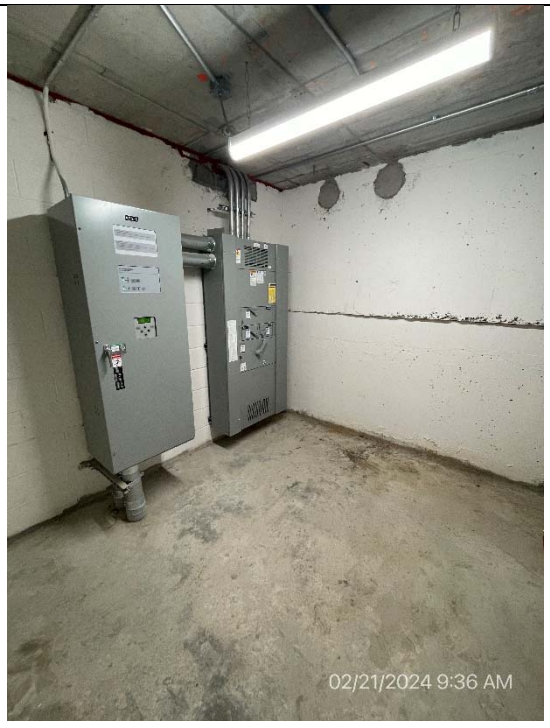
Staircase C	 
Small storage room (south eastern corner)	

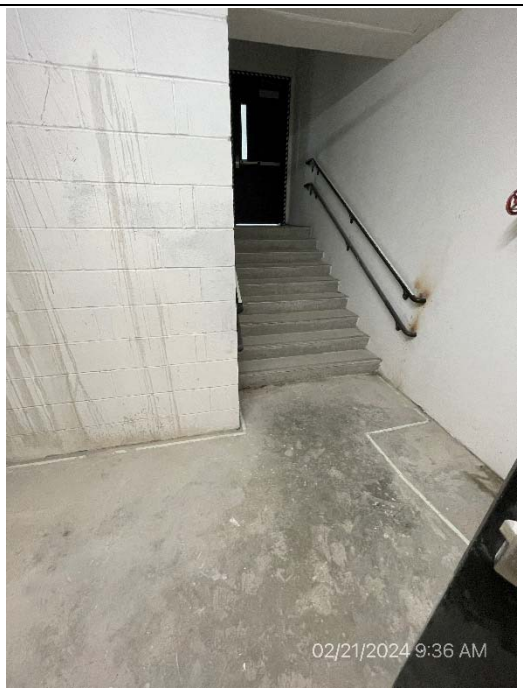
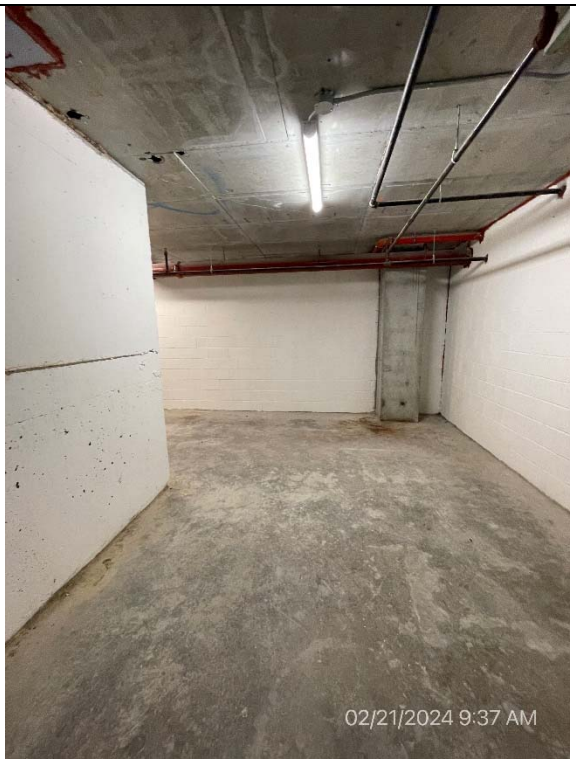
Large Storage Room (south eastern corner)	  

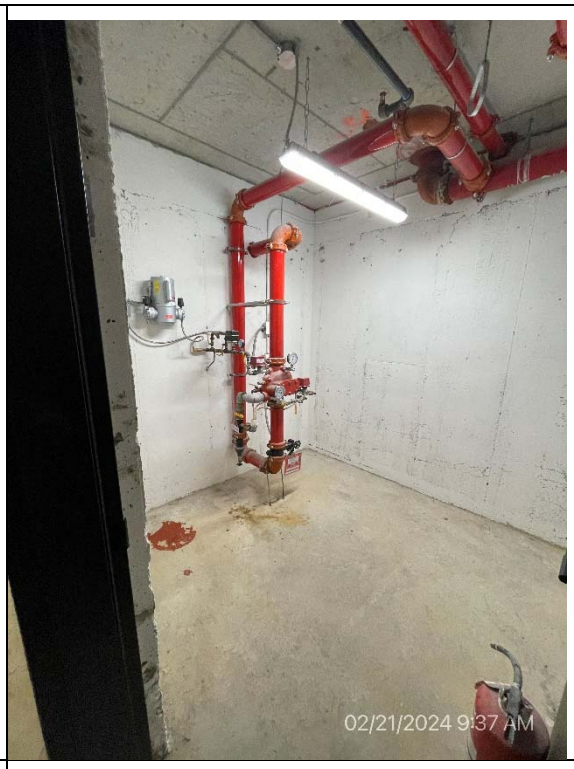
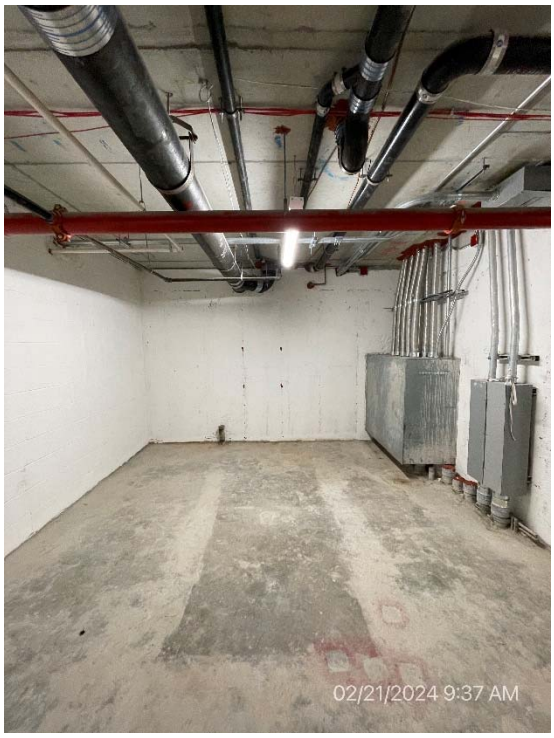
Gas Meter Room	 
Hallway outside of staircase C	

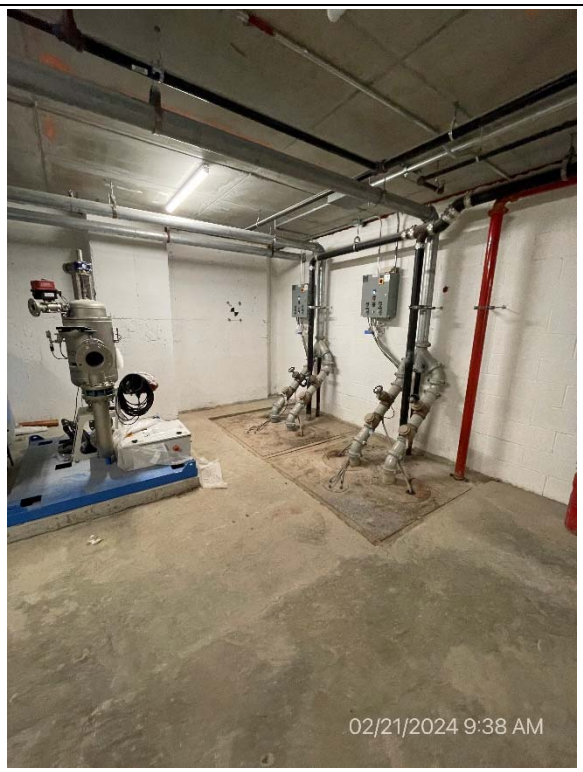
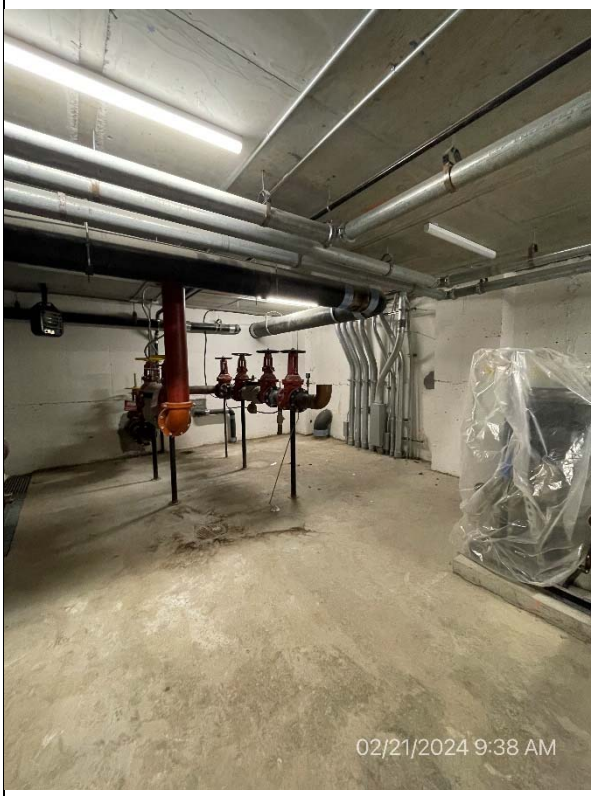
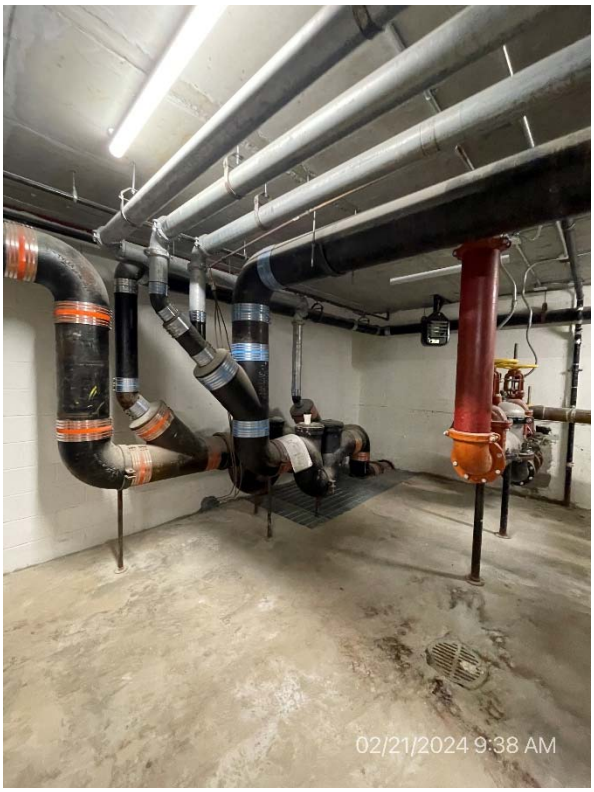
School Mechanical Room	  

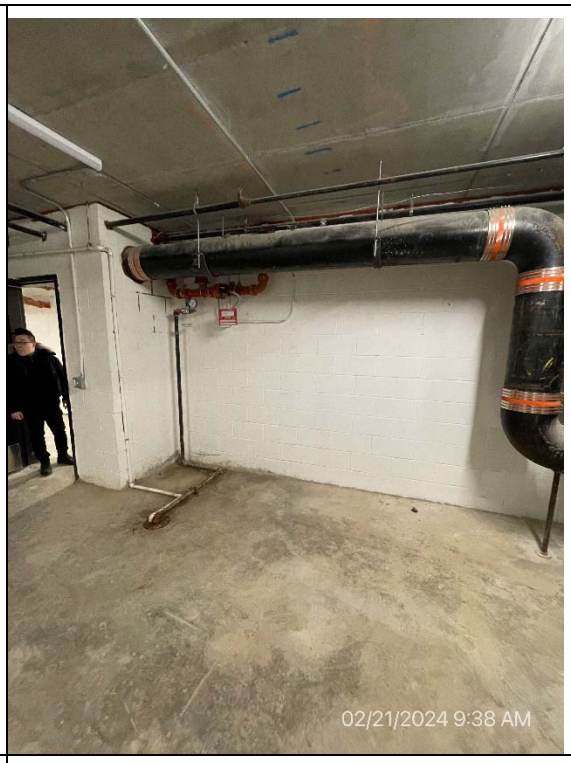
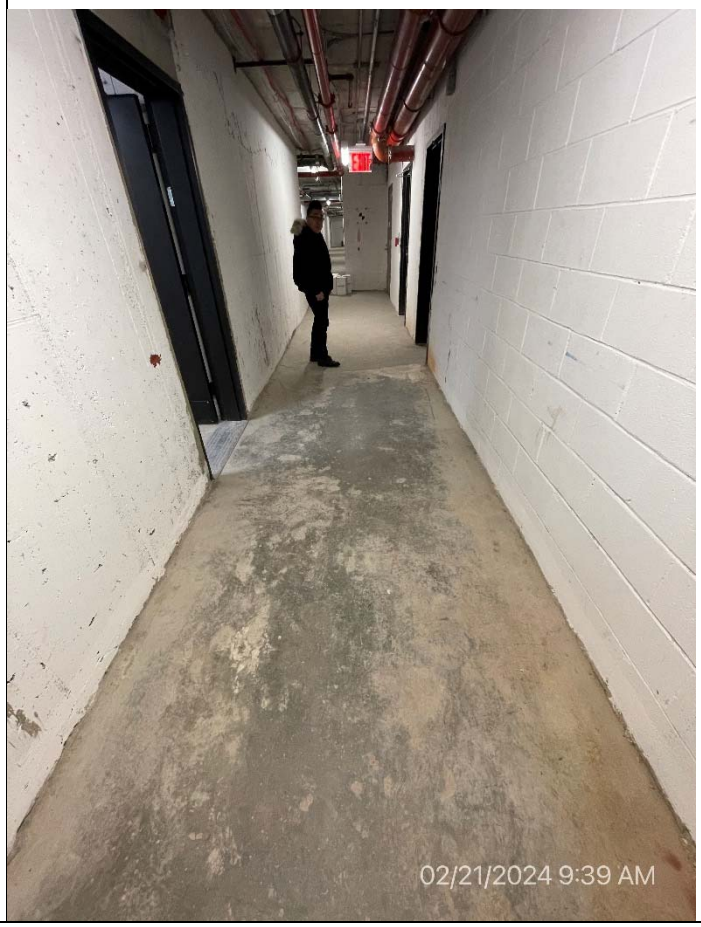
Hallway from east to west	   

School Electric Room	 
A.T.S.	 

Stair A	
General Storage	 

Small room in north western corner of Site	
Large room in north western corner of Site	 

Water Serv / Pump Room	   

Water Serv / Pump Room	
Hallway at western end of Site	

Appendix B: Phoenix Laboratory Data Package

PHOENIX
Environmental Laboratories, Inc.

Monday, March 18, 2024

Attn: Ariel Czemerinski
AMC Engineering PLLC
18-36 42nd Street
Astoria, NY 11105

Project ID: 69-02 QUEENS BLVD
SDG ID: GCQ28761
Sample ID#s: CQ28761 - CQ28764

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

March 18, 2024

SDG I.D.: GCQ28761

Any compound that is not detected above the MDL/LOD is reported as ND on the report and is reported in the electronic deliverables (EDD) as <RL or U at the RL per state and EPA guidance.

Version 1: Analysis results minus raw data.

