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30 May 2014
File No. 36795-027/029

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
270 Michigan Avenue
Buffalo, New York 14203

Attention: Mr. Glenn May
Environmental Geologist II

Subject: Summary of Indoor Air Testing Results
GMCH Lockport Facility - Buildings 7, 7A and 8
BCP Sites # C932138 / C932139
200 Upper Mountain Road
Lockport, New York

Dear Mr. May:

On behalf of GM Components Holdings, LLC, (GMCH) Haley & Aldrich of New York (Haley & Aldrich) has prepared this letter that summarizes the results of the recent indoor air sampling event conducted at the two referenced BCP Sites and Building 7A located at the GMCH Lockport facility, 200 Upper Mountain Road, Lockport, New York.

The indoor air sampling event was conducted in accordance with the work plan for the Interim Remedial Measures (IRM) Work Plan – Sub-Slab Depressurization Systems (SSDS) Buildings 7 and 8, BCP Sites #C932138 / C932139 dated 9 November 2012, 200 Upper Mountain Road, Lockport, New York and as discussed during our recent project review meeting conducted at the facility on 28 February 2014. The sampling event was implemented to measure the indoor air quality at the perimeter of the observed sub-slab vacuum influence from the operation of the sub-slab depressurization (SSD) systems installed as part of the proposed remedy for Building 7 (BCP Site #C932138), Building 7A and Building 8 (BCP Site #C932139).

Indoor air testing activities were conducted on 28 March 2014. Section 1 presents a summary of the air sampling activities conducted, Section 2 provides the results of the testing and Section 3 provides recommendations for the operation of the SSD systems at the facility. Figures 1-3 presents the observed vacuum influence measured at the temporary sub-slab vacuum monitoring points and the locations where the indoor air samples were collected within Buildings 7, Building 7A and 8, respectively. Table 1 (in Section 2.0) presents a summary of the volatile organic compounds (VOC) detected in the indoor air samples with comparison to the relevant New York State Department of Health (NYSDOH) guidance values. Copies of the final laboratory report and data usability memorandum are provided as Attachments to this letter.

1. INDOOR AIR SAMPLING ACTIVITIES

The purpose of the sampling was to evaluate the indoor air quality at the perimeter of the observed SSD systems vacuum influence. To achieve this objective, the indoor air sampling program was conducted at locations where the observed SSD system sub-slab vacuum influence readings were less than 0.002 inches of water column (in WC) and the estimated sub-slab vapor concentrations were at or above 1,000 ug/M³ prior to the installation of the SSD systems.

The indoor air samples were collected using batch certified 6-liter SUMMA[®] canisters equipped with dedicated pre-calibrated 8-hour integrated flow controllers supplied by a NYSDOH ELAP certified laboratory (TestAmerica Laboratories, Inc.). Samples were placed in the approximate locations shown on Figures 1-3 within the breathing zone (4 to 5 feet above the floor grade). The flow controllers used typically yield sample flow rates of approximately 12.5 milliliters/minute, well below the maximum flow rate of 200 milliliters/minute specified by the NYSDOH guidance¹. The indoor air samples were shipped at ambient temperature under chain-of-custody to the laboratory and analyzed for volatile organic compounds (VOCs) via the EPA Method TO-15 which includes the following compounds covered by the two NYSDOH guidance decision matrices.

Tetrachloroethene (PCE)	cis-1,2-Dichloroethene (1,2-DCE)
Trichloroethene (TCE)	Carbon Tetrachloride (CT)
1,1,1-Trichloroethane (TCA)	Vinyl Chloride (VC)
1,1 Dichloroethene (1,1-DCE)	

2. RESULTS

The following presents the results of the indoor air sampling conducted in Buildings 7, 7A and 8 at the GMCH Lockport facility on 28 March 2014.

