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Consolidated Edison Company of New York, Inc.

Interim Site Management Plan – Annual Indoor Air Monitoring Report

Former East 11th Street Works
Manhattan, New York

October 2011

ARCADIS

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Interim Site Management Plan – Annual Indoor Air Monitoring Report

Former East 11th Street Works Site, Manhattan, New York

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Table of Contents

Tables

Figures

Attachments (On CD)

1. Introduction

This report presents a summary of the results from the 2011 annual indoor air monitoring conducted by ARCADIS of New York, Inc. (ARCADIS) 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 comprehensive monitoring plan that is being developed to ensure that the public and the environment are protected until a final remedy for the site is implemented.

Indoor air monitoring was conducted at two properties within the Former East 11th Street Works site (the site). The properties included in the 2011 monitoring event included the Jacob Riis Housing Development and the Haven Plaza North Co-Op Apartments. Access was not obtained from Saint Emeric's to monitor indoor air from the Escuela Hispania Montessori Head Start School [formerly Saint Emeric's Roman Catholic School] or the Church of Saint Emeric's.

A summary of the activities performed associated with the 2011 annual 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.

2. Indoor Air Monitoring

Prior to initiating field work, the site Health and Safety Plan (HASP) was reviewed to ensure that task-specific monitoring activities were consistent with Con Edison's Corporate Health and Safety Procedure A32.00 (Rules We Live By). 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 agree to abide by its requirements. Tailgate meetings were conducted each morning to discuss the day's activities, critical work procedures, and safety requirements. No accidents or near misses occurred during the indoor air sampling events.

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

Table 1
Sample Collection Dates

Location	Sample Collection Date(s)
Jacob Riis Housing Development 170 Avenue D, 178 Avenue D, 1115 FDR Drive. 1141 FDR Drive, 1223 FDR Drive	February 22 – 25, 2011
Haven Plaza North Co-Op Apartments No. 3 Haven Plaza	July 14, 2011

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 consistent with conditions identified during visual inspections conducted in 2010.

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 (**Attachment 1**). 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 walk-through inspections are included on a compact disk (CD) provided in **Attachment 2**. The locations selected for indoor monitoring are presented on **Figure 1**. For consistency, the selected locations for each property were consistent with the locations sampled during the 2007 and 2011 indoor air monitoring events.

As identified in the photographic logs, a small quantity 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 in 2010. 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 are summarized in **Table 2**. The highest background VOC concentrations obtained from ambient air at each of the properties were recorded at the following locations:

- Jacob Riis: 52 parts per billion [ppb] was detected in the ambient air of the "tank room" located at 1141 FDR Drive.

- Haven Plaza: 300 ppb was detected in the ambient air of the "compactor room" that contained cleaning supplies and maintenance-related chemicals

Photographic logs documenting the conditions/stored products at these locations are included on a CD as **Attachment 5**.

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 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 on a CD included as **Attachment 3**. 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 (TestAmerica) 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 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. Data Usability Summary Reports (DUSRs) were prepared that present the results from the data review for each sample data group; DUSRs are included on a CD included as **Attachment 4**. 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 Jacob Riis and Haven Plaza properties are summarized in **Tables 2** and **3**, respectively. For comparison purposes, the indoor air results are compared to the NYSDOH Upper Fence (F) Criterion for indoor air background data for fuel oil heated homes and the USEPA's BASE guidance values for the 90th percentile background air levels to provide typical concentrations of VOCs in indoor air.

3. Results and Conclusions

The results from the annual indoor air monitoring event are presented below. Separate discussions and conclusions are presented for each of the two properties.

3.1 Jacob Riis Housing Development

Seventeen (17) indoor air samples (labeled based on building address), 3 ambient samples (AA-022311, AA-022411, and AA-022511), and 2 duplicate samples for quality control purposes (REP-022311 and REP-022411) were collected for laboratory analysis. The sample collection logs are included on a CD as **Attachment 3**; photographs documenting the sample locations and equipment set-up are included on a CD as **Attachment 5**. The laboratory results are presented in **Table 3**. Note that the non-detect results from duplicate sample REP-022311 were rejected by the data validator due to a return canister vacuum of 0.0 inches of mercury.

The ISMP included the collection of five air samples from elevator shafts within the Jacob Riis 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 pervious monitoring event, elevator shaft samples could not be collected.

As indicated in **Table 3**, a total of 23 VOC analytes were detected in the 17 indoor air samples collected throughout the Jacob Riis Housing Development. Descriptions of the detected analytes include:

- Eighteen of the VOC analytes detected indoor were also detected in the outdoor ambient air samples.
- Eight of the VOC analytes detected indoor were above the NYSDOH Upper F criterion; seven analytes were above the USEPA indoor air background level.
- Thirteen of the 23 VOC analytes detected indoor were chlorinated compounds.
- Four of the analytes detected at all indoor locations (n-butane, n-pentane, n-heptane, isooctane, isopentane and 2-methylpentane) are commonly used as “gasoline indicators”.
- Indene and thiopenes were not detected in any of the samples collected; these compounds are commonly used as “Manufactured Gas Plant (MGP) indicators”.