Version 2: Complete report with raw data.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

Sample Id Cross Reference

March 18, 2024

SDG I.D.: GCQ28761

Project ID: 69-02 QUEENS BLVD

Client Id	Lab Id	Matrix
IA-S	CQ28761	AIR
IA-CR	CQ28762	AIR
IA-C	CQ28763	AIR
IA-S DUP	CQ28764	AIR

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

March 18, 2024

FOR: Attn: Ariel Czemerinski
AMC Engineering PLLC
18-36 42nd Street
Astoria, NY 11105

Sample Information		Custody Information		Date	Time
Matrix:	AIR	Collected by:	EW	03/14/24	9:23
Location Code:	AMC-ENG	Received by:	CP	03/15/24	17:15
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					
Canister Id:	16001				

Laboratory Data

SDG ID: GCQ28761
Phoenix ID: CQ28761

Project ID: 69-02 QUEENS BLVD
Client ID: IA-S

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution	
Volatiles (TO15)										
1,1,1,2-Tetrachloroethane	ND	*0.146*	0.146	ND	*1.00*	1.00	03/16/24	KCA	1	1
1,1,1-Trichloroethane	ND	*0.183*	0.183	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1,2,2-Tetrachloroethane	ND	*0.146*	0.146	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1,2-Trichloroethane	ND	*0.183*	0.183	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1-Dichloroethane	ND	*0.247*	0.247	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1-Dichloroethene	ND	*0.051*	0.051	ND	*0.20*	0.20	03/16/24	KCA	1	
1,2,4-Trichlorobenzene	ND	*0.135*	0.135	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2,4-Trimethylbenzene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dibromoethane(EDB)	ND	*0.130*	0.130	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichloroethane	ND	*0.247*	0.247	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-dichloropropane	ND	*0.217*	0.217	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichlorotetrafluoroethane	ND	*0.143*	0.143	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3,5-Trimethylbenzene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3-Butadiene	ND	*0.452*	0.452	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,4-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,4-Dioxane	ND	*0.278*	0.278	ND	*1.00*	1.00	03/16/24	KCA	1	
2-Hexanone(MBK)	ND	*0.244*	0.244	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Ethyltoluene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Isopropyltoluene	ND	*0.182*	0.182	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Methyl-2-pentanone(MIBK)	ND	*0.244*	0.244	ND	*1.00*	1.00	03/16/24	KCA	1	
Acetone	5.37	*0.421*	0.421	12.7	*1.00*	1.00	03/16/24	KCA	1	
Acrylonitrile	ND	*0.461*	0.461	ND	*1.00*	1.00	03/16/24	KCA	1	
Benzene	ND	*0.313*	0.313	ND	*1.00*	1.00	03/16/24	KCA	1	
Benzyl chloride	ND	*0.193*	0.193	ND	*1.00*	1.00	03/16/24	KCA	1	

Project ID: 69-02 QUEENS BLVD
Client ID: IA-S

Phoenix I.D.: CQ28761

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution	
Bromodichloromethane	ND	*0.149*	0.149	ND	*1.00*	1.00	03/16/24	KCA	1	
Bromoform	ND	*0.097*	0.097	ND	*1.00*	1.00	03/16/24	KCA	1	
Bromomethane	ND	*0.258*	0.258	ND	*1.00*	1.00	03/16/24	KCA	1	
Carbon Disulfide	ND	*0.321*	0.321	ND	*1.00*	1.00	03/16/24	KCA	1	
Carbon Tetrachloride	0.081	*0.032*	0.032	0.51	*0.20*	0.20	03/16/24	KCA	1	
Chlorobenzene	ND	*0.217*	0.217	ND	*1.00*	1.00	03/16/24	KCA	1	
Chloroethane	ND	*0.379*	0.379	ND	*1.00*	1.00	03/16/24	KCA	1	
Chloroform	ND	*0.205*	0.205	ND	*1.00*	1.00	03/16/24	KCA	1	
Chloromethane	0.502	*0.485*	0.485	1.04	*1.00*	1.00	03/16/24	KCA	1	
Cis-1,2-Dichloroethene	ND	*0.051*	0.051	ND	*0.20*	0.20	03/16/24	KCA	1	
cis-1,3-Dichloropropene	ND	*0.221*	0.221	ND	*1.00*	1.00	03/16/24	KCA	1	
Cyclohexane	ND	*0.291*	0.291	ND	*1.00*	1.00	03/16/24	KCA	1	
Dibromochloromethane	ND	*0.118*	0.118	ND	*1.00*	1.00	03/16/24	KCA	1	
Dichlorodifluoromethane	0.428	*0.202*	0.202	2.12	*1.00*	1.00	03/16/24	KCA	1	
Ethanol	13.9	*0.531*	0.531	26.2	*1.00*	1.00	03/16/24	KCA	1	1
Ethyl acetate	ND	*0.278*	0.278	ND	*1.00*	1.00	03/16/24	KCA	1	1
Ethylbenzene	ND	*0.230*	0.230	ND	*1.00*	1.00	03/16/24	KCA	1	
Heptane	ND	*0.244*	0.244	ND	*1.00*	1.00	03/16/24	KCA	1	
Hexachlorobutadiene	ND	*0.094*	0.094	ND	*1.00*	1.00	03/16/24	KCA	1	
Hexane	ND	*0.284*	0.284	ND	*1.00*	1.00	03/16/24	KCA	1	
Isooctane	ND	*0.200*	0.200	ND	*0.93*	0.93	03/16/24	KCA	1	
Isopropylalcohol	1.67	*0.407*	0.407	4.10	*1.00*	1.00	03/16/24	KCA	1	
Isopropylbenzene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	
m,p-Xylene	0.328	*0.230*	0.230	1.42	*1.00*	1.00	03/16/24	KCA	1	
Methyl Ethyl Ketone	0.376	*0.339*	0.339	1.11	*1.00*	1.00	03/16/24	KCA	1	
Methyl tert-butyl ether(MTBE)	ND	*0.278*	0.278	ND	*1.00*	1.00	03/16/24	KCA	1	
Methylene Chloride	ND	*0.863*	0.863	ND	*3.00*	3.00	03/16/24	KCA	1	
Naphthalene	ND	*0.200*	0.200	ND	*1.05*	1.05	03/16/24	KCA	1	
n-Butylbenzene	ND	*0.182*	0.182	ND	*1.00*	1.00	03/16/24	KCA	1	1
o-Xylene	ND	*0.230*	0.230	ND	*1.00*	1.00	03/16/24	KCA	1	
Propylene	ND	*0.581*	0.581	ND	*1.00*	1.00	03/16/24	KCA	1	1
sec-Butylbenzene	ND	*0.182*	0.182	ND	*1.00*	1.00	03/16/24	KCA	1	1
Styrene	ND	*0.235*	0.235	ND	*1.00*	1.00	03/16/24	KCA	1	
Tetrachloroethene	0.064	*0.037*	0.037	0.43	*0.25*	0.25	03/16/24	KCA	1	
Tetrahydrofuran	ND	*0.339*	0.339	ND	*1.00*	1.00	03/16/24	KCA	1	1
Toluene	0.772	*0.266*	0.266	2.91	*1.00*	1.00	03/16/24	KCA	1	
Trans-1,2-Dichloroethene	ND	*0.252*	0.252	ND	*1.00*	1.00	03/16/24	KCA	1	
trans-1,3-Dichloropropene	ND	*0.221*	0.221	ND	*1.00*	1.00	03/16/24	KCA	1	
Trichloroethene	ND	*0.037*	0.037	ND	*0.20*	0.20	03/16/24	KCA	1	
Trichlorofluoromethane	0.196	*0.178*	0.178	1.10	*1.00*	1.00	03/16/24	KCA	1	
Trichlorotrifluoroethane	ND	*0.131*	0.131	ND	*1.00*	1.00	03/16/24	KCA	1	
Vinyl Chloride	ND	*0.078*	0.078	ND	*0.20*	0.20	03/16/24	KCA	1	
QA/QC Surrogates/Internals										
% Bromofluorobenzene	109	*%*	%	109	*%*	%	03/16/24	KCA	1	
% IS-1,4-Difluorobenzene	93	*%*	%	93	*%*	%	03/16/24	KCA	1	
% IS-Bromochloromethane	91	*%*	%	91	*%*	%	03/16/24	KCA	1	
% IS-Chlorobenzene-d5	93	*%*	%	93	*%*	%	03/16/24	KCA	1	

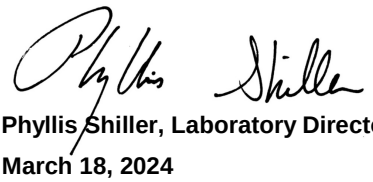
Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit1
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

March 18, 2024

Reviewed and Released by: Rashmi Makol, Project Manager

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

March 18, 2024

FOR: Attn: Ariel Czemerinski
AMC Engineering PLLC
18-36 42nd Street
Astoria, NY 11105

Sample Information		Custody Information		Date	Time
Matrix:	AIR	Collected by:	EW	03/14/24	9:21
Location Code:	AMC-ENG	Received by:	CP	03/15/24	17:15
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					
Canister Id:	13646				

Laboratory Data

SDG ID: GCQ28761
Phoenix ID: CQ28762

Project ID: 69-02 QUEENS BLVD
Client ID: IA-CR

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution	
Volatiles (TO15)										
1,1,1,2-Tetrachloroethane	ND	*0.146*	0.146	ND	*1.00*	1.00	03/16/24	KCA	1	1
1,1,1-Trichloroethane	ND	*0.183*	0.183	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1,2,2-Tetrachloroethane	ND	*0.146*	0.146	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1,2-Trichloroethane	ND	*0.183*	0.183	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1-Dichloroethane	ND	*0.247*	0.247	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1-Dichloroethene	ND	*0.051*	0.051	ND	*0.20*	0.20	03/16/24	KCA	1	
1,2,4-Trichlorobenzene	ND	*0.135*	0.135	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2,4-Trimethylbenzene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dibromoethane(EDB)	ND	*0.130*	0.130	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichloroethane	ND	*0.247*	0.247	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-dichloropropane	ND	*0.217*	0.217	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichlorotetrafluoroethane	ND	*0.143*	0.143	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3,5-Trimethylbenzene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3-Butadiene	ND	*0.452*	0.452	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,4-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,4-Dioxane	ND	*0.278*	0.278	ND	*1.00*	1.00	03/16/24	KCA	1	
2-Hexanone(MBK)	ND	*0.244*	0.244	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Ethyltoluene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Isopropyltoluene	ND	*0.182*	0.182	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Methyl-2-pentanone(MIBK)	ND	*0.244*	0.244	ND	*1.00*	1.00	03/16/24	KCA	1	
Acetone	5.78	*0.421*	0.421	13.7	*1.00*	1.00	03/16/24	KCA	1	
Acrylonitrile	ND	*0.461*	0.461	ND	*1.00*	1.00	03/16/24	KCA	1	
Benzene	ND	*0.313*	0.313	ND	*1.00*	1.00	03/16/24	KCA	1	
Benzyl chloride	ND	*0.193*	0.193	ND	*1.00*	1.00	03/16/24	KCA	1	

Project ID: 69-02 QUEENS BLVD
Client ID: IA-CR

Phoenix I.D.: CQ28762

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution	
Bromodichloromethane	ND	*0.149*	0.149	ND	*1.00*	1.00	03/16/24	KCA	1	
Bromoform	ND	*0.097*	0.097	ND	*1.00*	1.00	03/16/24	KCA	1	
Bromomethane	ND	*0.258*	0.258	ND	*1.00*	1.00	03/16/24	KCA	1	
Carbon Disulfide	ND	*0.321*	0.321	ND	*1.00*	1.00	03/16/24	KCA	1	
Carbon Tetrachloride	0.078	*0.032*	0.032	0.49	*0.20*	0.20	03/16/24	KCA	1	
Chlorobenzene	ND	*0.217*	0.217	ND	*1.00*	1.00	03/16/24	KCA	1	
Chloroethane	ND	*0.379*	0.379	ND	*1.00*	1.00	03/16/24	KCA	1	
Chloroform	ND	*0.205*	0.205	ND	*1.00*	1.00	03/16/24	KCA	1	
Chloromethane	ND	*0.485*	0.485	ND	*1.00*	1.00	03/16/24	KCA	1	
Cis-1,2-Dichloroethene	ND	*0.051*	0.051	ND	*0.20*	0.20	03/16/24	KCA	1	
cis-1,3-Dichloropropene	ND	*0.221*	0.221	ND	*1.00*	1.00	03/16/24	KCA	1	
Cyclohexane	ND	*0.291*	0.291	ND	*1.00*	1.00	03/16/24	KCA	1	
Dibromochloromethane	ND	*0.118*	0.118	ND	*1.00*	1.00	03/16/24	KCA	1	
Dichlorodifluoromethane	0.391	*0.202*	0.202	1.93	*1.00*	1.00	03/16/24	KCA	1	
Ethanol	14.6	*0.531*	0.531	27.5	*1.00*	1.00	03/16/24	KCA	1	1
Ethyl acetate	ND	*0.278*	0.278	ND	*1.00*	1.00	03/16/24	KCA	1	1
Ethylbenzene	ND	*0.230*	0.230	ND	*1.00*	1.00	03/16/24	KCA	1	
Heptane	ND	*0.244*	0.244	ND	*1.00*	1.00	03/16/24	KCA	1	
Hexachlorobutadiene	ND	*0.094*	0.094	ND	*1.00*	1.00	03/16/24	KCA	1	
Hexane	ND	*0.284*	0.284	ND	*1.00*	1.00	03/16/24	KCA	1	
Isooctane	ND	*0.200*	0.200	ND	*0.93*	0.93	03/16/24	KCA	1	
Isopropylalcohol	1.28	*0.407*	0.407	3.14	*1.00*	1.00	03/16/24	KCA	1	
Isopropylbenzene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	
m,p-Xylene	0.355	*0.230*	0.230	1.54	*1.00*	1.00	03/16/24	KCA	1	
Methyl Ethyl Ketone	0.427	*0.339*	0.339	1.26	*1.00*	1.00	03/16/24	KCA	1	
Methyl tert-butyl ether(MTBE)	ND	*0.278*	0.278	ND	*1.00*	1.00	03/16/24	KCA	1	
Methylene Chloride	ND	*0.863*	0.863	ND	*3.00*	3.00	03/16/24	KCA	1	
Naphthalene	ND	*0.200*	0.200	ND	*1.05*	1.05	03/16/24	KCA	1	
n-Butylbenzene	ND	*0.182*	0.182	ND	*1.00*	1.00	03/16/24	KCA	1	1
o-Xylene	ND	*0.230*	0.230	ND	*1.00*	1.00	03/16/24	KCA	1	
Propylene	ND	*0.581*	0.581	ND	*1.00*	1.00	03/16/24	KCA	1	1
sec-Butylbenzene	ND	*0.182*	0.182	ND	*1.00*	1.00	03/16/24	KCA	1	1
Styrene	ND	*0.235*	0.235	ND	*1.00*	1.00	03/16/24	KCA	1	
Tetrachloroethene	0.091	*0.037*	0.037	0.62	*0.25*	0.25	03/16/24	KCA	1	
Tetrahydrofuran	ND	*0.339*	0.339	ND	*1.00*	1.00	03/16/24	KCA	1	1
Toluene	0.763	*0.266*	0.266	2.87	*1.00*	1.00	03/16/24	KCA	1	
Trans-1,2-Dichloroethene	ND	*0.252*	0.252	ND	*1.00*	1.00	03/16/24	KCA	1	
trans-1,3-Dichloropropene	ND	*0.221*	0.221	ND	*1.00*	1.00	03/16/24	KCA	1	
Trichloroethene	ND	*0.037*	0.037	ND	*0.20*	0.20	03/16/24	KCA	1	
Trichlorofluoromethane	0.182	*0.178*	0.178	1.02	*1.00*	1.00	03/16/24	KCA	1	
Trichlorotrifluoroethane	ND	*0.131*	0.131	ND	*1.00*	1.00	03/16/24	KCA	1	
Vinyl Chloride	ND	*0.078*	0.078	ND	*0.20*	0.20	03/16/24	KCA	1	
QA/QC Surrogates/Internals										
% Bromofluorobenzene	106	*%*	%	106	*%*	%	03/16/24	KCA	1	
% IS-1,4-Difluorobenzene	101	*%*	%	101	*%*	%	03/16/24	KCA	1	
% IS-Bromochloromethane	98	*%*	%	98	*%*	%	03/16/24	KCA	1	
% IS-Chlorobenzene-d5	98	*%*	%	98	*%*	%	03/16/24	KCA	1	

