ENVIRONMENTAL STRATEGIES CONSULTING LLC
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March 3, 2006

Mr. James E. Burke, P.E.
Environmental Engineer
New York State Department of Environmental Conservation
Region 7
615 Erie Boulevard West
Syracuse, NY 13204-2400

Re: R&D Building Indoor Air Sampling Results
Emerson Power Transmission, Ithaca, New York

Dear Mr. Burke:

Environmental Strategies Consulting LLC, on behalf of Emerson Electric Co, is submitting this letter summarizing the results of the additional indoor air sampling conducted in the former Research and Development (R&D) Building on the Emerson Power Transmission (EPT) facility in Ithaca, New York. The work was completed in accordance with the approved procedures described in the approved *Focused Indoor Air Assessment and Soil/Groundwater Investigation Work Plan*, dated May 11, 2005, and Environmental Strategies' July 6, 2005, letter to the New York State Department of Environmental Conservation (NYSDEC), which responded to comments from NYSDEC on the draft plan. In addition, testing conformed to the New York State Department of Health's (NYSDOH's) *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*, dated February 2005.

The scope of work involved collecting a second round of indoor air samples at two locations in the basement of the former R&D Building to confirm the initial sampling results from September 2005. In addition, two indoor air samples were collected on the first floor of the building. One outdoor air sample was also collected to evaluate background concentrations of VOCs. The indoor air sampling was completed on January 17 and 18, 2006.

Indoor Air Sampling

Indoor air samples were collected from the basement level of the R&D Building at the locations designated RD4IAB and RD5IAB on Figure 1 and from the first floor level at locations designated RD1IAF and RD2IAF on Figure 2. The indoor air samples were collected using 1-liter Entech canisters positioned approximately 3 feet above the floor to be representative of the breathing zone. The flow regulators were pre-set by the laboratory to collect the samples over 24 hours. The flow regulator was connected to the canister to initiate sample collection. After 24 hours, the flow regulator was removed from the canister to complete the sample collection. The sample name, location, time and date of sample collection, canister and regulator number, and the analytical method were recorded on the chain-of-custody form and in the field log book.

Background Air Sampling

One background air sample was collected at the location shown on Figure 1 to assist in evaluating background outdoor air quality. Sample RD3AA was collected southwest (i.e., upwind) of the R&D Building. In accordance with NYSDOH guidance, the background air sample was collected approximately 3 to 5 feet above the ground and away from wind obstructions. The outdoor air sample was collected with 1-liter Entech canisters over 24 hours using the same procedures and analytical methods described above for the indoor air samples. The outdoor air sample was initiated within 1 hour of the first indoor air sample.

Sample Analysis

The sample canisters were shipped under ambient conditions to a NYSDOH Environmental Laboratory Accreditation Program-approved laboratory. The samples were analyzed for the complete list of compounds specified in U.S. Environmental Protection Agency (EPA) Method TO-15. The minimum detection limits using EPA Method TO-15 for all samples were 0.25 $\mu g/m^3$ for TCE and 1 $\mu g/m^3$ for all other VOCs.

Indoor Air Sampling Results

The January 2006 indoor and outdoor air sampling results are provided in Table 1 along with the sampling results from September 2005. PCE and TCE were detected in all indoor air basement and first floor samples while 1,1,1-TCA was detected in only the first floor samples. TCE concentrations in all samples were below 0.819 $\mu g/m^3$. PCE concentrations ranged from 0.965 $\mu g/m^3$ to 1.03 $\mu g/m^3$ The 1,1,1-TCA concentrations in the first floor samples were 0.61 $\mu g/m^3$ and 0.72 $\mu g/m^3$. All detected concentrations of 1,1,1-TCA, PCE, and TCE in indoor air are below the NYSDOH guidance values of 100 $\mu g/m^3$ for 1,1,1-TCA and PCE and 5 $\mu g/m^3$ for TCE.

Methylene chloride was detected in all indoor air samples at concentrations from 0.636 to 1.52 $\mu g/m^3$. cis-1,2-dichloroethylene was detected in one indoor air basement sample (RD4IAB011706) at 0.967 $\mu g/m^3$. Methylene chloride and TCE were the only site-related VOCs detected in the outdoor air sample at concentrations of 0.636 and 0.689 $\mu g/m^3$, respectively.