TABLE 1

Parameter Detected (ug/M ³)	TCE	PCE	1,2-DCE
Indoor Air Guidance Value	5.0	30 ²	NGV
Bldg 8-IA-1	3.5	1.4 U	1.4
Bldg 8-IA-2	5.4	1.4 U	1.6
Bldg 8-IA-3	8.4	2.6	2.2
Bldg 7A-IA-1	0.20 U	0.20 U	0.20 U
Bldg 7W-IA-1	1.1 U	1.3	0.79 U
Bldg 7W-IA-2	1.3	2.0	0.79 U
Bldg 7W-IA-3	1.1 U	3.2	0.79 U
Bldg 7W-IA-4	3.2 U	4.1 U	2.4 U
Bldg 7E-IA-1	2.1 U	3.3	5.8

¹ New York State Department of Health, (2006). Guidance for Evaluating Soil Vapor Intrusion in the State of New York. Center for Environmental Health, Bureau of Environmental Exposure Investigation, October 2006.

² New York State Department of Health, (2013). Tetrachloroethene (PERC) Indoor and Outdoor Air Fact Sheet. Bureau of Toxic Substance Assessment, September 2013.

Notes: VC, CT, DCE and TCA were not detected (ND).

U = compound was not detected above method detection limit.

NGV = No Guidance Value

The laboratory results for the indoor air samples collected within Building 7, 7A and 8 are lower than the concentrations observed during indoor air sampling conducted as part of the Remedial Investigation (RI) in 2011 that was completed before the installation of the SSD systems.

3. RECOMMENDATIONS

Based on the observed reductions in the indoor air VOC concentrations detected based on the March 2014 sampling event, we recommend that the SSD systems continue to operate as installed with implementation of a periodic monitoring program, which should include the following:

- Convert a portion of the temporary monitoring points to permanent sub-slab monitoring points as identified on Figures 1-3. The remaining temporary points will be sealed in place,
- Record vacuum readings at each suction pit, operating data of each blower unit, and vacuum readings at the permanent sub-slab monitoring points,
- Visual inspection of the blower unit components, and
- Visual inspection of the piping system for damage or unusual conditions

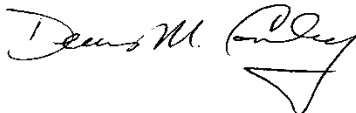
This periodic monitoring should be performed in accordance with the schedule proposed in the Draft GMCH Lockport SSD System Operation, Maintenance and Monitoring (OMM) Manual submitted to the NYSDEC for review on 7 February 2014. We recommend that the SSD systems be operated continuously and an additional indoor air sampling event be conducted within Building 7, 7A and 8 during the 1st Quarter of 2015.

CLOSING

This report has provided a summary of the indoor air sampling activities conducted at the GMCH Lockport facility located at 200 Upper Mountain Road, Lockport, New York. If there are questions or any additional information is required concerning the information provided in this report, please do not hesitate to contact us at 585.321.4245.