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit1
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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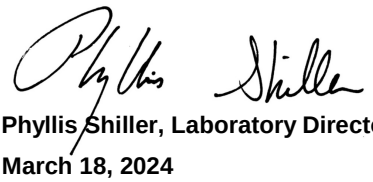


Phyllis Shiller, Laboratory Director

March 18, 2024

Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

March 18, 2024

FOR: Attn: Ariel Czemerinski
AMC Engineering PLLC
18-36 42nd Street
Astoria, NY 11105

Sample Information		Custody Information		Date	Time
Matrix:	AIR	Collected by:	EW	03/14/24	9:19
Location Code:	AMC-ENG	Received by:	CP	03/15/24	17:15
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					
Canister Id:	28625				

Laboratory Data

SDG ID: GCQ28761
Phoenix ID: CQ28763

Project ID: 69-02 QUEENS BLVD
Client ID: IA-C

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution	
Volatiles (TO15)										
1,1,1,2-Tetrachloroethane	ND	*0.146*	0.146	ND	*1.00*	1.00	03/16/24	KCA	1	1
1,1,1-Trichloroethane	ND	*0.183*	0.183	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1,2,2-Tetrachloroethane	ND	*0.146*	0.146	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1,2-Trichloroethane	ND	*0.183*	0.183	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1-Dichloroethane	ND	*0.247*	0.247	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1-Dichloroethene	ND	*0.051*	0.051	ND	*0.20*	0.20	03/16/24	KCA	1	
1,2,4-Trichlorobenzene	ND	*0.135*	0.135	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2,4-Trimethylbenzene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dibromoethane(EDB)	ND	*0.130*	0.130	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichloroethane	ND	*0.247*	0.247	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-dichloropropane	ND	*0.217*	0.217	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichlorotetrafluoroethane	ND	*0.143*	0.143	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3,5-Trimethylbenzene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3-Butadiene	ND	*0.452*	0.452	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,4-Dichlorobenzene	0.269	*0.166*	0.166	1.62	*1.00*	1.00	03/16/24	KCA	1	
1,4-Dioxane	ND	*0.278*	0.278	ND	*1.00*	1.00	03/16/24	KCA	1	
2-Hexanone(MBK)	ND	*0.244*	0.244	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Ethyltoluene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Isopropyltoluene	ND	*0.182*	0.182	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Methyl-2-pentanone(MIBK)	ND	*0.244*	0.244	ND	*1.00*	1.00	03/16/24	KCA	1	
Acetone	7.28	*0.421*	0.421	17.3	*1.00*	1.00	03/16/24	KCA	1	
Acrylonitrile	ND	*0.461*	0.461	ND	*1.00*	1.00	03/16/24	KCA	1	
Benzene	ND	*0.313*	0.313	ND	*1.00*	1.00	03/16/24	KCA	1	
Benzyl chloride	ND	*0.193*	0.193	ND	*1.00*	1.00	03/16/24	KCA	1	

Project ID: 69-02 QUEENS BLVD
Client ID: IA-C

Phoenix I.D.: CQ28763

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution	
Bromodichloromethane	ND	*0.149*	0.149	ND	*1.00*	1.00	03/16/24	KCA	1	
Bromoform	ND	*0.097*	0.097	ND	*1.00*	1.00	03/16/24	KCA	1	
Bromomethane	ND	*0.258*	0.258	ND	*1.00*	1.00	03/16/24	KCA	1	
Carbon Disulfide	ND	*0.321*	0.321	ND	*1.00*	1.00	03/16/24	KCA	1	
Carbon Tetrachloride	0.081	*0.032*	0.032	0.51	*0.20*	0.20	03/16/24	KCA	1	
Chlorobenzene	ND	*0.217*	0.217	ND	*1.00*	1.00	03/16/24	KCA	1	
Chloroethane	ND	*0.379*	0.379	ND	*1.00*	1.00	03/16/24	KCA	1	
Chloroform	ND	*0.205*	0.205	ND	*1.00*	1.00	03/16/24	KCA	1	
Chloromethane	ND	*0.485*	0.485	ND	*1.00*	1.00	03/16/24	KCA	1	
Cis-1,2-Dichloroethene	ND	*0.051*	0.051	ND	*0.20*	0.20	03/16/24	KCA	1	
cis-1,3-Dichloropropene	ND	*0.221*	0.221	ND	*1.00*	1.00	03/16/24	KCA	1	
Cyclohexane	ND	*0.291*	0.291	ND	*1.00*	1.00	03/16/24	KCA	1	
Dibromochloromethane	ND	*0.118*	0.118	ND	*1.00*	1.00	03/16/24	KCA	1	
Dichlorodifluoromethane	0.412	*0.202*	0.202	2.04	*1.00*	1.00	03/16/24	KCA	1	
Ethanol	14.7	*0.531*	0.531	27.7	*1.00*	1.00	03/16/24	KCA	1	1
Ethyl acetate	ND	*0.278*	0.278	ND	*1.00*	1.00	03/16/24	KCA	1	1
Ethylbenzene	ND	*0.230*	0.230	ND	*1.00*	1.00	03/16/24	KCA	1	
Heptane	ND	*0.244*	0.244	ND	*1.00*	1.00	03/16/24	KCA	1	
Hexachlorobutadiene	ND	*0.094*	0.094	ND	*1.00*	1.00	03/16/24	KCA	1	
Hexane	ND	*0.284*	0.284	ND	*1.00*	1.00	03/16/24	KCA	1	
Isooctane	ND	*0.200*	0.200	ND	*0.93*	0.93	03/16/24	KCA	1	
Isopropylalcohol	1.09	*0.407*	0.407	2.68	*1.00*	1.00	03/16/24	KCA	1	
Isopropylbenzene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	
m,p-Xylene	0.512	*0.230*	0.230	2.22	*1.00*	1.00	03/16/24	KCA	1	
Methyl Ethyl Ketone	0.494	*0.339*	0.339	1.46	*1.00*	1.00	03/16/24	KCA	1	
Methyl tert-butyl ether(MTBE)	ND	*0.278*	0.278	ND	*1.00*	1.00	03/16/24	KCA	1	
Methylene Chloride	ND	*0.863*	0.863	ND	*3.00*	3.00	03/16/24	KCA	1	
Naphthalene	ND	*0.200*	0.200	ND	*1.05*	1.05	03/16/24	KCA	1	
n-Butylbenzene	ND	*0.182*	0.182	ND	*1.00*	1.00	03/16/24	KCA	1	1
o-Xylene	ND	*0.230*	0.230	ND	*1.00*	1.00	03/16/24	KCA	1	
Propylene	ND	*0.581*	0.581	ND	*1.00*	1.00	03/16/24	KCA	1	1
sec-Butylbenzene	ND	*0.182*	0.182	ND	*1.00*	1.00	03/16/24	KCA	1	1
Styrene	ND	*0.235*	0.235	ND	*1.00*	1.00	03/16/24	KCA	1	
Tetrachloroethene	0.048	*0.037*	0.037	0.33	*0.25*	0.25	03/16/24	KCA	1	
Tetrahydrofuran	ND	*0.339*	0.339	ND	*1.00*	1.00	03/16/24	KCA	1	1
Toluene	0.724	*0.266*	0.266	2.73	*1.00*	1.00	03/16/24	KCA	1	
Trans-1,2-Dichloroethene	ND	*0.252*	0.252	ND	*1.00*	1.00	03/16/24	KCA	1	
trans-1,3-Dichloropropene	ND	*0.221*	0.221	ND	*1.00*	1.00	03/16/24	KCA	1	
Trichloroethene	ND	*0.037*	0.037	ND	*0.20*	0.20	03/16/24	KCA	1	
Trichlorofluoromethane	0.192	*0.178*	0.178	1.08	*1.00*	1.00	03/16/24	KCA	1	
Trichlorotrifluoroethane	ND	*0.131*	0.131	ND	*1.00*	1.00	03/16/24	KCA	1	
Vinyl Chloride	ND	*0.078*	0.078	ND	*0.20*	0.20	03/16/24	KCA	1	
QA/QC Surrogates/Internals										
% Bromofluorobenzene	107	*%*	%	107	*%*	%	03/16/24	KCA	1	
% IS-1,4-Difluorobenzene	95	*%*	%	95	*%*	%	03/16/24	KCA	1	
% IS-Bromochloromethane	92	*%*	%	92	*%*	%	03/16/24	KCA	1	
% IS-Chlorobenzene-d5	93	*%*	%	93	*%*	%	03/16/24	KCA	1	

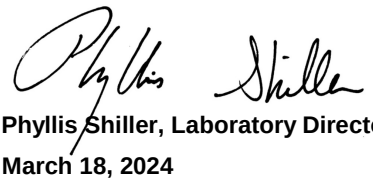
Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit1
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

March 18, 2024

Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

March 18, 2024

FOR: Attn: Ariel Czemerinski
AMC Engineering PLLC
18-36 42nd Street
Astoria, NY 11105

Sample Information		Custody Information		Date	Time
Matrix:	AIR	Collected by:	EW	03/14/24	9:24
Location Code:	AMC-ENG	Received by:	CP	03/15/24	17:15
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					
Canister Id:	9487				

Laboratory Data

SDG ID: GCQ28761
Phoenix ID: CQ28764

Project ID: 69-02 QUEENS BLVD
Client ID: IA-S DUP

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution	
Volatiles (TO15)										
1,1,1,2-Tetrachloroethane	ND	*0.146*	0.146	ND	*1.00*	1.00	03/16/24	KCA	1	1
1,1,1-Trichloroethane	ND	*0.183*	0.183	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1,2,2-Tetrachloroethane	ND	*0.146*	0.146	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1,2-Trichloroethane	ND	*0.183*	0.183	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1-Dichloroethane	ND	*0.247*	0.247	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1-Dichloroethene	ND	*0.051*	0.051	ND	*0.20*	0.20	03/16/24	KCA	1	
1,2,4-Trichlorobenzene	ND	*0.135*	0.135	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2,4-Trimethylbenzene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dibromoethane(EDB)	ND	*0.130*	0.130	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichloroethane	ND	*0.247*	0.247	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-dichloropropane	ND	*0.217*	0.217	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichlorotetrafluoroethane	ND	*0.143*	0.143	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3,5-Trimethylbenzene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3-Butadiene	ND	*0.452*	0.452	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,4-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,4-Dioxane	ND	*0.278*	0.278	ND	*1.00*	1.00	03/16/24	KCA	1	
2-Hexanone(MBK)	ND	*0.244*	0.244	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Ethyltoluene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Isopropyltoluene	ND	*0.182*	0.182	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Methyl-2-pentanone(MIBK)	ND	*0.244*	0.244	ND	*1.00*	1.00	03/16/24	KCA	1	
Acetone	5.43	*0.421*	0.421	12.9	*1.00*	1.00	03/16/24	KCA	1	
Acrylonitrile	ND	*0.461*	0.461	ND	*1.00*	1.00	03/16/24	KCA	1	
Benzene	ND	*0.313*	0.313	ND	*1.00*	1.00	03/16/24	KCA	1	
Benzyl chloride	ND	*0.193*	0.193	ND	*1.00*	1.00	03/16/24	KCA	1	

Project ID: 69-02 QUEENS BLVD
Client ID: IA-S DUP

Phoenix I.D.: CQ28764

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution	
Bromodichloromethane	ND	*0.149*	0.149	ND	*1.00*	1.00	03/16/24	KCA	1	
Bromoform	ND	*0.097*	0.097	ND	*1.00*	1.00	03/16/24	KCA	1	
Bromomethane	ND	*0.258*	0.258	ND	*1.00*	1.00	03/16/24	KCA	1	
Carbon Disulfide	ND	*0.321*	0.321	ND	*1.00*	1.00	03/16/24	KCA	1	
Carbon Tetrachloride	0.077	*0.032*	0.032	0.48	*0.20*	0.20	03/16/24	KCA	1	
Chlorobenzene	ND	*0.217*	0.217	ND	*1.00*	1.00	03/16/24	KCA	1	
Chloroethane	ND	*0.379*	0.379	ND	*1.00*	1.00	03/16/24	KCA	1	
Chloroform	ND	*0.205*	0.205	ND	*1.00*	1.00	03/16/24	KCA	1	
Chloromethane	0.502	*0.485*	0.485	1.04	*1.00*	1.00	03/16/24	KCA	1	
Cis-1,2-Dichloroethene	ND	*0.051*	0.051	ND	*0.20*	0.20	03/16/24	KCA	1	
cis-1,3-Dichloropropene	ND	*0.221*	0.221	ND	*1.00*	1.00	03/16/24	KCA	1	
Cyclohexane	ND	*0.291*	0.291	ND	*1.00*	1.00	03/16/24	KCA	1	
Dibromochloromethane	ND	*0.118*	0.118	ND	*1.00*	1.00	03/16/24	KCA	1	
Dichlorodifluoromethane	0.396	*0.202*	0.202	1.96	*1.00*	1.00	03/16/24	KCA	1	
Ethanol	13.8	*0.531*	0.531	26.0	*1.00*	1.00	03/16/24	KCA	1	1
Ethyl acetate	ND	*0.278*	0.278	ND	*1.00*	1.00	03/16/24	KCA	1	1
Ethylbenzene	ND	*0.230*	0.230	ND	*1.00*	1.00	03/16/24	KCA	1	
Heptane	ND	*0.244*	0.244	ND	*1.00*	1.00	03/16/24	KCA	1	
Hexachlorobutadiene	ND	*0.094*	0.094	ND	*1.00*	1.00	03/16/24	KCA	1	
Hexane	ND	*0.284*	0.284	ND	*1.00*	1.00	03/16/24	KCA	1	
Isooctane	ND	*0.200*	0.200	ND	*0.93*	0.93	03/16/24	KCA	1	
Isopropylalcohol	1.33	*0.407*	0.407	3.27	*1.00*	1.00	03/16/24	KCA	1	
Isopropylbenzene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	
m,p-Xylene	0.333	*0.230*	0.230	1.45	*1.00*	1.00	03/16/24	KCA	1	
Methyl Ethyl Ketone	0.713	*0.339*	0.339	2.10	*1.00*	1.00	03/16/24	KCA	1	
Methyl tert-butyl ether(MTBE)	ND	*0.278*	0.278	ND	*1.00*	1.00	03/16/24	KCA	1	
Methylene Chloride	ND	*0.863*	0.863	ND	*3.00*	3.00	03/16/24	KCA	1	
Naphthalene	ND	*0.200*	0.200	ND	*1.05*	1.05	03/16/24	KCA	1	
n-Butylbenzene	ND	*0.182*	0.182	ND	*1.00*	1.00	03/16/24	KCA	1	1
o-Xylene	ND	*0.230*	0.230	ND	*1.00*	1.00	03/16/24	KCA	1	
Propylene	ND	*0.581*	0.581	ND	*1.00*	1.00	03/16/24	KCA	1	1
sec-Butylbenzene	ND	*0.182*	0.182	ND	*1.00*	1.00	03/16/24	KCA	1	1
Styrene	ND	*0.235*	0.235	ND	*1.00*	1.00	03/16/24	KCA	1	
Tetrachloroethene	0.057	*0.037*	0.037	0.39	*0.25*	0.25	03/16/24	KCA	1	
Tetrahydrofuran	ND	*0.339*	0.339	ND	*1.00*	1.00	03/16/24	KCA	1	1
Toluene	0.722	*0.266*	0.266	2.72	*1.00*	1.00	03/16/24	KCA	1	
Trans-1,2-Dichloroethene	ND	*0.252*	0.252	ND	*1.00*	1.00	03/16/24	KCA	1	
trans-1,3-Dichloropropene	ND	*0.221*	0.221	ND	*1.00*	1.00	03/16/24	KCA	1	
Trichloroethene	ND	*0.037*	0.037	ND	*0.20*	0.20	03/16/24	KCA	1	
Trichlorofluoromethane	0.185	*0.178*	0.178	1.04	*1.00*	1.00	03/16/24	KCA	1	
Trichlorotrifluoroethane	ND	*0.131*	0.131	ND	*1.00*	1.00	03/16/24	KCA	1	
Vinyl Chloride	ND	*0.078*	0.078	ND	*0.20*	0.20	03/16/24	KCA	1	
QA/QC Surrogates/Internals										
% Bromofluorobenzene	107	*%*	%	107	*%*	%	03/16/24	KCA	1	
% IS-1,4-Difluorobenzene	97	*%*	%	97	*%*	%	03/16/24	KCA	1	
% IS-Bromochloromethane	94	*%*	%	94	*%*	%	03/16/24	KCA	1	
% IS-Chlorobenzene-d5	95	*%*	%	95	*%*	%	03/16/24	KCA	1	

