INDOOR AIR SAMPLING REPORT

SITE 7
DESTINY USA
SYRACUSE, NEW YORK

NYSDEC BCP SITE #C734135

Prepared for:
New York State Department of Environmental Conservation
Region 7
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1.0 INTRODUCTION

JMT of New York, Inc. is pleased to provide the NYS Department of Health (NYSDOH) and the NYS Department of Environmental Conservation (NYSDEC) with the Indoor Air Sampling Report for the Embassy Suites hotel located on the Destiny USA Brownfield site in Syracuse, NY. The sampling was performed in accordance with the New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006. JMT is submitting this indoor air sampling report as per reporting requirement of the Site Management Plan.

2.0 EXECUTIVE SUMMARY

Indoor air sampling took place overnight from 1000 hours to 1900 hours on March 17, 2019. The sampling was conducted on a Sunday during off peak hours to mitigate the influence of building occupants on sample results.

The indoor air samples were analyzed for the full TO-15 analyte list. The indoor air sample results have been compared to the EPA 2001 Building Assessment and Survey Evaluation (BASE) database.

Data validation was performed by Lab Data Consultants, Inc.. The Data Usability Summary Report has been submitted separately.

The vapor control system was installed to ensure that volatile compounds in subsurface soils would not enter the occupied space in the building. The parameters most likely to be present due to high levels in soil or soil vapor samples are absent or at inconsequential levels in indoor air samples. These results provide a clear indication that the vapor control system is functioning as intended, and that the building occupants are not being exposed to volatile compounds originating below the building.

3.0 SAMPLING EVENT PREPARATION

The eight (8) hour indoor air sampling was conducted between the hours of 10:00 am to 7:00 pm on March 17, 2019. JMT conducted a pre-sampling inventory to identify any potential chemicals or conditions that may affect air results. Every effort to the extent practical was made to mitigate the disturbance of the air samples by building occupants. The location, PID readings of identified chemicals were documented for use to interpret sampling results (Appendix C). The Building

Inventory Product Detail Sheet in Appendix C lists known product ingredients. Other intrinsic constituents may be in these products but are not reported in the SDS. Inventory items included cleaning supplies, odor eliminators, aerosols, and detergents.

As recommended by the NYSDOH vapor intrusion guidance document, the building should be adequately flushed prior to sampling. The HVAC system had been consistently operational for more than two weeks prior to the sampling.

Please see Appendix B NYSDOH Indoor Air Quality Questionnaire for additional information on the hotel's HVAC system.

4.0 SAMPLING EVENT

Sample locations were consistent with the previous sampling events, as approved by the NYSDEC and NYSDOH. The sample location map is attached as Figure 1. During the sampling event, windows and doors remained closed when possible, and HVAC systems and the SVCS operated under normal "on conditions".

Indoor air sampling took place on March 17, 2019 from 1000 hours to 1900 hours. The sampling was conducted on a Sunday during off peak hours to try and reduce the influence of building occupants on sample results. Air samples were collected using batch-certified 2.6 L summa canisters with 8-hour regulators and 4-5 mL/min flow rates. The canisters were placed in the pre-approved locations at a breathing level of 4-5 feet above the floor surface to collect vapors over an 8-hour period. In areas where furniture wasn't present to place canisters, a dowel and tubing was attached vertically to the canister in order to sample the breathing level 4-5 feet above the floor surface. Vacuum pressure of the canisters were recorded before and after sampling occurred (Appendix D).

The site is currently utilized as an Embassy Suites hotel. Staff was asked to avoid cleaning when possible. However, cleaning did occur periodically throughout the day. Inventoried items included cleaning supplies, odor eliminators, aerosols, detergents and other volatile organic containing products.

5.0 SAMPLING RESULTS & OBSERVATIONS

The summa canisters were delivered by JMT to Alpha Analytical, a New York State ELAP Certified Laboratory, for analysis of volatile organic compounds via TO-15 SIMS (low-level detection). The full TO-15 analyte list was analyzed consistent with previous sampling events and the aforementioned NYSDOH Guidance for Evaluating Soil Vapor Intrusion. Samples were analyzed on a standard turnaround time (TAT) of 5 business days. As requested by NYSDOH, the air sample results are being compared to the EPA 2001 Building Assessment and Survey Evaluation (BASE) database, SUMMA canister method, for Indoor Air and Outdoor Air (BASE), located in Appendix A. Unless noted otherwise, reference to BASE values are to the indoor air BASE values. See Table 1 and Figure 2 for the indoor air sampling results.

Data validation was performed by Lab Data Consultants, Inc..

5.1 PARAMETERS ABOVE BASE VALUES IN CURRENT EVENT

The only parameters detected in indoor samples above BASE values during the current sampling event were ethanol and chloroform.

Ethanol was detected in all of the samples collected. The ethanol level in Sample 5 (511 ug/m^3) was above the BASE value (290 ug/m^3). Sample 5 was collected in the small office of the laundry room. A duplicate sample collected at this location showed similar results. In the other samples, ethanol was below the BASE value, ranging from 52.8 ug/m^3 to 224 ug/m^3. The ambient outdoor air samples, Sample 13 and Sample 14 had ethanol at 25.4 ug/m^3 and 18.1 ug/m^3, respectively.

Chloroform was detected in all of the indoor samples and both of the outdoor samples. Samples at 11 of the thirteen indoor locations had levels above the BASE value (1.4 ug/m^3). The highest level was found in Sample 1 collected in the exercise room (34.5 ug/m^3). The average chloroform level in the other samples was below 8 ug/m^3. The ambient outdoor air samples were below the BASE value, at 0.606 ug/m^3 and 0.513 ug/m^3.

Acetone was detected in the indoor and the ambient outdoor air samples. The indoor samples had levels of acetone at an average concentration below 12 ug/m^3, well below the BASE value (120.2 ug/m^3). The ambient outdoor air samples were considerably higher. The level in outdoor Sample 14 (122 ug/m^3) exceeded the BASE value.

No other compounds were detected above the BASE values.

Chloroform is a byproduct of the disinfection of water using chlorine. The highest concentration was found in the sample collected nearest to the pool. Acetone and Ethanol are common components of cleaning products. Ethanol is found in laundry detergents, and numerous other commonly used products. The highest detected level of ethanol was in the sample collected from the office in the laundry room.

5.2 COMPARISON TO PREVIOUS SAMPLING EVENT

During the September 2017 sampling event, Sample 5, collected in the laundry room office, had levels of Toluene (334 ug/m^3) and n-Hexane (90.2 ug/m^3) above the respective BASE values (70.8 ug/m^3 and 15.2 ug/m^3, respectively). During the current sampling event, the laundry room sample had a significantly lower concentration of Toluene (5.46 ug/m^3), well below the BASE value, and n-Hexane was not detected above the analysis reporting limit (0.705 ug/m^3) in any indoor samples. Prior to the 2017 sampling event, the laundry office had multiple cleaning products, used rags, and other cleaning materials in the room. One of the cleaning products noted in the inventory, Satin Shine, contained petroleum distillates. Toluene was detected in all indoor samples during both events, but concentrations found during the current sampling event are on average roughly half of what they were in 2017.

During the 2017 sampling event, low levels of TCE were detected in 10 out of 13 indoor samples, all well below the BASE value (6.5 ug/m^3). During the current sampling event, TCE was not detected above the analysis reporting limit (0.107 ug/m^3) in any indoor samples. Similarly, methylene chloride, detected at four indoor locations during the 2017 sampling event, was not detected above the analysis reporting limit in any of the indoor samples during the current sampling event. Other parameters that were detected in 2017 that are no longer detected in indoor air samples include ethyl acetate, 1,4-dioxane, 2,2,4-trimethylpentane, cyclohexane, and tert-butyl alcohol.

Parameters that were not detected in 2017 that were detected in the current sampling event include benzene (12 out of 13 locations, maximum level 6% of BASE value), 1,2-dichloroethane (9 locations, maximum level 12% of BASE value), vinyl chloride (one location, 15% of BASE value), and Freon-113 (12 locations, no BASE value for comparison).

Carbon tetrachloride was found at 14 locations in 2017, 13 locations in current event, with maximum levels in both events less than 80% of the BASE value. Chloromethane was found at

14 locations in 2017, 13 locations in current event, with a maximum level in the current event at 46% of the BASE value. Average levels of tetrahydrofuran (detected at 12 locations in both sampling events) and isopropanol (detected at 14 locations in 2017, 13 locations in current event) were essentially unchanged from the first to the second events. Tetrahydrofuran and isopropanol don't have BASE values for comparison.

5.3 COMPARISON TO SOIL AND GROUNDWATER LEVELS

During the remedial investigation (RI) of the site in 2013, the compounds found in soil vapor at moderate to high levels included 2,2,4-trimethylpentane, n-hexane, cyclohexane, heptane, and acetone.

The constituent with the highest concentration was 2,2,4-Trimethylpentane. The highest level was found in soil vapor sample S1-V6 (93,900 ug/m^3) located near the southern portion of Sun 1 parcel. Soil vapor sample S1-V1 located within the hotel footprint had a concentration of 4,860 ug/m^3. 2,2,4-Trimethylpentane was not detected above the analysis reporting limit in any indoor air samples during the current sampling event.

n-Hexane had significant concentrations in soil vapor sample SI-V6 (15,100 ug/m^3). Soil vapor sample S1-V1 located within the footprint had 1,840 ug/m^3 of n-hexane. N-Hexane was not found in any indoor air samples during the current sampling event.

Cyclohexane was also found at high concentrations in soil vapor. The highest concentration was found in soil vapor sample SI-V6 (10,800 ug/m^3). Soil vapor sample S1-V1 had a moderate detection of 898 ug/m^3. Cyclohexane was not found in any indoor air samples during the current sampling event.

Heptane was detected in soil vapor sample S1-V6 at 4,920 ug/m^3. Heptane has been non-detected above the analysis reporting limit in either the 2017 or 2019 sampling events.

Acetone was found to have low to moderate levels in soil vapor, with a maximum of 957 ug/m^3. The maximum level of acetone detected during the current indoor air sampling event was 15% of the BASE value, and the indoor levels were lower than the levels detected in the ambient outdoor samples.

During the RI, 1,2,4-trimethylbenzene was detected in soil samples, up to 415 mg/Kg, and was also detected in groundwater. During the current indoor air sampling event, the maximum level detected in indoor samples was 2% of the BASE value. Benzene was detected in soil vapor samples, up to 690 ug/m^3, and was also detected in soil and groundwater. During the current sampling event, the maximum indoor air level was 6% of the BASE value, and the average indoor level was roughly half of the levels found in ambient outdoor air samples. Chloroform was detected in all of the indoor samples during the current round of sampling, but was not found in significant concentrations in soil, soil vapor or groundwater during the RI.

6.0 CONCLUSION

The only parameters detected above BASE values during the current round of sampling were chloroform and ethanol. Chloroform was not present at significant concentrations in soil vapor, soil or groundwater during the RI. The presence of chloroform in indoor samples may be associated with disinfection of the pool water with chlorine, routine use of cleaning products, or other operational activities. Ethanol was detected at one location in soil vapor at an insignificant concentration during the RI. Ethanol is a common constituent of cleaning products and laundry detergents, and the highest level was found in the laundry room office. Cleaning occurred periodically throughout the day that samples were collected. Inventoried items included cleaning supplies, odor eliminators, aerosols, detergents and other volatile organic containing products.

The vapor control system was installed to ensure that volatile constituents in subsurface soils would not enter the occupied space in the building. The parameters most likely to be present due to high levels in soil or soil vapor samples are absent or at inconsequential levels in indoor air samples. These results provide a clear indication that the vapor control system is functioning as intended, and that the building occupants are not being exposed to volatile compounds originating below the building. The Sub-Slab Vapor Control System Certification is attached in Appendix E.

The full laboratory data report is attached in Appendix F.

TABLE

Table 1: Indoor Air Analytical Results

Data validated by Lab Data Consultants, Inc. Table reflects qualifiers assigned by the validator.

Volatile Organic Compounds (TO-15)	EPA 2001 BASE 95th Percentile Indoor Air	Sample Type / Sample Name / Sample Date / Lab Sample ID		Indoor Air Samples															
		CasNum	Units	1 9/1/2017 L1731007-01	1 3/17/2019 L1910754-01	2 9/1/2017 L1731007-02	2 11/1/2017 L1740015-01	2 3/17/2019 L1910754-02	3 9/1/2017 L1731007-03	3 3/17/2019 L1910754-03	4 9/1/2017 L1731007-04	4 3/17/2019 L1910754-04	5D 9/1/2017 L1731007-05	5D 3/17/2019 L1910754-06	5 9/1/2017 L1731007-06	5 3/17/2019 L1910754-05	6 9/1/2017 L1731007-07	6 3/17/2019 L1910754-07	7 9/1/2017 L1731007-08	7 3/17/2019 L1910754-09
1,2,4-Trimethylbenzene	13.7	95-63-6	ug/m3	<0.983	0.157	<0.983	<0.983	0.176	<0.983	0.147	<0.983	0.236	<0.983	0.216	1.13	0.162	<0.983	0.192	<0.983	0.177
1,3-Dichlorobenzene	<2.5	541-73-1	ug/m3	<0.12	<0.12	<1.2	<1.2	<0.172	<1.2	<0.12	<1.2	<0.12	<1.2	<0.12	<1.2	<0.12	<1.2	<0.12	<1.2	<0.12
1,2-Dichloroethane	<1.0	107-06-2	ug/m3	<0.809	0.101	<0.809	<0.809	0.121	<0.809	0.101	<0.809	0.089	<0.809	0.081	<0.809	0.085	<0.809	0.105	<0.809	0.081
1,4-Dioxane		123-91-1	ug/m3	<0.721	<0.36	<0.721	<0.721	<0.515	<0.721	<0.36	<0.721	<0.36	<0.721	<0.36	<0.721	<0.36	<0.721	<0.36	<0.721	<0.36
2,2,4-Trimethylpentane		540-84-1	ug/m3	<0.934	<0.934	1.19	<0.934	<1.34	<0.934	<0.934	<0.934	<0.934	2.94	<0.934	3.06	<0.934	1.2	<0.934	<0.934	<0.934
2-Butanone	13.5	78-93-3	ug/m3	9.08	3.89	1.89	<1.47	3.19	1.82	2.5	<1.47	2.6	<1.47	3.1	<1.47	3.04	3.04	3.16	1.79	2.36
2-Hexanone		591-78-6	ug/m3	<0.82	<0.82	<0.82	<0.82	<1.17	<0.82	<0.82	<0.82	<0.82	<0.82	<0.82	<0.82	<0.82	<0.82	<0.82	<0.82	<0.82
Acetone	120.2	67-64-1	ug/m3	22.6	18	14.1	14.4	13.9	<2.38	10.3	<2.38	14.8	17.4	11.3	19.4	11.8	<2.38	10.8	<2.38	7.74
Benzene	12.5	71-43-2	ug/m3	<0.639	0.735	<0.639	<0.639	<0.457	<0.639	0.457	<0.639	0.466	<0.639	0.45	<0.639	0.444	<0.639	0.476	<0.639	0.457
Bromodichloromethane		75-27-4	ug/m3	<1.34	0.449	<1.34	<1.34	0.326	<1.34	0.167	<1.34	0.161	<1.34	0.335	<1.34	0.335	<1.34	<0.134	<1.34	<0.134
Carbon tetrachloride	0.7	56-23-5	ug/m3	0.434	0.554	0.428	0.541	0.503	0.415	0.497	0.415	0.516	0.403	0.535	0.421	0.478	0.421	0.554	0.415	0.484
Chloroform	1.4	67-66-3	ug/m3	<0.977	34.5	<0.977	9.18	15.5	<0.977	10.1	<0.977	4.98	<0.977	24.3	<0.977	23	<0.977	2.33	<0.977	2.02
Chloromethane	4.4	74-87-3	ug/m3	0.869	2.01	0.783	1.19	1.25	0.867	1.15	0.803	1.14	0.902	1.38	0.896	1.28	0.801	1.14	0.871	1.2
Cyclohexane		110-82-7	ug/m3	<0.688	<0.688	<0.688	<0.688	<0.984	<0.688	<0.688	<0.688	<0.688	1.02	<0.688	2.23	<0.688	<0.688	<0.688	<0.688	<0.688
Dichlorodifluoromethane	32.9	75-71-8	ug/m3	2.22	2.08	2.03	2.49	2.15	1.72	2.18	1.79	2.16	1.78	<0.17	1.98	2.13	1.96	2.17	2.41	2.17
Ethyl Acetate	9.5	141-78-6	ug/m3	4.14	<1.8	<1.8	<1.8	<2.57	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8
Ethanol	290	64-17-5	ug/m3	78.8	162 J	27.5	170	125 J	34.7	95.9 J	20.3	86.1 J	15.1	639 J	16.2	511 J	23	68 J	15.6	57.3 J
Ethylbenzene	7.6	100-41-4	ug/m3	0.93	0.226	<0.869	<0.869	0.211	<0.869	0.2	<0.869	0.308	<0.869	0.413	<0.869	0.361	<0.869	0.33	<0.869	0.278
Freon-113			ug/m4	NA	0.445	NA	<1.53	<0.547	NA	0.468	NA	0.429	NA	0.429	NA	0.445	NA	0.429	NA	0.437
Isopropanol		67-63-0	ug/m3	35.2	26.1	11.5	5.56	8.04	7.42	6.22	9.41	5.24	7.03	32.2	6.78	30	7.87	4.67	5.04	3.96
Methylene chloride	16	75-09-2	ug/m3	<1.74	<1.74	2.13	<1.74	<2.48	<1.74	<1.74	<1.74	<1.74	<1.74	<1.74	<1.74	<1.74	<1.74	<1.74	2.15	<1.74
n-Hexane	15.2	110-54-3	ug/m3	<0.705	<0.705	1.91	<0.705	<1.01	1.51	<0.705	1.86	<0.705	90.6	<0.705	90.2	<0.705	5.85	<0.705	3.88	<0.705
o-Xylene	11.2	95-47-6	ug/m3	1.25	0.295	<0.869	<0.869	0.279	<0.869	0.252	<0.869	0.387	<0.869	0.504	<0.869	0.434	1.19	0.421	<0.869	0.347
p/m-Xylene	28.5	179601-23-1	ug/m3	3.43	0.773	2.17	<1.74	0.743	1.84	0.691	<1.74	1.09	<1.74	1.52	2.05	1.32	3.33	1.18	1.77	1.04
Styrene	4.3	100-42-5	ug/m3	1.76	0.221	2.49	<0.852	0.189	1.01	0.166	1.59	0.234	2.66	0.26	3.03	0.221	1.06	0.247	<0.852	0.209
tert-Butyl Alcohol		75-65-0	ug/m3	1.82	<1.52	3.12	5.49	<2.16	<1.52	<1.52	<1.52	<1.52	4.21	<1.52	4.4	<1.52	2.11	<1.52	>1.52	<1.52
Tetrachloroethene	25.4	127-18-4	ug/m3	1.01	0.258	0.17	<0.136	<0.194	0.698	<0.136	<0.136	<0.136	<0.136	<0.136	0.142	<0.136	1.22	<1.36	0.698	<0.136
Tetrahydrofuran		109-99-9	ug/m3	2.32	6.64	4.57	<1.47	4.69	3.45	4.48	5.9	5.25	4.98	6.02	4.98	5.6	4.78	6.13	2.56	4.72
Toluene	70.8	108-88-3	ug/m3	6.82	3.64	8.29	1.15	4.26	5.99	2.97	8.22	4.22	327	5.46	334	5.84	16.7	4.86	9.8	3.92
Trichloroethene	6.5	79-01-6	ug/m3	0.236	<0.107	1.96	<0.107	<0.154	0.124	<0.107	0.172	<0.107	0.838	<0.107	0.403	<0.107	<0.107	<0.107	<0.107	<0.107
Trichlorofluoromethane	54	75-69-4	ug/m3	4	2.37	2.91	1.28	3.06	3.33	2.38	1.86	2.27	1.88	2.41	2.61	2.46	3.82	2.51	2.92	2.06
Vinyl Chloride	<2.2	75-01-4	ug/m3	<0.051	0.32	<0.051	<0.051	<0.073	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051

Notes:

1. Samples were collected by Spectra and submitted to Alpha Analytical for analysis of VOCs using method TO-15 Sims
2. <1.74 Analyte was not detected. The number following the "less than" (<) is the associated reporting limit.
3. Blue Highlight represents an exceedance of the95th percentile of the EPA 2001 Building Assessment and Survey Evaluation Database.
4. Data is compared to EPA 2001 Building Assessment and Survey Evaluation Database 95th Percentile (EPA 2001 BASE) for Indoor and Outdoor Air.
5. NA Not Sampled
6. J: Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL)

Table 1: Indoor Air Analytical Results (Cont'd)

Data validated by Lab Data Consultants, Inc. Table reflects qualifiers assigned by the validator.

