INTERIM SITE MANAGEMENT PLAN – INDOOR AIR MONITORING REPORT
FORMER EAST 11th STREET WORKS SITE – OU-1
MANHATTAN, NEW YORK
SITE ID NO. 231110

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ARCADIS Design & Consultancy for natural and built assets

Consolidated Edison Company of New York, Inc

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Former East 11th Street Works OU-1

Site No. 231110

Manhattan, New York

February 2020

INDOOR AIR MONITORING REPORT

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CONTENTS

TABLES

FIGURES

APPENDICES

ACRONYMS AND ABBREVIATIONS

Arcadis	Arcadis of New York, Inc.
Con Edison	Consolidated Edison Company of New York, Inc.
DUSR	Data Usability Summary Report
HASP	Health and Safety Plan
ISMP	*Interim Site Management Plan for Indoor Air Monitoring*
MGP	Manufactured Gas Plant
NYSDOH	New York State Department of Health
ppbRAE	portable organic vapor monitor
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound

EXECUTIVE SUMMARY

This report presents a summary of the results from the October 28 through November 1, 2019 indoor air monitoring conducted by Arcadis of New York, Inc. (Arcadis) at Operable Unit #1 within the site, which includes the Jacob Riis Housing Development on behalf of Consolidated Edison Company of New York, Inc. (Con Edison). Indoor air monitoring was conducted in accordance with the procedures and protocols presented in the *Interim Site Management Plan for Indoor Air Monitoring* (Arcadis 2009) (ISMP). The ISMP is a component of a monitoring plan in place to ensure that potential exposure to MGP related contaminants by the public and the environment is monitored and controlled until a final remedy for the Former East 11th Street Works Site (the site) is implemented.

A summary of the activities performed associated with the indoor air monitoring is included below. Tabulated laboratory results from the indoor air monitoring, a figure showing the sampling locations, photographic logs, sampling forms, and a compact disk (CD) containing copies of the Data Usability Summary Reports (DUSRs) are included as attachments. Deviations from the scope of work presented in the ISMP are also presented.

1 INDOOR AIR MONITORING

Prior to initiating field work, the site Health and Safety Plan (HASP) was reviewed and updated to ensure that task specific monitoring activities were consistent with Con Edison's Corporate Health and Safety Procedure A32.00 (Rules We Live By) and the most current guidance documents. A copy of the HASP was maintained on site during all work activities; all site personnel were required to review the HASP and sign an acknowledgement form stating that they understood the contents of the HASP and agreed to abide by its requirements. Tailgate meetings were conducted each morning to discuss the day's activities, critical work procedures, and safety requirements.

The dates that the annual indoor air sampling events were conducted are presented in **Table 1**.

Table 1. Sample Collection Dates

Location	Sample Collection Dates
Jacob Riis Housing Development 170 Avenue D, 178 Avenue D, 1115 FDR Drive 1141 FDR Drive, 1223 FDR Drive	October 28 through November 1, 2019

Pre-monitoring walk through visual inspections and chemical inventories were conducted concurrent with indoor air monitoring activities at each of the sampling locations. The objectives of the walk-through inspections and chemical inventories were to visually identify conditions that may affect or interfere with the indoor air monitoring, document the physical condition of the indoor air monitoring areas, and to confirm the sampling locations. Conditions identified during the visual inspections were generally consistent with conditions identified by Arcadis during visual inspections conducted in 2010, 2011, and 2013. Evidence of flooding (e.g., water marks on the exterior foundation walls) was evident on several buildings located closest to the FDR, potentially as a result of Hurricane Sandy, which severely impacted the lower east side of Manhattan in October 2012. Additionally, sewage water was observed in a storage room on the south east side in the building located at 1223 FDR Drive.

During the walk-through inspections, floor construction details for each building were documented and New York State Department of Health (NYSDOH) Indoor Air Quality Questionnaires and Building Inventory Forms were completed (**Appendix A**). Photographs of the areas where samples were collected to document general background conditions and the chemical products present that potentially contain volatile chemicals during the walkthrough inspections are provided in **Appendix B**.

The locations selected for indoor monitoring are presented on **Figure 1** and are consistent with those shown in the ISMP. The selected locations for each building are the same as the locations sampled during the 2007, 2010, 2011, and 2013 indoor air monitoring events.

As identified in the photographic logs, small quantities of containers containing paints, solvents, cleaning supplies, and/or maintenance-related chemical products were present in each of the buildings during the walk-through inspections. These conditions are also similar to the conditions identified during the walk-through inspections associated with the previous sampling events. Removal of these potential interferences

prior to collection of indoor air samples was not feasible. A portable organic vapor monitor (ppbRAE) was used to measure volatile organic compounds (VOCs) liberated from these contemporary chemicals. The measured concentrations of VOCs in each area monitored in each building were 0 parts per billion.

Photographic logs documenting the conditions/stored products at these locations are included as **Appendix E**.

Air samples for laboratory testing were collected using batch-certified clean, 6-liter SUMMA canisters equipped with laboratory pre-set flow regulators for 8-hour sample collection. Indoor air samples were collected from within the ground levels of each building within the breathing zone (approximately 3 to 4 feet above the floor). The date, times (start and end times), sample identification, and other required information were recorded on sample collection logs as described in the ISMP. The sample collection logs are included as **Appendix C**. Outdoor, ambient air monitoring was conducted from upwind locations each day indoor air samples were collected. Ambient air sampling locations are also presented on **Figure 1**.

Air samples were sent to TestAmerica Laboratories located in Knoxville, Tennessee via overnight courier for analysis of the project compound list analytes by United States Environmental Protection Agency (USEPA) Method TO-15. The project compound list included standard TO-15 VOCs, along with additional analyses for n-alkanes, branched alkanes, and other “indicator” compounds (the branched alkanes and other “indicator” compounds were reported as tentatively identified compounds). The laboratory provided ASP Category B-equivalent data packages for quality review. Laboratory data packages and associated quality control information were reviewed by qualified Arcadis personnel to verify they met the project-specific criteria for data quality. DUSRs were prepared that present the results from the data review for each sample data group; DUSRs are included as **Appendix D**. The DUSRs indicate that the laboratory results for each site met the data quality objectives and the data were considered usable.

The laboratory results for the East 11th Street OU-1 site are summarized in **Table 2**. Consistent with ISMP requirements, for comparison purposes, the indoor air results are compared to the NYSDOH’s *FINAL Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006 with 2017 amendment),* Upper Fence (F) Criterion for indoor air background data for fuel oil heated homes and the USEPA’s 2001 *Building Assessment Survey and Evaluation (BASE) Study* guidance values for the 90th percentile background air levels to provide typical concentrations of VOCs in indoor air. These studies have been conducted, both nationally and in the State of New York, to provide information on indoor and outdoor air background levels in a variety of settings (e.g., residential or commercial buildings). Per NYSDOH guidance, the Upper F values from the NYSDOH Fuel Oil Study data may be used as initial benchmarks when evaluating residential indoor air, and the 90th percentile values from the EPA BASE data for indoor air in office and commercial buildings.

2 RESULTS AND CONCLUSIONS

Eighteen (18) indoor air samples (labeled based on building address), 4 ambient samples (AA-102919, AA-103019, AA103119, and AA-110119), and 2 duplicate samples for quality control purposes (DUP-103119 and DUP-110119) were collected for laboratory analysis. The sample collection logs are included on a CD as **Appendix C**; photographs documenting the sample locations and equipment set-up are included on a CD as **Appendix E**. The laboratory results are presented in **Table 2**.

The ISMP included the collection of five air samples from elevator shafts within the site buildings (one sample from an elevator shaft within each building sampled); however, based upon inspection with Con Edison prior to the 2010 monitoring event, the elevator shafts were unable to be accessed safely for visual inspection and sample collection without terminating elevator operation. Terminating elevator operation was not feasible; therefore, consistent with the previous monitoring events, elevator shaft samples were not be collected.

As indicated in **Table 2**, a total of 40 VOC analytes included in the TO-15 analyses (including analytes qualified as estimated because their value was less than the minimum calibration level but greater than the estimated detection limit) were detected in the 18 indoor air samples collected throughout the site. This is consistent with previous indoor air sampling results. A summary of the detected analytes include:

- Of the 40 TO-15 VOCs detected in indoor air, 30 were also detected in ambient (i.e., outdoor) air. The 10 analytes detected in indoor air that were not detected in outdoor ambient air included 8 chlorinated compounds (various compounds in multiple sample locations), bromomethane (5 sample locations), and naphthalene (6 sample locations).
- When compared to the concentrations detected in the ambient air samples, 25 of the 40 TO-15 VOCs were detected in indoor samples at concentrations similar to or greater than the outdoor concentrations. The TO-15 VOCs detected at higher concentrations indoors included 19 chlorinated compounds.
- Ten (10) of the TO-15 VOC analytes detected in indoor air samples were above the NYSDOH Upper F criterion: 1,2,4-trimethylbenzene (1 location), 1,3,5-trimethylbenzene (1 location),1,4-dichlorobenzene (7 locations), 2-butanone (1 location), 2-methyl-2-pentanone (1 location), chloromethane (1 location), chloroform (15 locations), methylene chloride (3 locations), naphthalene (1 location), tetrachloroethene (1 location). Four of those analytes were also present above the USEPA indoor air background level (1,2,4-trimethylbenzene (1 sample) chloroform [5 samples], methylene chloride (2 locations), and naphthalene (1 location).
- Commonly identified “fuel oil or petroleum products indicators” (e.g., n-butane, n-pentane, n-heptane, isooctane, isopentane and 2-methylpentane) that were included in the n-alkanes and branched alkanes analyte lists were identified in all outdoor ambient air samples and indoor air samples. Each of these “indicator” analytes was detected in multiple indoor air samples at concentrations higher than detected in the ambient air samples.
- Indene and thiopene were not detected in any of the samples collected; these compounds are commonly used as “Manufactured Gas Plant (MGP) indicators”.
- Chloroform was detected in each of the indoor and outdoor samples collected for analysis, and was present at concentrations above both the NYSDOH Upper F and USEPA BASE 90th percentile values

in all but two of the indoor air samples. Chloroform is a man-made by-product used in industrial processes and as a solvent for lacquers, floor polishes, resins, and adhesives, and; therefore, not related to MGP operations.

- Other TO-15 VOC compounds that were reported in indoor air above both the NYSDOH Upper F and USEPA BASE 90th percentile values at multiple locations (i.e., two or more locations) included 1,4-dichlorobenzene, 4-methyl-2-pentanone, and methylene chloride. 1,4-dichlorobenzene is commonly used as in insecticides, fungicides, and pesticides, while 4-methyl-2-pentanone and methylene chloride are widely used as solvents for gums, resins, paints, varnishes, and lacquers.

Where analyzed, helium, used as a tracer gas, was not detected in any of the indoor air or ambient air samples. This indicates that no leaks, short-circuiting, or cross-contamination in the sampling equipment/procedures were present.

Based on the types of analytes detected, as well as the solvents, cleaning supplies, petroleum, oils, and maintenance-related chemical products stored within the ground-level areas/basements, and coupled with the absence of MGP indicator compounds, the data suggests that MGP-related impacts do not exist in the building areas monitored within the site.

3 WORK PLAN DEVIATIONS

The following deviations from the scope of work presented in the ISMP occurred during the field activities:

- Consistent with previous ISMP sampling events, due to the limitations of site access, the pre-monitoring walk through inspections and chemical inventories at each building were conducted concurrent with indoor air monitoring activities.
- Consistent with the previous ISMP sampling events, the elevator shafts were unable to be accessed for walk-through inspections and monitoring due to the inability to safely access the shafts without terminating elevator operation. Terminating elevator operation was not feasible; therefore the samples could not be collected.
- Haven Plaza North Co-Op Apartments and Saint Emeric's (including the Escuela Hispania Montessori Head Start School and the Church of Saint Emeric's) were not inspected and sampled at this time due to lack of access.
- The laboratory did not analyze for helium at 10 of the 22 sampling locations. The SUMMA canisters had already been purged by the laboratory when the analytical results were provided to Arcadis; therefore, the laboratory could not go back and re-analyze for helium.