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, no evidence of MGP-related indoor air impacts exist in the areas monitored at Jacob Riis Housing Development.

3.2 Haven Plaza North Co-Op Apartments

Three indoor air samples (HPL – STORAGE RM, HPL – MEETING RM, and HPL – COMPACTOR RM) were collected from within the ground-level of the Haven Plaza North Co-Op Apartment building. In addition, one outdoor ambient sample (AA-071411) was collected adjacent to the building northeast of the compactor room for laboratory analysis. Sample collection logs are included on a CD as **Attachment 3**; photographs documenting the sample locations and equipment set-up are included on a CD as **Attachment 5**. The laboratory results are presented in **Table 4**.

As indicated in **Table 4**, a total of 16 VOC analytes were detected in the 3 indoor air samples. Descriptions of the detected analytes include:

- Twelve of the 16 VOC analytes detected in indoor air were also detected in the outdoor ambient air sample.
- Six VOC analytes detected in indoor air were above the NYSDOH Upper F criterion; seven analytes were above the USEPA indoor air background level.
- Nine of the 16 detected VOC analytes were chlorinated compounds.
- One analyte (Chloroethane) was detected in the outdoor ambient air sample; however, was not detected in any of the 3 indoor air samples.
- Several analytes commonly used as “gasoline indicators” were detected in both the ambient air samples and the indoor air samples (isopentane, n-butane, n-pentane, and n-hexane). N-heptane (another “gasoline indicator” compound) was detected in 1 of the 3 indoor air samples as well as in the outdoor ambient air sample.
- The highest concentrations of VOCs were detected in the sample collected from the storage room (toluene, xylenes, and ethylbenzene were the analytes present in the highest concentrations; each above both NYSDOH and USEPA guidance criteria).
- Indene and thiopenes were not detected in any of the samples collected; these compounds are commonly used as “MGP indicators”.

Based on the types of analytes detected, along with the solvents, cleaning supplies, and maintenance-related chemical products stored within the ground-level area, and coupled with the absence of MGP indicator compounds, no evidence of MGP-related indoor air impacts exist in the areas monitored at the Haven Plaza North Co-Op Apartments.

4. Work Plan Deviations

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

- Consistent with the 2010 ISMP sampling event, 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 2010 ISMP sampling event, 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.

- Saint Emeric's (including the Escuela Hispania Montessori Head Start School and the Church of Saint Emeric's) were not inspected and sampled due to lack of an access agreement.

- During quality review of the data it was noticed that the contract laboratory (TestAmerica) did not analyze sample JR-170-IA-2. The sample was correctly identified on the chain of custody, and was received and logged-in by the laboratory; however it was not analyzed by the laboratory. The laboratory indicated oversight as the reason the sample was not analyzed.

- Duplicate sample REP-022311 indicated a vacuum pressure of -11 inches of mercury when sampling was terminated. The laboratory indicated that upon receipt, the pressure had decreased to 0 inches of mercury; thereby making this sample unusable for the QA/QC process.

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

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Tables

Table 2
Indoor Air Monitoring Summary

ISMP Annual Indoor Air Monitoring Report
Consolidated Edison Company of New York, Inc.

Sample ID	Date	Location	Background PID Reading (ppb)
JR-170-IA-1	2/23/2011	170 Avenue D - Cabinet room	0
JR-170-IA-3	2/23/2011	170 Avenue D - Near tank room	0
JR-170-IA-4	2/23/2011	170 Avenue D - Compactor room	0
JR-178-IA-1	2/23/2011	178 Avenue D - Crawl space beneath building	0
JR-178-IA-2	2/23/2011	178 Avenue D - Meter room	0
JR-178-IA-3	2/23/2011	178 Avenue D - Compactor room	0
AA-022311	2/23/2011	Along fence between 178 Avenue D and 1141 FDR Drive	0
JR-1115-IA-1	2/24/2011	1115 FDR Drive - Cabinet Room	0
JR-1115-IA-2	2/24/2011	1115 FDR Drive - Storage room outside of plaster room	0
JR-1115-IA-3	2/24/2011	1115 FDR Drive - Tank room	0
JR-1115-IA-4	2/24/2011	1115 FDR Drive - Plaster room	0
JR-1141-IA-1	2/24/2011	1141 FDR Drive - Crawl space	15
JR-1141-IA-2	2/24/2011	1141 FDR Drive - Tank room	52
JR-1141-IA-3	2/24/2011	1141 FDR Drive - Crawl space	0
AA-022411	2/24/2011	Along fence between 1141 FDR Drive and FDR Drive	0
JR-1223-IA-1	2/25/2011	1223 FDR Drive - Storage room (Southeast area of building)	0
JR-1223-IA-2	2/25/2011	1223 FDR Drive - Storage room (Near center of building)	0
JR-1223-IA-3	2/25/2011	1223 FDR Drive - Storage room (Near center corridor of building)	0
JR-1223-IA-4	2/25/2011	1223 FDR Drive - Tank room	0
AA-022511	2/25/2011	Along fence between 1223 FDR Drive and FDR Drive	0
HPL-STORAGERM	7/14/2011	Haven Plaza - Storage room	0
HPL-COMPACTORRM	7/14/2011	Haven Plaza - Compactor room	300
HPL-MEETINGRM	7/14/2011	Haven Plaza - Meeting room	0
AA-071411	7/14/2011	Along fence southwest of Haven Plaza	0

Note:

1. Background PID readings were obtained using a portable organic vapor monitor (ppbRAE) and are reported in parts per billion (ppb).