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit1
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
March 18, 2024
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Canister Sampling Information

March 18, 2024

FOR: Attn: Ariel Czemerinski
AMC Engineering PLLC
18-36 42nd Street
Astoria, NY 11105

Location Code: AMC-ENG

SDG I.D.: GCQ28761

Project ID: 69-02 QUEENS BLVD

						Laboratory					Field			
Client Id	Lab Id	Canister Id	Canister Type	Reg. Id	Chk Out Date	Out Hg	In Hg	Out Flow	In Flow	Flow RPD	Start Hg	End Hg	Sampling Start Date	Sampling End Date
IA-S	CQ28761	16001	6.0L	2860	03/12/24	-30	-6	3	2.99	0.3	-30	-17	03/14/24 10:19	03/15/24 09:23
IA-CR	CQ28762	13646	6.0L	3513	03/12/24	-30	-10	3.05	3.2	4.8	-30	-11.5	03/14/24 10:17	03/15/24 09:21
IA-C	CQ28763	28625	6.0L	3509	03/12/24	-30	-5	3.12	3.16	1.3	-30	-6.5	03/14/24 10:14	03/15/24 09:19
IA-S DUP	CQ28764	9487	6.0L	2889	03/12/24	-30	-4	3.24	3.3	1.8	-30	-5	03/14/24 10:20	03/15/24 09:24

Monday, March 18, 2024

Criteria: None

State: NY

Sample Criteria Exceedances Report

GCQ28761 - AMC-ENG

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

CHAIN OF CUSTODY RECORD
AIR ANALYSES

PHOENIX Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Telephone: 860.645.1102 • Fax: 860.645.0823
AMC-ENG

860-645-1102
email: greg@phoenixlabs.com

P.O. # Page 1 of 1

Data Delivery:
☐ Fax #:
☒ Email: Ariel@AMC-Engineering
☐ Phone #:

Report to:	emma	Project Name:	69-02 Queens Blvd	Data Format: (Circle) Equis Excel Other:	
Customer:	AMC Engineering PLLC	Invoice to:	Ariel Czemvinski	Requested Deliverable: RCP ASP CAT B	
Address:	18-36 42nd Street		AMC Engineering	MCP NJ Deliverables	
15619	Astoria, NY 11105	Sampled by:	Emma Waechter	Quote Number:	

Phoenix ID #	Client Sample ID	Canister ID #	Canister Size (L)	Outgoing Canister Pressure (" Hg)	Incoming Canister Pressure ("Hg)	Flow Regulator ID #	Flow Controller Setting (mL/min)	Sampling Start Time	Sampling End Time	Sample Start Date	Canister Pressure at Start (" Hg)	Canister Pressure at End ("Hg)	Ambient/Indoor Air	Soil Gas	Grab (G) Composite (C)	TO-15	APH	
		THIS SECTION FOR LAB USE ONLY											MATRIX			ANALYSES		
28761	1A-S	16001	6.0L	-30	-6	2860	3	10:19	9:23	3/14/24	-30	-17	X			X		
28762	1A-CR	13646	6.0L	-30	-10	3513	3.05	10:17	9:21	3/14/24	-30	-11.5	X			X		
28763	1A-C	28625	6.0L	-30	-5	3509	3.12	10:14	9:19	3/14/24	-30	-6.5	X			X		
28764	1A-S DUP	9487	6.0L	-30	-4	2889	3.24	10:20	9:24	3/14/24	-30	-5	X			X		

Relinquished by:	Accepted by:	Date:	Time:
		3/15/24	1348
		3/15/24	1520

I attest that all media released by Phoenix Environmental Laboratories, Inc. have been received in good working condition and agree to the terms and conditions as listed on the back of this document:

Signature: Date: 3/15/24

State Where Samples Collected: NY

SPECIAL INSTRUCTIONS, QC REQUIREMENTS, REGULATORY INFORMATION:

(4) - 6.0L 24 hr

Turnaround Time:
1 Day* ☐
2 Day* ☐
3 Day* ☐
4 Day* ☐
5 Day* ☐
Standard ☒
*SURCHARGES MAY APPLY

Requested Criteria: (Please Circle) CT:	MA:	NJ:	NY:	PA:	VT:
TAC I/C TAC RES SVVC I/C SVVC RES GWV I/C GWV CES	**Indoor Air:** Residential Ind/Commercial **Soil Gas:** Residential Ind/Commercial	**Indoor Air:** Residential Ind/Commercial **Soil Gas:** Residential Ind/Commercial	Vapor Intrusion	**Indoor Air** Residential Non-residential	**Indoor Air** Residential Industrial **Sub-slab** Residential Industrial

3-15-24 17:15

Appendix C: Data Usability Summary Report

ALPHA GEOSCIENCE

Geology
Hydrology
Remediation
Water Supply

May 14, 2024

Ms. Emma Waechter, EIT
Environmental Engineer
AMC Engineering PLLC
18-36 42nd Street
Astoria, NY 11105

Re: Data Validation Reports
69-02 Queens Blvd.
March 2024 Indoor Air Sampling Event

Dear Ms. Waechter:

The Data Usability Summary Report and QA/QC review are attached to this letter for the 69-02 Queens Blvd. site, March 2024 indoor air sampling event. The data for Phoenix Environmental Laboratories, Inc. Inc. SDG number GCQ28761 are acceptable with minor issues that are identified in the DUSR and QA/QC review summary. There are no data that are rejected (R) in the data pack.

A list of data validation acronyms and qualifiers is attached to assist you in interpreting the data validation reviews. If you have any questions concerning the work performed, please contact me at (518) 348-6995. Thank you for providing us an opportunity with AMC Engineering, PLLC.

Sincerely,
Alpha Geoscience

Donald Anné
Senior Chemist

Alpha Geoscience: Acronyms and Definitions

Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation

Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

U = Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.

R = Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.

N = Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.

J = Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.

J- = Analyte is present. Reported value may be biased low and associated with a higher level of uncertainty than is normally expected with the analytical method.

J+ = Analyte is present. Reported value may be biased high andassociated with a higher level of uncertainty than is normally expected with the analytical method.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

ALPHA GEOSCIENCE

Geology

Hydrology

Remediation

Water Supply

Data Usability Summary Report for
Phoenix Environmental Laboratories, Inc.
SDG: GCQ28761

3 Indoor Air Samples and 1 Field Duplicate
Collected March 14, 2024

Prepared by: Donald Anné
May 14, 2024

The data packages contain the documentation required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data pack contained the results for 3 indoor air samples and 1 field duplicate analyzed for TO15 volatiles.

The overall performances of the analyses are acceptable. Phoenix Environmental Laboratories, Inc. did fulfill the requirements of the analytical method.

The data are acceptable with some minor issues that are identified in the accompanying data validation reviews. The following data were flagged:

- The positive volatile results for ethanol were qualified as "estimated, biased low" (J-) for all 3 indoor air samples and field duplicate because the percent recovery for ethanol was below the QC limits, but not below 25% in the associated air/soil vapor LCS.

- The positive volatile results for methyl ethyl ketone (MEK) were qualified as estimated (J) in samples IA-S and IA-S DUP because the relative percent difference for MEK was above the allowable maximum in the air field duplicate pair IA-S/IA-S DUP.

All data are considered usable, with estimated (J or J-) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.

Qualified Data Section

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 03, 2024

FOR: Attn: Ariel Czemerinski
AMC Engineering PLLC
18-36 42nd Street
Astoria, NY 11105

Sample Information		Custody Information		Date	Time
Matrix:	AIR	Collected by:	EW	03/14/24	9:23
Location Code:	AMC-ENG	Received by:	CP	03/15/24	17:15
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					
Canister Id:	16001				

Laboratory Data

SDG ID: GCQ28761
Phoenix ID: CQ28761

Project ID: 69-02 QUEENS BLVD
Client ID: IA-S

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution	
Volatiles (TO15)										
1,1,1,2-Tetrachloroethane	ND	*0.146*	0.146	ND	*1.00*	1.00	03/16/24	KCA	1	1
1,1,1-Trichloroethane	ND	*0.183*	0.183	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1,2,2-Tetrachloroethane	ND	*0.146*	0.146	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1,2-Trichloroethane	ND	*0.183*	0.183	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1-Dichloroethane	ND	*0.247*	0.247	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1-Dichloroethene	ND	*0.051*	0.051	ND	*0.20*	0.20	03/16/24	KCA	1	
1,2,4-Trichlorobenzene	ND	*0.135*	0.135	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2,4-Trimethylbenzene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dibromoethane(EDB)	ND	*0.130*	0.130	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichloroethane	ND	*0.247*	0.247	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-dichloropropane	ND	*0.217*	0.217	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichlorotetrafluoroethane	ND	*0.143*	0.143	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3,5-Trimethylbenzene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3-Butadiene	ND	*0.452*	0.452	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,4-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,4-Dioxane	ND	*0.278*	0.278	ND	*1.00*	1.00	03/16/24	KCA	1	
2-Hexanone(MBK)	ND	*0.244*	0.244	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Ethyltoluene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Isopropyltoluene	ND	*0.182*	0.182	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Methyl-2-pentanone(MIBK)	ND	*0.244*	0.244	ND	*1.00*	1.00	03/16/24	KCA	1	
Acetone	5.37	*0.421*	0.421	12.7	*1.00*	1.00	03/16/24	KCA	1	
Acrylonitrile	ND	*0.461*	0.461	ND	*1.00*	1.00	03/16/24	KCA	1	
Benzene	ND	*0.313*	0.313	ND	*1.00*	1.00	03/16/24	KCA	1	
Benzyl chloride	ND	*0.193*	0.193	ND	*1.00*	1.00	03/16/24	KCA	1	

Project ID: 69-02 QUEENS BLVD
Client ID: IA-S

Phoenix I.D.: CQ28761

Parameter	ppbv Result		ppbv RL	LOD/ MDL	ug/m3 Result		ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution	
Bromodichloromethane	ND		*0.149*	0.149	ND		*1.00*	1.00	03/16/24	KCA	1	
Bromoform	ND		*0.097*	0.097	ND		*1.00*	1.00	03/16/24	KCA	1	
Bromomethane	ND		*0.258*	0.258	ND		*1.00*	1.00	03/16/24	KCA	1	
Carbon Disulfide	ND		*0.321*	0.321	ND		*1.00*	1.00	03/16/24	KCA	1	
Carbon Tetrachloride	0.081		*0.032*	0.032	0.51		*0.20*	0.20	03/16/24	KCA	1	
Chlorobenzene	ND		*0.217*	0.217	ND		*1.00*	1.00	03/16/24	KCA	1	
Chloroethane	ND		*0.379*	0.379	ND		*1.00*	1.00	03/16/24	KCA	1	
Chloroform	ND		*0.205*	0.205	ND		*1.00*	1.00	03/16/24	KCA	1	
Chloromethane	0.502		*0.485*	0.485	1.04		*1.00*	1.00	03/16/24	KCA	1	
Cis-1,2-Dichloroethene	ND		*0.051*	0.051	ND		*0.20*	0.20	03/16/24	KCA	1	
cis-1,3-Dichloropropene	ND		*0.221*	0.221	ND		*1.00*	1.00	03/16/24	KCA	1	
Cyclohexane	ND		*0.291*	0.291	ND		*1.00*	1.00	03/16/24	KCA	1	
Dibromochloromethane	ND		*0.118*	0.118	ND		*1.00*	1.00	03/16/24	KCA	1	
Dichlorodifluoromethane	0.428		*0.202*	0.202	2.12		*1.00*	1.00	03/16/24	KCA	1	
Ethanol	13.9	J-	*0.531*	0.531	26.2	J-	*1.00*	1.00	03/16/24	KCA	1	1
Ethyl acetate	ND		*0.278*	0.278	ND		*1.00*	1.00	03/16/24	KCA	1	1
Ethylbenzene	ND		*0.230*	0.230	ND		*1.00*	1.00	03/16/24	KCA	1	
Heptane	ND		*0.244*	0.244	ND		*1.00*	1.00	03/16/24	KCA	1	
Hexachlorobutadiene	ND		*0.094*	0.094	ND		*1.00*	1.00	03/16/24	KCA	1	
Hexane	ND		*0.284*	0.284	ND		*1.00*	1.00	03/16/24	KCA	1	
Isooctane	ND		*0.200*	0.200	ND		*0.93*	0.93	03/16/24	KCA	1	
Isopropylalcohol	1.67		*0.407*	0.407	4.10		*1.00*	1.00	03/16/24	KCA	1	
Isopropylbenzene	ND		*0.204*	0.204	ND		*1.00*	1.00	03/16/24	KCA	1	
m,p-Xylene	0.328		*0.230*	0.230	1.42		*1.00*	1.00	03/16/24	KCA	1	
Methyl Ethyl Ketone	0.376	J	*0.339*	0.339	1.11	J	*1.00*	1.00	03/16/24	KCA	1	
Methyl tert-butyl ether(MTBE)	ND		*0.278*	0.278	ND		*1.00*	1.00	03/16/24	KCA	1	
Methylene Chloride	ND		*0.863*	0.863	ND		*3.00*	3.00	03/16/24	KCA	1	
Naphthalene	ND		*0.200*	0.200	ND		*1.05*	1.05	03/16/24	KCA	1	
n-Butylbenzene	ND		*0.182*	0.182	ND		*1.00*	1.00	03/16/24	KCA	1	1
o-Xylene	ND		*0.230*	0.230	ND		*1.00*	1.00	03/16/24	KCA	1	
Propylene	ND		*0.581*	0.581	ND		*1.00*	1.00	03/16/24	KCA	1	1
sec-Butylbenzene	ND		*0.182*	0.182	ND		*1.00*	1.00	03/16/24	KCA	1	1
Styrene	ND		*0.235*	0.235	ND		*1.00*	1.00	03/16/24	KCA	1	
Tetrachloroethene	0.064		*0.037*	0.037	0.43		*0.25*	0.25	03/16/24	KCA	1	
Tetrahydrofuran	ND		*0.339*	0.339	ND		*1.00*	1.00	03/16/24	KCA	1	1
Toluene	0.772		*0.266*	0.266	2.91		*1.00*	1.00	03/16/24	KCA	1	
Trans-1,2-Dichloroethene	ND		*0.252*	0.252	ND		*1.00*	1.00	03/16/24	KCA	1	
trans-1,3-Dichloropropene	ND		*0.221*	0.221	ND		*1.00*	1.00	03/16/24	KCA	1	
Trichloroethene	ND		*0.037*	0.037	ND		*0.20*	0.20	03/16/24	KCA	1	
Trichlorofluoromethane	0.196		*0.178*	0.178	1.10		*1.00*	1.00	03/16/24	KCA	1	
Trichlorotrifluoroethane	ND		*0.131*	0.131	ND		*1.00*	1.00	03/16/24	KCA	1	
Vinyl Chloride	ND		*0.078*	0.078	ND		*0.20*	0.20	03/16/24	KCA	1	
QA/QC Surrogates/Internals												
% Bromofluorobenzene	109		*%*	%	109		*%*	%	03/16/24	KCA	1	
% IS-1,4-Difluorobenzene	93		*%*	%	93		*%*	%	03/16/24	KCA	1	
% IS-Bromochloromethane	91		*%*	%	91		*%*	%	03/16/24	KCA	1	
% IS-Chlorobenzene-d5	93		*%*	%	93		*%*	%	03/16/24	KCA	1	