No additional deviations from the scope of work presented in the ISMP were noted.

TABLES

Table 2
Indoor Air Analytical Results - East 11th Street OU-1

Location ID: / Date Collected:	NYSDOH Fuel Oil Heat - Indoor Air Upper Fence	USEPA BASE Guidance Values 90th Percentile	Units	AA-102919 10/29/19	AA-103019 10/30/19	AA-103119 10/31/19	AA-110119 11/01/19	JR-1115-IA-1 10/31/19	JR-1115-IA-2 10/31/19	JR-1115-IA-3 10/31/19	JR-1115-IA-4 10/31/19	JR-1141-IA-1 10/29/19	JR-1141-IA-2 10/29/19	JR-1141-IA-3 10/29/19	JR-1223-IA-1 11/01/19	JR-1223-IA-2 11/01/19	JR-1223-IA-3 11/01/19	JR-1223-IA-4 11/01/19	JR-170-IA-1 10/31/19	JR-170-IA-2 10/31/19	JR-170-IA-3 10/30/19	JR-170-IA-4 10/30/19	JR-178-IA-1 10/30/19	JR-178-IA-2 10/30/19	JR-178-IA-3 10/30/19
Volatile Organic Compounds																									
1,1,1-Trichloroethane	2.5	20.6	ug/m3	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U [0.44 U]	0.44 U [0.44 U]	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
1,1,2,2-Tetrachloroethane	0.38	- -	ug/m3	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U [0.55 U]	0.55 U [0.55 U]	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U
1,1,2-Trichloroethane	0.38	1.5	ug/m3	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U [0.44 U]	0.44 U [0.44 U]	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
1,1,2-Trichlorotrifluoroethane	2.5	- -	ug/m3	**0.56 J**	**0.56 J**	**0.54 J**	**0.53 J**	**0.51 J**	**0.57 J**	**0.53 J**	**0.56 J**	**0.53 J**	**0.55 J**	**0.56 J**	**0.52 J**	**0.55 J**	**0.54 J**	**0.53 J [0.56 J]**	**0.55 J [0.53 J]**	**0.55 J**	**0.56 J**	**0.51 J**	**0.54 J**	**0.54 J**	**0.53 J**
1,1-Dichloroethane	0.38	0.7	ug/m3	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U [0.32 U]	**0.034 J [0.039 J]**	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
1,1-Dichloroethene	0.4	1.4	ug/m3	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U [0.16 U]	0.16 U [0.16 U]	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
1,2,4-Trichlorobenzene	0.47	6.8	ug/m3	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U [0.59 U]	0.59 U [0.59 U]	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U
1,2,4-Trimethylbenzene	9.8	9.5	ug/m3	**0.47**	**0.11 J**	**0.43**	**0.15 J**	**0.43**	**0.45**	**0.37 J**	**0.33 J**	**0.40**	**0.37 J**	**0.34 J**	**0.42**	**0.23 J**	**0.47**	**0.39 U [0.12 J]**	**0.49 [1.0]**	**0.42**	**0.44**	**0.57**	**24**	**0.80**	**0.58**
1,2-Dibromoethane	0.38	1.5	ug/m3	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U [0.61 U]	0.61 U [0.61 U]	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.42	- -	ug/m3	**0.12 J**	**0.12 J**	**0.12 J**	**0.12 J**	**0.12 J**	**0.12 J**	**0.12 J**	**0.13 J**	**0.12 J**	**0.12 J**	**0.13 J**	**0.12 J**	**0.12 J**	**0.12 J**	**0.13 J [0.12 J]**	**0.10 J [0.13 J]**	**0.13 J**	**0.12 J**	**0.11 J**	**0.11 J**	**0.11 J**	**0.11 J**
1,2-Dichlorobenzene	0.48	1.2	ug/m3	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U [0.48 U]	0.48 U [0.48 U]	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
1,2-Dichloroethane	0.37	0.9	ug/m3	**0.090 J**	**0.053 J**	**0.053 J**	**0.048 J**	**0.12 J**	**0.055 J**	**0.16 J**	**0.057 J**	**0.10 J**	**0.089 J**	**0.10 J**	**0.12 J**	**0.069 J**	**0.071 J**	**0.060 J [0.060 J]**	**0.18 J [0.17 J]**	**0.22 J**	**0.13 J**	**0.11 J**	**0.071 J**	**0.13 J**	**0.065 J**
1,2-Dichloropropane	0.39	1.6	ug/m3	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U [0.37 U]	0.37 U [0.37 U]	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
1,3,5-Trimethylbenzene	3.9	3.7	ug/m3	**0.25 J**	0.39 U	**0.21 J**	0.39 U	**0.12 J**	**0.14 J**	**0.14 J**	0.39 U	**0.13 J**	**0.13 J**	**0.12 J**	**0.13 J**	0.39 U	**0.14 J**	0.39 U [0.39 U]	**0.14 J [0.22 J]**	**0.14 J**	**0.31 J**	**0.33 J**	**6.3**	**0.37 J**	**0.34 J**
1,3-Butadiene	- -	- -	ug/m3	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U [0.35 U]	0.35 U [0.35 U]	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
1,3-Dichlorobenzene	0.46	2.4	ug/m3	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U [0.48 U]	0.48 U [0.48 U]	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
1,4-Dichlorobenzene	1.2	5.5	ug/m3	**0.13 J**	0.48 U	**0.17 J**	0.48 U	**4.0**	**0.37 J**	**1.5**	**0.29 J**	**4.9**	**4.7**	**3.2**	**0.27 J**	**0.24 J**	**0.35 J**	0.48 U [0.48 U]	**1.4 [0.29 J]**	**0.51**	0.48 U	**0.55**	**0.39 J**	**1.8**	**0.19 J**
1,4-Dioxane	- -	- -	ug/m3	**0.22 J**	**2.6**	**0.13 J**	0.72 U	0.72 U	**0.12 J**	**0.22 J**	0.72 U	0.72 U	0.72 U	0.72 U	**0.30 J**	**0.19 J**	0.72 U	**0.20 J [0.72 U]**	**0.18 J [0.72 U]**	**0.13 J**	0.72 U	0.72 U	**0.13 J**	0.72 U	0.72 U
2-Butanone	16	- -	ug/m3	**0.93**	**0.84 J**	**6.8**	**0.34 J**	**2.4**	**1.8**	**1.4**	**1.5**	**1.4**	**1.6**	**1.4**	**0.87 J**	**0.75 J**	**1.4**	**0.84 J [1.1]**	**2.5 [2.5]**	**1.4**	**1.3**	**1.5**	**23**	**2.4**	**0.95**
2-Hexanone	- -	- -	ug/m3	**0.089 J**	**0.091 J**	**1.1**	0.82 U	**0.37 J**	**0.38 J**	**0.18 J**	**0.12 J**	**0.14 J**	**0.20 J**	**0.16 J**	**0.088 J**	**0.098 J**	**0.24 J**	**0.073 J [0.15 J]**	**0.43 J [0.12 J]**	**0.19 J**	**0.14 J**	**0.19 J**	**0.47 J**	**0.35 J**	**0.077 J**
4-Ethyltoluene	- -	- -	ug/m3	**0.28 J**	0.79 U	0.79 U	0.79 U	**0.57 J**	0.79 U	**0.54 J**	0.79 U	**0.28 J**	**0.37 J**	**0.34 J**	**0.23 J**	**0.19 J**	**0.18 J**	0.79 U [0.79 U]	**0.79 U [0.56 J]**	0.79 U	**0.20 J**	**0.37 J**	**6.5**	**0.39 J**	**0.37 J**
4-Methyl-2-Pentanone	1.9	- -	ug/m3	**3.0 J**	**0.32 J**	0.82 U	**0.24 J**	**0.53 J**	**0.84**	**0.32 J**	**0.97**	**0.23 J**	**0.33 J**	**0.45 J**	**0.37 J**	**1.1**	**0.30 J**	**0.25 J [0.82 U]**	**1.7 [0.45 J]**	**0.95**	**0.55 J**	**0.47 J**	**2.1 J**	**0.47 J**	**0.41 J**
Acetone	115	- -	ug/m3	**7.5 J**	**7.6 J**	**15 J**	**3.9 J**	**30 J**	**22 J**	**21 J**	**13 J**	**14 J**	**18 J**	**15 J**	**11 J**	**8.3 J**	**12 J**	**7.4 J [13 J]**	**21 J [38 J]**	**16 J**	**13**	**13 J**	**18**	**23 J**	**9.6 J**
Benzene	13	9.4	ug/m3	**0.69**	**0.83**	**0.49**	**0.41**	**1.2**	**0.85**	**0.76**	**0.56**	**0.71**	**0.77**	**0.78**	**0.50**	**0.43**	**1.8**	**0.50 [0.37]**	**0.63 J [2.9 J]**	**0.51**	**1.4**	**0.95**	**0.73**	**3.4**	**0.58**
Benzyl chloride	- -	- -	ug/m3	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U [0.83 U]	0.83 U [0.83 U]	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U
Bromodichloromethane	- -	- -	ug/m3	0.54 U	0.54 U	0.54 U	0.54 U	**0.24 J**	**0.44 J**	**0.24 J**	**0.17 J**	**4.4**	**3.6**	**5.8**	**2.1**	0.54 U	**1.2**	0.54 U [0.54 U]	**0.59 [0.45 J]**	0.54 U	**1.5**	**1.0**	**0.37 J**	**12**	**0.15 J**
Bromoform	- -	- -	ug/m3	0.83 U	0.83 U	0.83 UJ	0.83 UJ	0.83 UJ	0.83 UJ	0.83 UJ	0.83 UJ	0.83 U	0.83 U	0.83 U	0.83 UJ	0.83 UJ	0.83 UJ	0.83 UJ [0.83 UJ]	0.83 UJ [0.83 UJ]	0.83 UJ	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U
Bromomethane	0.48	1.7	ug/m3	0.31 U	0.31 U	0.31 U	0.31 U	**0.088 J**	0.31 U	0.31 U	**0.088 J**	0.31 U	**0.087 J**	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U [0.31 U]	**0.34 [0.20 J]**	**0.086 J**	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Carbon Disulfide	- -	4.2	ug/m3	**0.21 J**	**0.17 J**	**1.1**	**0.035 J**	**0.14 J**	**0.45 J**	**0.87**	**0.74**	**1.7**	**0.59 J**	**0.27 J**	**0.22 J**	**0.098 J**	**0.11 J**	**0.041 J [0.62 U]**	**0.28 J [0.16 J]**	**0.39 J**	**0.14 J**	**0.23 J**	**0.42 J**	**0.99**	**0.12 J**
Carbon Tetrachloride	1.3	1.3	ug/m3	**0.49**	**0.50**	**0.50**	**0.46**	**0.50**	**0.51**	**0.51**	**0.47**	**0.52**	**0.53**	**0.56**	**0.48**	**0.46**	**0.51**	**0.44 [0.50]**	**0.76 [0.66]**	**0.50**	**0.58**	**0.43**	**0.52**	**0.58**	**0.48**
Chlorobenzene	0.41	0.9	ug/m3	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U [0.37 U]	0.37 U [0.37 U]	0.37 U	0.37 U	0.37 U	0.37 U	**0.084 J**	0.37 U
Chloroethane	0.39	1.1	ug/m3	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	**0.076 J**	**0.14 J**	**0.084 J**	0.21 U	**0.092 J**	0.21 U	0.21 U	0.21 U	0.21 U [0.21 U]	**0.21 U [1.0]**	0.21 U	0.21 U	0.21 U	0.21 U	**0.12 J**	0.21 U
Chloroform	1.2	1.1	ug/m3	**0.19 J**	**0.25 J**	**0.22 J**	**0.26 J**	**4.4**	**2.8**	**2.9**	**1.2**	**26**	**22**	**34**	**13**	**0.57**	**6.8**	**0.38 J [0.42]**	**3.7 [2.9]**	**0.57**	**8.6**	**6.2**	**2.2**	**49**	**1.3**
Chloromethane	4.2	3.7	ug/m3	**1.1**	**1.4 J**	**1.4**	**1.4**	**2.3 J**	**1.7 J**	**1.8 J**	**2.5**	**1.6 J**	**1.5**	**1.8**	**1.6 J**	**1.5 J**	**1.6 J**	**1.5 J [1.3]**	**2.0 J [2.6 J]**	**2.0**	**1.2**	**1.1**	**1.4**	**1.5**	**1.4 J**
cis-1,2-Dichloroethene	0.41	1.9	ug/m3	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	**0.25**	0.16 U [0.16 U]	0.16 U [0.16 U]	0.16 U	0.16 U	0.16 U	**0.041 J**	**0.39**	0.16 U
cis-1,3-Dichloropropene	0.38	2.3	ug/m3	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U [0.36 U]	0.36 U [0.36 U]	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Cyclohexane	6.3	- -	ug/m3	**0.40 J**	**0.33 J**	**0.26 J**	**0.17 J**	**0.26 J**	**0.26 J**	**0.24 J**	**0.23 J**	**0.40 J**	**0.37 J**	**0.36 J**	**0.62 J**	**0.13 J**	**0.20 J**	**0.30 J [0.14 J]**	**0.27 J [1.2]**	**0.22 J**	**0.77**	**0.38 J**	**0.39 J**	**0.53 J**	**0.31 J**
Dibromochloromethane	- -	- -	ug/m3	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	**0.48 J**	**0.37 J**	**0.60 J**	**0.28 J**	0.68 U	**0.17 J**	0.68 U [0.68 U]	**0.076 J [0.68 U]**	0.68 U	**0.15 J**	**0.12 J**	0.68 U	**1.5**	0.68 U
Dichlorodifluoromethane	10	16.5	ug/m3	**2.6**	**1.4**	**1.5**	**1.2**	**1.3**	**1.3**	**1.4**	**1.4**	**1.4**	**1.3**	**1.4**	**1.2**	**1.3**	**1.4**	**1.5 [1.3]**	**1.3 [1.4]**	**1.3**	**2.7**	**2.5**	**2.6**	**2.7**	**2.6**
Ethylbenzene	6.4	5.7	ug/m3	**0.51**	**0.23 J**	**0.22 J**	**0.14 J**	**0.32 J**	**0.29 J**	**0.27 J**	**0.23 J**	**0.38**	**0.40**	**0.41**	**0.35**	**0.17 J**	**0.70**	**0.15 J [0.11 J]**	**0.41 [0.70]**	**0.36**	**0.85**	**0.65**	**3.0**	**1.3**	**0.51**
Hexachlorobutadiene	0.49	6.8	ug/m3	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U [0.85 U]	0.85 U [0.85 U]	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U
Isopropanol	- -	- -	ug/m3	**3.0**	**3.0**	**2.3**	**1.6 J**	**20**	**3.5**	**11**	**3.8**	**7.6**	**6.1**	**7.0**	**5.7**	**5.4**	**3.6**	**12 [14]**	**5.7 [3.0]**	**4.8**	**11**	**6.1**	**8.7**	**9.5**	**4.1**
Methyl tert-butyl Ether	14	11.5	ug/m3	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U [0.58 U]	0.58 U [0.58 U]	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U
Methylene Chloride	16	10	ug/m3	5.1 UB	1.9 UB	1.9 UB	2.0 UB	3.2 UB	**5.4**	3.5 UB	1.8 UB	3.5 UB	**8.2**	3.3 UB	3.3 UB	1.8 UB	2.2 UB	**11 J [2.0 UBJ]**	**2.6 UBJ [18 J]**	2.2 UB	**25**	5.0 UB	3.4 UB	3.3 UB	2.6 UB
m-Xylene & p-Xylene	11	22.2	ug/m3	**2.0**	**0.60**	**0.75**	**0.42**	**1.0**	**0.92**	**0.89**	**0.79**	**1.2**	**1.3**	**1.2**	**1.4**	**0.55**	**0.57**	**0.44 [0.32 J]**	**1.5 J [3.8 J]**	**1.4**	**2.3**	**1.7**	**11**	**1.7**	**1.7**
o-Xylene	7.1	7.9	ug/m3	**0.65**	**0.19 J**	**0.31 J**	**0.17 J**	**0.37**	**0.36**	**0.34 J**	**0.29 J**	**0.47**	**0.46**	**0.43**	**0.65**	**0.24 J**	**0.31 J**	**0.15 J [0.13 J]**	**0.64 [1.2]**	**0.61**	**0.78**	**0.59**	**4.5**	**0.67**	**0.55**
Naphthalene	- -	5.1	ug/m3	1.0 U	1.0 U	1.0 U	1.0 U	**0.89 J**	1.0 U	**0.46 J**	1.0 U	1.0 U	1.0 U	1.0 U	**0.48 J**	1.0 U	**0.44 J**	1.0 U [1.0 U]	1.0 U [1.0 U]	1.0 U	1.0 U	1.0 U	**8.1**	**0.81 J**	1.0 U
Propylene	- -	- -	ug/m3	**2.0 J**	**1.8 J**	1.7 U	1.7 U	**5.5 J**	**4.9 J**	**3.3 J**	**2.3 J**	**3.7 J**	**4.4 J**	1.7 U	**2.1 J**	**2.1 J**	**3.9 J**	**1.8 J [1.7 U]**	**2.1 J [7.5 J]**	**2.3 J**	**2.0 J**	**1.9 J**	**2.7 J**	**5.1 J**	**2.5 J**
Styrene	1.4	1.9	ug/m3	**0.44**	0.34 U	0.34 U	0.34 U	**0.67**	**0.22 J**	**0.31 J**	**0.25 J**	**0.53**	**0.53**	**0.44**	**0.16 J**	0.34 U	0.34 U	0.34 U [0.34 U]	**0.32 J [0.17 J]**	**0.30 J**	**0.32 J**	**0.46**	**0.70**	**0.92**	**0.48**
Tetrachloroethene	2.5	15.9	ug/m3	**1.6**	**0.88**	**0.63**	**0.50 J**	**0.66**	**0.58**	**0.90**	**0.62**	**1.6**	**1.5**	**1.5**	**0.55**	**2.0**	**2.4**	**0.48 J [0.63]**	**0.66 [0.59]**	**0.57**	**0.92**	**0.88**	**2.2**	**2.9**	**2.0**
Tetrahydrofuran	0.78	- -	ug/m3	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U [1.2 U]	1.2 U [1.2 U]	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Toluene	57	43	ug/m3	**3.4**	**2.3**	**1.6**	**0.86**	**2.8**	**3.7**	**2.4**	**1.9**	**2.9**	**3.0**	**3.0**	**16**	**1.6**	**1.2**	**2.0 [0.72]**	**2.3 J [11 J]**	**1.8**	**6.0**	**3.3**	**3.6**	**4.3**	**3.0**
trans-1,2-Dichloroethene	- -	- -	ug/m3	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	**0.099 J**	0.32 U	0.32 U	0.32 U	**0.065 J**	**0.064 J**	**0.028 J [0.32 U]**	**0.063 J [0.045 J]**	0.32 U	**0.072 J**	**0.088 J**	0.32 U	**0.11 J**	0.32 U
trans-1,3-Dichloropropene	0.4	1.3	ug/m3	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U [0.36 U]	0.36 U [0.36 U]	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Trichloroethene	0.46	4.2	ug/m3	**0.072 J**	**0.065 J**	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	**0.064 J**	**0.069 J**	**0.072 J**	0.19 U	0.19 U	**0.057 J**	0.19 U [0.19 U]	**0.036 J [0.19 U]**	0.19 U	**0.10 J**	**0.061 J**	**0.097 J**	**0.13 J**	**0.091 J**
Trichlorofluoromethane	12	18.1	ug/m3	**1.3**	**1.3**	**1.3**	**1.3**	**1.2**	**1.4**	**1.4**	**1.3**	**1.4**	**1.4**	**1.4**	**1.2**	**1.3**	**1.3**	**1.5 [1.3]**	**1.3 [1.6]**	**1.3**	**2.0**	**1.2**	**1.2**	**1.3**	**1.3**
Vinyl Chloride	0.37	1.9	ug/m3	**0.095 J**	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	**0.069 J**	0.10 U [0.10 U]	0.10 U [0.10 U]	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U