Volatile Organic Compounds (TO-15)	EPA 2001 BASE 95th Percentile Indoor Air	Indoor Air Samples														EPA 2001 BASE 95th Percentile Outdoor Air	Ambient Air Samples			
		8 9/1/2017 L1731007-09	8 3/17/2019 L1910754-09	9 9/1/2017 L1731007-10	9 3/17/2019 L1910754-10	10 9/1/2017 L1731007-11	10 3/17/2019 L1910754-11	11 9/1/2017 L1731007-12	11 3/17/2019 L1910754-12	12 9/1/2017 L1731007-13	12 3/17/2019 L1910754-13	12D 9/1/2017 L1731007-17	12D 3/17/2019 L1910754-14	15 9/1/2017 L1731007-16	15 3/17/2019 L1910754-17		13 9/1/2017 L1731007-14	13 3/17/2019 L1910754-15	14 9/1/2017 L1731007-15	14 3/17/2017 L1910754-16
1,2,4-Trimethylbenzene	13.7	<0.983	0.172	<0.983	0.187	<0.983	0.202	<0.983	0.138	<0.983	0.147	<0.983	0.157	<0.983	0.187	7.1	<0.983	<0.098	<0.983	<0.098
1,3-Dichlorobenzene	<2.5	<1.2	<0.12	<1.2	<0.12	<1.2	<0.12	<1.2	<0.12	<1.2	<0.12	<1.2	<0.12	<1.2	<0.12	<2.4	<1.2	0.186	<1.2	0.186
1,2-Dichloroethane	<1.0	<0.809	<0.081	<0.809	0.097	<0.809	<0.154	<0.809	<0.12	<0.809	<0.12	<0.809	<0.12	<0.809	0.101	<1.0	<0.809	0.081	<0.809	<0.154
1,4-Dioxane		<0.721	<0.36	<0.721	<0.36	<0.721	<0.36	<0.721	<0.36	1.15	<0.36	1.17	<0.36	<0.721	<0.36		<0.721	<0.36	<0.721	<0.36
2,2,4-Trimethylpentane		<0.934	<0.934	2.48	<0.934	<0.934	<0.934	<0.934	<0.934	<0.934	<0.934	<0.934	<0.934	<0.934	<0.934		<0.934	<0.934	<0.934	<0.934
2-Butanone	13.5	2.0	1.69	4.54	2.94	<1.47	2.67	<1.47	<1.47	2.72	3.07	3.95	2.57	6.13	3.83	14.8	<1.47	<1.47	<1.47	<1.47
2-Hexanone		<0.82	<0.82	<0.82	<0.82	<0.82	<0.82	<0.82	<0.82	<0.82	<0.82	0.844	<0.82	<0.82	<0.82		<0.82	<0.82	<0.82	<0.82
Acetone	120.2	<2.38	6.06	19.4	10.7	<2.38	11.3	<2.38	7.67	45.4	11.7	39.4	9.29	19.6	14.3	56	5.23	96	5.89	122
Benzene	12.5	<0.639	0.594	<0.639	0.508	<0.639	0.537	<0.639	0.482	<0.639	0.489	<0.639	0.473	<0.639	0.486	9.6	<0.639	1.03	<0.639	1.11
Bromodichloromethane		<1.34	<0.134	<1.34	<0.134	<1.34	0.201	<1.34	0.295	<1.34	<0.134	<1.34	<0.134	<1.34	<0.134		<1.34	<0.134	<1.34	<0.134
Carbon tetrachloride	0.7	0.403	0.44	0.409	0.51	0.421	0.465	0.428	0.472	0.428	0.535	0.415	0.522	0.453	0.541	0.7	0.415	0.315	0.415	0.34
Chloroform	1.4	<0.977	1.89	<0.977	2.3	<0.977	9.23	<0.977	14.5	<0.977	1.2	<0.977	1.06	<0.977	6.06	0.7	<0.977	0.606	<0.977	0.513
Chloromethane	4.4	0.96	1.1	0.888	1.11	0.919	1.24	0.855	1.26	0.754	1.12	0.719	1.09	0.938	1.17	4	1.08	1.14	0.758	1.11
Cyclohexane		<0.688	<0.688	<0.688	<0.688	1.1	<0.688	<0.688	<0.688	<0.688	<0.688	<0.688	<0.688	<0.688	<0.688		<0.688	<0.688	<0.688	<0.688
Dichlorodifluoromethane	32.9	2.7	2.14	1.99	2.17	1.99	2.17	1.93	2.11	1.8	2.14	2.07	2.08	1.95	2.1	12.2	2.17	2.11	2.4	2.08
Ethyl Acetate	9.5	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	2.43	<1.8	11.1	<1.8	10.7	<1.8	<1.8	<1.8	1.9	<1.8	<1.8	<1.8	<1.8
Ethanol	290	49.2	52.8 J	37.5	77.6 J	48	194 J	69	224 J	509	109 J	505	106 J	<9.42	84.4 J	82.5	<9.42	25.4 J	<9.42	18.1 J
Ethylbenzene	7.6	<0.869	0.252	<0.869	0.317	<0.869	0.282	<0.869	0.126	<0.869	0.252	<0.869	0.365	<0.869	0.343	4.3	<0.869	0.13	<0.869	0.1
Freon-113		NA	0.445	NA	0.445	NA	0.468	NA	0.422	NA	0.46	NA	0.414	NA	0.445		NA	0.437	NA	<0.383
Isopropanol		10	3	9.64	4.84	8.95	8.95	15	8.55	24.4	5.73	24.8	5.31	5.01	6.76		<1.23	2.16	1.5	1.58
Methylene chloride	16	<1.74	<1.74	<1.74	<1.74	5.32	<1.74	2.24	<1.74	<1.74	<1.74	<1.74	<1.74	<1.74	<1.74	10.3	<1.74	<1.74	<1.74	<1.74
n-Hexane	15.2	6.17	<0.705	9.94	<0.705	2.01	<0.705	0.715	<0.705	<0.705	<0.705	<0.705	<0.705	<0.705	<0.705	11.4	<0.705	<0.705	<0.705	<0.705
o-Xylene	11.2	0.895	0.321	1.01	0.404	<0.869	0.374	<0.869	0.143	<0.869	0.321	0.877	0.482	1.15	0.434	6	<0.869	0.156	<0.869	0.126
p/m-Xylene	28.5	2.62	0.912	2.95	1.17	<1.74	1.02	<1.74	0.374	2.38	0.912	2.46	1.44	3.18	1.27	16.1	<1.74	0.478	<1.74	0.356
Styrene	4.3	<0.852	0.187	1.18	0.187	4.15	0.217	2.6	0.23	2.73	0.204	2.81	0.226	0.984	0.255	3.6	<0.852	<0.085	<0.852	<0.085
tert-Butyl Alcohol		1.85	<1.52	2.09	<1.52	<1.52	<1.52	<1.52	<1.52	11.6	<1.52	11.8	<1.52	<1.52	<1.52		<1.52	<1.52	<1.52	<1.52
Tetrachloroethene	25.4	0.712	<0.136	0.99	<0.136	<0.136	<0.136	<0.136	0.136	0.59	<0.136	1.14	<0.136	1.27	<0.136	10.4	0.448	<0.136	0.434	<0.136
Tetrahydrofuran		4.6	3.36	24.1	6.25	1.8	5.28	<1.47	<1.47	1.88	5.22	2.04	4.54	6.52	8.2		<1.47	1.73	<1.47	<1.47
Toluene	70.8	17.7	3.27	26.1	5.13	7.35	4.64	3.77	2.43	4.48	3.69	4.41	5.77	6.86	5.92	49.2	2.49	2.45	2.33	1.89
Trichloroethene	6.5	<0.107	<0.107	0.172	<0.107	0.236	<0.107	0.339	<0.107	0.145	<0.107	0.113	<0.107	0.118	<0.107	2.6	<0.107	<0.107	<0.107	<0.107
Trichlorofluoromethane	54	3.52	2.08	3.52	2.43	1.67	2.07	1.85	1.11	2.86	2.35	3.4	1.76	4.28	2.39	5.6	2.3	1.74	2.24	1.78
Vinyl Chloride	<2.2	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051		<0.051	<0.051	<0.051	<0.051

Notes:

1. Samples were collected by Spectra and submitted to Alpha Analytical for analysis of VOCs using method TO-15 Sims
2. <1.74 Analyte was not detected. The number following the "less than" (<) is the associated reporting limit.
3. Blue Highlight represents an exceedance of the95th percentile of the EPA 2001 Building Assessment and Survey Evaluation Database.
4. Data is compared to EPA 2001 Building Assessment and Survey Evaluation Database 95th Percentile (EPA 2001 BASE) for Indoor and Outdoor Air.
5. NA Not Sampled
6. J: Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL)

FIGURES

EXERCISE ROOM
WOMEN'S LOCKER ROOM
DINING AREA
OFFICE
AIR INTAKE OUTDOOR SAMPLE
MANIFOLD AREA A
LOBBY
ADMIN
DUPLICATE
OFFICE
AIR INTAKE OUTDOOR SAMPLE
STORAGE-MANIFOLD B
SUITE
DUPLICATE
PRE FUNCTION
BALLROOM
PRE-FUNCTION

1 GROUND FLOOR PLAN
SCALE: 3/32"=1'0"

KEITH E. CARLSON ARCHITECT

REGISTERED ARCHITECT CARLSON KEITH EUGENE 036779 STATE OF NEW YORK 5/12/16

ARCHITECTURE
PLANNING
INTERIORS

3221 WEST ALABAMA
HOUSTON, TEXAS 77098
713/522-1054
713/522-4496 FAX

SYRACUSE HOTEL
Syracuse, New York

GROUND FLOOR PLAN

DATE
6/23/16 ISS'D F CONSTRUCT.
8/11/16 CITY COMMENTS
09/08/16 100% HILTON REVIEW
9/30/16 ISS'D F BRAND –INT.
10/5/16 ASI 17 –INTERIORS

PROJECT NUMBER: 1405
SHEET NUMBER: A2–1

VOCs (TO-15)	1 9/1/2017 L1731007-01	1 3/17/2019 L1910754-01
1,2,4-Trimethylbenzene	---	0.157
1,2-Dichloroethane	---	0.101
2-Butanone	9.08	3.89
Acetone	22.6	18
Benzene	---	0.735
Bromodichloromethane	---	0.449
Carbon tetrachloride	0.434	0.554
Chloroform	---	34.5
Chloromethane	0.869	2.01
Dichlorodifluoromethane	2.22	2.08
Ethanol	78.8	162 J
Ethyl Acetate	4.14	---
Ethylbenzene	0.93	0.226
Freon-113	---	0.445
Isopropanol	35.2	26.1
p/m-Xylene	3.43	0.773
Styrene	1.76	0.221
o-Xylene	1.25	0.295
tert-Butyl Alcohol	1.82	---
Tetrahydrofuran	2.32	6.64
Toluene	6.82	3.64
Trichloroethene	0.236	---
Trichlorofluoromethane	4	2.37
Tetrachloroethene	1.01	0.258
Vinyl Chloride	---	0.32

VOCs (TO-15)	2 9/1/2017 L1731007-02	2 11/1/2017 L1740015-01	2 3/17/2019 L1910754-02
1,2,4-Trimethylbenzene	---	---	0.176
1,2-Dichloroethane	---	---	0.121
2-Butanone	1.89	---	3.19
2,2,4-Trimethylpentane	1.19	---	---
Acetone	14.1	14.4	13.9
Bromodichloromethane	---	---	0.326
Carbon tetrachloride	0.428	0.541	0.503
Chloroform	---	---	15.5
Chloromethane	0.783	1.19	1.25
Dichlorodifluoromethane	2.03	2.49	2.15
Ethanol	27.5	170	125 J
Ethylbenzene	---	---	0.211
Isopropanol	11.5	5.56	8.04
Methylene Chloride	2.13	---	---
n-Hexane	1.91	---	---
o-Xylene	---	---	0.279
p/m-Xylene	2.17	---	0.743
Styrene	2.49	---	0.189
tert-Butyl Alcohol	3.12	5.49	---
Tetrachloroethene	0.17	---	---
Tetrahydrofuran	4.57	---	4.69
Toluene	8.29	1.15	4.26
Trichloroethene	1.96	---	---
Trichlorofluoromethane	2.91	1.28	3.06

VOCs (TO-15)	14 9/1/2017 L1731007-15	14 3/17/2019 L1910754-16
1,3-Dichlorobenzene	---	0.186
Acetone	5.89	122
Benzene	---	1.11
Carbon tetrachloride	0.415	0.34
Chloroform	---	0.513
Chloromethane	0.758	1.11
Dichlorodifluoromethane	2.4	2.08
Ethanol	---	18.1 J
Ethylbenzene	---	0.1
Isopropanol	1.5	1.58
o-Xylene	---	0.126
p/m-Xylene	---	0.356
Tetrachloroethene	0.434	<0.136
Toluene	2.33	1.89
Trichlorofluoromethane	2.24	1.78

VOCs (TO-15)	3 9/1/2017 L1731007-03	3 3/17/2019 L1910754-03
1,2,4-Trimethylbenzene	---	0.147
1,2-Dichloroethane	---	0.101
2-Butanone	1.82	2.5
Acetone	---	10.3
Benzene	---	0.457
Bromodichloromethane	---	0.167
Carbon tetrachloride	0.415	0.497
Chloroform	---	10.1
Chloromethane	0.867	1.15
Dichlorodifluoromethane	1.72	2.18
Ethanol	34.7	95.9 J
Ethylbenzene	---	0.2
Freon-113	---	0.468
Isopropanol	7.42	6.22
n-Hexane	1.51	---
o-Xylene	---	0.252
p/m-Xylene	1.84	0.691
Styrene	1.01	0.166
Tetrachloroethene	0.698	---
Tetrahydrofuran	3.45	4.48
Toluene	5.99	2.97
Trichloroethene	0.124	---
Trichlorofluoromethane	3.33	2.38

VOCs (TO-15)	4 9/1/2017 L1731007-04	4 3/17/2019 L1910754-04
1,2,4-Trimethylbenzene	---	0.236
1,2-Dichloroethane	---	0.089
2-Butanone	---	2.6
Acetone	---	14.8
Benzene	---	0.466
Bromodichloromethane	---	0.161
Carbon tetrachloride	0.415	0.516
Chloroform	---	4.98
Chloromethane	0.803	1.14
Dichlorodifluoromethane	1.79	2.16
Ethanol	20.3	86.1 J
Ethylbenzene	---	0.308
Freon-113	---	0.429
Isopropanol	9.41	5.24
n-Hexane	1.86	---
o-Xylene	---	0.387
p/m-Xylene	---	1.09
Styrene	1.59	0.234
Tetrahydrofuran	5.9	5.25
Toluene	8.22	4.22
Trichloroethene	0.172	---
Trichlorofluoromethane	1.86	2.27

VOCs (TO-15)	15 9/1/2017 L1731007-16	15 3/17/2019 L1910754-17
1,2,4-Trimethylbenzene	---	0.187
1,2-Dichloroethane	---	0.101
2-Butanone	6.13	3.83
Acetone	19.6	14.3
Benzene	---	0.486
Carbon tetrachloride	0.453	0.541
Chloroform	---	6.06
Chloromethane	0.938	1.17
Dichlorodifluoromethane	1.95	2.1
Ethanol	---	84.4 J
Ethylbenzene	---	0.343
Freon-113	NA	0.445
Isopropanol	5.01	6.76
o-Xylene	1.15	0.434
p/m-Xylene	3.18	1.27
Styrene	0.984	0.255
Tetrachloroethene	1.27	---
Tetrahydrofuran	6.52	8.2
Toluene	6.86	5.92
Trichloroethene	0.118	---
Trichlorofluoromethane	4.28	2.39

VOCs (TO-15)	5 9/1/2017 L1731007-06	5 3/17/2019 L1910754-05
1,2,4-Trimethylbenzene	1.13	0.162
1,2-Dichloroethane	---	0.085
2,2,4-Trimethylpentane	3.06	---
2-Butanone	---	3.04
Acetone	19.4	11.8
Benzene	---	0.444
Bromodichloromethane	---	0.335
Carbon tetrachloride	0.421	0.478
Chloroform	---	23
Chloromethane	0.896	1.28
Cyclohexane	2.23	---
Dichlorodifluoromethane	1.98	2.13
Ethanol	16.2	511 J
Ethylbenzene	---	0.361
Freon-113	---	0.445
Isopropanol	6.78	30
n-Hexane	90.2	---
o-Xylene	---	0.434
p/m-Xylene	2.05	1.32
Styrene	3.03	0.221
tert-Butyl Alcohol	4.4	---
Tetrachloroethene	0.142	---
Tetrahydrofuran	4.98	5.6
Toluene	334	5.84
Trichloroethene	0.403	---
Trichlorofluoromethane	2.61	2.46