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit1
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
April 03, 2024
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 03, 2024

FOR: Attn: Ariel Czemerinski
AMC Engineering PLLC
18-36 42nd Street
Astoria, NY 11105

Sample Information		Custody Information		Date	Time
Matrix:	AIR	Collected by:	EW	03/14/24	9:21
Location Code:	AMC-ENG	Received by:	CP	03/15/24	17:15
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					
Canister Id:	13646				

Laboratory Data

SDG ID: GCQ28761
Phoenix ID: CQ28762

Project ID: 69-02 QUEENS BLVD
Client ID: IA-CR

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution	
Volatiles (TO15)										
1,1,1,2-Tetrachloroethane	ND	*0.146*	0.146	ND	*1.00*	1.00	03/16/24	KCA	1	1
1,1,1-Trichloroethane	ND	*0.183*	0.183	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1,2,2-Tetrachloroethane	ND	*0.146*	0.146	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1,2-Trichloroethane	ND	*0.183*	0.183	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1-Dichloroethane	ND	*0.247*	0.247	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1-Dichloroethene	ND	*0.051*	0.051	ND	*0.20*	0.20	03/16/24	KCA	1	
1,2,4-Trichlorobenzene	ND	*0.135*	0.135	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2,4-Trimethylbenzene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dibromoethane(EDB)	ND	*0.130*	0.130	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichloroethane	ND	*0.247*	0.247	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-dichloropropane	ND	*0.217*	0.217	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichlorotetrafluoroethane	ND	*0.143*	0.143	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3,5-Trimethylbenzene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3-Butadiene	ND	*0.452*	0.452	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,4-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,4-Dioxane	ND	*0.278*	0.278	ND	*1.00*	1.00	03/16/24	KCA	1	
2-Hexanone(MBK)	ND	*0.244*	0.244	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Ethyltoluene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Isopropyltoluene	ND	*0.182*	0.182	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Methyl-2-pentanone(MIBK)	ND	*0.244*	0.244	ND	*1.00*	1.00	03/16/24	KCA	1	
Acetone	5.78	*0.421*	0.421	13.7	*1.00*	1.00	03/16/24	KCA	1	
Acrylonitrile	ND	*0.461*	0.461	ND	*1.00*	1.00	03/16/24	KCA	1	
Benzene	ND	*0.313*	0.313	ND	*1.00*	1.00	03/16/24	KCA	1	
Benzyl chloride	ND	*0.193*	0.193	ND	*1.00*	1.00	03/16/24	KCA	1	

Project ID: 69-02 QUEENS BLVD
Client ID: IA-CR

Phoenix I.D.: CQ28762

Parameter	ppbv Result		ppbv RL	LOD/ MDL	ug/m3 Result		ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution	
Bromodichloromethane	ND		*0.149*	0.149	ND		*1.00*	1.00	03/16/24	KCA	1	
Bromoform	ND		*0.097*	0.097	ND		*1.00*	1.00	03/16/24	KCA	1	
Bromomethane	ND		*0.258*	0.258	ND		*1.00*	1.00	03/16/24	KCA	1	
Carbon Disulfide	ND		*0.321*	0.321	ND		*1.00*	1.00	03/16/24	KCA	1	
Carbon Tetrachloride	0.078		*0.032*	0.032	0.49		*0.20*	0.20	03/16/24	KCA	1	
Chlorobenzene	ND		*0.217*	0.217	ND		*1.00*	1.00	03/16/24	KCA	1	
Chloroethane	ND		*0.379*	0.379	ND		*1.00*	1.00	03/16/24	KCA	1	
Chloroform	ND		*0.205*	0.205	ND		*1.00*	1.00	03/16/24	KCA	1	
Chloromethane	ND		*0.485*	0.485	ND		*1.00*	1.00	03/16/24	KCA	1	
Cis-1,2-Dichloroethene	ND		*0.051*	0.051	ND		*0.20*	0.20	03/16/24	KCA	1	
cis-1,3-Dichloropropene	ND		*0.221*	0.221	ND		*1.00*	1.00	03/16/24	KCA	1	
Cyclohexane	ND		*0.291*	0.291	ND		*1.00*	1.00	03/16/24	KCA	1	
Dibromochloromethane	ND		*0.118*	0.118	ND		*1.00*	1.00	03/16/24	KCA	1	
Dichlorodifluoromethane	0.391		*0.202*	0.202	1.93		*1.00*	1.00	03/16/24	KCA	1	
Ethanol	14.6	J-	*0.531*	0.531	27.5	J-	*1.00*	1.00	03/16/24	KCA	1	1
Ethyl acetate	ND		*0.278*	0.278	ND		*1.00*	1.00	03/16/24	KCA	1	1
Ethylbenzene	ND		*0.230*	0.230	ND		*1.00*	1.00	03/16/24	KCA	1	
Heptane	ND		*0.244*	0.244	ND		*1.00*	1.00	03/16/24	KCA	1	
Hexachlorobutadiene	ND		*0.094*	0.094	ND		*1.00*	1.00	03/16/24	KCA	1	
Hexane	ND		*0.284*	0.284	ND		*1.00*	1.00	03/16/24	KCA	1	
Isooctane	ND		*0.200*	0.200	ND		*0.93*	0.93	03/16/24	KCA	1	
Isopropylalcohol	1.28		*0.407*	0.407	3.14		*1.00*	1.00	03/16/24	KCA	1	
Isopropylbenzene	ND		*0.204*	0.204	ND		*1.00*	1.00	03/16/24	KCA	1	
m,p-Xylene	0.355		*0.230*	0.230	1.54		*1.00*	1.00	03/16/24	KCA	1	
Methyl Ethyl Ketone	0.427		*0.339*	0.339	1.26		*1.00*	1.00	03/16/24	KCA	1	
Methyl tert-butyl ether(MTBE)	ND		*0.278*	0.278	ND		*1.00*	1.00	03/16/24	KCA	1	
Methylene Chloride	ND		*0.863*	0.863	ND		*3.00*	3.00	03/16/24	KCA	1	
Naphthalene	ND		*0.200*	0.200	ND		*1.05*	1.05	03/16/24	KCA	1	
n-Butylbenzene	ND		*0.182*	0.182	ND		*1.00*	1.00	03/16/24	KCA	1	1
o-Xylene	ND		*0.230*	0.230	ND		*1.00*	1.00	03/16/24	KCA	1	
Propylene	ND		*0.581*	0.581	ND		*1.00*	1.00	03/16/24	KCA	1	1
sec-Butylbenzene	ND		*0.182*	0.182	ND		*1.00*	1.00	03/16/24	KCA	1	1
Styrene	ND		*0.235*	0.235	ND		*1.00*	1.00	03/16/24	KCA	1	
Tetrachloroethene	0.091		*0.037*	0.037	0.62		*0.25*	0.25	03/16/24	KCA	1	
Tetrahydrofuran	ND		*0.339*	0.339	ND		*1.00*	1.00	03/16/24	KCA	1	1
Toluene	0.763		*0.266*	0.266	2.87		*1.00*	1.00	03/16/24	KCA	1	
Trans-1,2-Dichloroethene	ND		*0.252*	0.252	ND		*1.00*	1.00	03/16/24	KCA	1	
trans-1,3-Dichloropropene	ND		*0.221*	0.221	ND		*1.00*	1.00	03/16/24	KCA	1	
Trichloroethene	ND		*0.037*	0.037	ND		*0.20*	0.20	03/16/24	KCA	1	
Trichlorofluoromethane	0.182		*0.178*	0.178	1.02		*1.00*	1.00	03/16/24	KCA	1	
Trichlorotrifluoroethane	ND		*0.131*	0.131	ND		*1.00*	1.00	03/16/24	KCA	1	
Vinyl Chloride	ND		*0.078*	0.078	ND		*0.20*	0.20	03/16/24	KCA	1	
QA/QC Surrogates/Internals												
% Bromofluorobenzene	106		*%*	%	106		*%*	%	03/16/24	KCA	1	
% IS-1,4-Difluorobenzene	101		*%*	%	101		*%*	%	03/16/24	KCA	1	
% IS-Bromochloromethane	98		*%*	%	98		*%*	%	03/16/24	KCA	1	
% IS-Chlorobenzene-d5	98		*%*	%	98		*%*	%	03/16/24	KCA	1	

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit1
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
April 03, 2024
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 03, 2024

FOR: Attn: Ariel Czemerinski
AMC Engineering PLLC
18-36 42nd Street
Astoria, NY 11105

Sample Information		Custody Information		Date	Time
Matrix:	AIR	Collected by:	EW	03/14/24	9:19
Location Code:	AMC-ENG	Received by:	CP	03/15/24	17:15
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					
Canister Id:	28625				

Laboratory Data

SDG ID: GCQ28761
Phoenix ID: CQ28763

Project ID: 69-02 QUEENS BLVD
Client ID: IA-C

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution	
Volatiles (TO15)										
1,1,1,2-Tetrachloroethane	ND	*0.146*	0.146	ND	*1.00*	1.00	03/16/24	KCA	1	1
1,1,1-Trichloroethane	ND	*0.183*	0.183	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1,2,2-Tetrachloroethane	ND	*0.146*	0.146	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1,2-Trichloroethane	ND	*0.183*	0.183	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1-Dichloroethane	ND	*0.247*	0.247	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1-Dichloroethene	ND	*0.051*	0.051	ND	*0.20*	0.20	03/16/24	KCA	1	
1,2,4-Trichlorobenzene	ND	*0.135*	0.135	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2,4-Trimethylbenzene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dibromoethane(EDB)	ND	*0.130*	0.130	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichloroethane	ND	*0.247*	0.247	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-dichloropropane	ND	*0.217*	0.217	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichlorotetrafluoroethane	ND	*0.143*	0.143	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3,5-Trimethylbenzene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3-Butadiene	ND	*0.452*	0.452	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,4-Dichlorobenzene	0.269	*0.166*	0.166	1.62	*1.00*	1.00	03/16/24	KCA	1	
1,4-Dioxane	ND	*0.278*	0.278	ND	*1.00*	1.00	03/16/24	KCA	1	
2-Hexanone(MBK)	ND	*0.244*	0.244	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Ethyltoluene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Isopropyltoluene	ND	*0.182*	0.182	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Methyl-2-pentanone(MIBK)	ND	*0.244*	0.244	ND	*1.00*	1.00	03/16/24	KCA	1	
Acetone	7.28	*0.421*	0.421	17.3	*1.00*	1.00	03/16/24	KCA	1	
Acrylonitrile	ND	*0.461*	0.461	ND	*1.00*	1.00	03/16/24	KCA	1	
Benzene	ND	*0.313*	0.313	ND	*1.00*	1.00	03/16/24	KCA	1	
Benzyl chloride	ND	*0.193*	0.193	ND	*1.00*	1.00	03/16/24	KCA	1	

Project ID: 69-02 QUEENS BLVD
Client ID: IA-C

Phoenix I.D.: CQ28763

Parameter	ppbv Result		ppbv RL	LOD/ MDL	ug/m3 Result		ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution	
Bromodichloromethane	ND		*0.149*	0.149	ND		*1.00*	1.00	03/16/24	KCA	1	
Bromoform	ND		*0.097*	0.097	ND		*1.00*	1.00	03/16/24	KCA	1	
Bromomethane	ND		*0.258*	0.258	ND		*1.00*	1.00	03/16/24	KCA	1	
Carbon Disulfide	ND		*0.321*	0.321	ND		*1.00*	1.00	03/16/24	KCA	1	
Carbon Tetrachloride	0.081		*0.032*	0.032	0.51		*0.20*	0.20	03/16/24	KCA	1	
Chlorobenzene	ND		*0.217*	0.217	ND		*1.00*	1.00	03/16/24	KCA	1	
Chloroethane	ND		*0.379*	0.379	ND		*1.00*	1.00	03/16/24	KCA	1	
Chloroform	ND		*0.205*	0.205	ND		*1.00*	1.00	03/16/24	KCA	1	
Chloromethane	ND		*0.485*	0.485	ND		*1.00*	1.00	03/16/24	KCA	1	
Cis-1,2-Dichloroethene	ND		*0.051*	0.051	ND		*0.20*	0.20	03/16/24	KCA	1	
cis-1,3-Dichloropropene	ND		*0.221*	0.221	ND		*1.00*	1.00	03/16/24	KCA	1	
Cyclohexane	ND		*0.291*	0.291	ND		*1.00*	1.00	03/16/24	KCA	1	
Dibromochloromethane	ND		*0.118*	0.118	ND		*1.00*	1.00	03/16/24	KCA	1	
Dichlorodifluoromethane	0.412		*0.202*	0.202	2.04		*1.00*	1.00	03/16/24	KCA	1	
Ethanol	14.7	J-	*0.531*	0.531	27.7	J-	*1.00*	1.00	03/16/24	KCA	1	1
Ethyl acetate	ND		*0.278*	0.278	ND		*1.00*	1.00	03/16/24	KCA	1	1
Ethylbenzene	ND		*0.230*	0.230	ND		*1.00*	1.00	03/16/24	KCA	1	
Heptane	ND		*0.244*	0.244	ND		*1.00*	1.00	03/16/24	KCA	1	
Hexachlorobutadiene	ND		*0.094*	0.094	ND		*1.00*	1.00	03/16/24	KCA	1	
Hexane	ND		*0.284*	0.284	ND		*1.00*	1.00	03/16/24	KCA	1	
Isooctane	ND		*0.200*	0.200	ND		*0.93*	0.93	03/16/24	KCA	1	
Isopropylalcohol	1.09		*0.407*	0.407	2.68		*1.00*	1.00	03/16/24	KCA	1	
Isopropylbenzene	ND		*0.204*	0.204	ND		*1.00*	1.00	03/16/24	KCA	1	
m,p-Xylene	0.512		*0.230*	0.230	2.22		*1.00*	1.00	03/16/24	KCA	1	
Methyl Ethyl Ketone	0.494		*0.339*	0.339	1.46		*1.00*	1.00	03/16/24	KCA	1	
Methyl tert-butyl ether(MTBE)	ND		*0.278*	0.278	ND		*1.00*	1.00	03/16/24	KCA	1	
Methylene Chloride	ND		*0.863*	0.863	ND		*3.00*	3.00	03/16/24	KCA	1	
Naphthalene	ND		*0.200*	0.200	ND		*1.05*	1.05	03/16/24	KCA	1	
n-Butylbenzene	ND		*0.182*	0.182	ND		*1.00*	1.00	03/16/24	KCA	1	1
o-Xylene	ND		*0.230*	0.230	ND		*1.00*	1.00	03/16/24	KCA	1	
Propylene	ND		*0.581*	0.581	ND		*1.00*	1.00	03/16/24	KCA	1	1
sec-Butylbenzene	ND		*0.182*	0.182	ND		*1.00*	1.00	03/16/24	KCA	1	1
Styrene	ND		*0.235*	0.235	ND		*1.00*	1.00	03/16/24	KCA	1	
Tetrachloroethene	0.048		*0.037*	0.037	0.33		*0.25*	0.25	03/16/24	KCA	1	
Tetrahydrofuran	ND		*0.339*	0.339	ND		*1.00*	1.00	03/16/24	KCA	1	1
Toluene	0.724		*0.266*	0.266	2.73		*1.00*	1.00	03/16/24	KCA	1	
Trans-1,2-Dichloroethene	ND		*0.252*	0.252	ND		*1.00*	1.00	03/16/24	KCA	1	
trans-1,3-Dichloropropene	ND		*0.221*	0.221	ND		*1.00*	1.00	03/16/24	KCA	1	
Trichloroethene	ND		*0.037*	0.037	ND		*0.20*	0.20	03/16/24	KCA	1	
Trichlorofluoromethane	0.192		*0.178*	0.178	1.08		*1.00*	1.00	03/16/24	KCA	1	
Trichlorotrifluoroethane	ND		*0.131*	0.131	ND		*1.00*	1.00	03/16/24	KCA	1	
Vinyl Chloride	ND		*0.078*	0.078	ND		*0.20*	0.20	03/16/24	KCA	1	
QA/QC Surrogates/Internals												
% Bromofluorobenzene	107		*%*	%	107		*%*	%	03/16/24	KCA	1	
% IS-1,4-Difluorobenzene	95		*%*	%	95		*%*	%	03/16/24	KCA	1	
% IS-Bromochloromethane	92		*%*	%	92		*%*	%	03/16/24	KCA	1	
% IS-Chlorobenzene-d5	93		*%*	%	93		*%*	%	03/16/24	KCA	1	