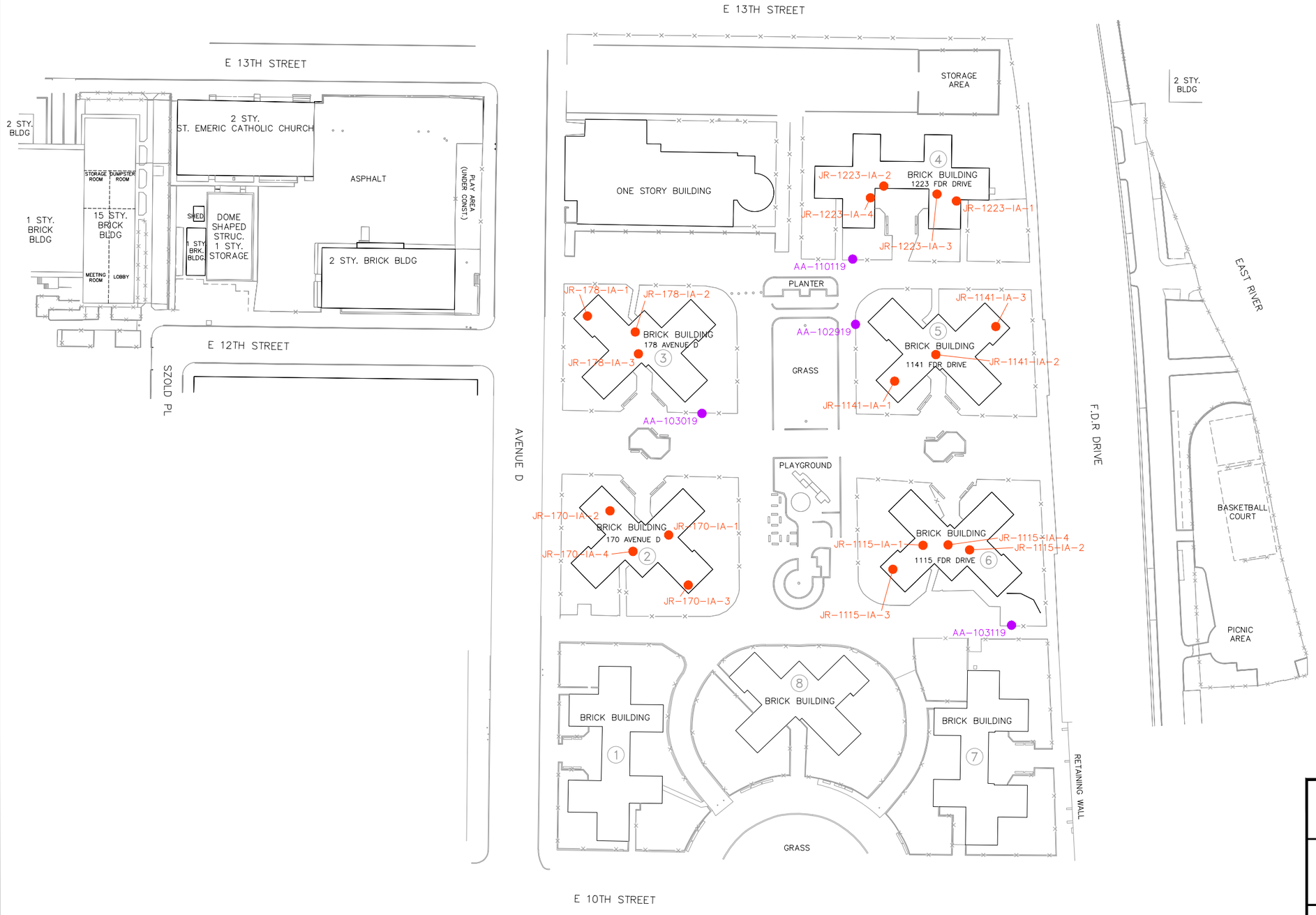
Table 2
Indoor Air Analytical Results - East 11th Street OU-1