Table 3
Indoor Air Analytical Results - Jacob Riis

ISMP Annual Indoor Air Monitoring
Consolidated Edison Company of New York, Inc.

Location ID: / Date Collected:	NYSDOH Fuel Oil Heat - Indoor Air Upper Fence (bold)	USEPA BASE Guidance Values 90th Percentile (shade)	Units	AA-022311 02/23/11	AA-022411 02/24/11	AA-022511 02/25/11	JR-1115-IA-1 02/24/11	JR-1115-IA-2 02/24/11	JR-1115-IA-3 02/24/11	JR-1115-IA-4 02/24/11	JR-1141-IA-1 02/24/11	JR-1141-IA-2 02/24/11	JR-1141-IA-3 02/24/11	JR-1223-IA-1 02/25/11	JR-1223-IA-2 02/25/11	JR-1223-IA-3 02/25/11	JR-1223-IA-4 02/25/11	JR-170-IA-1 02/23/11	JR-170-IA-3 02/23/11	JR-170-IA-4 02/23/11	JR-178-IA-1 02/23/11	JR-178-IA-2 02/23/11	JR-178-IA-3 02/23/11
Volatile Organic Compounds																							
1,1,1-Trichloroethane	2.5	20.6	ug/m3	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U [1.1 U]	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U [R]	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
1,1,2,2-Tetrachloroethane	0.38	- -	ug/m3	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U [1.4 U]	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U [R]	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,2-Trichloroethane	0.38	1.5	ug/m3	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U [1.1 U]	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U [R]	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
1,1,2-Trichlorotrifluoroethane	2.5	- -	ug/m3	0.63 J	0.80 J	0.64 J	0.69 J	0.65 J	0.72 J	0.67 J	0.65 J	0.74 J [0.58 J]	0.62 J	0.60 J	0.62 J	0.64 J	0.64 J	0.70 J [0.59 J]	0.64 J	0.65 J	0.64 J	0.67 J	0.61 J
1,1-Dichloroethane	0.38	0.7	ug/m3	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U [0.81 U]	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U [R]	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U
1,1-Dichloroethene	0.4	1.4	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	0.79 U	0.79 U	0.79 U [R]	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U
1,2,4-Trichlorobenzene	0.47	6.8	ug/m3	7.4 U	7.4 U	7.4 UJ	7.4 U	7.4 U	7.4 U	7.4 U	7.4 U	7.4 U [7.4 UJ]	7.4 U	7.4 UJ	7.4 UJ	7.4 UJ	7.4 UJ	7.4 U [R]	7.4 U	7.4 U	7.4 U	7.4 U	7.4 U
1,2,4-Trimethylbenzene	9.8	9.5	ug/m3	0.36 J	1.4	0.81 J	0.79 J	2.9	0.36 J	1.2	0.83 J	1.1 [1.6]	0.94 J	0.59 J	1.0	1.1	0.98 U	0.54 J [R]	0.50 J	0.46 J	0.93 J	0.69 J	0.68 J
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.42	- -	ug/m3	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U [1.4 U]	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U [R]	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,2-Dichlorobenzene	0.48	1.2	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 [R]	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
1,2-Dichloroethane	0.37	0.9	ug/m3	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U [0.81 U]	0.81 U	0.81 U	**0.41 J**	**0.60 J**	0.37 J	0.81 U [R]	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U
1,2-Dichloropropane	0.39	1.6	ug/m3	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U [0.92 U]	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U [R]	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U
1,3,5-Trimethylbenzene	3.9	3.7	ug/m3	0.98 U	0.46 J	0.33 J	0.98 U	1.6	0.98 U	0.47 J	0.36 J	0.35 J [0.47 J]	0.98 U	0.98 U	0.42 J	0.35 J	0.98 U	0.98 U [R]	0.98 U	0.98 U	0.36 J	0.98 U	0.98 U
1,3-Dichlorobenzene	0.46	2.4	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 [R]	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
1,4-Dichlorobenzene	1.2	5.5	ug/m3	1.2 U	0.69 J	1.2 U	0.61 J	1.2 U	1.2 U	**1.3**	0.60 J	0.90 J [0.98 J]	**1.3**	1.2 U	**3.4**	**6.6**	1.2 U	1.2 U [R]	1.2 U	1.2 U	**1.6**	0.46 J	0.40 J
Benzene	13	9.4	ug/m3	1.4	3.7	1.8	2.5	2.6	2.8	2.4	2.1	2.3 [2.7]	2.6	1.8	1.6	1.6	1.4	1.5 [1.7 J]	1.5	1.5	5.3	2.5	2.2