Sincerely yours,

HALEY & ALDRICH OF NEW YORK



Denis Conley
Project Manager



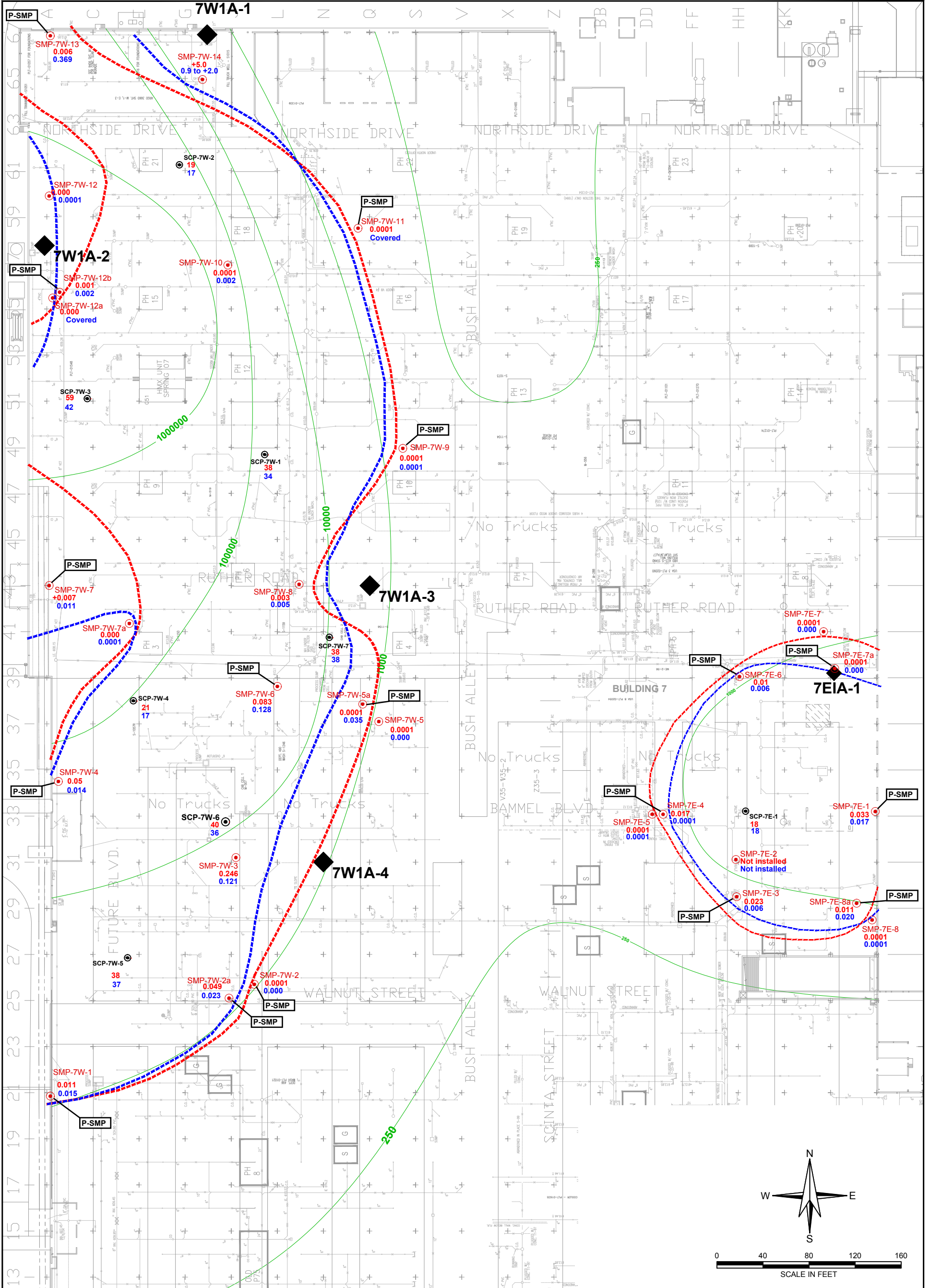
E. Quinn Lewis, P.E.
Senior Technical Specialist



David Hagen
Sr. Vice President

Attachments

Figure 1 – Building 7 Indoor Air Sampling Locations
Figure 2 – Building 7A Indoor Air Sampling Locations
Figure 3 – Building 8 Indoor Air Sampling Locations
TestAmerica Laboratories, Inc. Report
CRA Memorandum - Analytical Results and Reduced Validation



LEGEND

- ESTIMATED CONTOUR 0.002" W.C. VAC. DATA COLLECTED ON 11/1/13
- ESTIMATED CONTOUR 0.002" W.C. VAC. DATA COLLECTED ON 12/30/13
- 1000 ESTIMATED SUB-SLAB VAPOR CONCENTRATIONS (ug/m³)
- SMP-7W-1 0.011 0.015 TEMPORARY SUB-SLAB MONITORING POINT W/ VACUUM DATA (" W.C.)
- SCP-7W-3 38 34 SUCTION PIT W/ VACUUM DATA (" W.C.)
- ◆ 7W1A-1 INDOOR AIR SAMPLE LOCATION
- P-SMP PROPOSED LOCATION TO CONVERT TEMP. SUB-SLAB MONITORING POINT TO A PERMANENT POINT