Location ID: / Date Collected:	NYSDOH Fuel Oil Heat - Indoor Air Upper Fence	USEPA BASE Guidance Values 90th Percentile	Units	AA-102919 10/29/19	AA-103019 10/30/19	AA-103119 10/31/19	AA-110119 11/01/19	JR-1115-IA-1 10/31/19	JR-1115-IA-2 10/31/19	JR-1115-IA-3 10/31/19	JR-1115-IA-4 10/31/19	JR-1141-IA-1 10/29/19	JR-1141-IA-2 10/29/19	JR-1141-IA-3 10/29/19	JR-1223-IA-1 11/01/19	JR-1223-IA-2 11/01/19	JR-1223-IA-3 11/01/19	JR-1223-IA-4 11/01/19	JR-170-IA-1 10/31/19	JR-170-IA-2 10/31/19	JR-170-IA-3 10/30/19	JR-170-IA-4 10/30/19	JR-178-IA-1 10/30/19	JR-178-IA-2 10/30/19	JR-178-IA-3 10/30/19
n-Alkanes																									
n-Butane	- -	- -	ug/m3	**6.5**	**5.6**	**4.2**	**5.5**	**46 E**	**22**	**24**	**7.7**	**17**	**36**	**15**	**26**	**12**	**18**	**20 [3.8]**	**8.3 [29]**	**6.0**	**25**	**6.7**	**14**	**24**	**7.9**
Pentane	- -	- -	ug/m3	**1.8**	**1.4**	**1.1 J**	**1.3**	**2.9**	**1.5**	**2.2**	**1.6**	**2.5**	**2.9**	**2.2**	**47**	**0.76 J**	**0.97 J**	**5.6 [0.64 J]**	**4.6 [14]**	**1.3**	**7.6**	**2.2**	**26**	**2.7**	**1.5**
n-Decane	15	17.5	ug/m3	**0.83 J**	2.3 U	**1.1 J**	**0.24 J**	**1.9 J**	**40**	**1.6 J**	**2.7**	**1.4 J**	**1.1 J**	**1.3 J**	**1.2 J**	**1.2 J**	**1.4 J**	**2.3 U [0.39 J]**	**3.0 [1.1 J]**	**1.6 J**	**1.5 J**	**2.1 J**	**44**	**4.3**	**2.0 J**
n-Dodecane	9.2	- -	ug/m3	**0.46 J**	2.8 U	**0.96 J**	2.8 U	**2.0 J**	**20**	**1.5 J**	**2.0 J**	**1.7 J**	**1.5 J**	**1.7 J**	**11**	**0.60 J**	**1.6 J**	2.8 U [2.8 U]	**2.5 J [2.8 U]**	**3.5**	2.8 U	**1.7 J**	**6.1**	**2.3 J**	**1.9 J**
n-Heptane	18	- -	ug/m3	**0.45 J**	**0.36 J**	**0.34 J**	**0.21 J**	**0.62 J**	**0.60 J**	**0.46 J**	**0.35 J**	**0.46 J**	**0.57 J**	**0.46 J**	**0.44 J**	**0.29 J**	**0.34 J**	**0.37 J [0.23 J]**	**0.73 J [1.2]**	**0.38 J**	**0.96**	**0.56 J**	**6.6**	**0.66 J**	**0.51 J**
n-Hexane	14	10.2	ug/m3	**1.3**	**0.68 J**	**0.55 J**	**0.51 J**	**0.64 J**	**0.75**	**0.71**	**0.55 J**	**0.95**	**1.6**	**0.98**	**0.76**	**0.36 J**	**0.47 J**	**2.0 [0.38 J]**	**0.58 J [4.2 J]**	**0.50 J**	**5.2**	**1.4**	**2.0**	**1.1**	**0.82**
n-Octane	5.2	- -	ug/m3	**0.23 J**	**0.15 J**	**0.19 J**	**0.12 J**	**0.55 J**	**1.6**	**0.31 J**	**0.27 J**	**0.21 J**	**0.30 J**	**0.24 J**	**0.29 J**	**0.19 J**	**0.22 J**	**0.14 J [0.13 J]**	**0.57 J [0.68 J]**	**0.21 J**	**0.46 J**	**0.33 J**	**6.8**	**0.44 J**	**0.40 J**
Nonane	7.9	7.8	ug/m3	**0.32 J**	**0.13 J**	**0.20 J**	**0.12 J**	**0.73 J**	**24**	**0.51 J**	**1.2**	**0.22 J**	**0.26 J**	**0.22 J**	**0.28 J**	**0.21 J**	**0.27 J**	**1.0 U [0.13 J]**	**0.39 J [0.40 J]**	**0.23 J**	**0.49 J**	**0.41 J**	**8.9**	**0.71 J**	**0.56 J**
n-Undecane	12	22.6	ug/m3	**0.37 J**	2.6 U	**0.53 J**	2.6 U	**0.79 J**	**17**	**0.56 J**	**1.2 J**	**0.41 J**	**0.41 J**	**0.41 J**	**0.68 J**	2.6 U	**0.44 J**	2.6 U [2.6 U]	**0.64 J [0.46 J]**	**0.86 J**	2.6 U	**0.59 J**	**25**	**1.5 J**	**0.81 J**
Branched Alkanes (Reported as TICs)																									
2,3-Dimethylpentane	5.2	- -	ug/m3	**0.19 J**	**0.14 J**	**0.11 J**	0.33 U	**0.11 J**	**0.11 J**	**0.12 J**	0.33 U	**0.18 J**	**0.17 J**	**0.16 J**	**0.12 J**	0.33 U	0.33 U	**0.17 J [0.33 U]**	**0.11 J [0.47]**	0.33 U	**0.37 J**	**0.18 J**	**0.18 J**	**0.19 J**	**0.15 J**
Isopentane	- -	- -	ug/m3	**3.3**	**2.7**	**2.1**	**2.6**	**4.7**	**2.3**	**3.3**	**3.0**	**5.2**	**6.0**	**8.3**	**7.1**	**1.6**	**1.8**	**8.5 J [0.98]**	**4.2 J [20 J]**	**2.0**	**13**	**3.9**	**4.4**	**3.0**	**2.4**
2-methylpentane	- -	- -	ug/m3	**0.96**	**0.59**	**0.49**	**0.47**	**0.49**	**0.45**	**0.49**	**0.55**	**0.87**	**0.90**	**0.79**	**0.38**	**0.29**	**0.32**	**1.2 J [0.27 J]**	**0.49 J [3.1 J]**	**0.45**	**2.7**	**0.93**	**0.74**	**0.87**	**0.73**
Other (Reported as TICs)																									
Indane	- -	- -	ug/m3	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	**2.8**	0.39 U [0.39 U]	0.39 U [0.39 U]	0.39 U	**0.55**	**0.86**	**1.5**	**6.0**	0.39 U
Indene	- -	- -	ug/m3	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U [0.76 U]	0.76 U [0.76 U]	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
Isoctane	- -	- -	ug/m3	**0.68 J**	**0.44 J**	**0.44 J**	**0.19 J**	**0.38 J**	**0.38 J**	**0.36 J**	**0.36 J**	**0.52 J**	**0.55 J**	**0.52 J**	**0.22 J**	**0.16 J**	**0.16 J**	**0.37 J [0.15 J]**	**0.38 J [1.2]**	**0.34 J**	**1.1**	**0.56 J**	**0.63 J**	**0.60 J**	**0.52 J**
Thiopene	- -	- -	ug/m3	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U [0.28 U]	0.28 U [0.28 U]	0.28 U	0.28 U	0.28 U	0.28 U	**0.055 J**	0.28 U
1,2,3-Trimethylbenzene	- -	- -	ug/m3	0.39 U	0.39 U	**0.24 J**	0.39 U	**0.34 J**	**0.20 J**	**0.26 J**	0.39 U	**0.26 J**	**0.20 J**	**0.24 J**	**0.25 J**	0.39 U	**0.24 J**	0.39 U [0.39 U]	**0.74 [0.33 J]**	0.39 U	0.39 U	**0.22 J**	**5.3**	**0.68**	**0.18 J**
Isopropylbenzene	0.82	- -	ug/m3	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	**0.16 J**	0.79 U [0.79 U]	**0.79 U [0.13 J]**	0.79 U	**0.13 J**	**0.12 J**	**0.67 J**	**0.53 J**	0.79 U
Miscellaneous																									
Helium	- -	- -	%v/v	NA	NA	0.17 U	0.18 U	0.16 U	0.16 U	0.16 U	0.15 U	NA	NA	NA	0.16 U	0.18 U	0.19 U	0.13 U [0.16 U]	0.17 U [0.14 U]	0.16 U	NA	NA	NA	NA	NA

Notes:

Lab Qualifier	Definition
D	Sample required dilution prior to analysis.
J	Indicates an estimated value. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL)
U	Indicates the constituent was not detected at the PQL. The value preceding the U indicates the PQL.
[ ]	Identifies duplicate sample collected for quality control purposes.
bold font	Indicates analyte exceeded its NYSDOH Upper Fence Criterion.
shaded	indicates analyte exceeded the USEPA's BASE Guidance Value (90th Percentile).

FIGURES



LEGEND:

- INDOOR AIR SAMPLE LOCATION (IA)
- AMBIENT AIR SAMPLE LOCATION (AA)
- (4) JACOB RIIS HOUSES BUILDING NUMBER

NOTES:

1. BASE MAP AND SURVEY CONTROL WAS TAKEN FROM ORIGINAL SURVEY DATED 9/3/2004; SUBMITTED BY B.B.L. ON 8/25/2006.
2. ALL PLANIMETRIC FEATURES SHOWN ARE IN NAD 83 NY STATE PLANE COORDINATE SYSTEM.
3. THE ORIGINAL SURVEY WAS CONVERTED INTO NEW COORDINATE AND VERTICAL SYSTEM BASED ON 7 TRAVERSE POINTS, RECOVERED IN THE FIELD (#2,3,4,6,7,12, AND 18).
4. ALL LOCATIONS ARE APPROXIMATE.

0 100' 200'

GRAPHIC SCALE

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
FORMER EAST 11TH STREET WORKS
ISMP INDOOR AIR MONITORING REPORT

SITE PLAN WITH OU-1 AIR MONITORING LOCATIONS

ARCADIS Design & Consultancy for natural and built assets

FIGURE 1

APPENDIX A

NYSDOH Indoor Air Quality Questionnaires and Building Inventory Forms

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

Bldg # 1141

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

Preparer's Name Albina Redzepagic Date/Time Prepared 10/29/2019 9:30am

Preparer's Affiliation Arcadis Phone No. 212-365-4651

Purpose of Investigation Indoor Air Sampling

1. OCCUPANT:

Interviewed: Y /(N)

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

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

Interviewed:(Y)/ N Matrona Manager

Last Name: Collymore First Name: Shawn

Address: 454 East 10th Str.

County: Manhattan

Home Phone: _____ Office Phone: 212-228-2400

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

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

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:_____

If multiple units, how many? 117 units

If the property is commercial, type?

Business Type(s) N/A

Does it include residences (i.e., multi-use)? Y / N If yes, how many? N/A

Other characteristics:

Number of floors 13 Building age 70 yrs (1949)

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, No vertical air flow in design. Possible air flow through gaps in piping, compactor Room trash ~~chute~~ chute, or elevator shaft.

Airflow near source
Fan in the tank room, or during testing.
Gaps between the door & Frame.

Outdoor air infiltration
Through fan air exchange & doors opening & closing.

Infiltration into air ducts
No air ducts identified on the ground floor.

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 Epoxy Floor Coating

f. Foundation walls: (poured block) stone other _____

g. Foundation walls: unsealed (sealed) sealed with Paint

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: 20 (feet) Tank room Sump Room itself 8ft below grade.

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

_____

_____

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	(Steam 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: Steam

Boiler/furnace located in: Basement Outdoors Main Floor Other Steam Piped in

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.

Buiding has no supplied air ~~duct~~ duct work. only air supply is in the tank room from a work fan.