Summary

On January 17 and 18, 2006, indoor air samples were collected at two locations in the basement and two locations on the first floor of the former R&D Building. Low levels of certain site related VOCs were detected in all samples; all below 2 $\mu g/m^3$. Overall, concentrations of site-related compounds in the indoor air basement samples were lower in January compared to September. The analytical data sheets for samples collected during the January 2006 investigation are provided in Enclosure A.

Please feel free to contact us with any questions regarding the contents of this letter, or other aspects of the project.

Sincerely yours,

James P Bulman

James P. Bulman
Executive Partner

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Enclosure

cc/encl.: Derek Chase, Emerson
Henriette Hamel, NYSDOH

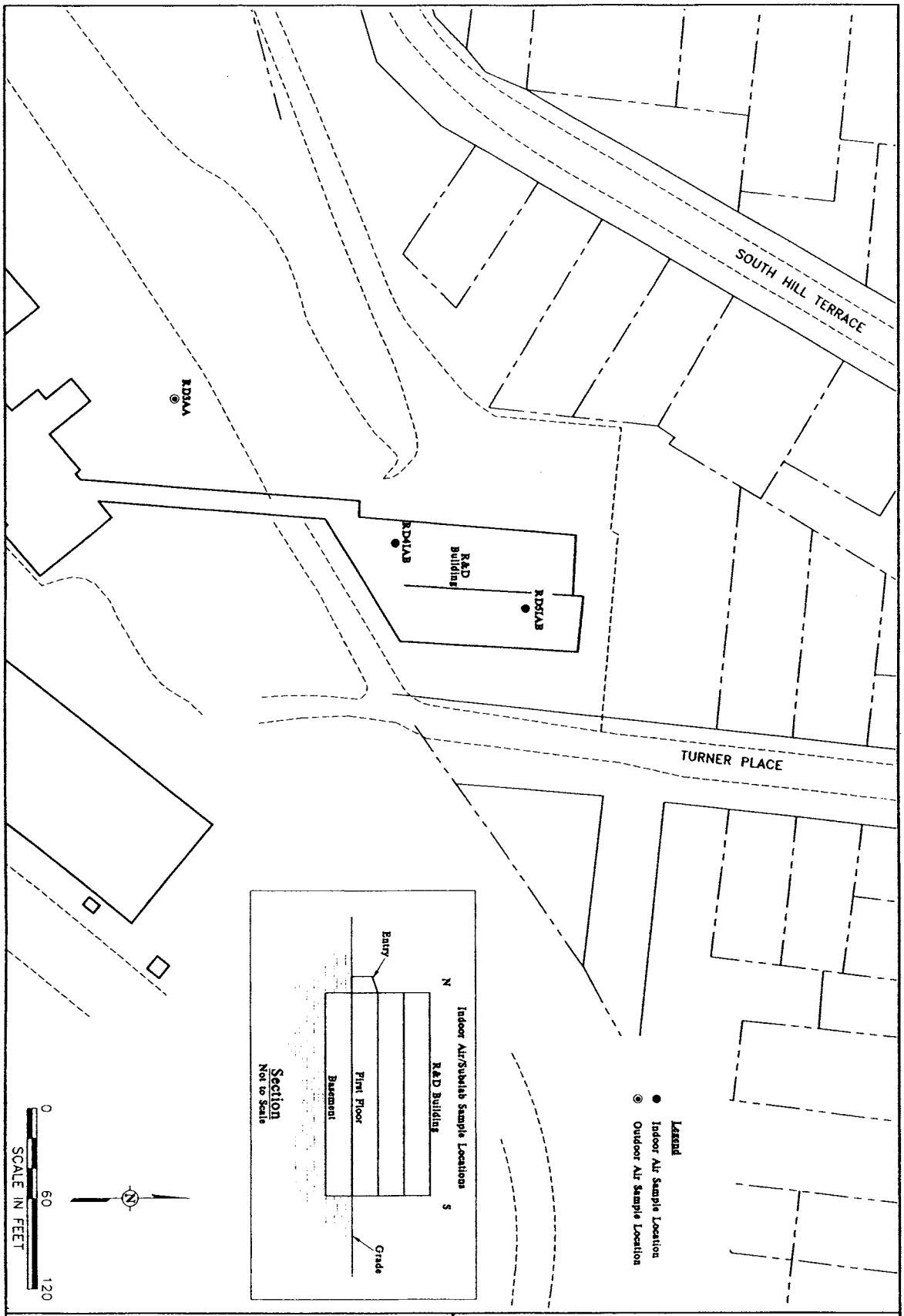

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Figure 1
R&D Building Basement Indoor Air Sample Loctions
Emerson Power Transmission
Ithaca, New York