NOTES

- ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

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 LOCKPORT, NEW YORK

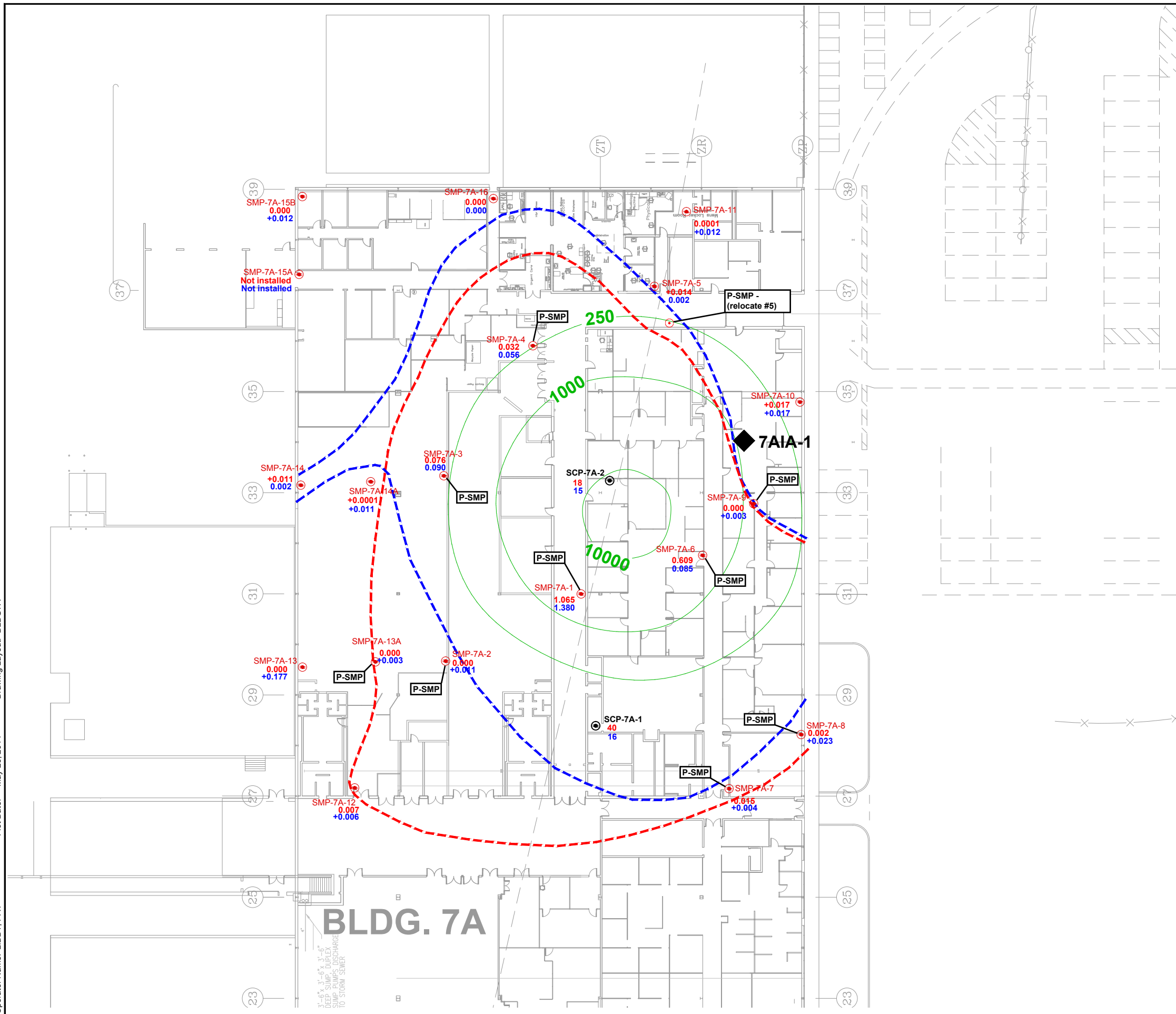
INDOOR AIR SAMPLING LOCATIONS - BUILDINGS 7W AND 7E