7. OCCUPANCY

Is basement/lowest level occupied? Full-time (Occasionally) Seldom (Almost Never)

Work area & Storage — NO occupancy

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	Electric room, Tank Room, Compactor Room 1/3, 2/3 ~~Residential~~ Crawlspace
1st Floor +B	Residential
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 stored in the garage (e.g., lawnmower, atv, car) Y / N / (NA) 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? Daily

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? Diorlesise

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

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: Cleaning products

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? Household cleaners

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

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

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)

a. Provide reasons why relocation is recommended: N/A

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

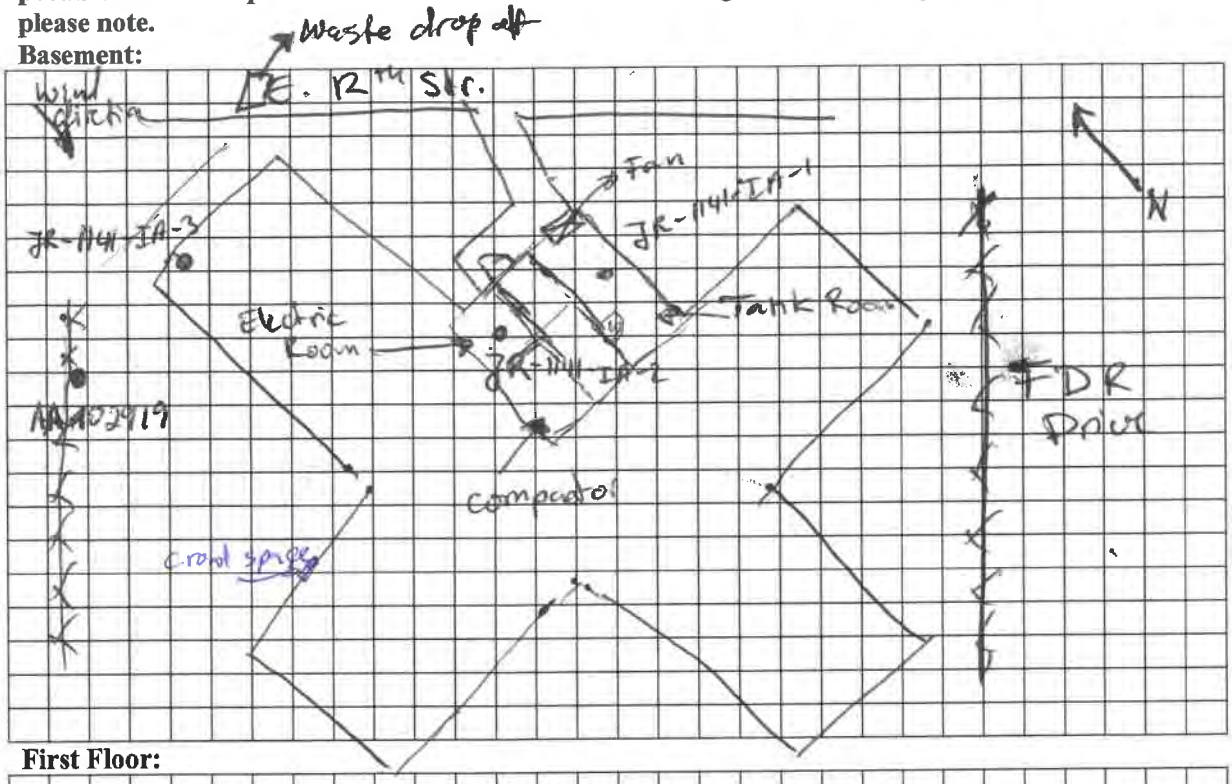
c. Responsibility for costs associated with reimbursement explained? Y / N

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

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:

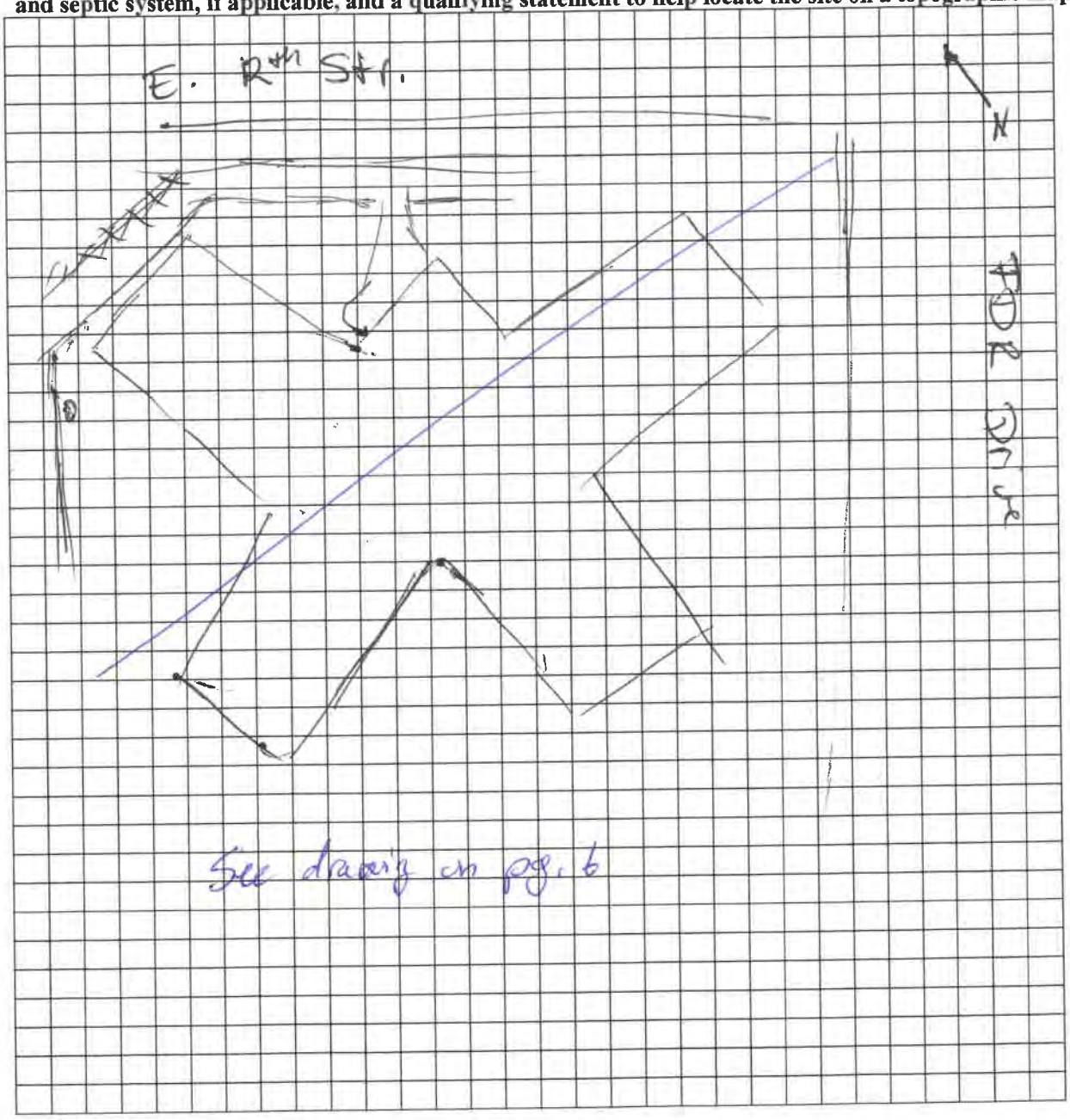


First Floor:

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



See drawing on pg. 6

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: _____

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo** Y/N
	No chemicals					
	See photo log					

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

178 Avenue D

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 Robert Arnold Date/Time Prepared 10/30/19 09:00

Preparer's Affiliation ARCADIS Phone No. (631) 391-5223

Purpose of Investigation Indoor Air Sampling

1. OCCUPANT:

Interviewed: Y / N

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

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

Interviewed: Y / N

Last Name: Collymore First Name: Shawn

Address: 454 East 10th Street

County: Manhattan

Home Phone: _____ Office Phone: 212-228-2406

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

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

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: _____

If multiple units, how many? 104

If the property is commercial, type?

Business Type(s) NA

Does it include residences (i.e., multi-use)? Y / N If yes, how many? —

Other characteristics:

Number of floors 13 Building age ~70 yrs

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. Only from doors & windows. Compactor has air supply. There are 1 fans & openings in the basement.

Airflow near source
Fan in trunk room. Openings in the storage room for airing.

Outdoor air infiltration
Fan & openings in basement. Open air bulbs in wall.

Infiltration into air ducts
NA - No air duct in the building observed.

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

a. Above grade construction: wood frame concrete stone brick

b. Basement type: RA 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 paint

h. The basement is: wet damp dry moldy

i. The basement is: finished unfinished partially finished

j. Sump present? Y / N [Sump in tank room]

k. Water in sump? Y / N / not applicable Could not access tank room

Basement/Lowest level depth below grade: 20 (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)
Earthen floor in crawl space, Concrete floors seem to be free of cracks, Drains

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: Steam

Boiler/furnace located in: Basement Outdoors Main Floor Other Steam Piped In

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.

No Duct work present ; small vents and fans create air exchange

7. OCCUPANCY

Is basement/lowest level occupied? Full-time (Occasionally) Seldom Almost Never

Workers

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	Meter room, compactor room, tank room
1st Floor ~13	Residences
2nd Floor	Residences
3rd Floor	Residences
4th Floor	Residences

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 stored in the garage (e.g., lawnmower, atv, car) Y / N / (NA) 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? People Still Do

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

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

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. 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: Trash Smell, cigarette Smell, possible urine

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? Household Cleaners

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)

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

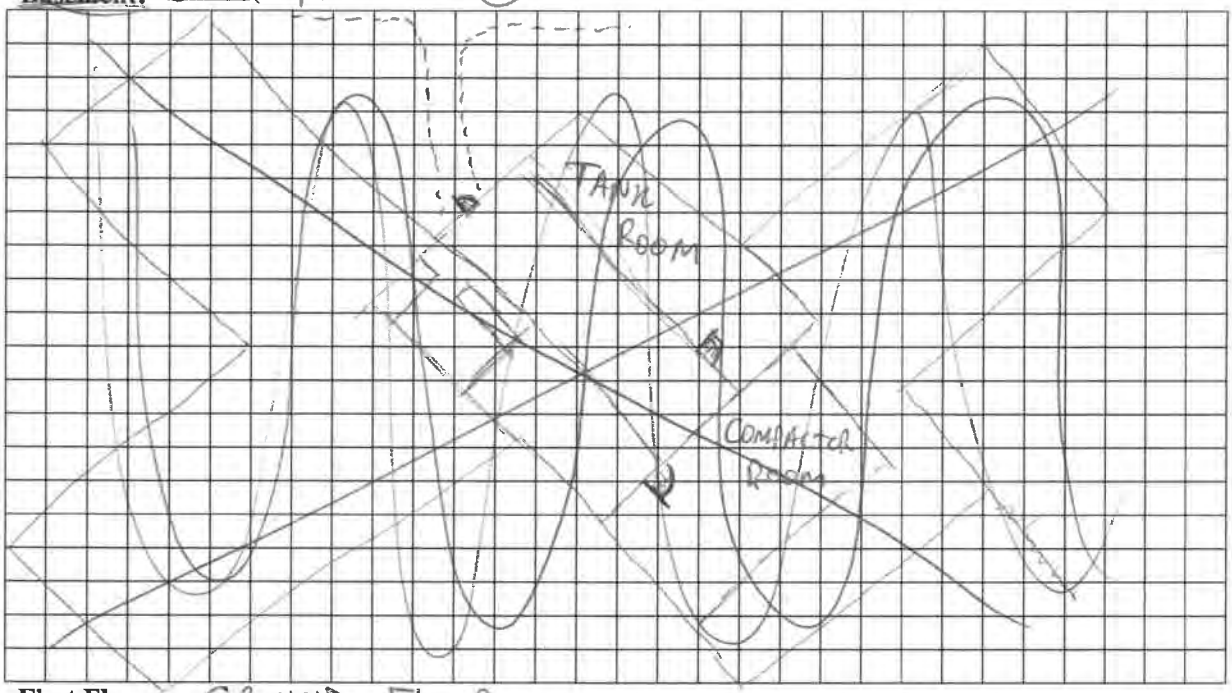
d. Relocation package provided and explained to residents? Y / N