12749112&DWG

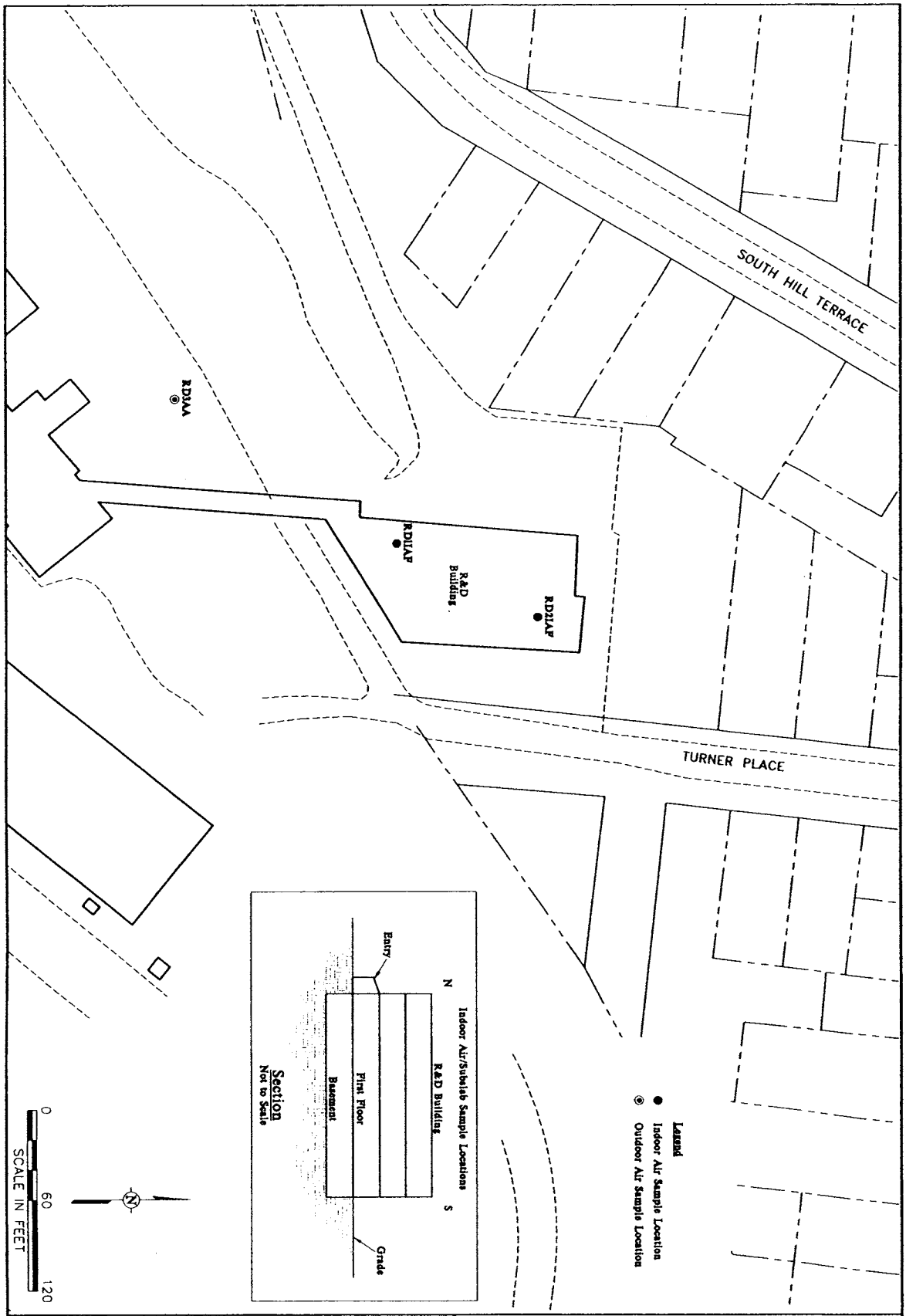

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Figure 2
R&D Building First Floor Indoor Air Sample Loctions
Emerson Power Transmission
Ithaca, New York

127491127.DWG

Table 1

Air Sample Results for
Research and Development Building
Emerson Power Transmission
Ithaca, New York
September 2005 and January 2006 (a)