Bromomethane	0.48	1.7	ug/m3	0.78 U	0.17 J	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.13 J [0.78 U]	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U [R]	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U
Carbon Tetrachloride	1.3	1.3	ug/m3	0.56 J	0.84 J	0.80 J	0.83 J	0.65 J	0.85 J	0.61 J	0.62 J	0.63 J [0.80 J]	0.75 J	0.65 J	0.55 J	0.62 J	0.58 J	1.3 [0.53 J]	0.78 J	0.70 J	0.81 J	0.67 J	0.62 J
Chlorobenzene	0.41	0.9	ug/m3	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U [0.92 U]	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U [R]	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U
Chloroethane	0.39	1.1	ug/m3	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.11 J	0.11 J [0.53 U]	0.21 J	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U [R]	0.11 J	0.53 U	0.13 J	0.53 U	0.53 U
Chloroform	1.2	1.1	ug/m3	0.22 J	0.27 J	0.31 J	**1.6**	0.80 J	**2.9**	**3.3**	**40**	**39 [41]**	**41**	0.76 J	**1.6**	1.1	1.0	1.1 [0.81 J]	**2.4**	0.89 J	**41**	**7.6**	**5.3**
Chloromethane	4.2	3.7	ug/m3	1.4	1.8	1.6	1.4	1.6	1.4	1.4	1.2	1.5 [1.4]	1.9	1.3	1.5	1.7	1.4	1.4 [1.3 J]	1.8	2.0	1.9	1.9	2.0
cis-1,2-Dichloroethene	0.41	1.9	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	0.27 J [0.25 J]	**1.0**	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U [R]	0.79 U	0.79 U	**13**	**2.1**	**1.4**
cis-1,3-Dichloropropene	0.38	2.3	ug/m3	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U [0.91 U]	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U [R]	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U
Dibromomethane	- -	- -	ug/m3	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U [2.8 U]	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U [R]	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U
Dichlorodifluoromethane	10	16.5	ug/m3	3.1	3.6	3.2	3.2	3.5	3.3	3.4	3.0	3.0 [3.3]	3.1	2.9	3.0	3.1	2.8	3.1 [3.0 J]	3.1	3.2	3.3	3.3	3.3
Ethylbenzene	6.4	5.7	ug/m3	0.35 J	1.3	0.77 J	0.92	0.77 J	1.1	1.2	0.89	0.97 [1.3]	1.1	0.86	0.90	0.77 J	0.90	0.56 J [R]	0.47 J	0.50 J	2.0	0.87	0.79 J
Hexachlorobutadiene	0.49	6.8	ug/m3	11 UJ	11 UJ	11 UJ	11 UJ	11 UJ	11 UJ	11 UJ	11 UJ	11 UJ [11 UJ]	11 UJ	11 UJ	11 UJ	11 UJ	11 UJ	11 UJ [R]	11 UJ	11 UJ	11 UJ	11 UJ	11 UJ
Methylene Chloride	16	10	ug/m3	1.6 J	3.2	**17**	3.6	1.6 J	2.8	**18**	4.0	1.9 [3.8]	2.2	6.7	2.4	1.2 J	2.6	1.7 J [3.2 J]	1.5 J	2.1	5.2	1.6 J	2.5
m-Xylene & p-Xylene	11	22.2	ug/m3	1.0	3.9	2.4	2.6	1.7	2.6	3.4	2.9	2.5 [3.6]	2.4	2.3	2.7	2.5	1.3	1.5 [R]	1.2	1.3	2.2	1.8	1.8
Naphthalene	- -	5.1	ug/m3	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.3 J	2.6 U	0.48 J [2.3 J]	2.6 U	2.6 U	0.49 J	2.6 U	2.6 U	2.6 U [R]	2.6 U	2.6 U	0.57 J	2.6 U	2.6 U
o-Xylene	7.1	7.9	ug/m3	0.37 J	1.4	0.90	0.88	0.88	0.90	1.2	1.0	0.96 [1.4]	0.96	0.83 J	0.97	0.88	0.50 J	0.58 J [R]	0.46 J	0.55 J	1.0	0.66 J	0.66 J
Styrene	1.4	1.9	ug/m3	0.85 U	0.27 J	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U [0.29 J]	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U [R]	0.85 U	0.85 U	0.31 J	0.85 U	0.29 J
Tetrachloroethene	2.5	15.9	ug/m3	0.99 J	2.1	2.0	1.4	**3.6**	2.1	1.4	**4.5**	**1.9 [2.6]**	**4.7**	1.4	1.4	1.7	1.4	1.4 [1.3 J]	1.6	1.3 J	**79**	**12**	**8.2**
Toluene	57	43	ug/m3	2.3	8.1	4.8	5.3	4.8	6.0	6.7	7.0	5.7 [7.5]	7.8	11	7.0	4.1	3.5	3.3 [4.4 J]	3.0	3.3	6.1	3.7	4.0
trans-1,3-Dichloropropene	0.4	1.3	ug/m3	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U [0.91 U]	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U [R]	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U
Trichloroethene	0.46	4.2	ug/m3	1.1 U	0.42 J	1.1 U	0.46 J	0.38 J	0.38 J	0.38 J	**1.1**	**0.97 J [0.99 J]**	**1.2**	1.1 U	1.1 U	1.1 U	**0.61 J**	0.29 J [R]	1.1 U	1.1 U	**9.2**	**1.3**	**0.89 J**
Trichlorofluoromethane	12	18.1	ug/m3	1.2	1.8	1.7	1.6	1.6	1.6	2.6	1.5	1.4 [1.6]	1.4	1.4	1.2	1.2	1.2	1.3 [1.2 J]	1.2	1.3	1.5	1.3	1.3
Vinyl Chloride	0.37	1.9	ug/m3	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U [0.51 U]	0.27 J	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U [R]	0.51 U	0.51 U	**2.2**	**0.46 J**	0.31 J