178 Ave. D

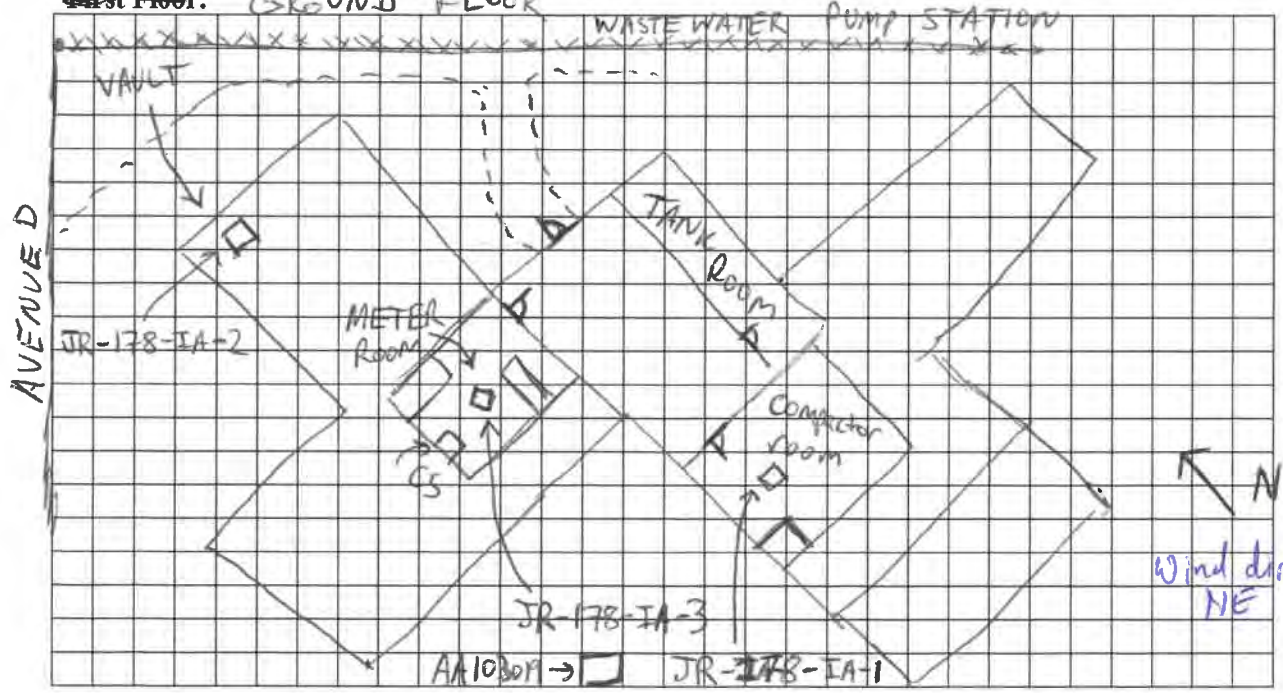
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement: ~~Second Floor~~ RA



~~First~~ Floor: GROUND FLOOR

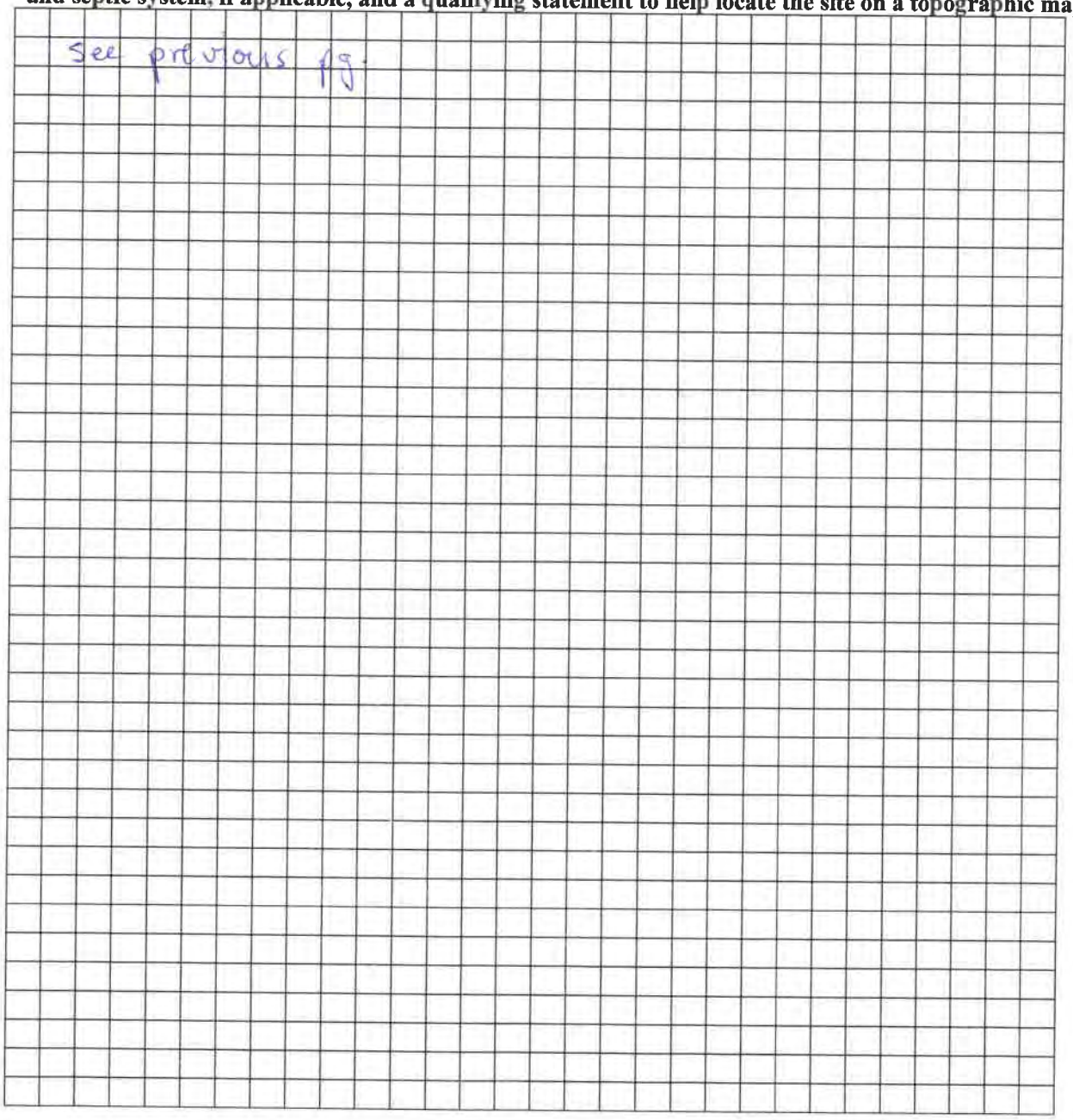


CS = Confined Space

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: _____

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo** Y/N
	NO CHEMICALS IDENTIFIED					

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

170 Avenue D

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 Dylan Corbett Date/Time Prepared 10/30/19

Preparer's Affiliation Arcadis Phone No. 631-391-5203

Purpose of Investigation Indoor Air Sampling

1. OCCUPANT:

Interviewed: Y / (N)

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

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

Interviewed: Y / N

Last Name: Collgnore First Name: Shawn

Address: 459 East 10th Street

County: Manhattan

Home Phone: _____ Office Phone: 212-228-2400

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

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

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:_____

If multiple units, how many? ~~117~~ 104 (RA)

If the property is commercial, type?

Business Type(s) None

Does it include residences (i.e., multi-use)? (Y) / N If yes, how many? 104

Other characteristics:

Number of floors 13 Building age 42

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 - except through gaps in piping or stairwell when door open

Airflow near source

vents in cabinet room and TANK room

Outdoor air infiltration

Fan in tank room for venting

Infiltration into air ducts

No Air DUCTS in ground floor

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 Tank room

k. Water in sump? Y / N / not applicable

Basement/Lowest level depth below grade: -20 (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

Minor Cracks in grand wall

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: Steam

Boiler/furnace located in: Basement Outdoors Main Floor Other Steam piped in

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.

N/A - no supplied air to building, except for small ventilation vents in wall (basement)

7. OCCUPANCY

Is basement/lowest level occupied? Full-time (Occasionally) Seldom Almost Never

maintenance staff

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	compactor room, Tank room, storage, Tank room
1st Floor	residences
2nd Floor	residences
3rd Floor	residences
4th Floor	residences

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 stored in the garage (e.g., lawnmower, atv, car) Y / N / (NA) 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? can happen

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

i. Have cosmetic products been used recently? Y / (N) When & Type? Not on ground level

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. 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: Trash

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? Household Solvents

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

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

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)

a. Provide reasons why relocation is recommended: NA

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

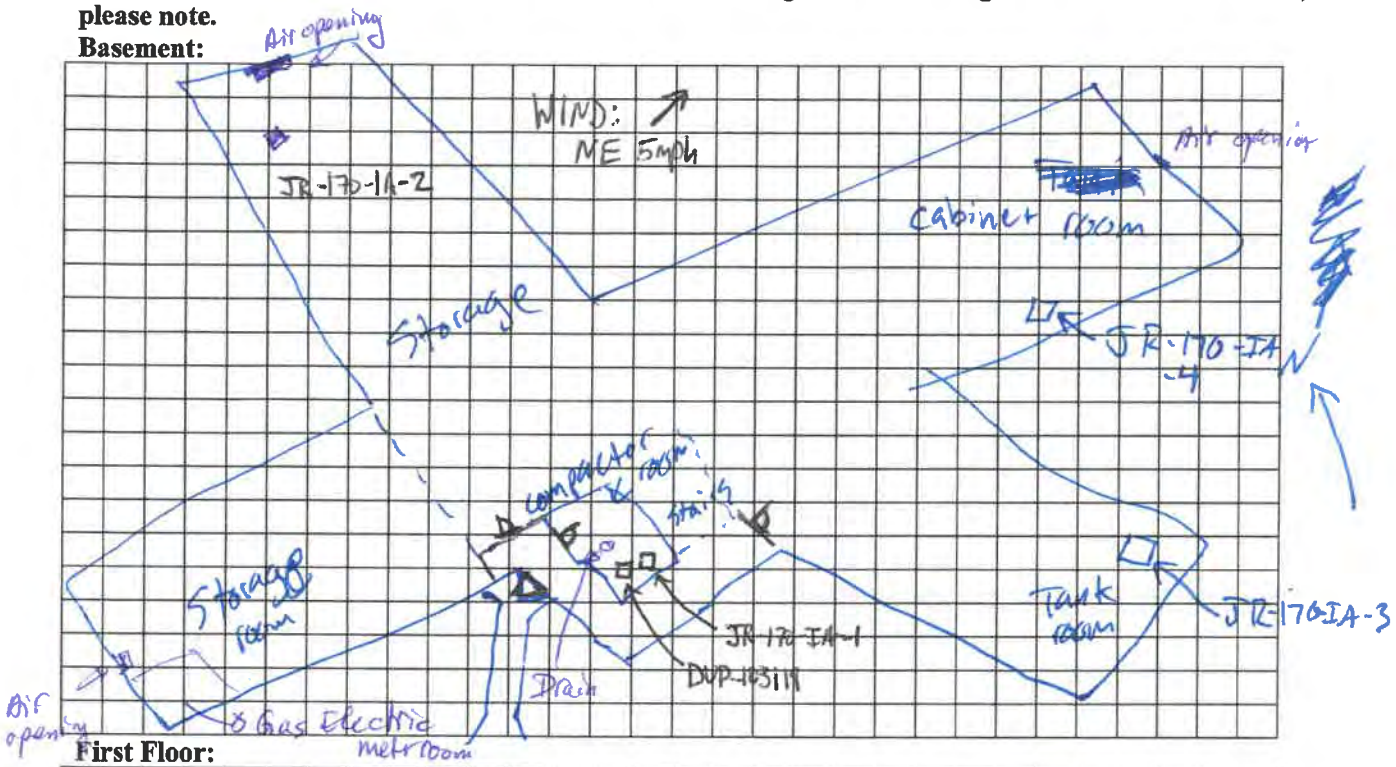
d. Relocation package provided and explained to residents? Y / N