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit1
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director
April 03, 2024
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

PHOENIX

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 03, 2024

FOR: Attn: Ariel Czemerinski
AMC Engineering PLLC
18-36 42nd Street
Astoria, NY 11105

Sample Information		Custody Information		Date	Time
Matrix:	AIR	Collected by:	EW	03/14/24	9:24
Location Code:	AMC-ENG	Received by:	CP	03/15/24	17:15
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					
Canister Id:	9487				

Laboratory Data

SDG ID: GCQ28761
Phoenix ID: CQ28764

Project ID: 69-02 QUEENS BLVD
Client ID: IA-S DUP

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution	
Volatiles (TO15)										
1,1,1,2-Tetrachloroethane	ND	*0.146*	0.146	ND	*1.00*	1.00	03/16/24	KCA	1	1
1,1,1-Trichloroethane	ND	*0.183*	0.183	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1,2,2-Tetrachloroethane	ND	*0.146*	0.146	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1,2-Trichloroethane	ND	*0.183*	0.183	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1-Dichloroethane	ND	*0.247*	0.247	ND	*1.00*	1.00	03/16/24	KCA	1	
1,1-Dichloroethene	ND	*0.051*	0.051	ND	*0.20*	0.20	03/16/24	KCA	1	
1,2,4-Trichlorobenzene	ND	*0.135*	0.135	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2,4-Trimethylbenzene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dibromoethane(EDB)	ND	*0.130*	0.130	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichloroethane	ND	*0.247*	0.247	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-dichloropropane	ND	*0.217*	0.217	ND	*1.00*	1.00	03/16/24	KCA	1	
1,2-Dichlorotetrafluoroethane	ND	*0.143*	0.143	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3,5-Trimethylbenzene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3-Butadiene	ND	*0.452*	0.452	ND	*1.00*	1.00	03/16/24	KCA	1	
1,3-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,4-Dichlorobenzene	ND	*0.166*	0.166	ND	*1.00*	1.00	03/16/24	KCA	1	
1,4-Dioxane	ND	*0.278*	0.278	ND	*1.00*	1.00	03/16/24	KCA	1	
2-Hexanone(MBK)	ND	*0.244*	0.244	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Ethyltoluene	ND	*0.204*	0.204	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Isopropyltoluene	ND	*0.182*	0.182	ND	*1.00*	1.00	03/16/24	KCA	1	1
4-Methyl-2-pentanone(MIBK)	ND	*0.244*	0.244	ND	*1.00*	1.00	03/16/24	KCA	1	
Acetone	5.43	*0.421*	0.421	12.9	*1.00*	1.00	03/16/24	KCA	1	
Acrylonitrile	ND	*0.461*	0.461	ND	*1.00*	1.00	03/16/24	KCA	1	
Benzene	ND	*0.313*	0.313	ND	*1.00*	1.00	03/16/24	KCA	1	
Benzyl chloride	ND	*0.193*	0.193	ND	*1.00*	1.00	03/16/24	KCA	1	

Project ID: 69-02 QUEENS BLVD
Client ID: IA-S DUP

Phoenix I.D.: CQ28764

Parameter	ppbv Result		ppbv RL	LOD/ MDL	ug/m3 Result		ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution	
Bromodichloromethane	ND		*0.149*	0.149	ND		*1.00*	1.00	03/16/24	KCA	1	
Bromoform	ND		*0.097*	0.097	ND		*1.00*	1.00	03/16/24	KCA	1	
Bromomethane	ND		*0.258*	0.258	ND		*1.00*	1.00	03/16/24	KCA	1	
Carbon Disulfide	ND		*0.321*	0.321	ND		*1.00*	1.00	03/16/24	KCA	1	
Carbon Tetrachloride	0.077		*0.032*	0.032	0.48		*0.20*	0.20	03/16/24	KCA	1	
Chlorobenzene	ND		*0.217*	0.217	ND		*1.00*	1.00	03/16/24	KCA	1	
Chloroethane	ND		*0.379*	0.379	ND		*1.00*	1.00	03/16/24	KCA	1	
Chloroform	ND		*0.205*	0.205	ND		*1.00*	1.00	03/16/24	KCA	1	
Chloromethane	0.502		*0.485*	0.485	1.04		*1.00*	1.00	03/16/24	KCA	1	
Cis-1,2-Dichloroethene	ND		*0.051*	0.051	ND		*0.20*	0.20	03/16/24	KCA	1	
cis-1,3-Dichloropropene	ND		*0.221*	0.221	ND		*1.00*	1.00	03/16/24	KCA	1	
Cyclohexane	ND		*0.291*	0.291	ND		*1.00*	1.00	03/16/24	KCA	1	
Dibromochloromethane	ND		*0.118*	0.118	ND		*1.00*	1.00	03/16/24	KCA	1	
Dichlorodifluoromethane	0.396		*0.202*	0.202	1.96		*1.00*	1.00	03/16/24	KCA	1	
Ethanol	13.8	J-	*0.531*	0.531	26.0	J-	*1.00*	1.00	03/16/24	KCA	1	1
Ethyl acetate	ND		*0.278*	0.278	ND		*1.00*	1.00	03/16/24	KCA	1	1
Ethylbenzene	ND		*0.230*	0.230	ND		*1.00*	1.00	03/16/24	KCA	1	
Heptane	ND		*0.244*	0.244	ND		*1.00*	1.00	03/16/24	KCA	1	
Hexachlorobutadiene	ND		*0.094*	0.094	ND		*1.00*	1.00	03/16/24	KCA	1	
Hexane	ND		*0.284*	0.284	ND		*1.00*	1.00	03/16/24	KCA	1	
Isooctane	ND		*0.200*	0.200	ND		*0.93*	0.93	03/16/24	KCA	1	
Isopropylalcohol	1.33		*0.407*	0.407	3.27		*1.00*	1.00	03/16/24	KCA	1	
Isopropylbenzene	ND		*0.204*	0.204	ND		*1.00*	1.00	03/16/24	KCA	1	
m,p-Xylene	0.333		*0.230*	0.230	1.45		*1.00*	1.00	03/16/24	KCA	1	
Methyl Ethyl Ketone	0.713	J	*0.339*	0.339	2.10	J	*1.00*	1.00	03/16/24	KCA	1	
Methyl tert-butyl ether(MTBE)	ND		*0.278*	0.278	ND		*1.00*	1.00	03/16/24	KCA	1	
Methylene Chloride	ND		*0.863*	0.863	ND		*3.00*	3.00	03/16/24	KCA	1	
Naphthalene	ND		*0.200*	0.200	ND		*1.05*	1.05	03/16/24	KCA	1	
n-Butylbenzene	ND		*0.182*	0.182	ND		*1.00*	1.00	03/16/24	KCA	1	1
o-Xylene	ND		*0.230*	0.230	ND		*1.00*	1.00	03/16/24	KCA	1	
Propylene	ND		*0.581*	0.581	ND		*1.00*	1.00	03/16/24	KCA	1	1
sec-Butylbenzene	ND		*0.182*	0.182	ND		*1.00*	1.00	03/16/24	KCA	1	1
Styrene	ND		*0.235*	0.235	ND		*1.00*	1.00	03/16/24	KCA	1	
Tetrachloroethene	0.057		*0.037*	0.037	0.39		*0.25*	0.25	03/16/24	KCA	1	
Tetrahydrofuran	ND		*0.339*	0.339	ND		*1.00*	1.00	03/16/24	KCA	1	1
Toluene	0.722		*0.266*	0.266	2.72		*1.00*	1.00	03/16/24	KCA	1	
Trans-1,2-Dichloroethene	ND		*0.252*	0.252	ND		*1.00*	1.00	03/16/24	KCA	1	
trans-1,3-Dichloropropene	ND		*0.221*	0.221	ND		*1.00*	1.00	03/16/24	KCA	1	
Trichloroethene	ND		*0.037*	0.037	ND		*0.20*	0.20	03/16/24	KCA	1	
Trichlorofluoromethane	0.185		*0.178*	0.178	1.04		*1.00*	1.00	03/16/24	KCA	1	
Trichlorotrifluoroethane	ND		*0.131*	0.131	ND		*1.00*	1.00	03/16/24	KCA	1	
Vinyl Chloride	ND		*0.078*	0.078	ND		*0.20*	0.20	03/16/24	KCA	1	
QA/QC Surrogates/Internals												
% Bromofluorobenzene	107		*%*	%	107		*%*	%	03/16/24	KCA	1	
% IS-1,4-Difluorobenzene	97		*%*	%	97		*%*	%	03/16/24	KCA	1	
% IS-Bromochloromethane	94		*%*	%	94		*%*	%	03/16/24	KCA	1	
% IS-Chlorobenzene-d5	95		*%*	%	95		*%*	%	03/16/24	KCA	1	

Parameter	ppbv Result	ppbv RL	LOD/ MDL	ug/m3 Result	ug/m3 RL	LOD/ MDL	Date/Time	By	Dilution

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit1
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
April 03, 2024
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

TO-15

Data Section

ALPHA GEOSCIENCE

Geology
Hydrology
Remediation
Water Supply

QA/QC Review of Method TO-15 Volatiles Data
for Phoenix Environmental Laboratories, Inc.
SDG: GCQ28761

3 Indoor Air Samples and 1 Field Duplicate
Collected March 14, 2024

Prepared by: Donald Anné
May 14, 2024

Holding Times: Samples were analyzed within recommended USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The average RRFs for target compounds were above the allowable minimum (0.010), as required.

The %RSD for naphthalene was above the allowable maximum (30%) for CHEM20 on 02-19-24. Positive results for naphthalene should be considered estimated (J) in associated samples.

Continuing Calibration: The RRFs for target compounds were above the allowable minimum (0.010), as required.

The %Ds for 1,2,4-trichlorobenzene, naphthalene, bromoform (sim), benzyl chloride (sim), and hexachlorobutadiene were above the allowable maximums on 03-15-24 (0315_02.D). Positive results for these compounds should be considered estimated (J) in associated samples.

Blanks: The analysis of intra-lab blank reported target compounds as not detected. The analyses of the cleaned canisters reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for the air/soil gas samples.

Laboratory Control Sample: The percent recovery (%R) for benzyl chloride was above QC limits for air/vapor sample CQ27704 LCS. Positive results for benzyl chloride should be considered estimated, biased high (J+) in associated air/soil vapor samples.

The %R for ethanol was below QC limits, but not below 25% for air/vapor sample CQ27704 LCS. Positive results for ethanol should be considered estimated, biased low (J-) and "not detected" results estimated (UJ) in associated air/soil vapor samples.

Laboratory Duplicate: The relative percent differences for applicable compounds were below the allowable maximum for air/vapor batch duplicate sample CQ27704, as required.

Field Duplicates: The relative percent difference for methyl ethyl ketone was above the allowable maximum (25%) for air field duplicate pair IA-S/IA-S DUP (attached table). Positive results for methyl ethyl ketone should be considered estimated (J) in samples IA-S and IA-S DUP.

Compound ID: Checked compounds were within quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

Canister Pressure: The laboratory reported the received samples with a residual vacuum, as required.

AIR LCS RECOVERY

Lab Name: Phoenix Environmental Labs Client: AMC-ENG

Lab Code: Phoenix Case No: SAS No: SDG No GCQ28761

LCS - Client Id: CQ27704 LCS

COMPOUND	SPIKE ADDED (ppbv)		LCS CONCENTRATION (ppbv)	LCS % REC	#	QC. LIMITS REC.	
Propylene	10		9.863	99		70	130
Dichlorodifluoromethane	10		10.33	103		70	130
Chloromethane	10		9.753	98		70	130
1,2-Dichlorotetrafluoroethane	10		10.12	101		70	130
Vinyl Chloride	10		10.08	101		70	130
1,3-Butadiene	10		10.22	102		70	130
Bromomethane	10		10.03	100		70	130
Chloroethane	10		9.837	98		70	130
Ethanol	10		6.818	68	*	70	130
Acetone	10		9.088	91		70	130
Trichlorofluoromethane	10		9.670	97		70	130
Isopropylalcohol	10		8.268	83		70	130
Acrylonitrile	10		9.159	92		70	130
1,1-Dichloroethene	10		9.411	94		70	130
Methylene Chloride	10		9.123	91		70	130
Carbon Disulfide	10		10.16	102		70	130
Trichlorotrifluoroethane	10		10.62	106		70	130
Trans-1,2-Dichloroethene	10		9.487	95		70	130
1,1-Dichloroethane	10		9.481	95		70	130
Methyl tert-butyl ether(MTBE)	10		9.377	94		70	130
Methyl Ethyl Ketone	10		9.895	99		70	130
Cis-1,2-Dichloroethene	10		9.276	93		70	130
Hexane	10		9.368	94		70	130
Chloroform	10		9.441	94		70	130
Ethyl acetate	10		10.17	102		70	130
Tetrahydrofuran	10		9.100	91		70	130
1,2-Dichloroethane	10		9.364	94		70	130
1,1,1-Trichloroethane	10		9.840	98		70	130
Benzene	10		9.415	94		70	130
Carbon Tetrachloride	10		11.03	110		70	130
Cyclohexane	10		9.151	92		70	130
1,2-dichloropropane	10		9.696	97		70	130
Bromodichloromethane	10		10.63	106		70	130
Trichloroethene	10		10.31	103		70	130
2,2,4-trimethylpentane	10		9.686	97		70	130
1,4-Dioxane	10		10.23	102		70	130
Heptane	10		10.04	100		70	130
cis-1,3-Dichloropropene	10		10.67	107		70	130
4-Methyl-2-pentanone(MIBK)	10		10.41	104		70	130
trans-1,3-Dichloropropene	10		10.78	108		70	130
1,1,2-Trichloroethane	10		10.27	103		70	130
Toluene	10		9.814	98		70	130
Dibromochloromethane	10		11.61	116		70	130
2-Hexanone(MBK)	10		10.67	107		70	130

FORM III AIR

AIR LCS RECOVERY

Lab Name: Phoenix Environmental Labs Client: AMC-ENG

Lab Code: Phoenix Case No: SAS No: SDG No GCQ28761

LCS - Client Id: CQ27704 LCS

COMPOUND	SPIKE ADDED (ppbv)		LCS CONCENTRATION (ppbv)	LCS % REC	#	QC. LIMITS REC.	
1,2-Dibromoethane(EDB)	10		10.25	103		70	130
Tetrachloroethene	10		9.941	99		70	130
1,1,1,2-Tetrachloroethane	10		11.28	113		70	130
Chlorobenzene	10		10.26	103		70	130
Ethylbenzene	10		10.14	101		70	130
m,p-Xylene	20		20.55	103		70	130
Bromoform	10		12.62	126		70	130
Styrene	10		10.29	103		70	130
1,1,2,2-Tetrachloroethane	10		10.35	104		70	130
o-Xylene	10		10.17	102		70	130
Isopropylbenzene	10		9.787	98		70	130
4-Ethyltoluene	10		10.38	104		70	130
1,3,5-Trimethylbenzene	10		9.827	98		70	130
1,2,4-Trimethylbenzene	10		10.30	103		70	130
Benzyl chloride	10		13.17	132	*	70	130
1,3-Dichlorobenzene	10		10.78	108		70	130
1,4-Dichlorobenzene	10		9.743	97		70	130
sec-Butylbenzene	10		9.592	96		70	130
4-Isopropyltoluene	10		9.553	96		70	130
1,2-Dichlorobenzene	10		10.32	103		70	130
n-Butylbenzene	10		9.496	95		70	130
1,2,4-Trichlorobenzene	10		11.14	111		70	130
Naphthalene	10		11.46	115		70	130
Hexachlorobutadiene	10		10.47	105		70	130