VOCs (TO-15)	6 9/1/2017 L1731007-07	6 3/17/2019 L1910754-07
1,2,4-Trimethylbenzene	---	0.192
1,2-Dichloroethane	---	0.105
2-Butanone	3.04	3.16
2,2,4-Trimethylpentane	1.2	---
Acetone	---	10.8
Benzene	---	0.476
Carbon tetrachloride	0.421	0.554
Chloroform	---	2.33
Chloromethane	0.801	1.14
Dichlorodifluoromethane	1.96	2.17
Ethanol	23	68 J
Ethylbenzene	---	0.33
Freon-113	---	0.429
Isopropanol	7.87	4.67
n-Hexane	5.85	---
o-Xylene	1.19	0.421
p/m-Xylene	3.33	1.18
Styrene	1.06	0.247
tert-Butyl Alcohol	2.11	---
Tetrachloroethene	1.22	---
Tetrahydrofuran	4.78	6.13
Toluene	16.7	4.86
Trichlorofluoromethane	3.82	2.51

VOCs (TO-15)	7 9/1/2017 L1731007-08	7 3/17/2019 L1910754-09
1,2,4-Trimethylbenzene	---	0.177
1,2-Dichloroethane	---	0.081
2-Butanone	1.79	2.36
Acetone	---	7.74
Benzene	---	0.457
Bromodichloromethane	---	---
Carbon tetrachloride	0.415	0.484
Chloroform	---	2.02
Chloromethane	0.871	1.2
Dichlorodifluoromethane	2.41	2.17
Ethanol	15.6	57.3 J
Ethylbenzene	---	0.278
Freon-113	NA	0.437
Isopropanol	5.04	3.96
Methylene Chloride	2.15	---
n-Hexane	3.88	---
o-Xylene	---	0.347
p/m-Xylene	1.77	1.04
Styrene	---	0.209
Tetrachloroethene	0.698	---
Tetrahydrofuran	2.56	4.72
Toluene	9.8	3.92
Trichlorofluoromethane	2.92	2.06

VOCs (TO-15)	8 9/1/2017 L1731007-09	8 3/17/2019 L1910754-09
1,2,4-Trimethylbenzene	---	0.172
2-Butanone	2.0	1.69
Acetone	---	6.06
Benzene	---	0.594
Carbon tetrachloride	0.403	0.44
Chloroform	---	1.89
Chloromethane	0.96	1.1
Dichlorodifluoromethane	2.7	2.14
Ethanol	49.2	52.8 J
Ethylbenzene	---	0.252
Freon-113	NA	0.445
Isopropanol	10	3
n-Hexane	6.17	---
o-Xylene	0.895	0.321
p/m-Xylene	2.62	0.912
Styrene	---	0.187
tert-Butyl Alcohol	1.85	---
Tetrachloroethene	0.712	---
Tetrahydrofuran	4.6	3.36
Toluene	17.7	3.27
Trichlorofluoromethane	3.52	2.08

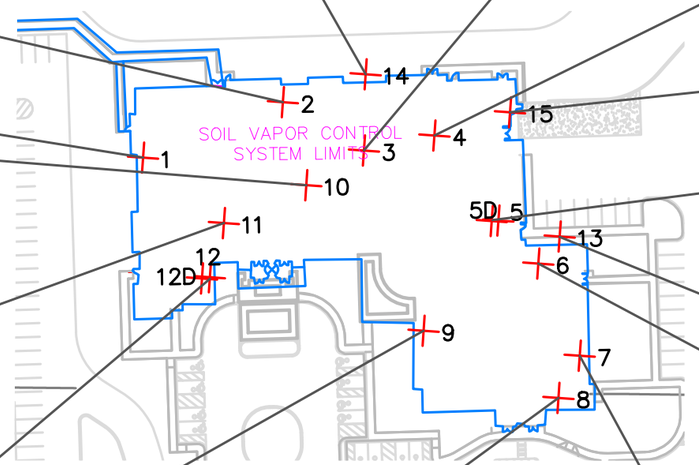
VOCs (TO-15)	9 9/1/2017 L1731007-10	9 3/17/2019 L1910754-10
1,2,4-Trimethylbenzene	---	0.187
1,2-Dichloroethane	---	0.097
2-Butanone	4.54	2.94
2,2,4-Trimethylpentane	2.48	---
Acetone	19.4	10.7
Benzene	---	0.508
Carbon tetrachloride	0.409	0.51
Chloroform	---	2.3
Chloromethane	0.888	1.11
Dichlorodifluoromethane	1.99	2.17
Ethanol	37.5	77.6 J
Ethylbenzene	---	0.317
Freon-113	NA	0.445
Isopropanol	9.64	4.84
n-Hexane	9.94	---
o-Xylene	1.01	0.404
p/m-Xylene	2.95	1.17
Styrene	1.18	0.187
tert-Butyl Alcohol	2.09	---
Tetrachloroethene	0.99	---
Tetrahydrofuran	24.1	6.25
Toluene	26.1	5.13
Trichloroethene	0.172	---
Trichlorofluoromethane	3.52	2.43

VOCs (TO-15)	10 9/1/2017 L1731007-11	10 3/17/2019 L1910754-11
1,2,4-Trimethylbenzene	---	0.202
2-Butanone	---	2.67
Acetone	---	11.3
Benzene	---	0.537
Bromodichloromethane	---	0.201
Carbon tetrachloride	0.421	0.465
Chloroform	---	9.23
Chloromethane	0.919	1.24
Cyclohexane	1.1	---
Dichlorodifluoromethane	1.99	2.17
Ethanol	48	194 J
Ethylbenzene	---	0.282
Freon-113	NA	0.468
Isopropanol	8.95	8.95
Methylene Chloride	5.32	---
n-Hexane	2.01	---
o-Xylene	---	0.374
p/m-Xylene	---	1.02
Styrene	4.15	0.217
Tetrahydrofuran	1.8	5.28
Toluene	7.35	4.64
Trichloroethene	0.236	---
Trichlorofluoromethane	1.67	2.07

VOCs (TO-15)	11 9/1/2017 L1731007-12	11 3/17/2019 L1910754-12
1,2,4-Trimethylbenzene	---	0.138
Acetone	---	7.67
Benzene	---	0.482
Bromodichloromethane	---	0.295
Carbon tetrachloride	0.428	0.472
Chloroform	---	14.5
Chloromethane	0.855	1.26
Dichlorodifluoromethane	1.93	2.11
Ethanol	2.43	---
Ethylbenzene	69	224
Freon-113	---	0.126
Isopropanol	NA	0.422
Methylene Chloride	15	8.55
n-Hexane	2.24	---
o-Xylene	0.715	---
p/m-Xylene	---	0.143
Styrene	---	0.374
tert-Butyl Alcohol	2.6	0.23
Tetrachloroethene	---	0.136
Toluene	3.77	2.43
Trichloroethene	0.339	---
Trichlorofluoromethane	1.85	1.11

VOCs (TO-15)	12 9/1/2017 L1731007-13	12 3/17/2019 L1910754-13
1,2,4-Trimethylbenzene	---	0.147
1,4-Dioxane	1.15	---
2-Butanone	2.72	3.07
2-Hexanone	---	---
Acetone	45.4	11.7
Benzene		0.489
Carbon tetrachloride	0.428	0.535
Chloroform	---	1.2
Chloromethane	0.754	1.12
Dichlorodifluoromethane	1.8	2.14
Ethanol	509	109 J
Ethyl Acetate	11.1	---
Ethylbenzene	---	0.252
Freon-113	---	0.46
Isopropanol	24.4	5.73
p/m-Xylene	2.38	0.912
o-Xylene	---	0.321
Styrene	2.73	0.204
tert-Butyl Alcohol	11.6	---
Tetrachloroethene	0.59	---
Tetrahydrofuran	1.88	5.22
Toluene	4.48	3.69
Trichloroethene	0.145	---
Trichlorofluoromethane	2.86	2.35

VOCs (TO-15)	13 9/1/2017 L1731007-14	13 3/17/2019 L1910754-15
1,3-Dichlorobenzene	---	0.186
Acetone	5.23	96
Benzene	---	1.03
Carbon tetrachloride	0.415	0.315
Chloroform	---	0.606
Chloromethane	1.08	1.14
Dichlorodifluoromethane	2.17	2.11
Ethanol	---	25.4 J
Ethylbenzene	---	0.13
Freon-113	NA	0.437
Isopropanol	---	2.16
o-Xylene	---	0.156
p/m-Xylene	---	0.478
Tetrachloroethene	0.448	---
Tetrahydrofuran	---	1.73
Toluene	2.49	2.45
Trichlorofluoromethane	2.3	1.74



LEGEND

+1 INDOOR AIR SAMPLE

D DUPLICATE SAMPLE

19 British American Blvd.,Latham, New York 12110
P: (518) 782-0882 F: (518) 782-0973 www.jmt.com

Site 7

Indoor Air Sample Results

Destiny USA

CITY OF SYRACUSE ONONDAGA CO., NY

PN: 18-00996N-001	DATE: 4/5/2019	SCALE: 1"=100'	DWG. NO. 18-00996N-001A	FIGURE 2

APPENDIX A

EPA 2001: BUILDING ASSESSMENT AND SURVEY EVALUATION (BASE) DATABASE

Table C2. EPA 2001: Building assessment and survey evaluation (BASE) database, SUMMA® canister method

All results are micrograms per cubic meter (mcg/m^3).

Compound	INDOOR AIR											
	ND	ND(%)	N	Mean*	Min	25th	Median	75th	90th	95th	99th	Max
1,1,1-TRICHLOROETHANE	7	2.3%	298	16.2	<0.5	2.6	5.1	10.8	20.6	33.0	737.9	833.2
1,1,2-TRICHLOROETHANE	136	100.0%	136	0.6	<0.6	<1.0	<1.3	<1.4	<1.5	<1.6	<2.1	<2.3
1,1-DICHLOROETHANE	136	100.0%	136	0.2	<0.2	<0.4	<0.5	<0.5	<0.7	<0.8	<0.9	<0.9
1,1-DICHLOROETHENE	136	100.0%	136	0.5	<0.7	<0.9	<1.1	<1.2	<1.4	<1.6	<1.7	<1.8
1,2,4-TRICHLOROBENZENE	136	100.0%	136	1.1	<0.6	<0.9	<1.0	<1.2	<6.8	<7.2	<8.1	<8.2
1,2,4-TRIMETHYLBENZENE	52	17.7%	294	4.8	<0.4	1.7	2.8	5.1	9.5	13.7	39.0	91.0
1,2-DIBROMOETHANE	258	99.6%	259	0.6	<0.8	<1.1	<1.3	<1.4	<1.5	<1.6	<2.7	1.4
1,2-DICHLOROBENZENE	255	98.5%	259	0.6	<0.6	<0.8	<0.9	<1.0	<1.2	<1.3	10.5	11.2
1,2-DICHLOROETHANE	254	98.1%	259	0.9	<0.4	<0.5	<0.6	<0.7	<0.9	<1.0	24.8	84.9
1,2-DICHLOROPROPANE	136	100.0%	136	0.6	<0.5	<1.0	<1.4	<1.6	<1.6	<1.7	<2.3	<2.6
1,3,5-TRIMETHYLBENZENE	206	79.5%	259	1.6	<0.8	<1.3	<1.5	<4.6	3.7	4.6	9.0	16.6
1,3-BUTADIENE	39	100.0%	39	1.4	<2.1	<2.3	<2.5	<2.7	<3.0	<7.5	<7.9	<7.9
1,3-DICHLOROBENZENE	136	100.0%	136	0.6	<0.5	<0.7	<0.8	<1.1	<2.4	<2.5	<2.8	<2.9
1,4-DICHLOROBENZENE	212	71.1%	298	3.1	<0.5	<0.8	<1.2	1.4	5.5	12.5	80.5	87.1
1-BUTANOL	118	95.9%	123	42.7	<2.4	<3.6	<4.0	<4.3	<4.8	<7.9	35.3	4957.4
2-BUTANONE (MEK)	13	5.0%	259	6.2	<1.4	3.3	5.2	7.5	12.0	13.5	28.1	55.4
2-BUTOXYETHANOL	123	100.0%	123	4.0	<4.8	<7.2	<8.0	<8.6	<9.3	<10.4	<16.4	<16.8
2-ETHYL-1-HEXANOL	160	98.8%	162	3.2	<1.1	<5.0	<7.6	<8.4	<9.2	<9.7	8.2	8.4
2-METHYL-1-PROPANOL	30	76.9%	39	1.2	<0.9	<1.0	<1.1	<3.0	3.1	5.5	5.8	5.8
2-PROPANOL	8	20.5%	39	73.1	<1.3	6.6	30.0	56.0	250.0	475.0	580.0	580.0
3-METHYL PENTANE	125	48.3%	259	3.1	<0.9	<1.7	1.4	4.2	6.5	8.3	22.9	35.4
4-ETHYLTOLUENE	212	81.9%	259	1.7	<0.9	<1.5	<1.6	<3.1	3.6	5.9	9.8	16.4
4-METHYL-2-PENTANONE	153	59.1%	259	3.1	<0.7	<1.2	<1.5	3.0	6.0	8.1	58.4	72.5
ACETONE	0	0.0%	259	54.0	11.6	32.4	45.0	59.8	98.9	120.2	226.6	243.7
a-PINENE	238	79.9%	298	4.2	<0.5	<1.1	<1.2	<2.8	3.6	6.4	67.8	399.1
BENZENE	56	19.0%	294	4.5	<0.8	2.1	3.4	5.1	9.4	12.5	25.0	63.0
BENZYL CHLORIDE	136	100.0%	136	1.2	<0.8	<1.2	<1.4	<1.7	<6.8	<7.2	<8.1	<8.2
BROMOMETHANE	246	95.0%	259	0.6	<0.6	<0.8	<0.9	<1.1	<1.7	<2.1	3.6	4.6
BUTYL ACETATE	232	77.9%	298	2.9	<0.9	<1.5	<1.8	<5.2	4.5	15.8	35.3	50.6
CARBON DISULFIDE	134	51.7%	259	1.9	<0.5	<0.8	<1.3	2.1	4.2	6.4	14.8	24.5
CARBON TETRACHLORIDE	241	93.1%	259	0.5	<0.5	<0.8	<0.9	<1.1	<1.3	0.7	0.9	2.1
CHLOROBENZENE	255	98.5%	259	0.4	<0.4	<0.6	<0.7	<0.8	<0.9	<1.0	1.0	1.2
CHLOROETHANE	254	98.1%	259	1.1	<0.6	<0.8	<0.9	<1.0	<1.1	<1.3	47.9	56.7
CHLOROFORM	203	78.4%	259	0.5	<0.3	<0.4	<0.5	<1.2	1.1	1.4	4.8	12.1
CHLOROMETHANE	2	0.8%	259	2.9	<0.7	2.1	2.5	3.1	3.7	4.4	12.3	21.8
CIS-1,2-DICHLOROETHENE	136	100.0%	136	0.6	<0.6	<0.8	<1.0	<1.2	<1.9	<2.0	<2.2	<2.3

(Continued)

Table C2. EPA 2001: Building assessment and survey evaluation (BASE) database, SUMMA® canister method -- Continued

All results are micrograms per cubic meter (mcg/m^3).

Compound	INDOOR AIR											
	ND	ND(%)	N	Mean*	Min	25th	Median	75th	90th	95th	99th	Max
CIS-1,3-DICHLOROPROPENE	136	100.0%	136	0.9	<1.2	<1.7	<1.9	<2.0	<2.3	<2.5	<2.9	<3.2
DICHLORODIFLUOROMETHANE	18	6.9%	259	13.8	<4.8	4.8	6.7	10.5	16.5	32.9	81.3	942.3
DICHLOROTETRAFLUOROETHANE	136	100.0%	136	1.6	<1.5	<2.2	<2.5	<3.0	<6.8	<7.4	<8.2	<11.3
DIMETHYL DISULFIDE	239	92.3%	259	2.0	<1.4	<2.1	<2.4	<2.7	<3.7	3.6	32.4	70.4
d-LIMONENE	74	24.8%	298	10.8	<0.7	2.5	5.3	11.3	22.5	43.7	136.7	148.0
DODECANE	107	35.9%	298	8.2	<1.7	<4.5	5.4	9.6	15.9	22.0	92.8	110.0
ETHANOL	3	7.7%	39	89.3	<1.2	26.0	79.0	140.0	210.0	290.0	300.0	300.0
ETHYL ACETATE	163	54.7%	298	3.0	<0.6	<1.0	<2.6	3.2	5.4	9.5	59.0	64.2
ETHYLBENZENE	144	49.0%	294	2.8	<0.9	<1.6	1.4	3.4	5.7	7.6	18.5	73.6
HEXACHLOROBUTADIENE	136	100.0%	136	1.5	<1.3	<1.8	<2.1	<2.5	<6.8	<7.2	<8.1	<8.2
HEXANAL	78	63.4%	123	6.8	<2.5	<3.9	<4.6	7.8	12.0	14.7	26.2	235.1
m & p-XYLENES	53	18.0%	294	10.8	<1.5	4.1	6.9	12.2	22.2	28.5	67.6	260.8
METHYL TERTIARY-BUTYL ETHER	198	76.4%	259	3.3	<1.0	<1.5	<1.7	<6.4	11.5	16.1	30.8	34.0
METHYLENE CHLORIDE	94	31.5%	298	21.2	<1.1	<1.7	2.9	5.0	10.0	16.0	1155.6	1496.9
NAPHTHALENE	254	85.8%	296	6.6	<1.4	<2.2	<2.5	<5.2	5.1	20.9	98.0	410.0
n-DECANE	58	19.5%	298	7.4	<0.7	3.0	4.6	8.4	17.5	22.4	48.6	54.8
n-HEPTANAL	36	92.3%	39	1.7	<1.2	<1.3	<1.5	<1.6	<3.6	3.1	34.9	34.9
n-HEXANE	26	16.0%	162	6.3	<.9	1.6	3.1	6.4	10.2	15.2	120.0	130.0
NONANAL	146	90.1%	162	6.8	<1.6	<5.1	<7.8	<8.6	<16.8	30.2	88.9	106.3
NONANE	101	39.0%	259	3.7	<0.5	<1.0	1.7	3.6	7.8	12.4	45.2	53.8
n-UNDECANE	25	9.7%	259	12.6	<1.1	5.1	8.9	16.4	22.6	27.4	68.7	169.6
OCTANE	155	52.0%	298	5.5	<0.4	<0.8	<2.5	2.0	4.5	8.6	47.9	921.7
o-XYLENE	81	27.6%	294	3.8	<0.7	<2.4	2.4	4.4	7.9	11.2	20.1	90.5
PENTANAL	111	90.2%	123	3.0	<2.4	<3.7	<4.1	<4.6	<7.3	7.0	20.0	57.3
STYRENE	251	85.4%	294	1.5	<0.6	<1.6	<1.8	<2.3	1.9	4.3	15.0	40.0
TETRACHLOROETHENE	103	34.6%	298	6.0	<0.9	<1.9	3.0	5.9	15.9	25.4	55.6	65.7
TOLUENE	0	0.0%	294	25.1	3.5	10.7	15.7	25.9	43.0	70.8	348.9	390.3
TRANS-1,3-DICHLOROPROPENE	136	100.0%	136	0.5	<0.5	<0.8	<1.1	<1.2	<1.3	<1.3	<1.8	<2.0
TRICHLOROETHENE	216	72.5%	298	2.6	<0.6	<1.2	<1.4	1.2	4.2	6.5	57.0	88.5
TRICHLOROFLUOROMETHANE	107	35.9%	298	19.4	<1.7	<3.7	3.9	6.7	18.1	54.0	860.6	1015.3
TRICHLOROTRIFLUOROETHANE	217	83.8%	259	2.0	<1.1	<1.7	<1.9	<3.0	3.5	9.4	19.7	30.9
VINYL CHLORIDE	257	99.2%	259	0.5	<0.6	<0.8	<0.9	<1.0	<1.9	<2.2	<2.6	7.5

(Continued)

Table C2. EPA 2001: Building assessment and survey evaluation (BASE) database, SUMMA® canister method -- Continued

All results are micrograms per cubic meter (mcg/m^3).