SCALE: AS SHOWN
 MAY 2014

FIGURE 1

CTS136795_GM LOCKPORT\CAD\36795-039-B7W-E-INF+AIR.DWG

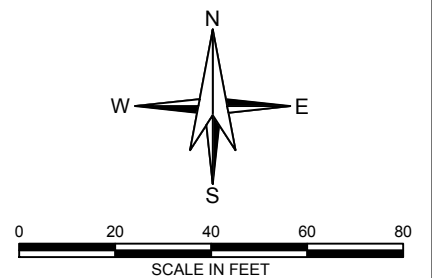
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 Drawing Layout: BLDG7A



- LEGEND**
- - - ESTIMATED CONTOUR 0.002" W.C. VAC. DATA COLLECTED ON 11/13
 - - - ESTIMATED CONTOUR 0.002" W.C. VAC. DATA COLLECTED ON 12/30/13
 - 1000 ESTIMATED SUB-SLAB VAPOR CONCENTRATIONS (ug/m³)
 - SMP-7A-2 (0.000, +0.011) TEMPORARY SUB-SLAB MONITORING POINT W/ VACUUM DATA (" W.C.)
 - SCP-7A-2 (18, 15) SUCTION PIT W/ VACUUM DATA (" W.C.)
 - ◆ 7AIA-1 INDOOR AIR SAMPLE LOCATION
 - P-SMP PROPOSED LOCATION TO CONVERT TEMP. SUB-SLAB MONITORING POINT TO A PERMANENT POINT