n-Alkanes																							
n-Butane	- -	- -	ug/m3	4.6	17	15	15	14	14	21	18	16 [17]	19	13	8.5	9.0	9.4	11 [14 J]	11	7.9	9.6	9.7	23
n-Decane	15	17.5	ug/m3	0.37 J	1.3 J	0.79 J	1.6 J	9.9	0.68 J	6.4	1.3 J	1.2 J [2.9 J]	0.84 J	0.56 J	1.6 J	1.7 J	5.8 U	0.88 J [R]	0.68 J	0.80 J	1.1 J	0.76 J	0.83 J
n-Dodecane	9.2	- -	ug/m3	7.0 U	0.92 J	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	0.94 J	0.71 J [2.8 J]	0.54 J	7.0 U	1.3 J	7.0 U	7.0 U	7.0 U [R]	7.0 U	7.0 U	1.6 J	0.57 J	0.55 J
n-Heptane	18	- -	ug/m3	0.58 J	1.9 J	1.0 J	1.2 J	1.1 J	1.3 J	1.4 J	0.88 J	1.0 J [1.4 J]	1.1 J	1.6 J	1.1 J	0.98 J	0.96 J	0.72 J [1.4 J]	0.57 J	0.71 J	1.1 J	0.89 J	0.76 J
n-Hexane	14	10.2	ug/m3	1.1 J	3.4	3.7	2.4	1.9	2.4	7.8	2.3	2.3 [2.8]	2.4	3.5	6.0	4.4	2.6	1.1 J [3.2 J]	0.95 J	1.0 J	1.8	1.5 J	1.3 J
n-Octane	5.2	- -	ug/m3	0.34 J	1.0 J	0.55 J	0.57 J	0.47 J	0.60 J	0.98 J	0.42 J	0.61 J [0.90 J]	0.67 J	0.50 J	0.64 J	0.64 J	0.37 J	0.47 J [0.26 J]	0.36 J	0.42 J	0.61 J	0.46 J	0.52 J
Nonane	7.9	7.8	ug/m3	0.29 J	1.0 J	0.53 J	1.1 J	1.2 J	0.57 J	2.8	0.47 J	0.69 J [0.97 J]	0.58 J	0.38 J	0.73 J	0.67 J	2.6 U	0.49 J [R]	0.39 J	0.71 J	0.52 J	0.43 J	0.58 J
n-Undecane	12	22.6	ug/m3	6.4 U	0.94 J	6.4 U	6.4 U	0.45 J	6.4 U	1.4 J	0.93 J	0.82 J [9.7]	0.54 J	6.4 U	1.9 J	0.84 J	6.4 U	0.41 J [R]	6.4 U	6.4 U	0.62 J	6.4 U	0.49 J
Pentane	- -	- -	ug/m3	1.8 J	8.3	6.1	6.2	5.4	6.1	7.0	8.4	7.2 [9.9]	8.7	16	3.9	3.5	4.2	2.0 J [6.2 J]	1.9 J	5.0	6.9	3.4	14
Branched Alkanes (Reported as TICs)																							
2,3-Dimethylpentane	5.2	- -	ug/m3	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U [0.82 U]	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U [R]	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U
Isopentane	- -	- -	ug/m3	2.5	13	8.1	9.7	9.2	9.6	12	11	10 [12]	12	11	6.0	6.2	5.5	2.6 [8.8 J]	2.9	9.4	6.3	4.6	34
2-methylpentane	- -	- -	ug/m3	0.70 U	2.4 J	1.9 J	1.7 J	1.6 J	1.7 J	2.0 J	1.8 J	1.8 J [2.6 J]	1.9 J	2.7 J	1.6 J	1.5 J	1.3 J	0.70 U [2.2 J]	0.70 U	0.70 U	1.0 J	1.0 J	0.86 J
Other (Reported as TICs)																							
1,2,3-Trimethylbenzene	- -	- -	ug/m3	0.98 U	0.98 U	0.98 U	0.98 U	1.2 J	0.98 U	0.98 U	0.98 U	0.98 U [1.4 J]	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U [R]	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
2-Ethylthiophene	- -	- -	ug/m3	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U [0.92 U]	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U [R]	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U
2-Methylthiophene	- -	- -	ug/m3	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U [0.80 U]	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U [R]	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U
3-Methylthiophene	- -	- -	ug/m3	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U [0.80 U]	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U [R]	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U
Indane	- -	- -	ug/m3	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U [0.97 U]	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U [R]	0.97 U	0.97 U	3.1 J	0.97 U	0.97 U
Indene	- -	- -	ug/m3	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U [1.9 U]	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U [R]	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Isoctane	- -	- -	ug/m3	0.56 J	2.3 J	1.3 J	1.4 J	1.2 J	1.4 J	1.5 J	1.3 J	1.2 J [1.6 J]	1.3 J	1.5 J	1.0 J	1.0 J	0.76 J	0.57 J [1.2 J]	0.53 J	0.60 J	0.83 J	0.79 J	0.76 J
Isopropylbenzene	0.82	- -	ug/m3	2.0 U	2.0 U	2.0 U	2.0 U	0.35 J	2.0 U	2.0 U	2.0 U	2.0 U [2.0 U]	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U [R]	2.0 U	2.0 U	0.38 J	2.0 U	2.0 U
Thiopene	- -	- -	ug/m3	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U [0.69 U]	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U [R]	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U