Compound	OUTDOOR AIR											
	ND	ND(%)	N	Mean*	Min	25th	Median	75th	90th	95th	99th	Max
1,1,1-TRICHLOROETHANE	40	40.0%	100	1.3	<0.4	<0.6	0.8	1.7	2.6	3.8	8.4	8.7
1,1,2-TRICHLOROETHANE	46	100.0%	46	0.6	<0.6	<1.0	<1.2	<1.4	<1.6	<1.6	<1.8	<1.8
1,1-DICHLOROETHANE	46	100.0%	46	0.2	<0.4	<0.4	<0.4	<0.6	<0.6	<0.8	<0.8	<0.8
1,1-DICHLOROETHENE	46	100.0%	46	0.5	<0.8	<1.0	<1.0	<1.2	<1.4	<1.4	<1.6	<1.6
1,2,4-TRICHLOROBENZENE	46	100.0%	46	1.1	<0.6	<0.8	<1.0	<1.2	<6.4	<6.6	<7.8	<7.8
1,2,4-TRIMETHYLBENZENE	30	30.0%	100	2.6	<0.4	<1.6	1.8	3.1	5.8	7.1	19.1	24.2
1,2-DIBROMOETHANE	87	100.0%	87	0.6	<0.8	<1.2	<1.2	<1.4	<1.6	<1.6	<2.0	<2.0
1,2-DICHLOROBENZENE	86	98.9%	87	0.4	<0.6	<0.8	<1.0	<1.0	<1.2	<1.2	1.1	1.1
1,2-DICHLOROETHANE	86	98.9%	87	0.3	<0.4	<0.6	<0.6	<0.6	<0.8	<1.0	0.8	0.8
1,2-DICHLOROPROPANE	46	100.0%	46	0.6	<0.6	<1.2	<1.4	<1.6	<1.6	<1.8	<1.8	<1.8
1,3,5-TRIMETHYLBENZENE	69	79.3%	87	1.2	<0.8	<1.2	<1.4	<2.4	2.7	3.3	8.9	8.9
1,3-BUTADIENE	13	100.0%	13	1.5	<2.2	<2.4	<2.6	<2.8	<3.4	<7.6	<7.6	<7.6
1,3-DICHLOROBENZENE	46	100.0%	46	0.5	<0.6	<0.8	<0.8	<1.0	<2.2	<2.4	<2.8	<2.8
1,4-DICHLOROBENZENE	88	88.0%	100	0.7	<0.6	<0.8	<0.8	<1.4	1.2	1.7	5.4	6.1
1-BUTANOL	41	100.0%	41	2.0	<2.4	<3.4	<4.0	<4.4	<4.8	<5.2	<6.0	<6.0
2-BUTANONE (MEK)	5	5.7%	87	5.2	<1.2	2.2	3.7	5.7	11.3	14.8	43.1	43.1
2-BUTOXYETHANOL	41	100.0%	41	3.9	<4.6	<7.0	<8.0	<8.6	<9.6	<10.4	<11.8	<11.8
2-ETHYL-1-HEXANOL	53	98.1%	54	3.2	<1.2	<4.6	<7.2	<8.4	<9.6	<10.8	5.9	5.9
2-METHYL-1-PROPANOL	13	100.0%	13	0.6	<0.8	<1.0	<1.0	<1.2	<1.4	<3.0	<3.0	<3.0
2-PROPANOL	4	30.8%	13	6.4	<3.0	<4.2	4.7	6.6	16.5	23.5	23.5	23.5
3-METHYL PENTANE	55	63.2%	87	1.8	<1.0	<1.4	<1.6	2.0	4.4	6.6	10.5	10.5
4-ETHYLTOLUENE	75	86.2%	87	1.2	<1.0	<1.4	<1.6	<2.0	3.0	3.3	8.0	8.0
4-METHYL-2-PENTANONE	61	70.1%	87	1.3	<0.8	<1.0	<1.2	0.9	1.9	4.3	21.0	21.0
ACETONE	1	1.1%	87	26.5	<1.8	15.4	22.5	31.7	43.7	56.0	104.2	104.2
a-PINENE	92	92.0%	100	1.0	<0.6	<1.0	<1.2	<1.4	<6.2	3.7	6.8	8.1
BENZENE	22	22.0%	100	3.2	<1.2	1.2	2.7	3.7	6.6	9.6	12.6	13.0
BENZYL CHLORIDE	46	100.0%	46	1.2	<1.0	<1.2	<1.4	<1.6	<6.4	<6.6	<7.8	<7.8
BROMOMETHANE	82	94.3%	87	0.6	<0.6	<0.8	<1.0	<1.0	<1.6	1.0	4.5	4.5
BUTYL ACETATE	94	94.0%	100	1.4	<0.8	<1.4	<1.6	<1.8	<5.8	3.3	18.6	32.7
CARBON DISULFIDE	39	44.8%	87	2.1	<0.6	<0.8	0.9	2.2	3.7	8.3	22.0	22.0
CARBON TETRACHLORIDE	69	79.3%	87	0.5	<0.6	<0.8	<1.0	<1.0	0.7	0.7	1.5	1.5
CHLOROBENZENE	85	97.7%	87	0.4	<0.4	<0.6	<0.8	<0.8	<0.8	<1.0	1.1	1.1
CHLOROETHANE	84	96.6%	87	0.5	<0.6	<0.8	<0.9	<1.0	<1.2	<1.2	3.5	3.5
CHLOROFORM	77	88.5%	87	0.5	<0.2	<0.4	<0.4	<0.6	0.6	0.7	13.8	13.8
CHLOROMETHANE	0	0.0%	87	2.6	0.9	2.0	2.3	3.0	3.7	4.0	10.6	10.6
CIS-1,2-DICHLOROETHENE	45	97.8%	46	0.5	<0.6	<0.8	<1.0	<1.2	<1.8	<1.8	1.1	1.1

(Continued)

Table C2. EPA 2001: Building assessment and survey evaluation (BASE) database, SUMMA® canister method -- Continued

All results are micrograms per cubic meter (mcg/m^3).

Compound	OUTDOOR AIR											
	ND	ND(%)	N	Mean*	Min	25th	Median	75th	90th	95th	99th	Max
CIS-1,3-DICHLOROPROPENE	46	100.0%	46	0.9	<1.4	<1.6	<1.8	<2.0	<2.2	<2.4	<2.6	<2.6
DICHLORODIFLUOROMETHANE	7	8.0%	87	7.3	<4.4	3.8	4.4	5.8	8.1	12.2	183.7	183.7
DICHLOROTETRAFLUOROETHANE	46	100.0%	46	1.6	<1.6	<2.2	<2.4	<3.0	<6.4	<6.6	<7.8	<7.8
DIMETHYL DISULFIDE	74	85.1%	87	1.7	<1.4	<2.0	<2.4	<2.8	2.4	4.5	16.4	16.4
d-LIMONENE	73	73.0%	100	1.5	<0.8	<1.0	<1.4	2.0	3.6	4.1	9.8	12.5
DODECANE	51	51.0%	100	4.6	<2.0	<2.6	<4.0	4.2	10.4	14.1	51.0	52.3
ETHANOL	0	0.0%	13	32.0	3.8	13.0	24.5	47.0	57.0	82.5	82.5	82.5
ETHYL ACETATE	89	89.0%	100	0.7	<0.6	<0.8	<1.0	<1.2	1.5	1.9	3.7	3.9
ETHYLBENZENE	59	59.0%	100	1.4	<0.8	<1.4	<1.8	1.6	3.5	4.3	7.6	7.8
HEXACHLOROBUTADIENE	46	100.0%	46	1.4	<1.4	<1.8	<2.0	<2.6	<6.4	<6.6	<7.8	<7.8
HEXANAL	30	73.2%	41	3.1	<2.4	<3.8	<4.2	2.7	3.3	3.8	36.0	36.0
m & p-XYLENES	26	26.0%	100	5.6	<1.4	<3.6	4.4	7.3	12.8	16.1	24.8	26.8
METHYL TERTIARY-BUTYL ETHER	67	77.0%	87	2.7	<1.0	<1.4	<1.8	<5.4	6.2	13.3	36.0	36.0
METHYLENE CHLORIDE	43	43.0%	100	3.7	<1.0	<1.8	1.3	3.0	6.1	10.3	63.0	78.5
NAPHTHALENE	86	86.0%	100	10.6	<1.4	<2.0	<2.4	<4.8	4.9	15.1	379.8	670.0
n-DECANE	35	35.0%	100	3.7	<0.6	<2.0	2.4	4.2	7.6	11.4	32.4	37.3
n-HEPTANAL	10	76.9%	13	3.0	<1.2	<1.5	<1.8	<2.2	2.2	26.8	26.8	26.8
n-HEXANE	16	29.6%	54	2.5	<.8	<1.2	1.4	2.7	6.4	11.4	15.3	15.3
NONANAL	41	75.9%	54	8.6	<1.6	<6.0	<7.8	<10.8	22.7	37.6	57.0	57.0
NONANE	49	56.3%	87	1.3	<0.4	<0.8	<1.0	1.7	2.8	4.0	15.3	15.3
n-UNDECANE	13	14.9%	87	7.0	<1.0	2.6	3.9	7.8	14.8	19.7	94.8	94.8
OCTANE	73	73.0%	100	0.9	<0.4	<0.6	<0.8	1.0	1.6	1.9	11.9	17.5
o-XYLENE	36	36.0%	100	2.0	<0.6	<1.4	1.4	2.6	4.6	6.0	9.6	11.1
PENTANAL	37	90.2%	41	3.5	<2.4	<3.4	<4.0	<4.4	<6.0	7.0	52.7	52.7
STYRENE	83	83.0%	100	1.7	<0.6	<1.4	<1.6	<2.0	1.3	3.6	34.1	58.0
TETRACHLOROETHENE	51	51.0%	100	2.7	<0.8	<1.4	<2.0	3.0	6.5	10.4	24.8	27.6
TOLUENE	0	0.0%	100	15.4	2.1	5.9	9.6	16.3	33.7	49.2	86.5	93.1
TRANS-1,3-DICHLOROPROPENE	46	100.0%	46	0.5	<0.6	<0.8	<1.0	<1.2	<1.4	<1.4	<1.4	<1.4
TRICHLOROETHENE	81	81.0%	100	1.0	<0.6	<1.0	<1.5	<1.6	1.3	2.6	11.2	13.5
TRICHLOROFLUOROMETHANE	41	41.0%	100	3.6	<2.0	<2.8	1.7	2.8	4.3	5.6	71.1	132.5
TRICHLOROTRIFLUOROETHANE	75	86.2%	87	1.0	<1.2	<1.6	<1.8	<2.0	1.6	1.8	5.4	5.4
VINYL CHLORIDE	87	100.0%	87	0.5	<0.6	<0.8	<1.0	<1.0	<1.8	<2.0	<2.6	<2.6

ND = Number of non-detects

ND (%) = Percentage of total number in sample that are non-detect

N = Total number of samples

* Non-detects were estimated at 1/2 the appropriate detection limit or quantification limit to calculate the mean

Min; Max = minimum and maximum value detected

APPENDIX B

NYSDOH INDOOR AIR QUALITY QUESTIONNAIRE

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 Frank R. Peduto, P.E. Date/Time Prepared 9/14/2017

Preparer's Affiliation Spectra Environmental Group, Inc. Phone No. 518-782-0882

Purpose of Investigation Indoor Air Quality

1. OCCUPANT:

Interviewed: Y / (N)

Last Name: N/A-New Building 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 ___) Representative for Destiny USA

Interviewed: Y / (N)

Last Name: Aitken First Name: David

Address: 4 Clinton Square, Syracuse, NY 13202

County: Onondaga

Home Phone: _____ Office Phone: 315-422-7000

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

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

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? _____

If the property is commercial, type?

Business Type(s) Hotel

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

Other characteristics:

Number of floors 7 Building age 0-1

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 on the first floor is distributed via several Variable Air Volume HVAC handling units with ducted outside air for each unit horizontally to an exterior wall louver. Air is distributed via insulated ductwork directly into the space they serve. See attached description for more details.

Airflow near source

N/A

Outdoor air infiltration

Outdoor air intakes are located on the northeast and northwest side of the building, see attached First Floor HVAC Plan.

Infiltration into air ducts

See attached First Floor HVAC Plan & Description

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 N/A
c. Basement floor:	concrete	dirt	stone	other N/A
d. Basement floor:	uncovered	covered	covered with N/A	
e. Concrete floor:	unsealed	(sealed)	sealed with Barricoat S & Vapor Barrier	
f. Foundation walls:	(poured)	block	stone	other
g. Foundation walls:	unsealed	(sealed)	sealed with Barricoat S	
h. The basement is:	wet	damp	dry	moldy N/A
i. The basement is:	finished	unfinished	partially finished N/A	
j. Sump present?	Y /(N)			
k. Water in sump?	Y / N /(not applicable)			

Basement/Lowest level depth below grade: 4 (feet)

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

All utility port and drains were sealed with Barricoat R.

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: Gas

Boiler/furnace located in:	Basement	Outdoors	(Main Floor)	Other 1st floor Mechanical Room
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.

The supply air is supplied from Variable Air Volume Air handling unit. From there air is distributed via insulated sheet metal ductwork distribution system to Fan Powered Boxes. From there the air is distributed from sheet metal ductwork to the air devices directly into the space they serve. The return air is a plenum system being returned back to the air handling unit. All ductwork is insulated and located above the ceiling (plenum space).

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	N/A
1st Floor	Lobby, Dining, Function Rooms, Kitchen, Laundry, Admin
2nd Floor	Guest Rooms
3rd Floor	Guest Rooms
4th Floor	Guest Rooms

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? Products in Preparation for Building Opening

i. Have cosmetic products been used recently? (Y) / N When & Type? Products in Preparation for Building Opening

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

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

l. Have air fresheners been used recently? (Y)/ N When & Type? Possibly, air fresheners present

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

n. Is there a bathroom exhaust fan? (Y)/ N If yes, where vented? 1st floor roof

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: Odors associated with new carpet, new paint, new fixtures/furniture

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

If yes, what types of solvents are used? _____

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

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

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

subsurface
Is there a ~~radon~~ mitigation system for the building/structure? (Y)/ N Date of Installation: 09/2017
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) N/A

a. Provide reasons why relocation is recommended: _____

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

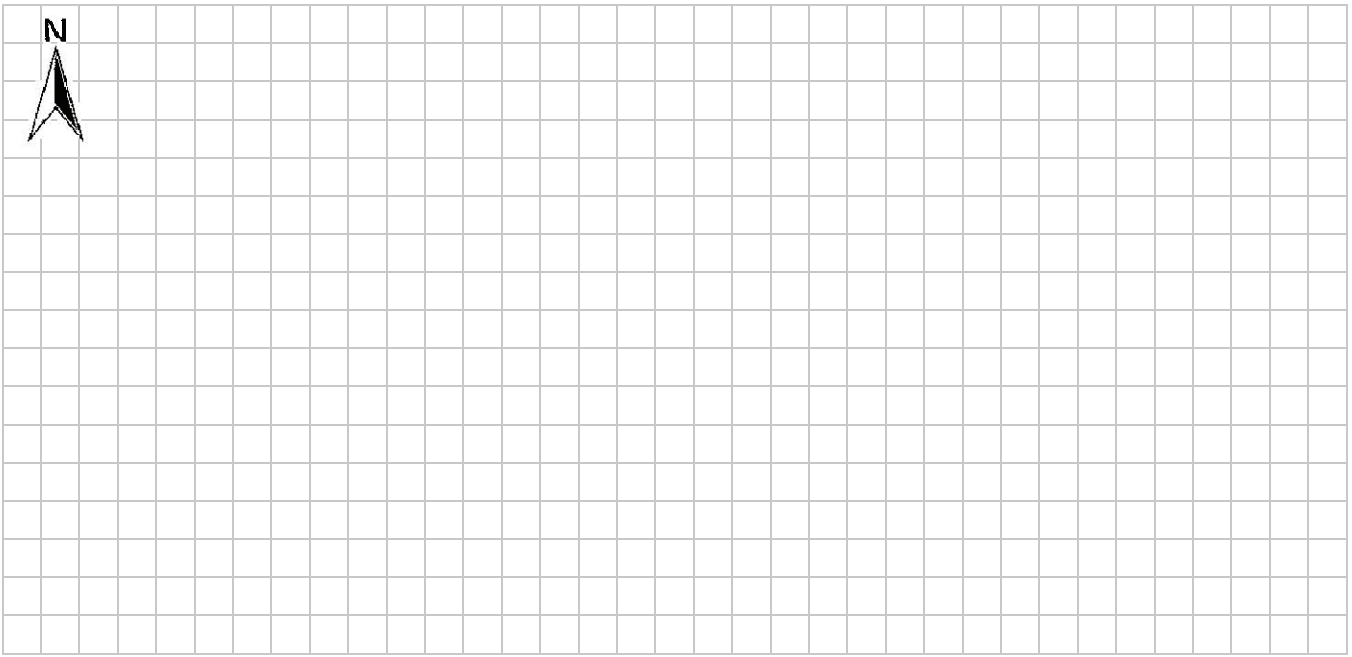
c. Responsibility for costs associated with reimbursement explained? Y / N