Sample Location	1	2	3	3	1	2	2	3	1	2	4	5	1	2	3
Sample Type	SS	SS	SS	SSR	IAB	IAB	IABR	IAB	AA	AA	IAB	IAB	IAF	IAF	AA
Sample Date	September 22, 2005				September 22-23, 2005				September 22-23, 2005		January 17-18, 2006				
VOCs by EPA Method TO-15 (ug/m3)															
1,1,1-Trichloroethane	1.5 C	0.943 C	2.11 C	1.33 C	0.998 C	0.666 C	0.666 C	0.943 C	0.832 UC	0.832 UC	0.832 U	0.832 U	0.61 J	0.721 J	0.832 U
1,2-Dichloroethane	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U
cis-1,2-Dichloroethene	4.15	0.604 U	0.604 U	0.604 U	0.604 U	0.604 U	0.604 U	0.604 U	0.604 U	0.604 U	0.967	0.604 U	0.604 U	0.604 U	0.604 U
Methylene chloride	0.53 U	0.918	1.06	0.847	24.2	2.01	2.37	1.31	0.53 U	0.53 U	0.989	1.52	0.636	1.38	0.636
Tetrachloroethylene	8.41	4.48	44.8	16.5	1.45	1.38	1.45	2.83	1.03 U	1.03 U	0.965 J	1.03 J	1.03 J	0.965 J	0.689 J
trans-1,2-Dichloroethene	0.604 U	0.604 U	0.604 U	0.604 U	0.604 U	0.604 U	0.604 U	0.604 U	0.604 U	0.604 U	0.604 U	0.604 U	0.604 U	0.604 U	0.604 U
Trichloroethene	13.7	4.21	7.21	3.93	1.42	1.31	1.97	1.31	0.546	0.218 U	0.819	0.437	0.601	0.765	0.218 U
Vinyl chloride	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	0.39 U	0.39 U
1,1,2,2-Tetrachloroethane	1.05 U	1.05 U	1.05 U	1.05 U	1.05 U	1.05 U	1.05 U	1.05 U	1.05 U	1.05 U	1.05 U	1.05 U	1.05 U	1.05 U	1.05 U
1,1,2-Trichloroethane	0.832 U	0.832 U	0.832 U	0.832 U	0.832 U	0.832 U	0.832 U	0.832 U	0.832 U	0.832 U	0.832 U	0.832 U	0.832 U	0.832 U	0.832 U
1,1-Dichloroethane	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U	0.617 U
1,1-Dichloroethene	0.605 U	0.605 U	0.605 U	0.605 U	0.605 U	0.605 U	0.605 U	0.605 U	0.605 U	0.605 U	0.605 U	0.605 U	0.605 U	0.605 U	0.605 U
1,2,4-Trichlorobenzene	1.13 U	1.13 U	1.13 U	1.13 U	1.13 U	1.13 U	1.13 U	1.13 U	1.13 U	1.13 U	1.13 U	1.13 U	1.13 U	1.13 U	1.13 U
1,2,4-Trimethylbenzene	2.8	3.95	4.5	2.45	4.3	3.85	5.5	3.45	3.9	3.4	3.2	3.15	2.1	5.45	2.4
1,2-Dibromoethane	1.17 U	1.17 U	1.17 U	1.17 U	1.17 U	1.17 U	1.17 U	1.17 U	1.17 U	1.17 U	1.17 U	1.17 U	1.17 U	1.17 U	1.17 U