Table 3
Indoor Air Analytical Results - Jacob Riis

ISMP Annual Indoor Air Monitoring
Consolidated Edison Company of New York, Inc.

Lab Qualifier	Definition
J	Indicates an estimated value.
N	The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
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).

Table 4
Consolidated Edison of New York, Inc.
Interim Site Management Plan
Haven Plaza Indoor Air Analytical Results

Location ID: Date Collected:	NYSDOH Upper Fence Criterion (bold)	USEPA BASE Guidance Values 90th Percentile (shade)	Units	AA-071411 07/14/11	HPL-COMPACTOR RM 07/14/11	HPL-MEETING RM 07/14/11	HPL-STORAGE RM 07/14/11
Volatile Organic Compounds							
1,1,1-Trichloroethane	2.5	20.6	ug/m3	1.1 U	1.1 U	1.1 U [1.1 U]	42 U
1,1,2,2-Tetrachloroethane	0.38	- -	ug/m3	1.4 U	1.4 U	1.4 U [1.4 U]	53 U
1,1,2-Trichloroethane	0.38	1.5	ug/m3	1.1 U	1.1 U	1.1 U [1.1 U]	42 U
1,1,2-Trichlorotrifluoroethane	2.5	- -	ug/m3	0.60 J	0.55 J	0.54 J [0.61 J]	59 U
1,1-Dichloroethane	0.38	0.7	ug/m3	0.81 U	0.81 U	0.81 U [0.81 U]	31 U
1,1-Dichloroethene	0.4	1.4	ug/m3	0.79 U	0.79 U	0.79 U [0.79 U]	31 U
1,2,4-Trichlorobenzene	0.47	6.8	ug/m3	7.4 UJ	7.4 UJ	7.4 UJ [7.4 UJ]	290 UJ
1,2,4-Trimethylbenzene	9.8	9.5	ug/m3	0.98 U	0.98 U	0.92 J [0.98]	38 U
1,2-Dibromoethane	0.38	1.5	ug/m3	1.5 U	1.5 U	1.5 U [1.5 U]	59 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.42	- -	ug/m3	1.4 U	1.4 U	1.4 U [1.4 U]	54 U
1,2-Dichlorobenzene	0.48	1.2	ug/m3	1.2 U	1.2 U	1.2 U [1.2 U]	47 U
1,2-Dichloroethane	0.37	0.9	ug/m3	0.81 U	0.81 U	0.81 U [0.81 U]	31 U
1,2-Dichloropropane	0.39	1.6	ug/m3	0.92 U	0.92 U	0.92 U [0.92 U]	36 U
1,3,5-Trimethylbenzene	3.9	3.7	ug/m3	0.98 U	0.98 U	0.98 U [0.98 U]	38 U
1,3-Dichlorobenzene	0.46	2.4	ug/m3	1.2 U	1.2 U	1.2 U [1.2 U]	47 U
1,4-Dichlorobenzene	1.2	5.5	ug/m3	1.2 U	1.2 U	**6.8 [7.1]**	47 U
2,3-Dimethylpentane	5.2	- -	ug/m3	0.82 U	0.82 U	0.82 U [0.82 U]	32 U
Benzene	13	9.4	ug/m3	0.37 J	0.24 J	0.68 [0.66]	25 U
Bromomethane	0.48	1.7	ug/m3	0.78 U	0.78 U	0.78 U [0.78 U]	30 U
Carbon Tetrachloride	1.3	1.3	ug/m3	0.51 J	1.3 U	0.52 J [0.52 J]	49 U
Chlorobenzene	0.41	0.9	ug/m3	0.92 U	0.92 U	0.92 U [0.92 U]	36 U
Chloroethane	0.39	1.1	ug/m3	0.10 J	0.53 U	0.53 U [0.53 U]	20 U
Chloroform	1.2	1.1	ug/m3	0.22 J	**1.5**	**1.8 [1.7]**	**10 J**
Chloromethane	4.2	3.7	ug/m3	2.4	1.4	3.5 [1.4]	40 U