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

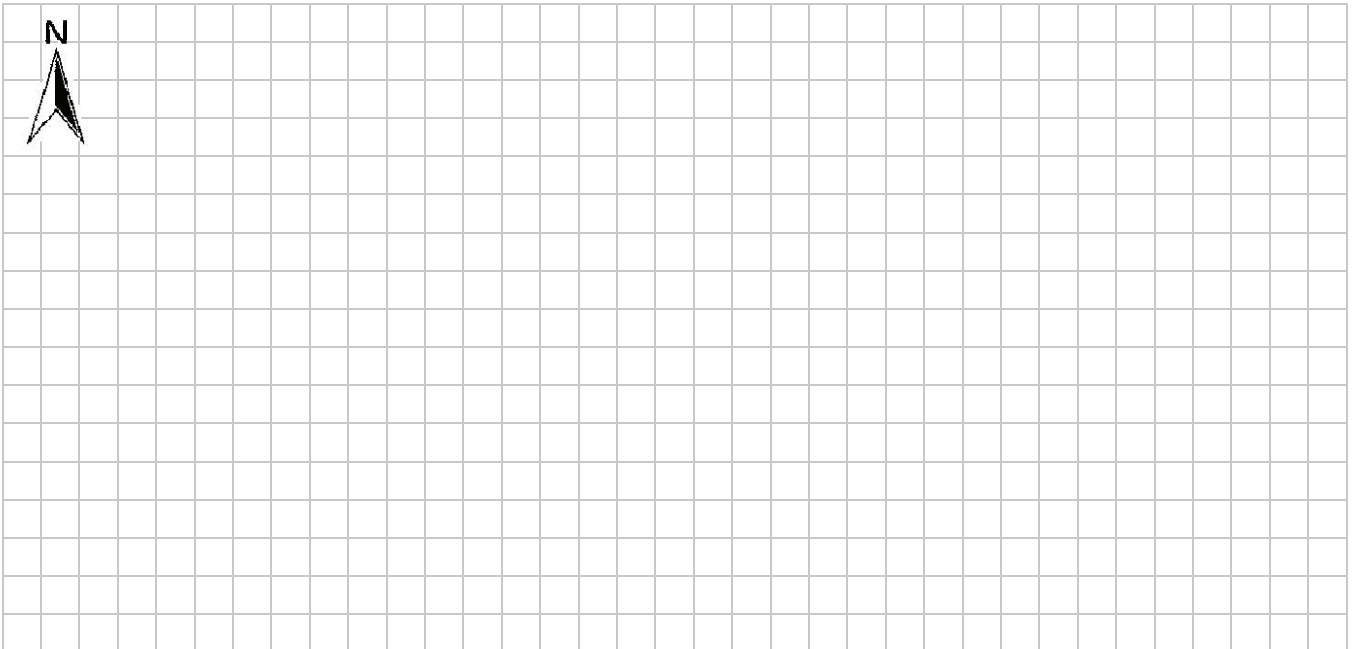
11. FLOOR PLANS

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: N/A



First Floor: See Figure 1 Indoor Air Sampling Location Map in Indoor Air Sampling Report

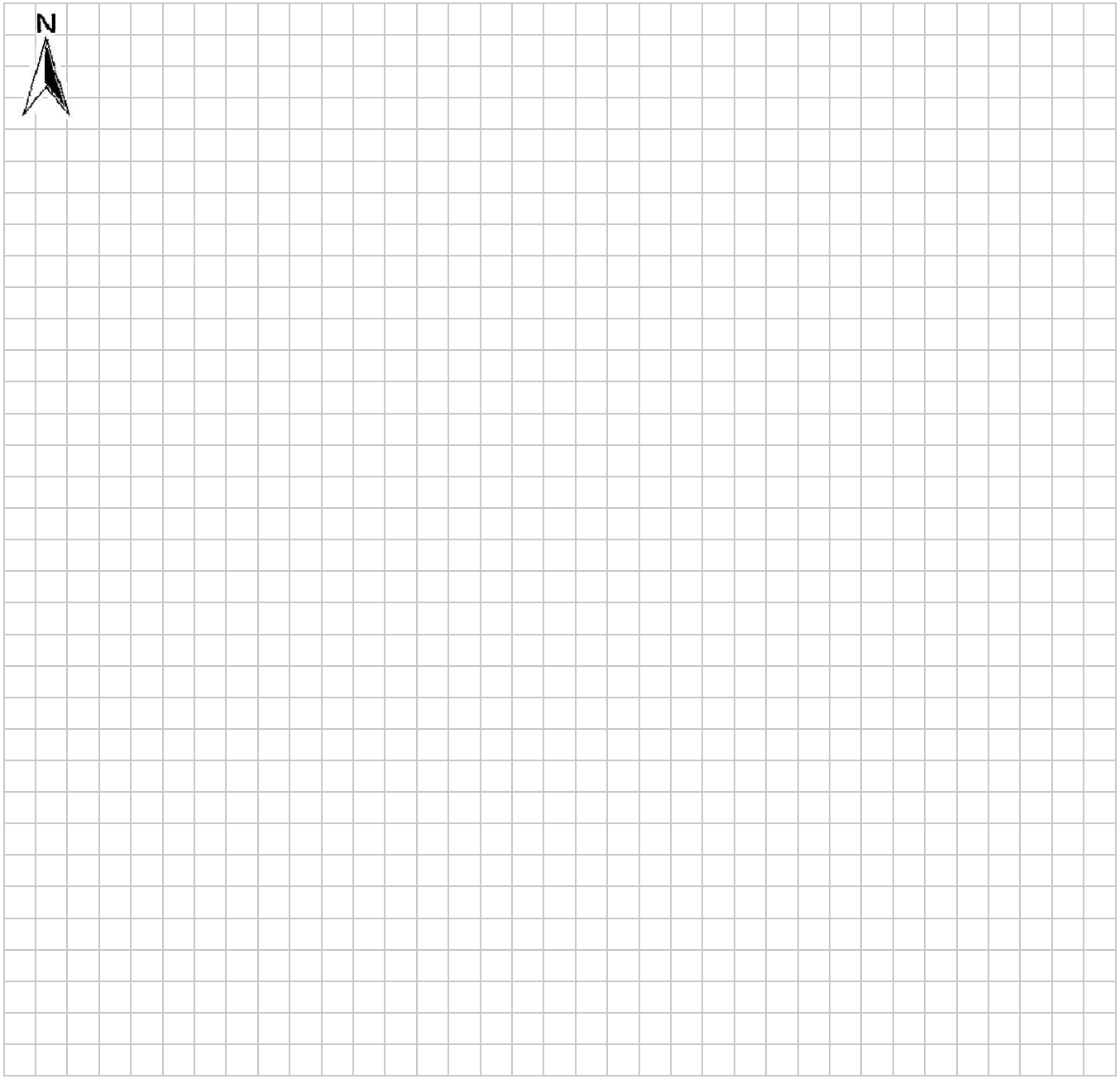


12. OUTDOOR PLOT

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 Figure 2 Indoor Air Sample Results in Indoor Air Sampling Report



13. PRODUCT INVENTORY FORM

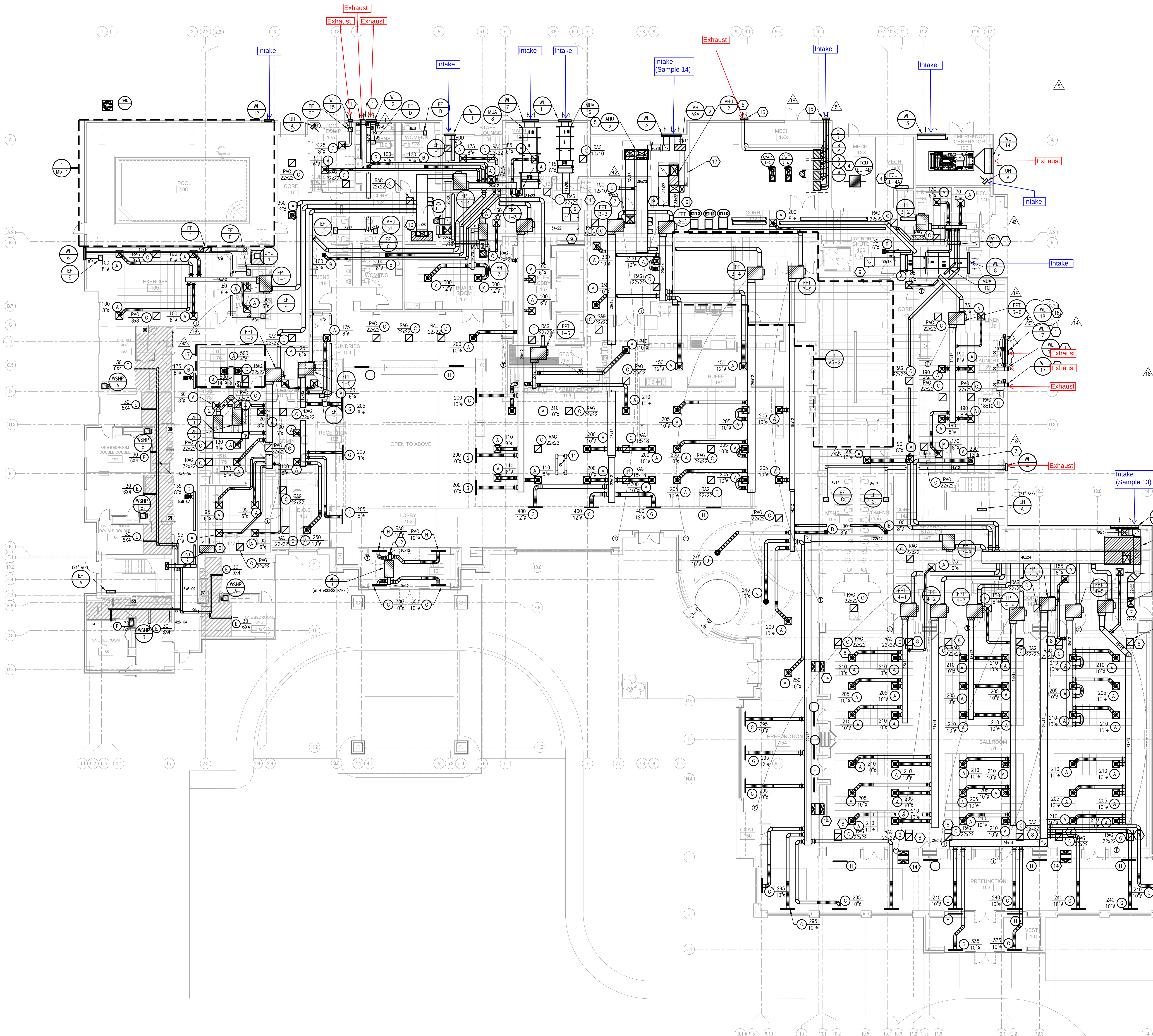
Make & Model of field instrument used: RAE Systems MiniRAW 3000 PID

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

See Building Inventory in Appendix C of Indoor Air Sampling Report

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.



1 FIRST FLOOR PLAN
SCALE: 3/32" = 1'-0"

GENERAL NOTES

1. CONTRACTOR TO COORDINATE WITH STRUCTURAL PRIOR TO INSTALLATION.
2. CONTRACTOR SHALL COORDINATE EXACT THERMOSTAT LOCATIONS WITH OWNER PRIOR TO INSTALLATION.
3. CONTRACTOR SHALL LOCATE SUPPLY DUCTS AND EQUIPMENT TIGHT TO DECK, TYP.
4. REFER TO M2-1 SHEET FOR CWS/R, CONDENSATE PIPING. REFER TO M0-5 FOR CWS/R RISER.
5. PROVIDE ALL FSD WITH ACCESS PANEL, IF NOT LOCATED ABOVE ACCESSIBLE CEILING.

KEYNOTES (APPLIES TO THIS SHEET ONLY)

1. DRYER EXHAUST ROUTED TO LOUVER, WITH MOTORIZED DAMPER.
2. BACKDRAFT DAMPER.
3. MAKEUP AIR FOR DRYER. REMAINING MAKEUP AIR TO COME FROM R/A PLENUM.
4. DUCTLESS AIR HANDLER ABOVE DOOR, ROUTE FULL SIZE CONDENSATE LINE TO NEAREST FLOOR DRAIN.
5. ROUTE FULL SIZE CONDENSATE LINE TO FLOOR DRAIN IN MECHANICAL ROOM. REFER TO PLUMBING PLANS FOR EXACT LOCATION.
6. CONDENSING UNIT LOCATED IN PLENUM.
7. UNEQUAL ELBOW TURNED UP. SIZE AS INDICATED.
8. PROVIDE SOUND BOOT FOR SOUND ATTENUATION.
9. REFER TO SHEET M5-2 FOR CONTINUATION.
10. PANTS LEG DOWN TO SUPPLY AIR OPENINGS.
11. 10"ø EXHAUST FLUE FOR FIREPLACE UP TO ROOF. FLASH AND SEAL AT ROOF PENETRATION.
12. 6"ø OA DUCT ROUTED UP TO ROOF. FLASH AND SEAL AT ROOF PENETRATION.
13. REQUIRED CLEARANCE FOR HVAC EQUIPMENT, TYPICAL.
14. 36x12 RETURN AIR BOOT. REFER TO DETAIL ON SHEET M0-3.
15. 8"ø BOILER COMBUSTION AIR INTAKE DUCTED TO EXTERIOR USING CAT III VENT MATERIAL.
16. 8"ø BOILER COMBUSTION AIR EXHAUST DUCTED TO EXTERIOR USING CAT III VENT MATERIAL.
17. INSTALL A GALVANIZED DRAIN PAN FOR ALL PLUMBING/MECHANICAL PIPING LOCATED ABOVE THIS ROOM. THE PIPING FOR THE DRAIN PAN SHALL BE ROUTED TO FLOOR SINK/DRAIN IN MECHANICAL ROOM 122.
18. MAKE-UP AIR LOUVER WITH MOTORIZED DAMPER WIRED TO OPEN WHEN DRYERS ARE IN OPERATION.

KEITH E. CARLSON
ARCHITECT

ARCHITECTURE
PLANNING
INTERIORS

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SYRACUSE HOTEL
Syracuse, New York

DATE
06/23/16 ISSUED FOR CONSTRUCTION
1 07/25/16 CITY COMMENTS
5 08/04/16 ASI 5-MECHANICAL EQUIPMENT RELOCATION
14 09/08/16 100% HILTON REVIEW COMMENTS
18 10/11/16 ASI #18 MECHANICAL CHANGES
42 02/13/17 ASI #42
57 6/6/17 ASI #57

JSE Jordan & Skala Engineers
10375 Richmond Avenue, Suite 300, Houston, TX 77042
V: (281) 617-3200 F: (281) 617-3207
Project Number - 1460065
Texas Firm Registration # F-4990
Drawn By: PGC
Checked By: CJC

FIRST FLOOR PLAN - HVAC

PROJECT NUMBER: 1405

SHEET NUMBER: M1-1

SECTION 23 31 00

DUCTWORK AND ACCESSORIES

PART 1 - GENERAL

1.1 DESCRIPTION

A. All work in this section shall be subject to the provisions of Section 23 00 00 - HVAC General.

B. Furnish and install all material, labor, accessories, etc. shown on the drawings and as specified herein to completely install all ductwork systems.

C. Ductwork systems shall be classified as follows:

1. Static pressure class +2 in. wg - from constant volume air handling unit, and terminal unit to supply diffusers, and all return and exhaust ductwork
2. Static pressure class +4 in. wg - from VAV air handling unit to PIU/VAV

D. Ductwork shall be constructed according to the latest edition of SMACNA ductwork construction standards applicable to the system pressures described above, and the system material construction.

E. Duct sizes shown on the drawings are nominal inside clear.

1.2 SUBMITTALS

A. For all fire dampers, combination fire and smoke dampers, and smoke dampers, submit UL approved installation instructions for each specific application.

PART 2 - PRODUCTS

2.1 DUCTWORK

A. All ductwork shall be constructed of galvanized steel sheets of the thickness listed in the SMACNA manuals for the pressures referenced above, or of 1" thick (1½" thick if required by the applicable energy code) resin bonded fiberglass with fire resistant foil-scrim-kraft vapor barrier.

B. Internal insulation for supply and outside air ducts MUST BE CLOSED CELL ELASTOMERIC. Fiberglass duct liner is not acceptable.

C. Rectangular sheet metal duct elbows shall be smooth radius type without turning vanes or square (or mitered) type with turning vanes. Sharp throat elbows (ASHRAE Fitting No. CR3-2) shall not be permitted. Round sheet metal duct elbows shall be smooth radius type without turning vanes, gored type or mitered type with turning vanes.

D. Unless otherwise indicated, elbows shall have a centerline radius of not less than 1½ times the width of the duct. Where space limitations necessitate use of short radius or square elbows, provide turning vanes.

E. Fiberglass ductwork shall be UL-181 listed class 1 duct material with a minimum thermal conductivity of 0.23 at 75 degrees F.

F. Ductwork connecting kitchen exhaust hoods to exhaust fans shall be constructed of 16-gauge black steel with welded seams. All grease exhaust ductwork shall be constructed and installed according to requirements of local code authorities and NFPA 96 (latest edition) requirements. Slope duct down towards hood at 1" per linear foot or per local code requirements. Install gasketed access doors at each change of direction.

G. Kitchen hood exhaust ductwork shall be insulated per NFPA 96 (latest edition) and local code requirements. Kitchen hood supply ductwork shall be insulated per specifications for HVAC supply ductwork.

H. Dishwasher exhaust ductwork above the ceiling shall be either 18-gauge stainless steel or 16-gauge aluminum. All seams and joints shall be welded liquid-tight.

I. Dishwasher exhaust risers and trim collars below the ceiling shall be 18-gauge, type 304 stainless steel finished in a 180 grit polished finish.

J. All dishwasher exhaust ductwork shall slope down toward the dishwasher connections at 1/4" per foot and be constructed with no pockets which will trap condensation.

2.2 FIRE DAMPERS

A. Fire dampers shall be installed at all locations where ductwork or supply or return air openings penetrate any floor, wall or partition with a fire rating.

B. All fire dampers shall be of the “Dynamic” type as classified in UL Standard 555.

C. Fire dampers shall have a rating compatible with the floor, wall or partition, shall be tested to UL Standard 555 and be labeled for the intended installation (horizontal or vertical).

D. Maximum pressure drop: 0.10" wg; provide ductwork transitions as required so as not to exceed maximum pressure drop.

E. Fire Resistance Rating: 1½ hours unless noted otherwise indicated on drawings for 3 hours.

F. Closure device: Each fire damper shall be equipped with a factory installed heat responsive device (fusible link) rated to close the damper when temperature at the damper reaches: 212°F.

G. Airflow Closure Rating:

1. Dynamic fire dampers shall be selected for the velocity and pressure rating of the intended installation. Refer to the plans and schedules for airflow rates (CFM) and pressures (in. wg).
2. Dampers shall have a minimum velocity rating of 2000 fpm at a pressure rating of 4 in. wg.
3. Dampers in systems operating above 2000 fpm or 4 in. wg shall be selected for a velocity rating of 4000 fpm at a pressure rating of 6 in. wg or a velocity rating of 6000 fpm at a pressure rating of 8 in. wg as required.

H. Types:

1. Curtain Style: for use in systems up to 4000 fpm velocity; Type B or C with the blade stack out of the airstream (Type A with the blade stack in the airstream may be used behind grilles or where space conditions do not permit the use of a Type B damper).
    a. Construction:
        1) Frame: Galvanized steel (in gauges required by manufacturer's UL listing).
        2) Blade design: interlocking galvanized steel
        3) Sleeves: Damper shall be supplied as a single assembly with a factory sleeve.
        4) Retaining Angles: Damper shall be supplied with factory retaining angles sized to provide installation overlap in accordance with the manufacturer's UL listing.
        5) Duct Transition Connection: breakaway type
2. Round: for use in systems up to 2000 fpm velocity.
    a. Construction:
        1) Frame: Galvanized steel (in gauges required by manufacturer's UL listing).