1,2-Dichlorobenzene	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U
1,2-Dichloropropane	0.705 U	0.705 U	0.705 U	0.705 U	0.705 U	0.705 U	0.705 U	0.705 U	0.705 U	0.705 U	0.705 U	0.705 U	0.705 U	0.705 U	0.705 U
1,3,5-Trimethylbenzene	2.15	2.8	2.7	1.6	3.75	4.05	4.7	2	3.5	2.75	1.15	1.7	0.999	3.15	1.05
1,3-Butadiene	0.337 U	0.337 U	0.337 U	0.337 U	0.337 U	0.337 U	0.337 U	0.337 U	0.337 U	0.337 U	0.337 U	0.337 U	0.337 U	0.337 U	0.337 U
1,3-Dichlorobenzene	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U
1,4-Dichlorobenzene	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U	0.917 U
1,4-Dioxane	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
2,2,4-Trimethylpentane	0.712 U	0.38 J	0.712 U	0.38 J	0.475 J	0.427 J	3.18	0.712 U	0.38 J	0.38 J	0.712 U	0.712 U	0.712 U	0.712 U	0.712 U
4-Ethyltoluene	0.5 J	0.999	1.05	0.65 J	1.2	1.1	1.6	0.8	0.75 J	0.55 J	0.849	0.75 J	0.65 J	1.2	0.6 J
Acetone	0.724 UC	35 C	22 C	0.724 UC	26.6 C	25.2 C	26.8 C	32.8 C	0.724 UC	0.724 UC	10.9	0.724 U	12.8	0.724 U	4.15
Allyl chloride	0.477 UC	0.477 UC	0.477 UC	0.477 UC	0.477 UC	0.477 UC	0.477 UC	0.477 UC	0.477 UC	0.477 UC	0.477 U	0.477 U	0.477 U	0.477 U	0.477 U
Benzene	0.649	0.942	0.942	0.877	1.2	1.3	1.53	1.2	1.14	1.2	1.36	1.98	1.33	1.33	1.33
Benzyl chloride	0.877 UC	0.877 UC	0.877 UC	0.877 UC	0.877 UC	0.877 UC	0.877 UC	0.877 UC	0.877 UC	0.877 UC	0.877 U	0.877 U	0.877 U	0.877 U	0.877 U
Bromodichloromethane	2.93 C	1.02 C	5.45 C	3.54 C	0.749 C	1.02 UC	0.681 C	1.02 UC	1.02 UC	1.02 UC	1.02 U	1.02 U	1.02 U	1.02 U	1.02 U
Bromoform	1.58 UC	1.58 UC	1.58 UC	1.58 UC	1.58 UC	1.58 UC	1.58 UC	1.58 UC	1.58 UC	1.58 UC	1.58 UC	1.58 UC	1.58 UC	1.58 UC	1.58 UC
Bromomethane	0.592 U	0.592 U	0.592 U	0.592 U	0.592 U	0.592 U	0.592 U	0.592 U	0.592 U	0.592 U	0.592 U	0.592 U	0.592 U	0.592 U	0.592 U
Carbon disulfide	1.36	0.506	0.981	0.57	0.475 U	0.285 J	0.475 U	0.475 U	0.475 U	0.475 U	0.665	0.665	0.38 J	1.01	0.855
Carbon tetrachloride	0.767 C	0.767 C	1.34 C	1.09 C	0.767 C	0.959 UC	0.959 UC	0.959 UC	0.895 C	0.895 C	0.703 JC	0.703 JC	0.831 JC	0.767 JC	0.767 JC