FORM III AIR

6B
AIR INITIAL CALIBRATION DATA

Lab Name: Phoenix Environmental Labs | Client: AMC-ENG

Lab Code: Phoenix | SDG No.: GCQ28761

Instrument ID: CHEM20 | Calibration Date From: 02/19/24 20:38

Heated Purge (Y/N): Y | Calibration Date Thru: 02/20/24 00:28

GC Column: | Method File: 20_AIR_0219.M

Laboratory File Ids

RRF1 0219_04.D RRF2 0219_05.D RRF3 0219_06.D RRF4 0219_07.D RRF5 0219_08.D RRF6 0219_09.D
RRF7 0219_10.D RRF8 0219_15.D RRF9 0219_11.D RRF10 0219_12.D RRF11 0219_16.D RRF12 0219_13.D
RRF13 0219_14.D

COMPOUND	RRF1 0.01	RRF2 0.02	RRF3 0.035	RRF4 0.05	RRF5 0.1	RRF6 0.2	RRF7 0.5	RRF8 1	RRF9 2.5	RRF10 5	RRF11 10	RRF12 25	RRF13 40	__ RRF	% RSD
Propylene						1.007	1.000	1.086	1.057	1.200	1.110	1.135	1.141	1.092	6.31
Dichlorodifluoromethane						2.959	2.642	3.095	2.865	3.232	2.891	3.024	3.149	2.982	6.24
Chloromethane						1.367	1.142	1.201	1.148	1.356	1.192	1.227	1.231	1.233	6.94
1,2-Dichlorotetrafluoroethane						2.669	2.518	2.899	2.778	3.156	2.843	2.909	2.961	2.842	6.77
Vinyl Chloride						1.105	1.205	1.229	1.164	1.348	1.216	1.246	1.251	1.220	5.76
1,3-Butadiene						0.874	0.831	0.946	0.934	1.096	0.985	1.010	1.021	0.962	8.79
Bromomethane						0.894	0.912	1.022	0.962	1.123	0.996	1.028	1.032	0.996	7.36
Chloroethane						0.396	0.526	0.558	0.540	0.606	0.547	0.556	0.561	0.536	11.44
Ethanol							0.504	0.485	0.434	0.525	0.460	0.466	0.455	0.476	6.59
Acetone						2.637	2.342	2.327	2.205	2.495	2.217	2.243	2.266	2.342	6.47
Trichlorofluoromethane						2.744	2.831	2.856	2.787	3.190	2.871	2.932	3.000	2.901	4.87
Isopropylalcohol						2.633	2.582	2.778	2.662	3.021	2.765	2.721	2.598	2.720	5.22
Acrylonitrile						1.027	1.027	1.169	1.094	1.191	1.021	1.020	0.990	1.067	7.09
1,1-Dichloroethene						1.966	2.042	2.128	2.008	2.313	2.070	2.122	2.111	2.095	5.01
Methylene Chloride						1.773	1.762	1.803	1.648	1.887	1.707	1.702	1.691	1.746	4.34
Carbon Disulfide						3.403	3.103	3.214	3.146	3.520	3.170	3.179	3.169	3.238	4.48
Trichlorotrifluoroethane						2.168	2.152	2.310	2.179	2.502	2.238	2.248	2.251	2.256	4.98
Trans-1,2-Dichloroethene						1.849	1.849	1.969	1.903	2.121	1.942	1.979	1.978	1.949	4.50
1,1-Dichloroethane						2.308	2.344	2.368	2.310	2.611	2.348	2.430	2.412	2.391	4.14
Methyl tert-butyl ether(MTBE)						3.237	3.069	3.374	3.203	3.614	3.230	3.332	3.339	3.300	4.84
Methyl Ethyl Ketone						2.954	2.825	3.165	3.063	3.848	3.428	3.641	3.470	3.299	10.75
Cis-1,2-Dichloroethene						1.743	1.730	1.847	1.839	2.081	1.879	1.958	1.949	1.878	6.20
Hexane						1.999	2.065	2.057	1.992	2.291	2.066	2.103	2.097	2.084	4.46
Chloroform						2.573	2.538	2.588	2.534	2.849	2.570	2.624	2.635	2.614	3.89

(#) The maximum %RSD was not met for this compound Note: m,p-xylene TV is 2 times the TV Listed

(l) linear (q) quadratic (i) inverse conc weight (i2) inverse conc weight squared (f) force through zero

Compounds not using average response (l, li, lfi, li2, lfi2, q, qi, qfi, qi2, qfi2) display concentrations and not response factors

6B
AIR INITIAL CALIBRATION DATA

Lab Name: Phoenix Environmental Labs | Client: AMC-ENG

Lab Code: Phoenix | SDG No.: GCQ28761

Instrument ID: CHEM20 | Calibration Date From: 02/19/24 20:38

Heated Purge (Y/N): Y | Calibration Date Thru: 02/20/24 00:28

GC Column: | Method File: 20_AIR_0219.M

Laboratory File Ids

RRF1 0219_04.D RRF2 0219_05.D RRF3 0219_06.D RRF4 0219_07.D RRF5 0219_08.D RRF6 0219_09.D
RRF7 0219_10.D RRF8 0219_15.D RRF9 0219_11.D RRF10 0219_12.D RRF11 0219_16.D RRF12 0219_13.D
RRF13 0219_14.D

COMPOUND	RRF1 0.01	RRF2 0.02	RRF3 0.035	RRF4 0.05	RRF5 0.1	RRF6 0.2	RRF7 0.5	RRF8 1	RRF9 2.5	RRF10 5	RRF11 10	RRF12 25	RRF13 40	__ RRF	% RSD
Ethyl acetate						0.286	0.415	0.446	0.461	0.557	0.497	0.507	0.518	0.461	18.12
Tetrahydrofuran						1.413	1.441	1.554	1.478	1.693	1.518	1.592	1.585	1.534	5.96
1,2-Dichloroethane						1.751	1.692	1.899	1.812	2.094	1.876	1.939	1.947	1.876	6.70
1,1,1-Trichloroethane						2.654	2.262	2.573	2.363	2.735	2.541	2.622	2.674	2.553	6.35
Benzene					3.795	3.678	3.571	3.911	3.720	4.276	3.831	3.958	4.002	3.860	5.39
Carbon Tetrachloride						1.954	2.033	2.306	2.098	2.565	2.429	2.611	2.690	2.336	12.08
Cyclohexane						1.572	1.515	1.454	1.421	1.557	1.421	1.467	1.455	1.483	3.94
1,2-dichloropropane						0.392	0.396	0.392	0.378	0.444	0.401	0.402	0.410	0.402	4.79
Bromodichloromethane						0.564	0.560	0.655	0.617	0.743	0.681	0.690	0.707	0.652	10.21
Trichloroethene						0.354	0.360	0.374	0.378	0.430	0.377	0.371	0.365	0.376	6.17
2,2,4-trimethylpentane						1.580	1.500	1.626	1.574	1.856	1.613	1.633	1.642	1.628	6.31
1,4-Dioxane							0.096	0.199	0.183	0.212	0.189	0.188	0.180	0.178	21.17
Heptane						0.597	0.600	0.685	0.655	0.779	0.682	0.683	0.684	0.671	8.55
cis-1,3-Dichloropropene						0.469	0.487	0.566	0.543	0.647	0.591	0.615	0.625	0.568	11.37
4-Methyl-2-pentanone(MIBK)						0.679	0.694	0.906	0.857	1.018	0.893	0.900	0.910	0.857	13.42
trans-1,3-Dichloropropene						0.319	0.359	0.426	0.429	0.518	0.478	0.497	0.516	0.443	16.64
1,1,2-Trichloroethane						0.327	0.341	0.378	0.369	0.427	0.388	0.394	0.400	0.378	8.54
Toluene						1.025	1.064	1.155	1.095	1.288	1.152	1.177	1.185	1.143	7.15
Dibromochloromethane						0.482	0.461	0.583	0.524	0.669	0.622	0.663	0.689	0.587	15.16
2-Hexanone(MBK)						0.456	0.572	0.783	0.799	0.947	0.831	0.859	0.864	0.764	21.58
1,2-Dibromoethane(EDB)						0.476	0.513	0.603	0.567	0.679	0.610	0.623	0.628	0.588	11.21
Tetrachloroethene						0.474	0.454	0.489	0.475	0.572	0.495	0.503	0.506	0.496	7.09
1,1,1,2-Tetrachloroethane						0.698	0.644	0.815	0.757	0.872	0.780	0.742	0.693	0.750	9.73
Chlorobenzene						1.594	1.543	1.619	1.606	1.781	1.556	1.403	1.297	1.550	9.40

(#) The maximum %RSD was not met for this compound Note: m,p-xylene TV is 2 times the TV Listed

(l) linear (q) quadratic (i) inverse conc weight (i2) inverse conc weight squared (f) force through zero

Compounds not using average response (l, li, lfi, li2, lfi2, q, qi, qfi, qi2, qfi2) display concentrations and not response factors

6B
AIR INITIAL CALIBRATION DATA

Lab Name: Phoenix Environmental Labs
Client: AMC-ENG
Lab Code: Phoenix
SDG No.: GCQ28761
Instrument ID: CHEM20
Calibration Date From: 02/19/24 20:38
Heated Purge (Y/N): Y
Calibration Date Thru: 02/20/24 00:28
GC Column:
Method File: 20_AIR_0219.M

Laboratory File Ids

RRF1 0219_04.D RRF2 0219_05.D RRF3 0219_06.D RRF4 0219_07.D RRF5 0219_08.D RRF6 0219_09.D
RRF7 0219_10.D RRF8 0219_15.D RRF9 0219_11.D RRF10 0219_12.D RRF11 0219_16.D RRF12 0219_13.D
RRF13 0219_14.D

COMPOUND	RRF1 0.01	RRF2 0.02	RRF3 0.035	RRF4 0.05	RRF5 0.1	RRF6 0.2	RRF7 0.5	RRF8 1	RRF9 2.5	RRF10 5	RRF11 10	RRF12 25	RRF13 40	_ RRF	% RSD
Ethylbenzene					2.967	2.638	2.609	2.781	2.767	3.057	2.689	2.508	2.281	2.700	8.63
m,p-Xylene					2.324	2.070	1.942	1.690	2.093	2.347	2.036	1.884	1.735	2.013	11.40
Bromoform						0.809	0.729	0.968	0.903	1.139	1.065	1.035	0.962	0.951	14.20
Styrene						1.232	1.365	1.527	1.502	1.667	1.443	1.371	1.257	1.420	10.20
1,1,2,2-Tetrachloroethane						1.526	1.518	1.600	1.596	1.820	1.565	1.461	1.351	1.555	8.66
o-Xylene					2.290	2.038	2.142	2.204	2.256	2.441	2.105	1.945	1.781	2.134	9.21
Isopropylbenzene						2.909	2.784	2.987	2.874	3.179	2.753	2.585	2.358	2.804	8.95
4-Ethyltoluene						2.468	2.716	2.732	2.834	3.215	2.765	2.569	2.604	2.738	8.26
1,3,5-Trimethylbenzene						2.758	2.629	2.610	2.455	2.757	2.378	2.194	1.757	2.442	13.81
1,2,4-Trimethylbenzene						2.433	2.427	2.464	2.421	2.828	2.454	2.304	2.115	2.431	8.17
Benzyl chloride						0.991	1.086	1.640	1.554	2.084	1.985	1.950	1.879	1.646	25.20
1,3-Dichlorobenzene						1.474	1.473	1.572	1.534	1.791	1.553	1.413	1.283	1.512	9.64
1,4-Dichlorobenzene						1.655	1.468	1.630	1.468	1.684	1.452	1.360	1.230	1.493	10.47
sec-Butylbenzene						3.549	3.456	3.716	3.680	4.024	3.464	3.225	2.931	3.506	9.39
4-Isopropyltoluene						3.124	3.230	3.337	3.272	3.641	3.158	2.964	2.702	3.178	8.63
1,2-Dichlorobenzene						1.425	1.391	1.506	1.414	1.689	1.448	1.350	1.246	1.434	8.94
n-Butylbenzene						2.891	2.975	3.223	3.148	3.555	3.099	2.931	2.698	3.065	8.40
1,2,4-Trichlorobenzene						0.554	0.622	1.111	0.846	1.212	1.113	1.129	1.062	0.956	26.26
Naphthalene						0.969	1.267	2.503	1.823	2.693	2.471	2.455	2.295	2.059	31.00 #
Hexachlorobutadiene						1.015	1.049	1.225	1.074	1.322	1.163	1.094	1.001	1.118	9.95
1,2-Dichlorotetrafluoroethane(sim)	3.197	2.975	2.856	2.772	2.771	2.429	2.259	2.627	2.516	2.855				2.726	10.10
Vinyl Chloride(sim)	1.415	1.247	1.226	1.132	1.325	1.218	1.163	1.258	1.179	1.343				1.250	7.04
Bromomethane(sim)	1.444	1.332	1.146	1.036	1.222	0.814	0.818	0.926	0.872	1.016				1.063	20.57
Trichlorofluoromethane(sim)	3.139	2.778	2.703	2.655	3.379	2.872	2.762	2.903	2.791	3.160				2.914	8.07

(#) The maximum %RSD was not met for this compound Note: m,p-xylene TV is 2 times the TV Listed

(l) linear (q) quadratic (i) inverse conc weight (i2) inverse conc weight squared (f) force through zero

Compounds not using average response (l, li, lfi, li2, lfi2, q, qi, qfi, qi2, qfi2) display concentrations and not response factors

6B
AIR INITIAL CALIBRATION DATA

Lab Name: Phoenix Environmental Labs | Client: AMC-ENG

Lab Code: Phoenix | SDG No.: GCQ28761

Instrument ID: CHEM20 | Calibration Date From: 02/19/24 20:38

Heated Purge (Y/N): Y | Calibration Date Thru: 02/20/24 00:28

GC Column: | Method File: 20_AIR_0219.M

Laboratory File Ids

RRF1 0219_04.D RRF2 0219_05.D RRF3 0219_06.D RRF4 0219_07.D RRF5 0219_08.D RRF6 0219_09.D
RRF7 0219_10.D RRF8 0219_15.D RRF9 0219_11.D RRF10 0219_12.D RRF11 0219_16.D RRF12 0219_13.D
RRF13 0219_14.D