2) Blade design: single galvanized steel blade (in gauge required by manufacturer's UL listing).
3) Retainer plate(s): supplied with damper.
4) Sleeves: Length as required per wall thickness.
5) Duct Transition Connection: breakaway type.

3. Multi-blade:
   a. Up to 2000 fpm velocity: Triple vee-groove type blade.
   b. 2000-4000 fpm velocity: Fabricated double skin airfoil type blade.
   c. Construction:
      1) Frame: Galvanized steel with mitered and interlocking corners (in gauges required by manufacturer's UL listing).
      2) Blade design: 16 ga. galvanized steel strengthened by three longitudinal 1" deep Vee grooves running the entire length of each blade. Each blade shall be symmetrical relative to its axle pivot point, presenting identical performance characteristics with air flowing in either direction through the damper. Provide symmetrical blades of varying size as required to completely fill the damper opening.
      3) Sleeves: Damper shall be supplied as a single assembly with a factory sleeve.
      4) Retaining Angles: Damper shall be supplied with factory retaining angles sized to provide installation overlap in accordance with the manufacturer's UL listing.
      5) Duct Transition Connection: breakaway type

I. All dampers shall be installed in strict accordance with the manufacturer's UL approved installation details.

J. Where fire dampers are required in a fibrous glass ductboard system, provide sheet metal sleeve per manufacturer's UL installation instructions. Verify gage of sleeve and attachment angle with governing code authorities. Installation shall also conform to SMACNA Figure 5-9 "Fibrous Glass Duct Installation".

2.3 COMBINATION FIRE AND SMOKE DAMPERS

A. Fire/smoke dampers shall be installed at all locations where ductwork or supply or return air openings penetrate any floor, wall or partition with a fire and smoke rating, or where otherwise shown on the drawings.

B. Fire/smoke dampers shall be provided with actuators capable of closing the damper on activation of area smoke detectors, the fire alarm system and/or the Firefighter's Smoke Control Panel, and shall be normally closed. Actuators shall be compatible with the activating smoke detectors or fire alarm system (coordinate with other trades).

C. Unless otherwise indicated, smoke detectors integral to the combination fire/smoke damper shall be furnished and installed by the fire alarm contractor (coordinate with other trades).

D. All combination fire/smoke dampers shall be of the "Dynamic" type as classified in UL Standards 555 and 555S.

E. Fire/smoke dampers shall have a rating compatible with the floor, wall or partition, shall be tested to UL Standards 555 and 555S and be labeled for the intended installation (horizontal or vertical).

F. Maximum pressure drop: 0.10" wg; provide ductwork transitions as required so as not to exceed maximum pressure drop.

G. Fire Resistance Rating: 1½ hours unless noted otherwise on drawings for 3 hours.

H. Leakage Rating: Class 1 (maximum of 8 cfm/ft^2 at 4 in. wg) unless noted otherwise.

I. Elevated Temperature Rating: 350°F (177°C) for 30 minutes.

J. Airflow Closure Rating:

1. Dynamic fire/smoke dampers shall be selected for the velocity and pressure rating of the intended installation. Refer to the plans and schedules for airflow rates (CFM) and pressures (in. wg).
2. Dampers shall have a minimum velocity rating of 2000 fpm at a pressure rating of 4 in. wg.
3. Dampers in systems operating above 2000 fpm or 4 in. wg shall be selected for a velocity rating of 4000 fpm at a pressure rating of 6 in. wg or a velocity rating of 6000 fpm at a pressure rating of 8 in. wg as required.

K. Types:

1. Round: for use in systems up to 3000 fpm velocity.
   a. Construction:
      1) Frame: Galvanized steel (in gauges required by manufacturer's UL listing).
      2) Blade design: single galvanized steel blade (in gauge required by manufacturer's UL listing).
      3) Retainer plate(s): supplied with damper.
      4) Sleeves: Length as required per wall thickness.
      5) Duct Transition Connection: breakaway type.
2. Multi-blade:

a. Up to 2000 fpm velocity: Triple vee-groove type blade.
b. 2000-4000 fpm velocity: Fabricated double skin airfoil type blade.
c. Construction:
    1) Frame: Galvanized steel with mitered and interlocking corners (in gauges required by manufacturer's UL listing).
    2) Blade design: 16 ga. galvanized steel strengthened by three longitudinal 1" deep Vee grooves running the entire length of each blade. Each blade shall be symmetrical relative to its axle pivot point, presenting identical performance characteristics with air flowing in either direction through the damper. Provide symmetrical blades of varying size as required to completely fill the damper opening.
    3) Blade Stops: Each blade stop (at top and bottom of damper frame) shall occupy no more than ½" of the damper opening area to allow for maximum free area and to minimize pressure loss across the damper.
    4) Seals:
        a. Blade Edge: Blade seals shall be extruded silicone rubber permanently bonded to the appropriate blade edges.
        b. Jamb: Flexible stainless steel compression type.
    5) Linkage: Concealed in jamb.
    6) Axles: Minimum ½" diameter plated steel.
    7) Bearings: Axle bearings shall be sintered bronze sleeve type rotating in polished extruded holes in the damper frame.
    8) Sleeves: Damper shall be supplied as a single assembly with a factory sleeve.
    9) Retaining Angles: Damper shall be supplied with factory retaining angles sized to provide installation overlap in accordance with the manufacturer's UL listing.
    10) Duct Transition Connection: breakaway type

L. Heat Responsive Device: Electric, controlled closure, quick detect heat-actuated device designed to prevent damage to ductwork and other HVAC system components. The device shall be a reusable/resettable link (RRL) with a temperature setting of 165°F (74°C).

M. Damper Motors: Two-position meeting the following:

1. Comply with NEMA designation, temperature rating, service factor, enclosure type, and efficiency requirements for motors specified in Division 23 Section "Common Motor Requirements for HVAC Equipment."

a. Motor Sizes: Minimum size as indicated. If not indicated, large enough so the driven load will not require motor to operate in service factor range above 1.0.
b. Controllers, Electrical Devices, and Wiring: Comply with requirements for electrical devices and connections specified in Division 26 Sections.
c. Permanent-Split-Capacitor or Shaded-Pole Motors: With oil-immersed and sealed gear trains.
d. Spring-Return Motors: Equip with an integral spiral-spring mechanism where indicated. Enclose entire spring mechanism in a removable housing designed for service or adjustments. Size for running torque rating of 150 in. x lbf (17 N x m) and breakaway torque rating of 150 in. x lbf (17 N x m).
e. Outdoor Motors and Motors in Outdoor-Air Intakes: Equip with O-ring gaskets designed to make motors weatherproof. Equip motors with internal heaters to permit normal operation at minus 40°F (minus 40°C).
f. Nonspring-Return Motors: For dampers larger than 25 sq. ft. (2.3 sq. m), size motor for running torque rating of 150 in. x lbf (17 N x m) and breakaway torque rating of 300 in. x lbf (34 N x m).
g. Electrical Connection: 115 V, single phase, 60 Hz.

N. Momentary Test Switch (for use in combination fire and smoke dampers that are not part of a smoke management system): factory mounted and wired assembly for testing and cycling the damper during start-up and maintenance.

O. Accessories for active smoke management systems:

1. Open Closed Indicator (OCI): factory mounted and tested with two switches, one set to close when the damper blades are at their open position, and the other set to close when the damper blades are at their closed position. This will be wired to the Fire Fighter's Smoke Control Station to indicate true damper position.
2. Temperature Limited Override: factory mounted and tested with two temperature sensing devices (thermostats) with fixed settings (165°F [74°C] and 350°F [177°C]). The primary sensor (with the 165°F [74°C] setting) may be bypassed by an external electrical signal allowing the damper to reopen and remain open until the temperature reaches the setting of the secondary sensor (350°F [177°C]).
When the temperature of the secondary sensor is exceeded, the damper closes and remains closed thereafter.

3. Test Switch and Indicator Panel: 5" x 5" control panel with toggle switch, red LED (replaceable) indicator light to indicate closed damper position and a green LED (replaceable) indicator light to indicate open damper position.

P. Combination Fire and Smoke Dampers shall have a single point wiring per UL requirements (except where two signals are required as with the Temperature Limited Override specified above).

2.4 CORRIDOR COMBINATION FIRE AND SMOKE DAMPERS

A. Corridor fire/smoke dampers shall be installed at all locations where ductwork or supply or return air openings penetrate any tunnel corridor ceiling with a fire and smoke rating, or where otherwise shown on the drawings.

B. Corridor fire/smoke dampers shall be provided with actuators capable of closing the damper on activation of area smoke detectors, the fire alarm system and/or the Firefighter's Smoke Control Panel, and shall be normally closed. Actuators shall be compatible with the activating smoke detectors or fire alarm system (coordinate with other trades).

C. Unless otherwise indicated, smoke detectors integral to the corridor fire/smoke damper shall be furnished and installed by the fire alarm contractor (coordinate with other trades).

D. All corridor fire/smoke dampers shall be of the "Dynamic" type as classified in UL Standards 555 and 555S.

E. Corridor fire/smoke dampers shall be tested to UL Standards 555 and 555S and be labeled for the intended installation.

F. Maximum pressure drop: 0.10" wg; provide ductwork transitions as required so as not to exceed maximum pressure drop.

G. Fire Resistance Rating: 1 hour.

H. Leakage Rating: Class 1 (maximum of 8 cfm/ft^2 at 4 in. wg) unless noted otherwise.

I. Elevated Temperature Rating: 350°F (177°C) for 30 minutes.

J. Airflow Closure Rating:

1. Dynamic fire/smoke dampers shall be selected for the velocity and pressure rating of the intended installation. Refer to the plans and schedules for airflow rates (CFM) and pressures (in. wg).
2. Dampers shall have a minimum velocity rating of 2000 fpm at a pressure rating of 4 in. wg.

K. Types:

1. Round: for use in systems up to 3000 fpm velocity.
   a. Construction:
      1) Frame: Galvanized steel (in gauges required by manufacturer's UL listing).
      2) Blade design: single galvanized steel blade (in gauge required by manufacturer's UL listing).
      3) Retainer plate(s): supplied with damper.
      4) Sleeves: Length as required per wall thickness.
      5) Duct Transition Connection: breakaway type.
2. Multi-blade:
   a. Up to 2000 fpm velocity: Triple vee-groove type blade.
   b. 2000-4000 fpm velocity: Fabricated double skin airfoil type blade.
   c. Construction:
      1) Frame: Galvanized steel with mitered and interlocking corners (in gauges required by manufacturer's UL listing).
      2) Blade design: 16 ga. galvanized steel strengthened by three longitudinal 1" deep Vee grooves running the entire length of each blade. Each blade shall be symmetrical relative to its axle pivot point, presenting identical performance characteristics with air flowing in either direction through the damper. Provide symmetrical blades of varying size as required to completely fill the damper opening.
      3) Blade Stops: Each blade stop (at top and bottom of damper frame) shall occupy no more than ½" of the damper opening area to allow for maximum free area and to minimize pressure loss across the damper.
      4) Seals:
         a. Blade Edge: Blade seals shall be extruded silicone rubber permanently bonded to the appropriate blade edges.
         b. Jamb: Flexible stainless steel compression type.
      5) Linkage: Concealed in jamb.
      6) Axles: Minimum ½" diameter plated steel.
      7) Bearings: Axle bearings shall be sintered bronze sleeve type rotating in polished extruded holes in the damper frame.

8) Sleeves: Damper shall be supplied as a single assembly with a factory sleeve.
9) Retaining Angles: Damper shall be supplied with factory retaining angles sized to provide installation overlap in accordance with the manufacturer's UL listing.
10) Duct Transition Connection: breakaway type

L. Heat Responsive Device: Electric, controlled closure, quick detect heat-actuated device designed to prevent damage to ductwork and other HVAC system components. The device shall be a reusable/resettable link (RRL) with a temperature setting of 165°F (74°C).

M. Damper Motors: Two-position meeting the following:

1. Comply with NEMA designation, temperature rating, service factor, enclosure type, and efficiency requirements for motors specified in Division 23 Section "Common Motor Requirements for HVAC Equipment."
   a. Motor Sizes: Minimum size as indicated. If not indicated, large enough so the driven load will not require motor to operate in service factor range above 1.0.
   b. Controllers, Electrical Devices, and Wiring: Comply with requirements for electrical devices and connections specified in Division 26 Sections.
   c. Permanent-Split-Capacitor or Shaded-Pole Motors: With oil-immersed and sealed gear trains.
   d. Spring-Return Motors: Equip with an integral spiral-spring mechanism where indicated. Enclose entire spring mechanism in a removable housing designed for service or adjustments. Size for running torque rating of 150 in. x lbf (17 N x m) and breakaway torque rating of 150 in. x lbf (17 N x m).
   e. Outdoor Motors and Motors in Outdoor-Air Intakes: Equip with O-ring gaskets designed to make motors weatherproof. Equip motors with internal heaters to permit normal operation at minus 40°F (minus 40°C).
   f. Nonspring-Return Motors: For dampers larger than 25 sq. ft. (2.3 sq. m), size motor for running torque rating of 150 in. x lbf (17 N x m) and breakaway torque rating of 300 in. x lbf (34 N x m).
   g. Electrical Connection: 115 V, single phase, 60 Hz.

N. Momentary Test Switch (for use in combination fire and smoke dampers that are not part of a smoke management system): factory mounted and wired assembly for testing and cycling the damper during start-up and maintenance.

O. Accessories for active smoke management systems:

1. Open Closed Indicator (OCI): factory mounted and tested with two switches, one set to close when the damper blades are at their open position, and the other set to close when the damper blades are at their closed position. This will be wired to the Fire Fighter's Smoke Control Station to indicate true damper position.
2. Temperature Limited Override: factory mounted and tested with two temperature sensing devices (thermostats) with fixed settings (165°F [74°C] and 350°F [177°C]). The primary sensor (with the 165°F [74°C] setting) may be bypassed by an external electrical signal allowing the damper to reopen and remain open until the temperature reaches the setting of the secondary sensor (350°F [177°C]). When the temperature of the secondary sensor is exceeded, the damper closes and remains closed thereafter.
3. Test Switch and Indicator Panel: 5" x 5" control panel with toggle switch, red LED (replaceable) indicator light to indicate closed damper position and a green LED (replaceable) indicator light to indicate open damper position.

P. Combination Fire and Smoke Dampers shall have a single point wiring per UL requirements (except where two signals are required as with the Temperature Limited Override specified above).

2.5 CONTROL DAMPERS

A. Automatic control dampers shall be installed as shown on the drawings and shall be controlled as described in the 23 09 00 - Automatic Controls section of these specifications.

B. Unless indicated otherwise, dampers shall be of the opposed blade type constructed of minimum 18-gauge galvanized steel and shall have rigidly constructed blades less than 6" wide and shall have duct mounting flanges.

C. Dampers shall be the low leakage type with replaceable blade and jamb seals. Maximum pressure drop for dampers operating in systems exceeding 2000 fpm shall be 0.10" wg.

D. Outside air supply and exhaust openings shall be provided with a Class 1A motorized damper with a maximum leakage rate of 4 cfm/ft^2 (20.3 L/s · m^2) at 1.0 in. wg (249 Pa) when tested in accordance with AMCA 500D.

1. Gravity (non-motorized) dampers having a maximum leakage rate of 20 cfm/ft^2 (101.6 L/s · m^2) at 1.0 in. wg (249 Pa) when tested in accordance with AMCA 500D may be used in any one of the following conditions:
   a. In buildings for exhaust and relief dampers.
   b. In buildings of less than three stories in height above grade.
   c. For ventilation air intakes and exhaust and relief dampers in buildings of any height in Climate Zones 1, 2 and 3.
   d. Where the design outdoor air intake or exhaust capacity does not exceed 300 cfm (141 L/s).

   Gravity (non-motorized) dampers for ventilation air intakes shall be protected from direct exposure to wind.
2. Dampers smaller than 24 inches (610 mm) in either dimension shall be permitted to have a leakage rate of 40 cfm/ft2 (203.2 L/s · m2) at 1.0 in. wg (249 Pa) when tested in accordance with AMCA 500D.

2.6 FLEXIBLE DUCT CONNECTORS

A. Install flexible duct connectors at connections of sheet metal duct to motor driven equipment, or otherwise noted. Flexible duct connectors shall be glass fabric coated with neoprene, suitable for the intended service. Flexible duct connectors shall be Duro Dyne Excelon or approved equal. Install per manufacturer's instructions, and support sheet metal ductwork so that no weight is supported by the flexible duct connector.

B. Flexible connectors exposed to the weather shall be UV and ozone resistant.

C. Fabrics, coating and adhesives shall be tested in accordance with UL 701 and have a maximum flame spread/smoke developed rating of 25/50.

D. Flex duct connectors shall also be provided at building expansion joints.

2.7 ACCESS DOORS

A. Hinged, gasketed and latched access doors and/or panels shall be installed at each fire and smoke damper, each duct mounted smoke detector, each valve, at each duct mounted balancing damper or any other mechanical equipment or device that requires accessibility. Doors and panels shall be sized (minimum 18" x 18", duct size allowing), and located to optimize access to dampers, detectors, and other equipment for service and replacement. Access doors in ductwork shall be per SMACNA Standards. Access panels in walls, ceilings or other surfaces shall be coordinated with architectural finishes and selected by the architect.

B. Access doors shall be designed for five times the pressure of the duct in which it is mounted.

C. Access doors for fire dampers, combination fire/smoke dampers and smoke dampers in medium pressure (+4 in.wg and higher) duct systems shall be the implosion type designed to prevent excessive negative pressure downstream resulting in collapsed ductwork. At the contractor's option, the access door may be an integral feature of the damper assembly.

D. Access doors for grease exhaust ducts shall be in accordance with NFPA 96 (latest edition). Vertical grease ducts shall have an access door at each floor level in an inconspicuous location.

2.8 FLEXIBLE DUCTWORK

A. Flexible ductwork shall be UL Class I air duct.

B. Flexible ductwork (maximum 8'-0" long except in residential applications, length shall be as indicated) shall be installed between main supply ducts and diffusers.

C. Take-offs shall be made using spin-in type fittings with scoop and balancing damper. Flexible ductwork shall be Thermaflex M-KE R-6 (R value = 6.0 minimum or as required by local energy code) flexible air duct or approved equal. Duct size shall be the same size as diffuser neck it serves.

D. Flexible duct connections to ceiling diffusers shall be installed without kinks or sags to provide unrestricted airflow. Provide Flex Flow Elbow supports by Thermaflex.

2.9 DUCT INSULATION

A. Also refer to Section 23 07 00 - HVAC Insulation.

B. Supply air ductwork a minimum of 15 linear feet (or as indicated) downstream of low pressure air handling equipment and terminal units shall be internally lined with 1½" thick c.

1. Duct liner shall be securely fastened to ductwork with stick pins, speed washers and adhesive. Leading edges of liner in medium pressure ductwork shall have a sheetmetal nosing.
2. Exposed edges and butt joints shall be "buttered" with duct sealer.

C. Return air ductwork, sound boots and transfer ducts shall have 1" thick liner, Johns Manville Linacoustic RC or approved equal.