Table 1

Air Sample Results for
Research and Development Building
Emerson Power Transmission
Ithaca, New York
September 2005 and January 2006 (a)

Sample Location	1	2	3	3	1	2	2	3	1	2	4	5	1	2	3
Sample Type	SS	SS	SS	SSR	IAB	IAB	IABR	IAB	AA	AA	IAB	IAB	IAF	IAF	AA
Sample Date	September 22, 2005				September 22-23, 2005				September 22-23, 2005		January 17-18, 2006				
VOCs by EPA Method TO-15 (ug/m3)															
Chlorobenzene	0.702 U	0.702 U	0.702 U	0.702 U	0.702 U	0.702 U	0.702 U	0.702 U	0.702 U	0.702 U	0.702 U	0.702 U	0.702 U	0.702 U	0.702 U
Chloroethane	0.402 U	0.402 U	0.402 U	0.402 U	0.402 U	0.402 U	0.402 U	0.402 U	0.402 U	0.402 U	0.402 U	0.402 U	0.402 U	0.402 U	0.402 U
Chloroform	34.2	17.4	78.4	38.7	5.26	4.91	5.01	6.3	0.744 U	0.744 U	1.14	0.893	0.993	1.49	0.744 U
Chloromethane	0.315 U	1.01	0.315 U	0.861	1.3	1.34	1.39	1.24	0.315 U	1.78	0.315 UC	0.315 UC	0.315 UC	0.315 UC	0.315 UC
cis-1,3-Dichloropropene	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U
Cyclohexane	0.525 U	1.99	0.525 U	1.22	6.44	5.74	5.63	3.04	0.525 U	0.525 U	0.525 U	0.525 U	0.525 U	0.525 U	0.525 U
Dibromochloromethane	1.3 UC	1.3 UC	1.3 UC	1.3 UC	1.3 UC	1.3 UC	1.3 UC	1.3 UC	1.3 UC	1.3 UC	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Ethyl acetate	0.916 U	0.916 U	0.916 U	0.916 U	0.916 U	0.916 U	0.916 U	0.916 U	0.916 U	0.916 U	0.916 U	0.916 U	0.916 U	0.916 U	0.916 U
Ethylbenzene	0.574 J	0.971	1.28	0.794	1.15	1.28	1.77	0.839	0.75	0.706	0.618 J	0.794	0.574 J	0.927	0.485 J
Freon 11	2.34	2.46	2.51	2.28	3.88	2.74	3.08	2.34	2.06	2.11	2.4	2	1.88	2	1.83
Freon 113	7.87	12.2	3.58	6.08	49.5	20.6	21	8.72	0.935 J	0.935 J	15.6	7.79	3.12	3.97	0.857 J
Freon 114	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 U	1.07 UC	1.07 UC	1.07 UC	1.07 UC	1.07 UC
Freon 12	3.92	4.02	3.87	4.02	4.17	4.32	4.47	3.82	4.07	4.37	4.17 C	3.97 C	5.78 C	6.03 C	4.12 C
Heptane	0.625 UC	0.625 UC	0.625 UC	0.625 UC	0.625 UC	0.625 UC	1.08 C	0.625 UC	0.625 UC	0.625 UC	0.625 U	0.625 U	0.625 U	0.625 U	0.625 U
Hexachloro-1,3-butadiene	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U	1.63 U
Hexane	0.537 U	1.93	2.04	1.65	2.15	1.68	2.97	1.65	0.537 U	0.537 U	1.07	1.65	0.609	1	0.788
Isopropyl alcohol	0.375 U	0.375 U	0.375 U	0.375 U	0.375 U	0.375 U	0.375 U	0.375 U	0.375 U	0.375 U	0.375 U	0.375 U	0.375 U	0.375 U	0.375 U
m-Xylene	1.37	2.47	2.87	1.5	2.38	2.87	4.41	1.94	1.68	1.72	1.72	2.25	1.46	2.52	1.46
Methyl butyl ketone	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U
Methyl ethyl ketone	0.899 U	0.899 U	0.899 U	0.899 U	0.899 U	0.899 U	0.899 U	0.899 U	0.899 U	0.899 U	0.899 U	0.899 U	0.899 U	0.899 U	0.899 U
Methyl isobutyl ketone	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U	1.25 U
Methyl tert-butyl ether	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 UC	0.55 UC	0.55 UC	0.55 UC	0.55 UC
o-Xylene	1.32	1.32	1.94	1.15	1.54	1.59	2.34	1.32	1.37	1.24	0.794	0.883	0.618 J	1.24	0.706
p-Xylene	0.618 J	0.794	1.5	0.883	1.19	1.24	1.77	1.06	1.1	0.794	0.262 U	0.262 U	0.262 U	0.262 U	0.262 U
Propylene	0.262 U	0.262 U	0.262 U	0.262 U	0.262 U	0.262 U	0.262 U	0.262 U	0.262 U	0.262 U					
Styrene	0.649 U	0.649 U	0.649 U	0.649 U	0.649 U	0.649 U	0.996	0.649 U	0.649 U	0.649 U	0.649 U	0.649 U	0.649 U	0.649 U	0.649 U
Tetrahydrofuran	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
Toluene	5.02	7.09	10.3	10.3	8.81	7.16	14.6	6.89	5.98	6.13	3.6	5.44	3.52	6.13	3.41
trans-1,3-Dichloropropene	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U	0.692 U
Vinyl acetate	0.537 U	0.537 U	0.537 U	0.537 U	0.537 U	0.537 U	0.537 U	0.537 U	0.537 U	0.537 U	0.537 U	0.537 U	0.537 U	0.537 U	0.537 U
Vinyl bromide	0.667 UC	0.667 UC	0.667 UC	0.667 UC	0.667 UC	0.667 UC	0.667 UC	0.667 UC	0.667 UC	0.667 UC	0.667 U	0.667 U	0.667 U	0.667 U	0.667 U

a/ U = not detected at the reporting limit; SS = subslab soil gas sample; SSR = duplicate subslab soil gas sample; IAB = indoor air sample collected from basement; IABR = duplicate indoor air sample collected from basement; AA = ambient (outdoor) air sample;
J = analyte was detected at or below quantitation limit, C=result or reporting limit is estimated because of exceedances in the continuing calibration