COMPOUND	RRF1 0.01	RRF2 0.02	RRF3 0.035	RRF4 0.05	RRF5 0.1	RRF6 0.2	RRF7 0.5	RRF8 1	RRF9 2.5	RRF10 5	RRF11 10	RRF12 25	RRF13 40	_ RRF	% RSD
1,2-Dichloroethane(sim)	1.922	1.943	1.747	1.807	2.086	1.593	1.517	1.721	1.642	1.894				1.787	9.89
1,1,1-Trichloroethane(sim)	2.83	2.537	2.321	2.302	2.735	2.465	2.342	2.576	2.387	2.775				2.527	7.80
Benzene(sim)	5.748	4.804	4.270	4.133	3.452	3.348	3.203	3.544	3.369					3.986	21.28
Carbon Tetrachloride(sim)	2.062	1.990	2.005	1.903	2.305	2.077	1.993	2.328	2.108					2.086	6.90
1,1-Dichloroethene(sim)	2.388	2.181	2.236	2.094	1.887	1.789	1.832	1.928	1.819	2.092				2.025	10.07
Trichlorotrifluoroethane(sim)	2.487	2.223	2.178	2.151	2.741	2.288	2.164	2.247	2.169	2.443				2.309	8.30
Trans-1,2-Dichloroethene(sim)	2.446	2.040	2.010	1.880	1.949	1.683	1.659	1.785	1.723	1.919				1.909	12.12
1,1-Dichloroethane(sim)	2.498	2.346	2.331	2.262	2.529	2.417	2.302	2.399	2.311	2.617				2.401	4.77
Cis-1,2-Dichloroethene(sim)	2.161	1.970	1.934	1.923	2.126	1.586	1.552	1.674	1.666					1.843	12.47
Chloroform(sim)	2.83	2.746	2.475	2.470	2.844	2.624	2.497	2.615	2.511	2.837				2.645	5.93
1,2-dichloropropane(sim)	0.624	0.439	0.547	0.439	0.511	0.427	0.407	0.431	0.418	0.488				0.473	14.69
Bromodichloromethane(sim)	0.786	0.803	0.758	0.673	0.661	0.564	0.560	0.656	0.617	0.743				0.682	12.82
Trichloroethene(sim)	0.539	0.462	0.435	0.415	0.465	0.425	0.411	0.428	0.416	0.481				0.448	8.95
1,4-Dioxane(sim)					0.165	0.131	0.096	0.199	0.183	0.212				0.165	26.59
cis-1,3-Dichloropropene(sim)	0.705	0.598	0.574	0.563	0.621	0.579	0.568	0.636	0.609					0.606	7.40
1,1,2-Trichloroethane(sim)	0.47	0.428	0.406	0.430	0.459	0.327	0.342	0.378	0.369	0.427				0.404	11.94
Dibromochloromethane(sim)	0.699	0.548	0.539	0.534	0.627	0.564	0.542	0.646	0.598					0.589	9.85
1,2-Dibromoethane(EDB)(sim)	0.693	0.631	0.594	0.619	0.667	0.476	0.514	0.603	0.567	0.679				0.604	11.62
Tetrachloroethene(sim)	0.743	0.622	0.584	0.567	0.631	0.592	0.556	0.582	0.562	0.657	0.573			0.606	9.13
Bromoform(sim)	1.476	1.015	0.913	0.883	1.052	0.964	0.900	1.148	1.070					1.047	17.51
m,p-Xylene(sim)	2.956	2.507	1.864	2.104	2.324	2.070	2.037	2.169	2.126	2.373				2.253	13.67
1,1,2,2-Tetrachloroethane(sim)	2.7	1.936	1.863	1.701	1.917	1.786	1.675	1.814	1.712	1.947				1.905	15.56
Benzyl chloride(sim)	1.714	1.329	1.157	1.032	1.117	0.991	1.086	1.640	1.554					1.291	21.53
1,3-Dichlorobenzene(sim)	3.087	1.763	1.586	1.516	1.737	1.698	1.712	1.903	1.827					1.870	25.18

(#) The maximum %RSD was not met for this compound Note: m,p-xylene TV is 2 times the TV Listed

(l) linear (q) quadratic (i) inverse conc weight (i2) inverse conc weight squared (f) force through zero

Compounds not using average response (l, li, lfi, li2, lfi2, q, qi, qfi, qi2, qfi2) display concentrations and not response factors

6B
AIR INITIAL CALIBRATION DATA

Lab Name: Phoenix Environmental Labs | Client: AMC-ENG

Lab Code: Phoenix | SDG No.: GCQ28761

Instrument ID: CHEM20 | Calibration Date From: 02/19/24 20:38

Heated Purge (Y/N): Y | Calibration Date Thru: 02/20/24 00:28

GC Column: | Method File: 20_AIR_0219.M

Laboratory File Ids

RRF1 0219_04.D RRF2 0219_05.D RRF3 0219_06.D RRF4 0219_07.D RRF5 0219_08.D RRF6 0219_09.D
RRF7 0219_10.D RRF8 0219_15.D RRF9 0219_11.D RRF10 0219_12.D RRF11 0219_16.D RRF12 0219_13.D
RRF13 0219_14.D

COMPOUND	RRF1 0.01	RRF2 0.02	RRF3 0.035	RRF4 0.05	RRF5 0.1	RRF6 0.2	RRF7 0.5	RRF8 1	RRF9 2.5	RRF10 5	RRF11 10	RRF12 25	RRF13 40	__ RRF	% RSD
1,4-Dichlorobenzene(sim)			2.546	2.315	2.195	1.655	1.468	1.630	1.468					1.897	23.42
sec-Butylbenzene(sim)	6.314	4.219	3.890	3.616	4.116	3.910	3.821	4.077	3.995	4.382				4.234	17.99
4-Isopropyltoluene(sim)	5.914	3.988	2.794	2.912	3.379	3.124	3.230	3.337	3.272					3.550	26.72
1,2-Dichlorobenzene(sim)		2.237	1.817	1.700	1.766	1.668	1.611	1.758	1.629	1.937				1.792	10.89
n-Butylbenzene(sim)	5.041	3.444	3.175	2.854	2.494	2.891	2.975	3.223	3.148					3.249	22.28
1,2,4-Trichlorobenzene(sim)			1.162	0.942	0.666	0.755	0.813	1.304	1.001					0.949	23.95
Hexachlorobutadiene(sim) qfi		0.041	0.057	0.069	0.093	0.166	0.434	1.049	2.496					Coef R2	0.99
% Bromofluorobenzene						1.318	1.300	1.295	1.336	1.301	1.266	1.178	1.090	1.261	6.66

(#) The maximum %RSD was not met for this compound Note: m,p-xylene TV is 2 times the TV Listed

(l) linear (q) quadratic (i) inverse conc weight (i2) inverse conc weight squared (f) force through zero

Compounds not using average response (l, li, lfi, li2, lfi2, q, qi, qfi, qi2, qfi2) display concentrations and not response factors

7A
AIR CONTINUING CALIBRATION CHECK

Lab Name: Phoenix Environmental Labs Client: AMC-ENG

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GCQ28761

Instrument: CHEM20 Calibration Date: 03/15/24 Time: 14:28

Lab File Id: 0315_02.D Init. Calib. Date(s): 02/19/24 02/20/24

Heated Purge (Y/N): Y Init. Calib. Times: 17:59 00:28

GC Column: RTX-1 60M Method File: 20_AIR_0219.M

COMPOUND	RRF	RRF1	RRF MIN	%D	% D LIMITS
Propylene	1.092	0.954		12.6	30
Dichlorodifluoromethane	2.982	2.752		7.7	30
Chloromethane	1.233	1.160		5.9	30
1,2-Dichlorotetrafluoroethane	2.842	2.689		5.4	30
Vinyl Chloride	1.220	1.151		5.7	30
1,3-Butadiene	0.962	0.873		9.3	30
Bromomethane	0.996	0.932		6.4	30
Chloroethane	0.536	0.538		-0.4	30
Ethanol	0.476	0.416		12.6	30
Acetone	2.342	2.177		7.0	30
Trichlorofluoromethane	2.901	2.747		5.3	30
Isopropylalcohol	2.720	2.508		7.8	30
Acrylonitrile	1.067	0.976		8.5	30
1,1-Dichloroethene	2.095	1.902		9.2	30
Methylene Chloride	1.746	1.593		8.8	30
Carbon Disulfide	3.238	3.143		2.9	30
Trichlorotrifluoroethane	2.256	2.312		-2.5	30
Trans-1,2-Dichloroethene	1.949	1.781		8.6	30
1,1-Dichloroethane	2.391	2.185		8.6	30
Methyl tert-butyl ether(MTBE)	3.300	2.728		17.3	30
Methyl Ethyl Ketone	3.299	2.665		19.2	30
Cis-1,2-Dichloroethene	1.878	1.635		12.9	30
Hexane	2.084	1.730		17.0	30
Chloroform	2.614	2.314		11.5	30
Ethyl acetate	0.461	0.449		2.6	30
Tetrahydrofuran	1.534	1.284		16.3	30
1,2-Dichloroethane	1.876	1.654		11.8	30
1,1,1-Trichloroethane	2.553	2.429		4.9	30
Benzene	3.860	3.386		12.3	30
Carbon Tetrachloride	2.336	2.564		-9.8	30
Cyclohexane	1.483	1.315		11.3	30
1,2-dichloropropane	0.402	0.393		2.2	30
Bromodichloromethane	0.652	0.684		-4.9	30
Trichloroethene	0.376	0.374		0.5	30
2,2,4-trimethylpentane	1.628	1.504		7.6	30

(*) Recommended RRF not met (+) %D exceeds criteria % (#) %D exceeds (maximum) criteria

%D: 20% of target compounds are allowed to be above criteria %, but must be less than the (maximum) %D

(#) Maximum %D not met.

7B
AIR CONTINUING CALIBRATION CHECK

Lab Name: Phoenix Environmental Labs Client: AMC-ENG

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GCQ28761

Instrument: CHEM20 Calibration Date: 03/15/24 Time: 14:28

Lab File Id: 0315_02.D Init. Calib. Date(s): 02/19/24 02/20/24

Heated Purge (Y/N): Y Init. Calib. Times: 17:59 00:28

GC Column: RTX-1 60M Method File: 20_AIR_0219.M

COMPOUND	RRF	RRF1	RRF MIN	%D	% D LIMITS
1,4-Dioxane	0.178	0.182		-2.2	30
Heptane	0.671	0.642		4.3	30
cis-1,3-Dichloropropene	0.568	0.534		6.0	30
4-Methyl-2-pentanone(MIBK)	0.857	0.832		2.9	30
trans-1,3-Dichloropropene	0.443	0.407		8.1	30
1,1,2-Trichloroethane	0.378	0.361		4.5	30
Toluene	1.143	1.013		11.4	30
Dibromochloromethane	0.587	0.634		-8.0	30
2-Hexanone(MBK)	0.764	0.696		8.9	30
1,2-Dibromoethane(EDB)	0.588	0.559		4.9	30
Tetrachloroethene	0.496	0.477		3.8	30
1,1,1,2-Tetrachloroethane	0.750	0.839		-11.9	30
Chlorobenzene	1.550	1.645		-6.1	30
Ethylbenzene	2.700	2.514		6.9	30
m,p-Xylene	2.013	1.496		25.7	30
Bromoform	0.951	1.148		-20.7	30
Styrene	1.420	1.310		7.7	30
1,1,2,2-Tetrachloroethane	1.555	1.682		-8.2	30
o-Xylene	2.134	2.087		2.2	30
Isopropylbenzene	2.804	2.765		1.4	30
4-Ethyltoluene	2.738	2.681		2.1	30
1,3,5-Trimethylbenzene	2.442	2.373		2.8	30
1,2,4-Trimethylbenzene	2.431	2.137		12.1	30
Benzyl chloride	1.646	1.714		-4.1	30
1,3-Dichlorobenzene	1.512	1.433		5.2	30
1,4-Dichlorobenzene	1.493	1.383		7.4	30
sec-Butylbenzene	3.506	3.365		4.0	30
4-Isopropyltoluene	3.178	3.027		4.8	30
1,2-Dichlorobenzene	1.434	1.324		7.7	30
n-Butylbenzene	3.065	2.751		10.2	30
1,2,4-Trichlorobenzene	0.956	0.597		37.6 #	30
Naphthalene	2.059	1.286		37.5 #	30
Hexachlorobutadiene	1.118	0.928		17.0	30
1,2-Dichlorotetrafluoroethane(sim)	2.726	2.407		11.7	30
Vinyl Chloride(sim)	1.250	1.154		7.7	30

(*) Recommended RRF not met (+) %D exceeds criteria % (#) %D exceeds (maximum) criteria

%D: 20% of target compounds are allowed to be above criteria %, but must be less than the (maximum) %D

(#) Maximum %D not met.

7B
AIR CONTINUING CALIBRATION CHECK

Lab Name: Phoenix Environmental Labs Client: AMC-ENG

Lab Code: Phoenix Case No.: SAS No.: SDG No.: GCQ28761

Instrument: CHEM20 Calibration Date: 03/15/24 Time: 14:28

Lab File Id: 0315_02.D Init. Calib. Date(s): 02/19/24 02/20/24

Heated Purge (Y/N): Y Init. Calib. Times: 17:59 00:28

GC Column: RTX-1 60M Method File: 20_AIR_0219.M

COMPOUND	RRF	RRF1	RRF MIN	%D	% D LIMITS
Bromomethane(sim)	1.063	0.834		21.5	30
Trichlorofluoromethane(sim)	2.914	2.704		7.2	30
1,2-Dichloroethane(sim)	1.787	1.481		17.1	30
1,1,1-Trichloroethane(sim)	2.527	2.481		1.8	30
Benzene(sim)	3.986	3.031		24.0	30
Carbon Tetrachloride(sim)	2.086	2.487		-19.2	30
1,1-Dichloroethene(sim)	2.025	1.702		16.0	30
Trichlorotrifluoroethane(sim)	2.309	2.346		-1.6	30
Trans-1,2-Dichloroethene(sim)	1.909	1.594		16.5	30
1,1-Dichloroethane(sim)	2.401	2.212		7.9	30
Cis-1,2-Dichloroethene(sim)	1.843	1.463		20.6	30
Chloroform(sim)	2.645	2.453		7.3	30
1,2-dichloropropane(sim)	0.473	0.435		8.0	30
Bromodichloromethane(sim)	0.682	0.684		-0.3	30
Trichloroethene(sim)	0.448	0.436		2.7	30
1,4-Dioxane(sim)	0.165	0.182		-10.3	30
cis-1,3-Dichloropropene(sim)	0.606	0.620		-2.3	30
1,1,2-Trichloroethane(sim)	0.404	0.361		10.6	30
Dibromochloromethane(sim)	0.589	0.738		-25.3	30
1,2-Dibromoethane(EDB)(sim)	0.604	0.559		7.5	30
Tetrachloroethene(sim)	0.606	0.586		3.3	30
Bromoform(sim)	1.047	1.396		-33.3 #	30
m,p-Xylene(sim)	2.253	1.948		13.5	30
1,1,2,2-Tetrachloroethane(sim)	1.905	1.837		3.6	30
Benzyl chloride(sim)	1.291	1.714		-32.8 #	30
1,3-Dichlorobenzene(sim)	1.870	1.791		4.2	30
1,4-Dichlorobenzene(sim)	1.897	1.383		27.1	30
sec-Butylbenzene(sim)	4.234	3.730		11.9	30
4-Isopropyltoluene(sim)	3.550	3.027		14.7	30
1,2-Dichlorobenzene(sim)	1.792	1.559		13.0	30
n-Butylbenzene(sim)	3.249	2.751		15.3	30
1,2,4-Trichlorobenzene(sim)	0.949	0.742		21.8	30
Hexachlorobutadiene(sim) qfi	1.000	0.78		22.0 #	20
% Bromofluorobenzene	1.261	1.394		-10.5	30

(*) Recommended RRF not met (+) %D exceeds criteria % (#) %D exceeds (maximum) criteria

%D: 20% of target compounds are allowed to be above criteria %, but must be less than the (maximum) %D

(#) Maximum %D not met.

Field Duplicate Calculation Section

Volatiles

Calculations for Field Duplicate Relative Percent Difference (RPD)
SDG No. GCQ28761

S1= IA-S **S2=** IA-S DUP

Analyte	S1	S2	RPD (%)	
Acetone	5.37	5.43	1%	
Carbon Tetrachloride	0.081	0.077	5%	
Chloromethane	0.502	0.502	0%	
Dichlorodifluoromethane	0.428	0.396	8%	
Ethanol	13.9	13.8	1%	
Isopropylalcohol	1.67	1.33	23%	
m,p-Xylene	0.328	0.333	2%	
Methyl Ethyl Ketone	0.376	0.713	62%	*
Tetrachloroethene	0.064	0.057	12%	
Toluene	0.772	0.722	7%	
Trichlorofluoromethane	0.196	0.185	6%	

* RPD is above the allowable maximum 25%.

Results are in units of ppbv.

Bold numbers were values that are below the CRQL or above the high standard.
ND - Not detected.
NC - Not calculated, both results must be within the linear range for valid RPDs to be calculated.