1. Refer to Section 23 07 00 - HVAC Insulation for return air ductwork requiring external insulation.

PART 3 - EXECUTION

3.1 DUCTWORK

A. All ductwork shall be installed in accordance with applicable SMACNA Standards according to the pressure class described in PART 1 - GENERAL.

B. Ductwork shall be supported as recommended by SMACNA Standards from structural members. Ductwork shall not be allowed to rest on ceilings, light fixtures or structural members. Ductwork supported from joists shall be supported from the top chord of all joists.

C. All ductwork accessories shall be installed in strict accordance with manufacturer's recommendations.

D. Ductwork that is designed to operate at static pressures in excess of 3 in. wg and all ductwork located outdoors shall be leak-tested in accordance with SMACNA Standards. Representative sections totaling no less than 25% of the total installed duct area for the designated pressure class shall be tested. All sections shall be selected by the building owner or the designated representative of the building owner. Positive pressure leakage testing is acceptable for negative pressure ductwork. The maximum permitted duct leakage shall be:

$$L_{max} = C_L P^{0.65}$$

where

L_{max} = maximum permitted leakage, cfm/100 ft^2 duct surface area
C_L = 6, duct leakage class, cfm/100 ft^2 duct surface area at 1 in. wg
P = test pressure, which shall be equal to the design duct pressure class rating, in. wg

All ductwork seams shall be sealed with mastic to provide a system that is within the recommended SMACNA leakage limits. Six (6) copies of the ductwork test report shall be submitted to the Engineer prior to the Contractor's request for final payment.

E. All ductwork shall be cleaned inside and out prior to system start up, and shall be left in a neat and orderly manner.

F. Duct sizes shown on drawings are inside clear dimensions.

G. Unless otherwise approved, ducts shall be true to dimensions indicated, straight and smooth on the inside with neatly finished joints, securely anchored to the building in an approved manner, and installed to be completely free from vibration under all conditions of operation. Exact routing of ductwork will be dependent on location of framing members. Route ductwork to avoid cutting framing members.

H. Brace ducts not more than 60 inches on center.

I. Make slip joints in the direction of air flow.

J. Offset ducts around obstructions where possible. Where duct must encompass obstruction, area of duct shall remain constant.

K. Duct tapers shall not exceed 1:4 ratio and transformations 30 degrees between air flow and diverging or converging air flow.

L. Provide access doors for access to all equipment, dampers and motors concealed by sheet metal.

M. Where applicable, provide seismic bracing and restraints for ductwork per ASCE 7-10 and the latest edition of the SMACNA Seismic Restraint Manual. Also refer to Section 23 05 48 Noise and Vibration Control.

3.2 BALANCING DAMPERS

A. Install manual volume dampers where indicated on the drawings and where required to properly balance the air distribution system.

B. Provide an opposed blade damper behind the face of each supply register which shall be adjustable through the face of the register with a screwdriver.

C. Provide a butterfly damper in the neck of each supply diffuser unless noted otherwise.

END OF SECTION

APPENDIX C

BUILDING INVENTORY

Building Inventory
Destiny Indoor Air Sampling
Site 7 - Embassy Suites Hotel
Syracuse, NY

JMT Sample ID	PID Reading (ppm)	Sample Location	Room #	Inventory
1	0.0	Exercise Room	109	-Exercise Equipment, Medicine Balls, Yoga Mats -Rubberized Flooring -Disinfectanting Wipes -Slight odor
2	0.0	Women's Locker Room	131	-Lockers -Sinks -Bathroom Fixtures -Tile Flooring *Cleaning took place in evening of sampling event
3	0.0	Dining Area	163	-Carpet
4	0.0	Office	165B	-Desk -Chair -Hybrid tile -Kitchen outside office have dishwashing chemicals present (see attached detail chemical form)
5	0.0	Laundry Room Office	140	-Hand Sanitizer -Tape -Carpet -Laundry Room outside office has laundering chemicals present (see attached detail chemical form)
5D (Duplicate)	0.0	Duplicate	140	-Hand Sanitizer -Tape -Carpet -Laundry Room outside office has laundering chemicals present (see attached detail chemical form)
6	0.0	Storage (Manifold B)	146	-Floor Tile -Banquet Storage -Poly/Vinyl Blend Fabric -Sterno Cartridges
7	0.0	Ballroom	151	-Carpets *Conference taking place from 10-12
8	0.0	Pre-Function	153	-Carpet
9	0.0	Pre-Function	154	-Carpet *Nearby table cleaned with disinfectant
10	0.0	Lobby	102	-Carpet -Tile -Fireplace -Bar *Lobby is active area, tile floor was cleaned throughout the day
11	0.0	Admin	106	-Carpet
12	0.0	Suite	186	-Carpet
12D (Duplicate)	0.0	Suite	186	-Carpet
13	0.0	Outside Air Intake	NA	
14	0.0	Outside Air Intake	NA	
15	0.0	Recycling/ Mainfold A	144B	-Mainfold -Road De-Icing Salt

Building Inventory Product Detail Sheet
Destiny Indoor Air Sampling
Site 7 - Embassy Suites Hotel
Syracuse, NY

Location	Associated Sample	PID Reading	Number of Containers	Amount per Container	Products	Ingredients
Kitchen	4	0	3	17.6 oz	3M Hi-Strength 90 Spray Adhesive	Dimethyl Ether, Non Volatile Components, Pentane, Cyclohexane, Acetone, Isobutane, Propane
		0.0	17	9 lb	Eco Lab Solid Power XL- Extended Life Dishmachine Detergent	Sodium Hydroxide, Sodiuim Carbonate (soda), Oxirane, Methyl-, polymer with oxirane, Polycarboxylates
		0.0	2	90 (18g ea.)	Alto Shaam CombiTabs Water Soluble Tablets	Sodium Hydroxide Sodium Metasilicate
		0.0	4	1 gal	Lime-A-way, Multipurpose Lime Scale Remover	Uronium Hydrogen Sulphate, Urea
		0.0	2	2L	Eco Lab Peroxide Multi Surface Disenfectant	Dodecylbenzene sulfonic acid and salt hydrogen peroxide,
		0.0	24	750 mL	Eco Lab Antibacterial Foam Soap	Ethanol, 2- methylpentane-2,4-diol, Boric Acid
		0.0	2	2 L	Eco Lab Grease Lift	Benzyl alcohol, monoethanolamine, benzenesulfonic acid, dodecyl-, compd. With 2-aminoethanol, 2-(2-aminoethoxy) ethanol, D-gluconic acid, compound with 2, 2',2"-nitrilotrisethanol (1:1)
		0.0	1	2.5 gal	Oasis Multi-Quat Sanitizer	Benzalkonium chloride, octyl decyl dimethyl ammonium chloride ethanol, Didecyl Dimethyl Ammonium Chloride, Dioctyl dimethyl ammonium chloride,
		0.0	1	4lb	Alto Shaam Scale Free Descaling Powder	
		0.0	1	2 gal	Eco Lab Scout Pot/Pan Detergent	Sodium dodecylbenzene sulfonate, benzenesulfonic acid, dodecyl-, compd. With 2,2',2"-nitrilotriethanol, poly (oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-hydroxy-, c10-16-alkyl ethers, sodium salts, amides, coco, n,n-bis(hydroxyethyl), xylenesulfonic acid, sodium salt,ethanol
Laundry Room	5,5D	0.0	8	9 lb	Low Temp Laundry Solid Detergent	Sodium Hydroxide, alcohol ethoxylate, sodium carbonate(soda)
		0.0	2	1.2 lb	Eco Lab Stainblaster Power Pak Plus Reclaim	Sodium Carbonate (soda), ethylenediamine tetraacetate, sodium metasilicate, sodium dichloro-s-triazinetrione dihydrate, poly (oxy-1,2-ethanediyl), a-(2-propylheptyl)-w-hydroxy-, alcohol ethoxylate
		0.0	3	0.65 lb	Eco Lab Stainblaster Rust Remover	Ethanedioic acid/dihydrate, ethanol, 2-amino-, ethanedioate(2:1)(salt)
		0.0	2	2 L	Eco Lab Peroxide Multi Surface Disenfectant	Dodecylbenzene sulfonic acid and its salt, hydrogen peroxide
		0.0	2	2L	Zephar Mt Mist Air Freshener	Alcohol ethoxylate, proprietary fragrance, sodium xylenesulfonate, fattyalcohol ethoxylates > 5EO
		0.0	2	2L	Heavy Duty Alkaline Bathroom Cleaner	Ethylenediamine tetraacetate, poly (oxy-1,2-ethanediyl)/.alpha.-undeycl-.omega.-hydroxy-, n-Alkyl (50% C14, 40% C12, 10% C16) Dimethyl, Benzyl Ammonium Chloride, Acetic acid/(ethylenedinitrilo)tetra-/trisodium salt, Didecyl Dimethyl Ammonium chloride
		0.0	2	2L	High Performance Floor Cleaner	Oxirane/methyl-/polymer with oxirane, Sodium Xylenesulfonate, Poly(oxy-1,2-ethanediyl)/a-(2-propylheptyl)-w-hydroxy-, Fragrance
		0.0		22oz	Stianblaster Make Up Remover	Ethylenediamine Tetraacetate, Amphoteric Surfactants, Sodium Hydroxide
		0.0		8 oz	Brasso	Ammonia solution, Ethanedioic acid, hydrate (1:2), Isopropyl Alcohol, Aromatic Mineral Oils
		0.0		22 oz	Stainblaster Destainer	Sodium Hypochlorite
		0.0		22 oz	Stainblaster Grease Remover	distillates (petroleum), hydrotreated light, alcohol ethoxylate, d-Limonene
		0.0			Eco Lab Revitalize Encapsulation Carpet Cleaner	Alkylethoxy-propoxylates
		0.0		32 oz	Eco Lab Medallion Stainless Steel Cleaner	white mineral oil/petroleum, gas oil blend, 2-(2-butoxyethoxy)ethanol
		0.0		32 oz	Eco Lab Spray Cleaner All Purpose Cleaner	Glycols-glycolethers, aliphatic hydrocarbons, propane
		0.0		1 gal	Eco Lab Clean & Smooth Lotion Skin Cleanser	sulfuric acid, mono-c10-alkyl esters sodium salts, C10-16 polyglycoside, sodium chloride
		0.0		22 oz	Stainblaster Enzyme Boost	glycerin, linear alkylbenzenesulphonates, fatty acids coco compounds with triethanolamine, alcohols C12-16 ethoxylated, isopropanol, triethanolamine, sodium metabisulphite
Pre-fucntion Area	9	0.0	1	1L	Peroxide Multi Surface Disenfectant	Dodecylbenzene sulfonic acid and its salt, hydrogen peroxide
Women's Locker Room	2	0.0	1	1L	Peroxide Multi Surface Disenfectant	Dodecylbenzene sulfonic acid and its salt, hydrogen peroxide

Building Inventory Product Detail SDS Sheet
Destiny Indoor Air Sampling
Site 7 - Embassy Suites Hotel
Syracuse, NY

Location	Associated Sample	Products	SDS
Kitchen	4	3M Hi-Strength 90 Spray Adhesive	http://multimedia.3m.com/mws/mediawebserver?mwsId=SSSSSuUn_zu8l00xMxmxlxtSPv70k17zHvu9lxtD7SSSSSS--
		Eco Lab Solid Power XL- Extended Life Dishmachine Detergent	http://portal.ecolab.com/servlet/PdfServlet?sid=913472&cntry=US&langid=en-US&langtype=RFC1766LangCode&locale=en_US&pdfname=SOLID+POWER+XL
		Alto Shaam CombiTabs Water Soluble Tablets	https://cdnimg.webstaurantstore.com/documents/sds/131ce36354_msds.pdf
		Lime-A-way, Multipurpose Lime Scale Remover	http://vcusd.keenan.safeschoolssds.com/document/repo/bd41cc73-86a4-43c7-8ac5-1ec18674f5a4
		Eco Lab Peroxide Multi Surface Disenfectant	http://sds.chemtel.net/webclients/cheneybrothers/10044986SDS.pdf
		Eco Lab Antibacterial Foam Soap	https://safetydata.ecolab.com/svc/getpdf/?sid=901410-01&cntry=us&langid=en-us&langtype=1
		Eco Lab Grease Lift	https://safetydata.ecolab.com/svc/GetPdf/?cntry=US&langid=en-US&sid=915016-01
		Oasis Multi-Quat Sanitizer	https://www.wesclean.com/catelog/MSDS/425491.pdf
		Alto Shaam Scale Free Descaling Powder	
		Eco Lab Scout Pot/Pan Detergent	https://www.lakeland.edu/PDFs/MSDS/300/Scout%20Pots%20&%20Pans%20Detergent%20(Ecolab).pdf
Laundry Room	5,5D	Low Temp Laundry Solid Detergent	https://www.hillnmarkes.com/ASSETS/DOCUMENTS/ITEMS/EN/ECO6100307_SDS.pdf
		Eco Lab Stainblaster Power Pak Plus Reclaim	http://www.holidaywholesale.com/wp-content/uploads/EcolabStainBlasterPowerPakPlusReclaimWhite.pdf
		Eco Lab Stainblaster Rust Remover	https://www.wesclean.com/catelog/MSDS/425564.pdf
		Peroxide Multi Surface Disenfectant	http://sds.chemtel.net/webclients/cheneybrothers/10044986SDS.pdf
		Zephar Mt Mist Air Freshener	https://content.interlinebrands.com/product/document/10133/2471716_SDS_E.pdf
		Heavy Duty Alkaline Bathroom Cleaner	http://www.gjfood.com/pdf/msds/177_892055.pdf
		High Performance Floor Cleaner	https://www.wesclean.com/catelog/MSDS/426227.pdf
		Stianblaster Make Up Remover	https://safetydata.ecolab.com/svc/getpdf/?sid=915495-02&cntry=us&langid=en-us&langtype=1
		Brasso	http://www.rbnainfo.com/MSDS/US/Brasso%20Metal%20Polish%20EN%20GHS%20US.pdf
		Stainblaster Destainer	https://3eonline.com/ImageServer/NewPdf/1ac2462b-886e-42c9-9637-deebb8f2abb3/jmsds.pdf
		Stainblaster Grease Remover	https://safetydata.ecolab.com/svc/getpdf/?sid=903334-04&cntry=us&langid=en-us&langtype=1
		Eco Lab Revitalize Encapsulation Carpet Cleaner	https://safetydata.ecolab.com/svc/GetPdf/?cntry=US&langid=en-US&sid=901517-01
		Eco Lab Medallion Stainless Steel Cleaner	https://content.interlinebrands.com/product/document/10063/291804_SDS_E.pdf
		Eco Lab Spray Cleaner All Purpose Cleaner	https://3eonline.com/ImageServer/NewPdf/442fc991-87ff-4419-8d56-a42a0832168f/1.pdf
		Eco Lab Clean & Smooth Lotion Skin Cleanser	https://portal.ecolab.com/servlet/PdfServlet?sid=913996&cntry=US&langid=en-US&langtype=RFC1766LangCode&locale=en_US&pdfname=CLEAN+%26+SMOOTH
		Stainblaster Enzyme Boost	https://safetydata.ecolab.com/svc/getpdf/?sid=900245-02&cntry=us&langid=en-us&langtype=1
Pre-fucntion Area	9	Peroxide Multi Surface Disenfectant	http://sds.chemtel.net/webclients/cheneybrothers/10044986SDS.pdf
Women's Locker Room	2	Peroxide Multi Surface Disenfectant	http://sds.chemtel.net/webclients/cheneybrothers/10044986SDS.pdf

APPENDIX D

SUMMARY OF INDOOR AIR CANISTERS

Summary of Indoor Air Canisters
Destiny Indoor Air Sampling
Site 7 - Embassy Suites Hotel
Syracuse, NY

JMT Sample ID	Canister ID	Flow Controller ID	End Date	Start Time	End Time	Initial Vacuum	Final Vacuum
11	339	0286	3/17/2019	9:59	17:19	-29.79	-4.33
3	2332	0335	3/17/2019	10:15	18:16	-30.53	-6.31
1	323	01216	3/17/2019	10:10	17:57	-29.97	-5.03
10	456	0347	3/17/2019	10:05	17:25	-30.09	-6.33
2	2300	0814	3/17/2019	10:12	19:01	-29.83	-14.5
8	363	01247	3/17/2019	10:27	18:18	-29.97	-5.5
14*	2769	01025	3/17/2019	10:44	17:40	-30.3	-3.32
12	485	01001	3/17/2019	10:50	17:55	-29.26	-7.95
6	450	01176	3/17/2019	10:31	17:30	-29.86	-5.24
13*	320	0842	3/17/2019	10:40	17:41	-30.16	-6.89
12D	347	0285	3/17/2019	10:51	17:55	-30.4	-0.2
4	1724	0096	3/17/2019	10:22	18:30	-29.9	-3.7
5	2199	0829	3/17/2019	10:37	18:01	-29.15	-5.4
15	2278	01057	3/17/2019	10:39	18:58	-29.7	-7.91
9	2428	0064	3/17/2019	10:24	18:06	-30.01	-5.49
7	2177	0270	3/17/2019	10:29	18:35	-30.27	-5.93
5D	527	0981	3/17/2019	10:37	18:01	-29.63	-6.26

* Ambient Air Sample

APPENDIX E

SUBSLAB VAPOR CONTROL SYSTEM CERTIFICATION

Embassy Suites Vapor Control System Testing

Pre-Commissioning Test Observations

Spectra conducted testing of the Embassy Suites vapor control system on July 17, 2017. The tests were conducted with a GAST R 4110-2 regenerative blower, operating on 120 VAC power. The maximum pressure obtainable with the rented pump is 48 cfm. Rated pressure capacity is 50 in-H2O. Monitoring test points where pressure readings were collected are located on the I-81 side of the building (the east side), and on the Solar Street side of the building (the west side).

A variety of tests were conducted to provide data that will allow specification of pumps for the system. These included testing individual zone losses under isolated pressurization, and cumulative losses while all zones were simultaneously pressurized. Additional measurements were made to establish that reasonably accurate measurements were being obtained on the gauges.

Blower Recommendations

The recommended equipment in the following table has been selected to account for the observed data during testing and for pump wear and potential changes in the sub-floor pressure boundary that cannot be anticipated.

Recommended Equipment

		Area A	Area B
Model		Rotron DR 757	Rotron DR 656
Part Number		DR757D89X	DR656D72X
Max Free Flow	SCFM	350	210
Max Pressure	in-H2O	83	110
Horsepower		5	4
Voltage		230/460 Three Phase	230/460 Three Phase

Embassy Suites Vapor Control System Certification Test
Summary Data

The certification testing was conducted on August 14 and 25, 2017 after the permanent specified blowers were installed, and the zone manifold adjusted to optimize pressures in each zone. Area B was tested on August 14, 2017 and Area A was tested on August 25, 2017. Due to environmental conditions (high winds) that compromised the data from Area B, the area was retested on September 14, 2017. Please see the next page for Area B results.