170 Ave. D

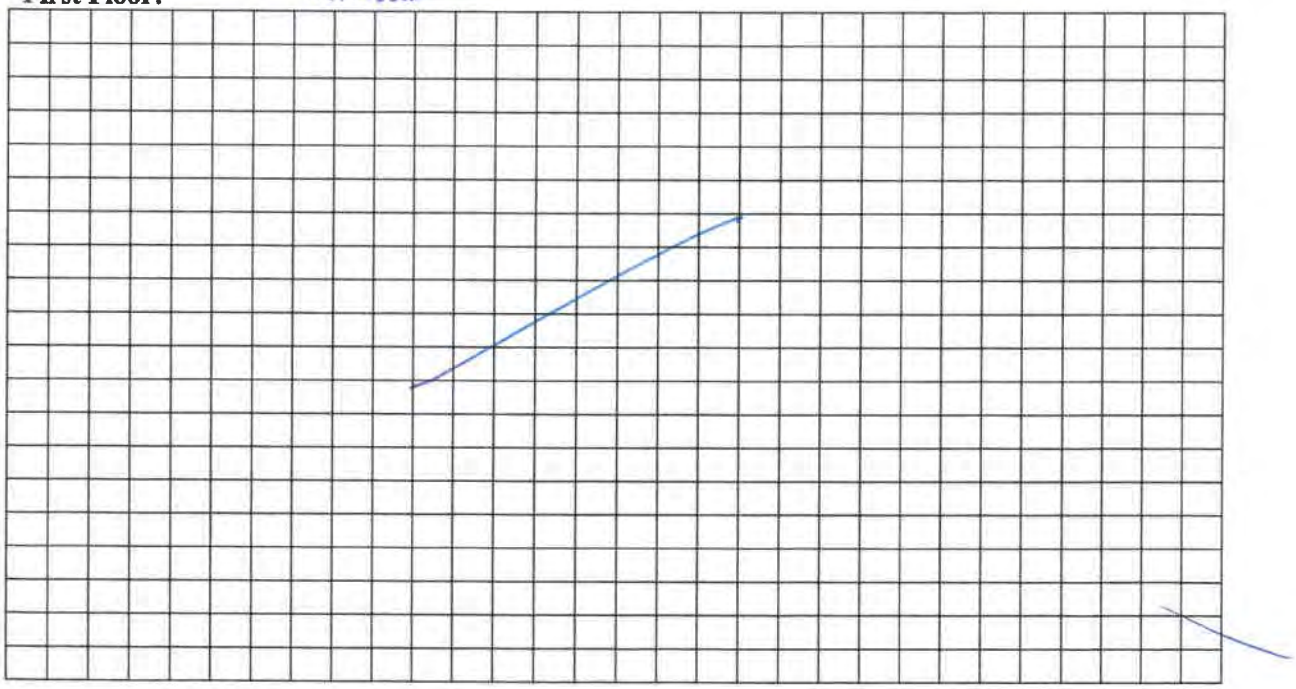
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



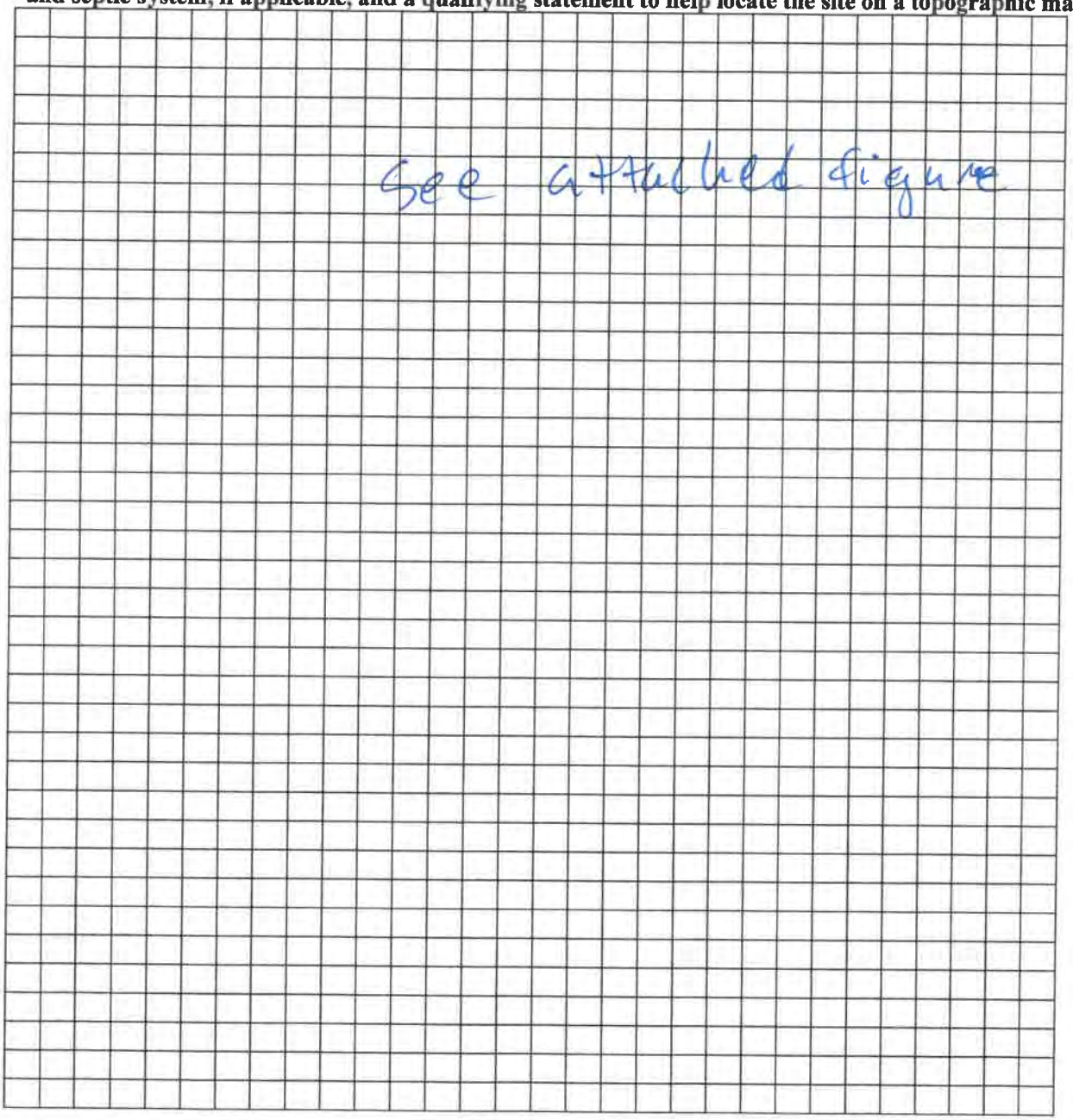
First Floor:



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: _____

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo** Y/N
4	None					
3	None					

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

Bldg. 1115

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 Albina Redzepagic Date/Time Prepared 10/31/2019

Preparer's Affiliation Arcadis U.S. Inc. Phone No. 212-365-4651

Purpose of Investigation Indoor Air Sampling

1. OCCUPANT:

Interviewed: Y / (N)

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

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

Interviewed: (Y) / N

Last Name: Harrison First Name: ~~Lorance~~ Lawrence

Address: 152 Scott Str.

County: ~~#~~ Wilkes Barre, PA 18702

Home Phone: _____ Office Phone: 570-328-5786

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

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

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:_____

If multiple units, how many? 13 x 8 = 104

If the property is commercial, type?

Business Type(s) N/A

Does it include residences (i.e., multi-use)? Y / N If yes, how many? _____

Other characteristics:

Number of floors 13 Building age 70 yer

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

Airflow near source

Outdoor air infiltration

Infiltration into air ducts

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 Concrete

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: _____(feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

_____

_____

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 Steam 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: Steam

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.

_____

_____

_____

_____

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	Storage
1st Floor -13	Residential
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 stored in the garage (e.g., lawnmower, atv, car) Y / N / NA
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? outside door

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. 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: Cleaning liquids / wet air / compactor-garbage

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? Cleaning supplies

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)

a. Provide reasons why relocation is recommended: _____

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

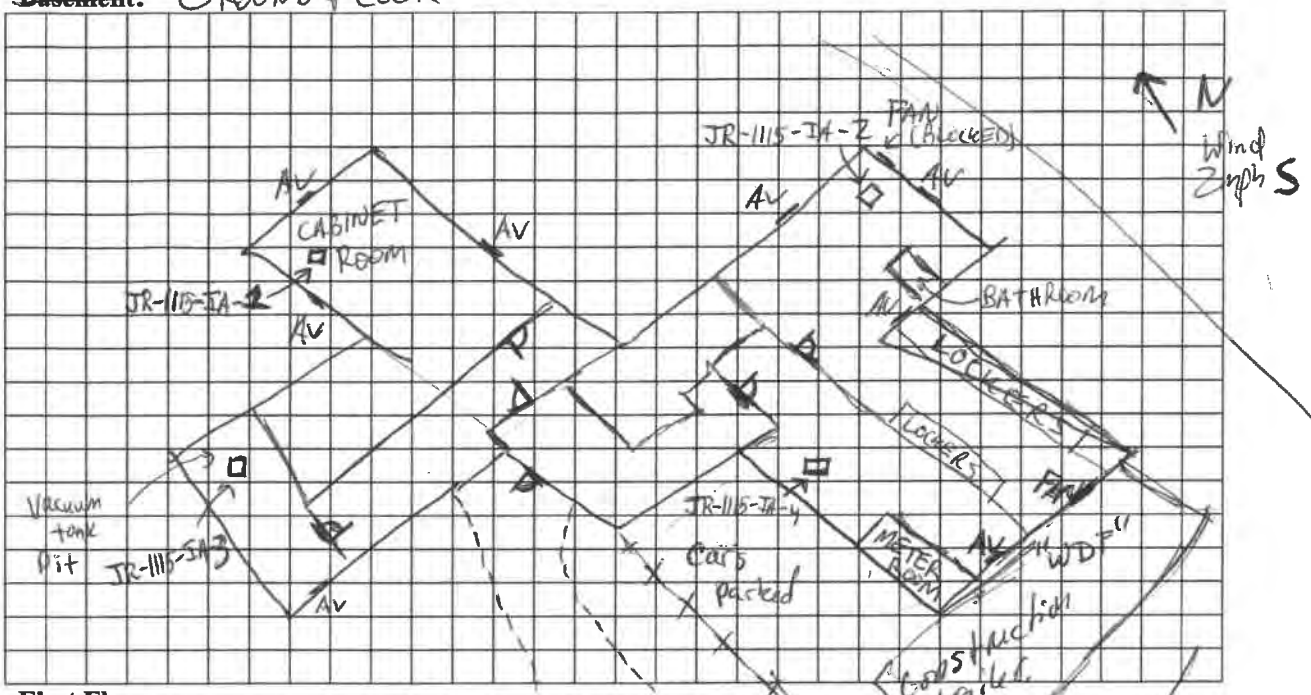
c. Responsibility for costs associated with reimbursement explained? Y / N