cis-1,2-Dichloroethene	0.41	1.9	ug/m3	0.79 U	0.79 U	0.79 U [0.79 U]	31 U
cis-1,3-Dichloropropene	0.38	2.3	ug/m3	0.91 U	0.91 U	0.91 U [0.91 U]	35 U
Dibromomethane	- -	- -	ug/m3	2.8 U	2.8 U	2.8 U [2.8 U]	110 U
Dichlorodifluoromethane	10	16.5	ug/m3	2.4	2.5	2.4 [3.0]	38 U
Ethylbenzene	6.4	5.7	ug/m3	0.87 U	0.87 U	0.70 J [0.69 J]	**34**
Hexachlorobutadiene	0.49	6.8	ug/m3	11 U	11 U	11 U [11 U]	410 U
Methylene Chloride	16	10	ug/m3	1.2 J	2.2 J	1.9 J [3.1 J]	13 J
m-Xylene & p-Xylene	11	22.2	ug/m3	0.76 J	0.87 U	1.9 [1.8]	**95**
o-Xylene	7.1	7.9	ug/m3	0.30 J	0.87 U	0.67 J [0.67 J]	**28 J**
Styrene	1.4	1.9	ug/m3	0.85 U	0.85 U	0.36 J [0.40 J]	33 U
Tetrachloroethene	2.5	15.9	ug/m3	1.4 U	1.4 U	1.4 U [0.29 J]	52 U
Toluene	57	43	ug/m3	1.1	0.25 J	2.9 [3.3]	**1,600**
Naphthalene	- -	5.1	ug/m3	2.6 U	2.6 U	2.6 U [2.6 U]	100 U
trans-1,3-Dichloropropene	0.4	1.3	ug/m3	0.91 U	0.91 U	0.91 U [0.91 U]	35 U
Trichloroethene	0.46	4.2	ug/m3	1.1 U	1.1 U	1.1 U [1.1 U]	42 U
Trichlorofluoromethane	12	18.1	ug/m3	1.3	1.9	1.1 [1.8]	8.2 J
Vinyl Chloride	0.37	1.9	ug/m3	0.51 U	0.51 U	0.51 U [0.51 U]	20 U
n-Alkanes							
n-Butane	- -	- -	ug/m3	2.6	14	5.5 [7.3]	18 J
n-Decane	15	17.5	ug/m3	0.65 J	5.8 U	1.7 J [1.7 J]	**18 J**
n-Dodecane	9.2	- -	ug/m3	7.0 U	7.0 U	0.71 J [1.1 J]	270 U
n-Heptane	18	- -	ug/m3	0.35 J	2.0 U	0.47 J [0.46 J]	79 U
n-Hexane	14	10.2	ug/m3	1.9	0.89 J	2.6 [2.6]	4.8 J
n-Octane	5.2	- -	ug/m3	0.29 J	1.9 U	0.40 J [0.40 J]	72 U
Nonane	7.9	7.8	ug/m3	0.41 J	2.6 U	0.81 J [0.77 J]	**20 J**
Pentane	- -	- -	ug/m3	0.59 J	2.9	0.71 J [0.97 J]	110 U
n-Undecane	12	22.6	ug/m3	0.69 J	6.4 U	0.86 J [1.2 J]	250 U
Other VOCs							
Isooctane	- -	- -	ug/m3	0.21 J	2.3 U	0.54 J [0.53 J]	90 U
Isopropylbenzene	0.82	- -	ug/m3	2.0 U	2.0 U	2.0 U [2.0 U]	76 U
Tentatively Identified Compounds							
2-methylpentane	- -	- -	ug/m3	0.70 U	0.70 U	0.83 [0.82]	27 U
Isopentane	- -	- -	ug/m3	1.3 J	14	3.7 [6.3]	3.7 J
1,2,3-Trimethylbenzene	- -	- -	ug/m3	0.98 U	0.98 U	0.98 U [0.98 U]	38 U
2-Ethylthiophene	- -	- -	ug/m3	0.92 U	0.92 U	0.92 U [0.92 U]	36 U
2-Methylthiophene	- -	- -	ug/m3	0.80 U	0.80 U	0.80 U [0.80 U]	31 U
3-Methylthiophene	- -	- -	ug/m3	0.80 U	0.80 U	0.80 U [0.80 U]	31 U
Indane	- -	- -	ug/m3	0.97 U	0.97 U	0.97 U [0.97 U]	37 U
Indene	- -	- -	ug/m3	1.9 U	1.9 U	1.9 U [1.9 U]	74 U
Thiopene	- -	- -	ug/m3	0.69 U	0.69 U	0.69 U [0.69 U]	27 U