NOTES

- ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

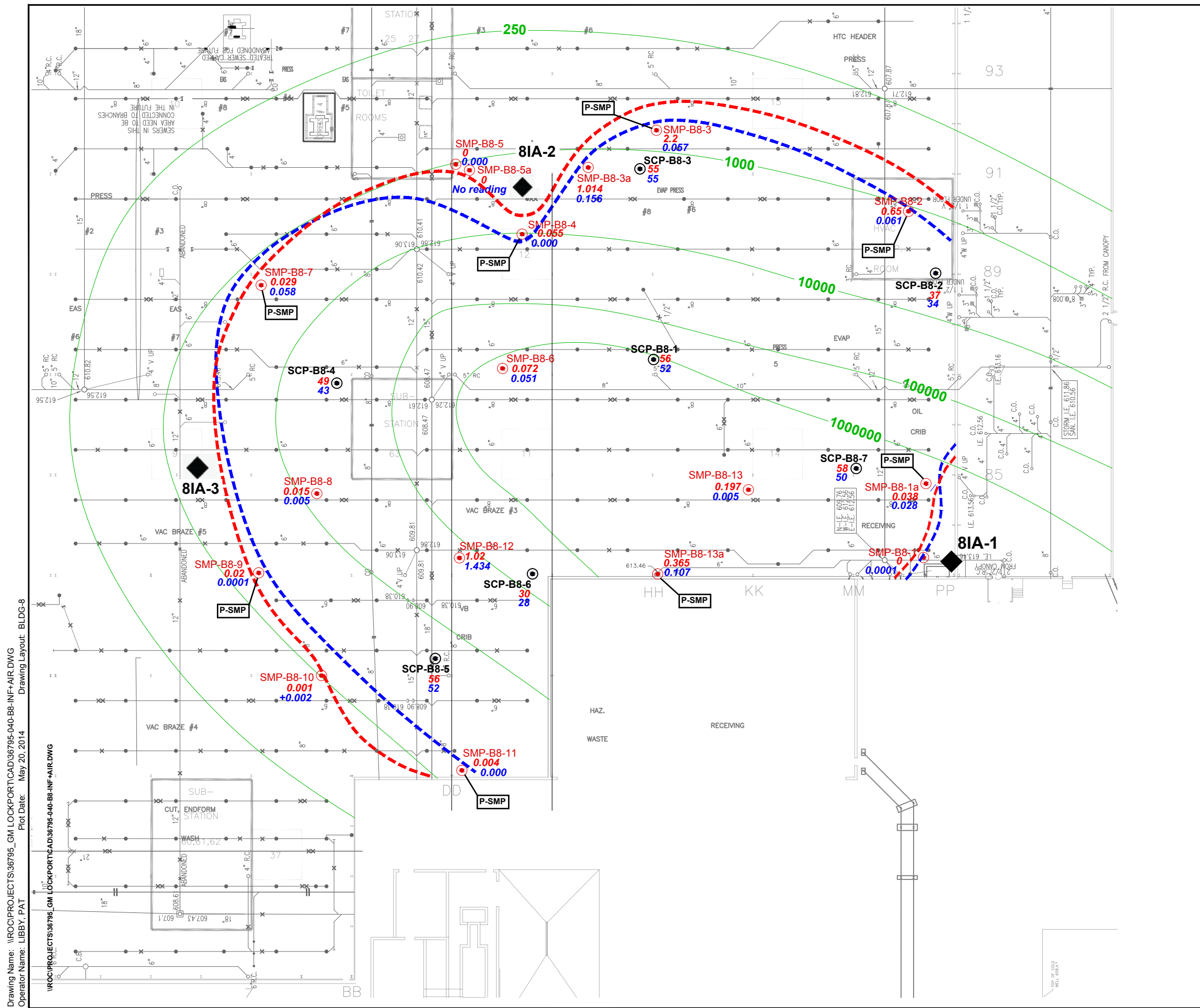


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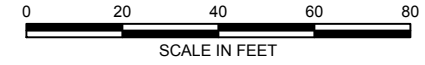
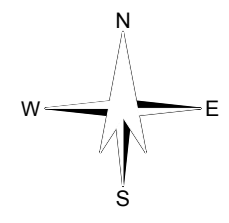
**INDOOR AIR SAMPLING
 LOCATIONS - BUILDING 7A**

SCALE: AS SHOWN
 MAY 2014

FIGURE 2



- LEGEND:**
- ESTIMATED CONTOUR 0.002" W.C. VAC. DATA COLLECTED ON 11/11/13
 - ESTIMATED CONTOUR 0.002" W.C. VAC. DATA COLLECTED ON 12/30/13
 - 1000 ESTIMATED SUB-SLAB VAPOR CONCENTRATIONS (ug/m³)
 - SMP-B8-11 0 0.0001 TEMPORARY SUB-SLAB MONITORING POINT W/ VACUUM DATA (" W.C.)
 - SCP-B8-5 56 52 SUCTION PIT W/ VACUUM DATA (" W.C.)
 - ◆ 8IA-1 INDOOR AIR SAMPLE, COLLECTED 28 MARCH 2014
 - P-SMP PROPOSED LOCATION TO CONVERT TEMP. SUB-SLAB MONITORING POINT TO A PERMANENT POINT



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LOCKPORT, NEW YORK

INDOOR AIR SAMPLING
LOCATIONS - BUILDING 8

SCALE: AS SHOWN
MAY 2014

FIGURE 3

Drawing Name: \\ROCI\PROJECTS\36795_GM LOCKPORT\CAD\36795-040-B8-INF+AIR.DWG
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