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

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

~~**Basement:**~~ GROUND FLOOR

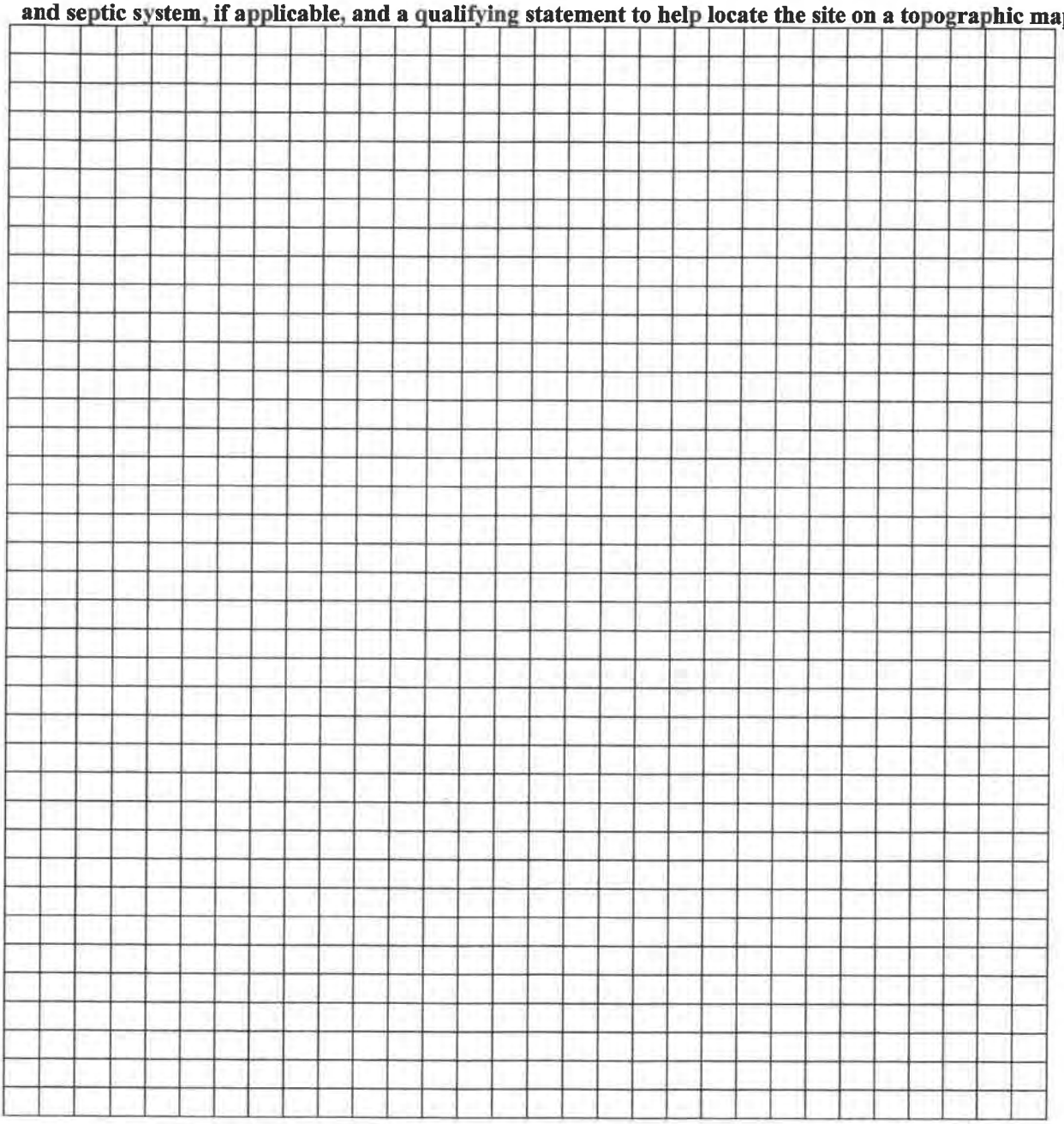


First Floor:

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: _____

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo** Y/N

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

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 Albina Radzpagic Date/Time Prepared 11/1/19 / 10:45 am

Preparer's Affiliation Arcadis U.S., Inc Phone No. 212-365-4651

Purpose of Investigation Indoor Air Sampling

1. OCCUPANT:

Interviewed: Y / N

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

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

Interviewed: Y / N

Last Name: Harrison First Name: Lawrence

Address: 152 Scott Street

County: Wilkins Barre, PA 18702

Home Phone: _____ Office Phone: 570-328-5781

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

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

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: —

If multiple units, how many? 48

If the property is commercial, type?

Business Type(s) NA

Does it include residences (i.e., multi-use)? Y / N If yes, how many? —

Other characteristics:

Number of floors 6 Building age 70 years

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

Air shafts, openings in the wall, fans, doors & windows.

Outdoor air infiltration

Open window, Fans, Open air shafts in the walls.

Infiltration into air ducts

No air ducts.

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: 10% concrete 90% 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: 10% wet 40% damp 50% 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: _____(feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

20% of floor is covered w/ dirt. All of the dirt floor is potential soil vapor intrusion point/ Area.

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: Steam

Boiler/furnace located in: Basement Outdoors Main Floor Other Separate Building

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.

No air return/supply ductwork.

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	Compactor room, Tank room, Electric room, Storage
1st Floor - 6th	Residential
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 stored in the garage (e.g., lawnmower, atv, car) Y / N / NA 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? In compactor room

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

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? In the past 6 months active.

Are there odors in the building? (Y) / N
If yes, please describe: Sewer, Rodent, garbage, musty, All are strong

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? Cleaners

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: _____
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10. RELOCATION INFORMATION (for oil spill residential emergency)

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

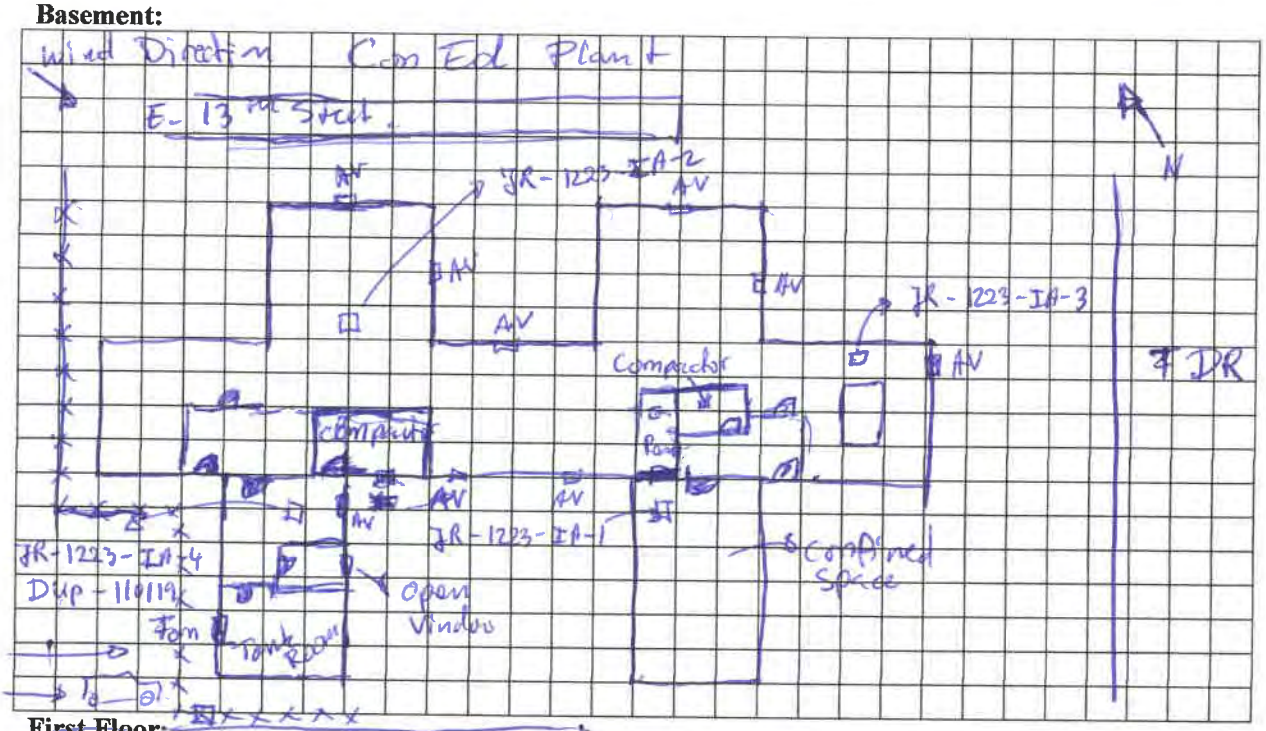
c. Responsibility for costs associated with reimbursement explained? Y / N

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

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

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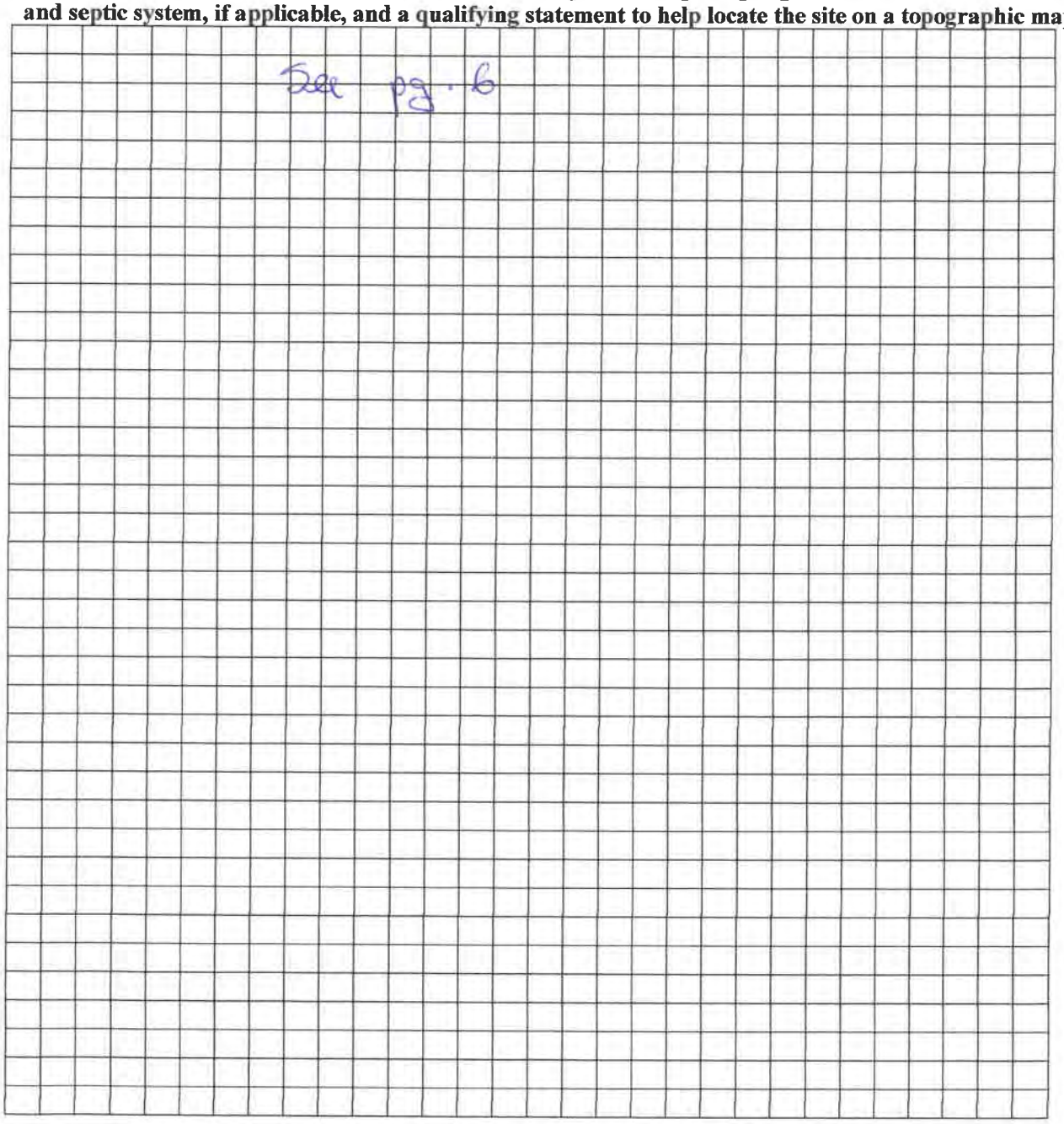

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Make & Model of field instrument used: _____

List specific products found in the residence that have the potential to affect indoor air quality.

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* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
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