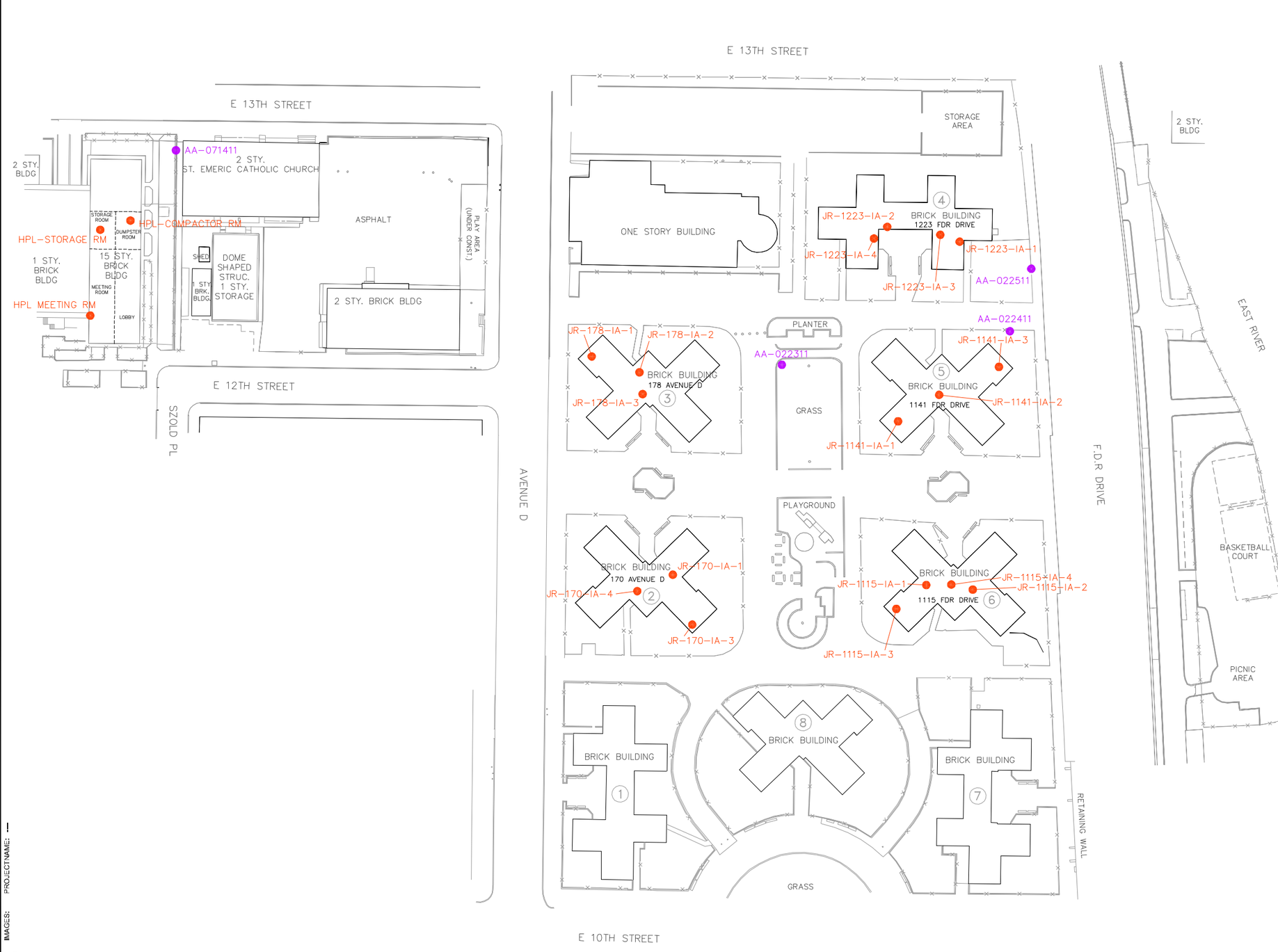
Table 4
Consolidated Edison of New York, Inc.
Interim Site Management Plan
Haven Plaza Indoor Air Analytical Results

Qualifier Type	Lab Qualifiers	Definition
Organic	J	Indicates an estimated value.
Organic	U	Indicates the constituent was not detected at the PQL. The value preceding the U indicates the PQL.

Notes:
Exceedances of NYSDOH Fuel Oil Heat - Indoor Air Upper Fence are bold.
Exceedances of USEPA BASE Guidance Values 90th Percentile are shaded.

ARCADIS

Figures



LEGEND:

- INDOOR AIR SAMPLE LOCATION (IA)
- AMBIENT AIR SAMPLE LOCATION (AA)
- (4) JACOB RIIS 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 ANNUAL INDOOR AIR MONITORING REPORT

SITE PLAN WITH AIR MONITORING LOCATIONS

ARCADIS

FIGURE 1

ARCADIS

Attachments (On CD)