Monitoring Test Port Pressure Readings Under
Simultaneous Pressurization Conditions
(Pressure in in-H2O)

Area A

(8/25/2017)

Zone	I-81 (East Side) Monitoring Point	Pressure (IWG)	Solar Street (West Side) Monitoring Point	Pressure (IWG)
A	A1	0.100	A2	0.096
A	--	--	A3	--
B	B1	0.630	B2	0.100
C	C1	0.085	C2	0.030
D	D1	0.180	D2	0.300
E	E1	0.022	E2	0.005
E	--	--	E3	0.623

Area B

(8/14/2017)

The pressure readings were collected from each of the test ports in Area B. The results were as follows:

Monitoring Test Port Pressure Readings Under
Simultaneous Pressurization Conditions
(Pressure in in-H_2O)

Zone	I-81 (East Side) Monitoring Point	Pressure (IWG)	Solar Street (West Side) Monitoring Point	Pressure (IWG)
F	F1	10.02	F2	0.016
G1	G1-1	0.09	G1-2	0.030
G2	G2-1	1.30	G2-2	0.340
H1	H1-1	0.20	H1-2	0.040
H2	H2-1	0.09	H2-2	0.040
I	I-1	0.07	I-2	0.240

Embassy Suites Vapor Control System Certification Test
Summary Data

A final round of pressure readings was collected to recertify the entire system on September 14, 2017.

Monitoring Test Port Pressure Readings Under
Simultaneous Pressurization Conditions
(Pressure in in-H2O)

Area A

Zone	I-81 (East Side) Monitoring Point	Pressure (IWG)	Solar Street (West Side) Monitoring Point	Pressure (IWG)
A	A1	0.078	A2	0.021
A	--	--	A3	0.500
B	B1	1.028	B2	0.180
C	C1	0.114	C2	0.040
D	D1	0.632	D2	0.056
E	E1	0.104	E2	0.050
E	--	--	E3	0.626

Area B

Zone	I-81 (East Side) Monitoring Point	Pressure (IWG)	Solar Street (West Side) Monitoring Point	Pressure (IWG)
F	F1	0.540	F2	0.046
G1	G1-1	0.020	G1-2	0.062
G2	G2-1	1.060	G2-2	0.353
H1	H1-1	0.256	H1-2	0.022
H2	H2-1	0.109	H2-2	0.068
I	I1	0.07	I2	0.24

Area A

Manifold Pressure/Flow and Individual Zone Flow

Manifold A	Manifold A	Zone Flow (cfm)				
Pressure (IWG)	Flow (cfm)	A	B	C	D	E
80	120+*	30	22	26	23	19

*- CFM flow meter installed on Manifold are too low on scale to be read. Value does not reflect flow lost to expansion valve. New meters are being ordered.

Area B

Manifold Pressure/Flow and Individual Zone Flow

Manifold B	Manifold B	Zone Flow (cfm)					
Pressure (IWG)	Flow (cfm)	F	G1	G2	H1	H2	I
35	100+*	24	22	13	16	13	12

*- CFM flow meter installed on Manifold are too low on scale to be read. Value does not reflect flow lost to expansion valve. New meters are being ordered.

All zones in Areas A & B registered a positive pressure above atmospheric. This certifies that the SVCS is operating as required and meets the criteria established in the remedial work plan.

APPENDIX F

INDOOR AIR LAB REPORT (ON CD)

ANALYTICAL REPORT

Lab Number:	L1910754
Client:	JMT, Inc. 19 British American Blvd. Latham, NY 12110
ATTN:	Paul Adel
Phone:	(518) 782-0882
Project Name:	EMBASSY SUITES
Project Number:	18-00996N-001
Report Date:	03/28/19

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001

Lab Number: L1910754
Report Date: 03/28/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1910754-01	1	AIR	Not Specified	03/17/19 17:57	03/18/19
L1910754-02	2	AIR	Not Specified	03/17/19 19:01	03/18/19
L1910754-03	3	AIR	Not Specified	03/17/19 18:16	03/18/19
L1910754-04	4	AIR	Not Specified	03/17/19 18:30	03/18/19
L1910754-05	5	AIR	Not Specified	03/17/19 18:01	03/18/19
L1910754-06	5D	AIR	Not Specified	03/17/19 18:01	03/18/19
L1910754-07	6	AIR	Not Specified	03/17/19 17:30	03/18/19
L1910754-08	7	AIR	Not Specified	03/17/19 18:35	03/18/19
L1910754-09	8	AIR	Not Specified	03/17/19 18:18	03/18/19
L1910754-10	9	AIR	Not Specified	03/17/19 18:06	03/18/19
L1910754-11	10	AIR	Not Specified	03/17/19 17:25	03/18/19
L1910754-12	11	AIR	Not Specified	03/17/19 17:19	03/18/19
L1910754-13	12	AIR	Not Specified	03/17/19 17:55	03/18/19
L1910754-14	12D	AIR	Not Specified	03/17/19 17:55	03/18/19
L1910754-15	13	AIR	Not Specified	03/17/19 17:41	03/18/19
L1910754-16	14	AIR	Not Specified	03/17/19 17:40	03/18/19
L1910754-17	15	AIR	Not Specified	03/17/19 18:58	03/18/19

Project Name:	EMBASSY SUITES	**Lab Number:**	L1910754
Project Number:	18-00996N-001	**Report Date:**	03/28/19

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: EMBASSY SUITES **Lab Number:** L1910754
Project Number: 18-00996N-001 **Report Date:** 03/28/19

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on March 14, 2019. The canister certification results are provided as an addendum.

L1910754-02 : The canister vacuum measured on receipt at the laboratory was > 15 in. Hg and was pressurized with Nitrogen prior to analysis. The reporting limits have been elevated accordingly.

L1910754-05 and -06: The samples were re-analyzed on dilution in order to quantify the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

The WG1220285-4 Method Blank, associated with WG1220285, has a concentration above the reporting limit for 1,2,4-trichlorobenzene. Since the sample(s) were non-detect to the RL for this target analyte, no further actions were taken. The results of the original analysis are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 03/28/19

AIR

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001

Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-01
Client ID: 1
Sample Location:

Date Collected: 03/17/19 17:57
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/28/19 10:17
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.421	0.200	--	2.08	0.989	--		1
Chloromethane	0.972	0.200	--	2.01	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	0.125	0.020	--	0.320	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Ethanol	85.9	5.00	--	162	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	7.58	1.00	--	18.0	2.38	--		1
Trichlorofluoromethane	0.422	0.050	--	2.37	0.281	--		1
Isopropanol	10.6	0.500	--	26.1	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.058	0.050	--	0.445	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	1.32	0.500	--	3.89	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-01
Client ID: 1
Sample Location:

Date Collected: 03/17/19 17:57
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	7.07	0.020	--	34.5	0.098	--		1
Tetrahydrofuran	2.25	0.500	--	6.64	1.47	--		1
1,2-Dichloroethane	0.025	0.020	--	0.101	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.230	0.100	--	0.735	0.319	--		1
Carbon tetrachloride	0.088	0.020	--	0.554	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	0.067	0.020	--	0.449	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	0.967	0.050	--	3.64	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	0.038	0.020	--	0.258	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.052	0.020	--	0.226	0.087	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-01
Client ID: 1
Sample Location:

Date Collected: 03/17/19 17:57
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p/m-Xylene	0.178	0.040	--	0.773	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.052	0.020	--	0.221	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	0.068	0.020	--	0.295	0.087	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	0.032	0.020	--	0.157	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	94		60-140
bromochloromethane	103		60-140
chlorobenzene-d5	98		60-140

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001

Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-02 D
Client ID: 2
Sample Location:

Date Collected: 03/17/19 19:01
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/27/19 18:55
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.434	0.286	--	2.15	1.41	--		1.429
Chloromethane	0.605	0.286	--	1.25	0.591	--		1.429
Freon-114	ND	0.071	--	ND	0.499	--		1.429
Vinyl chloride	ND	0.029	--	ND	0.073	--		1.429
1,3-Butadiene	ND	0.029	--	ND	0.063	--		1.429
Bromomethane	ND	0.029	--	ND	0.111	--		1.429
Chloroethane	ND	0.143	--	ND	0.377	--		1.429
Ethanol	66.6	7.14	--	125	13.5	--		1.429
Vinyl bromide	ND	0.286	--	ND	1.25	--		1.429
Acetone	5.86	1.43	--	13.9	3.40	--		1.429
Trichlorofluoromethane	0.545	0.071	--	3.06	0.401	--		1.429
Isopropanol	3.27	0.714	--	8.04	1.76	--		1.429
1,1-Dichloroethene	ND	0.029	--	ND	0.113	--		1.429
Tertiary butyl Alcohol	ND	0.714	--	ND	2.16	--		1.429
Methylene chloride	ND	0.714	--	ND	2.48	--		1.429
3-Chloropropene	ND	0.286	--	ND	0.895	--		1.429
Carbon disulfide	ND	0.286	--	ND	0.891	--		1.429
Freon-113	ND	0.071	--	ND	0.547	--		1.429
trans-1,2-Dichloroethene	ND	0.029	--	ND	0.113	--		1.429
1,1-Dichloroethane	ND	0.029	--	ND	0.116	--		1.429
Methyl tert butyl ether	ND	0.286	--	ND	1.03	--		1.429
2-Butanone	1.08	0.714	--	3.19	2.11	--		1.429
cis-1,2-Dichloroethene	ND	0.029	--	ND	0.113	--		1.429

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-02 D
Client ID: 2
Sample Location:
Sample Depth:

Date Collected: 03/17/19 19:01
Date Received: 03/18/19
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Ethyl Acetate	ND	0.714	--	ND	2.57	--		1.429
Chloroform	3.17	0.029	--	15.5	0.140	--		1.429
Tetrahydrofuran	1.59	0.714	--	4.69	2.11	--		1.429
1,2-Dichloroethane	0.030	0.029	--	0.121	0.116	--		1.429
n-Hexane	ND	0.286	--	ND	1.01	--		1.429
1,1,1-Trichloroethane	ND	0.029	--	ND	0.156	--		1.429
Benzene	ND	0.143	--	ND	0.457	--		1.429
Carbon tetrachloride	0.080	0.029	--	0.503	0.180	--		1.429
Cyclohexane	ND	0.286	--	ND	0.984	--		1.429
1,2-Dichloropropane	ND	0.029	--	ND	0.132	--		1.429
Bromodichloromethane	0.049	0.029	--	0.326	0.192	--		1.429
1,4-Dioxane	ND	0.143	--	ND	0.515	--		1.429
Trichloroethene	ND	0.029	--	ND	0.154	--		1.429
2,2,4-Trimethylpentane	ND	0.286	--	ND	1.34	--		1.429
Heptane	ND	0.286	--	ND	1.17	--		1.429
cis-1,3-Dichloropropene	ND	0.029	--	ND	0.130	--		1.429
4-Methyl-2-pentanone	ND	0.714	--	ND	2.93	--		1.429
trans-1,3-Dichloropropene	ND	0.029	--	ND	0.130	--		1.429
1,1,2-Trichloroethane	ND	0.029	--	ND	0.156	--		1.429
Toluene	1.13	0.071	--	4.26	0.269	--		1.429
2-Hexanone	ND	0.286	--	ND	1.17	--		1.429
Dibromochloromethane	ND	0.029	--	ND	0.244	--		1.429
1,2-Dibromoethane	ND	0.029	--	ND	0.220	--		1.429
Tetrachloroethene	ND	0.029	--	ND	0.194	--		1.429
Chlorobenzene	ND	0.143	--	ND	0.659	--		1.429
Ethylbenzene	0.049	0.029	--	0.211	0.124	--		1.429

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-02 D
Client ID: 2
Sample Location:
Sample Depth:

Date Collected: 03/17/19 19:01
Date Received: 03/18/19
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p/m-Xylene	0.171	0.057	--	0.743	0.248	--		1.429
Bromoform	ND	0.029	--	ND	0.296	--		1.429
Styrene	0.044	0.029	--	0.189	0.122	--		1.429
1,1,2,2-Tetrachloroethane	ND	0.029	--	ND	0.196	--		1.429
o-Xylene	0.064	0.029	--	0.279	0.124	--		1.429
4-Ethyltoluene	ND	0.029	--	ND	0.141	--		1.429
1,3,5-Trimethybenzene	ND	0.029	--	ND	0.141	--		1.429
1,2,4-Trimethylbenzene	0.036	0.029	--	0.176	0.141	--		1.429
Benzyl chloride	ND	0.286	--	ND	1.48	--		1.429
1,3-Dichlorobenzene	ND	0.029	--	ND	0.172	--		1.429
1,4-Dichlorobenzene	ND	0.029	--	ND	0.172	--		1.429
1,2-Dichlorobenzene	ND	0.029	--	ND	0.172	--		1.429
1,2,4-Trichlorobenzene	ND	0.071	--	ND	0.530	--		1.429
Hexachlorobutadiene	ND	0.071	--	ND	0.762	--		1.429

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	95		60-140
bromochloromethane	99		60-140
chlorobenzene-d5	94		60-140

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-03
Client ID: 3
Sample Location:

Date Collected: 03/17/19 18:16
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/27/19 19:35
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.440	0.200	--	2.18	0.989	--		1
Chloromethane	0.558	0.200	--	1.15	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Ethanol	50.9	5.00	--	95.9	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	4.35	1.00	--	10.3	2.38	--		1
Trichlorofluoromethane	0.423	0.050	--	2.38	0.281	--		1
Isopropanol	2.53	0.500	--	6.22	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.061	0.050	--	0.468	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.848	0.500	--	2.50	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-03
Client ID: 3
Sample Location:

Date Collected: 03/17/19 18:16
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	2.07	0.020	--	10.1	0.098	--		1
Tetrahydrofuran	1.52	0.500	--	4.48	1.47	--		1
1,2-Dichloroethane	0.025	0.020	--	0.101	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.143	0.100	--	0.457	0.319	--		1
Carbon tetrachloride	0.079	0.020	--	0.497	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	0.025	0.020	--	0.167	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	0.787	0.050	--	2.97	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.046	0.020	--	0.200	0.087	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-03
Client ID: 3
Sample Location:

Date Collected: 03/17/19 18:16
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p/m-Xylene	0.159	0.040	--	0.691	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.039	0.020	--	0.166	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	0.058	0.020	--	0.252	0.087	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	0.030	0.020	--	0.147	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	95		60-140
bromochloromethane	101		60-140
chlorobenzene-d5	97		60-140

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-04
Client ID: 4
Sample Location:

Date Collected: 03/17/19 18:30
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/27/19 20:14
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.436	0.200	--	2.16	0.989	--		1
Chloromethane	0.552	0.200	--	1.14	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Ethanol	45.7	5.00	--	86.1	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	6.25	1.00	--	14.8	2.38	--		1
Trichlorofluoromethane	0.404	0.050	--	2.27	0.281	--		1
Isopropanol	2.13	0.500	--	5.24	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.056	0.050	--	0.429	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.883	0.500	--	2.60	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-04
Client ID: 4
Sample Location:

Date Collected: 03/17/19 18:30
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	1.02	0.020	--	4.98	0.098	--		1
Tetrahydrofuran	1.78	0.500	--	5.25	1.47	--		1
1,2-Dichloroethane	0.022	0.020	--	0.089	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.146	0.100	--	0.466	0.319	--		1
Carbon tetrachloride	0.082	0.020	--	0.516	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	0.024	0.020	--	0.161	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	1.12	0.050	--	4.22	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.071	0.020	--	0.308	0.087	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-04
Client ID: 4
Sample Location:

Date Collected: 03/17/19 18:30
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p/m-Xylene	0.250	0.040	--	1.09	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.055	0.020	--	0.234	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	0.089	0.020	--	0.387	0.087	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	0.048	0.020	--	0.236	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	97		60-140
bromochloromethane	103		60-140
chlorobenzene-d5	102		60-140

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-05
Client ID: 5
Sample Location:

Date Collected: 03/17/19 18:01
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/27/19 21:35
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.431	0.200	--	2.13	0.989	--		1
Chloromethane	0.618	0.200	--	1.28	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Ethanol	253	5.00	--	477	9.42	--	E	1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	4.98	1.00	--	11.8	2.38	--		1
Trichlorofluoromethane	0.437	0.050	--	2.46	0.281	--		1
Isopropanol	12.2	0.500	--	30.0	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.058	0.050	--	0.445	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	1.03	0.500	--	3.04	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001

Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-05
Client ID: 5
Sample Location:

Date Collected: 03/17/19 18:01
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	4.71	0.020	--	23.0	0.098	--		1
Tetrahydrofuran	1.90	0.500	--	5.60	1.47	--		1
1,2-Dichloroethane	0.021	0.020	--	0.085	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.139	0.100	--	0.444	0.319	--		1
Carbon tetrachloride	0.076	0.020	--	0.478	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	0.050	0.020	--	0.335	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	1.55	0.050	--	5.84	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.083	0.020	--	0.361	0.087	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-05
Client ID: 5
Sample Location:

Date Collected: 03/17/19 18:01
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p/m-Xylene	0.305	0.040	--	1.32	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.052	0.020	--	0.221	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	0.100	0.020	--	0.434	0.087	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	0.033	0.020	--	0.162	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	96		60-140
bromochloromethane	102		60-140
chlorobenzene-d5	97		60-140

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001

Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-05 D
Client ID: 5
Sample Location:

Date Collected: 03/17/19 18:01
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/28/19 08:28
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Ethanol	271	10.0	--	511	18.8	--		2

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	92		60-140
bromochloromethane	103		60-140
chlorobenzene-d5	92		60-140

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-06
Client ID: 5D
Sample Location:

Date Collected: 03/17/19 18:01
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/27/19 22:15
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.441	0.200	--	2.18	0.989	--		1
Chloromethane	0.666	0.200	--	1.38	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	0.021	0.020	--	0.047	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Ethanol	280	5.00	--	528	9.42	--	E	1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	4.75	1.00	--	11.3	2.38	--		1
Trichlorofluoromethane	0.429	0.050	--	2.41	0.281	--		1
Isopropanol	13.1	0.500	--	32.2	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.056	0.050	--	0.429	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	1.05	0.500	--	3.10	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001

Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-06
Client ID: 5D
Sample Location:

Date Collected: 03/17/19 18:01
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	4.97	0.020	--	24.3	0.098	--		1
Tetrahydrofuran	2.04	0.500	--	6.02	1.47	--		1
1,2-Dichloroethane	0.020	0.020	--	0.081	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.141	0.100	--	0.450	0.319	--		1
Carbon tetrachloride	0.085	0.020	--	0.535	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	0.050	0.020	--	0.335	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	1.45	0.050	--	5.46	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.095	0.020	--	0.413	0.087	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-06
Client ID: 5D
Sample Location:

Date Collected: 03/17/19 18:01
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p/m-Xylene	0.351	0.040	--	1.52	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.061	0.020	--	0.260	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	0.116	0.020	--	0.504	0.087	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	0.044	0.020	--	0.216	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	95		60-140
bromochloromethane	102		60-140
chlorobenzene-d5	97		60-140

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001

Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-06 D
Client ID: 5D
Sample Location:

Date Collected: 03/17/19 18:01
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/28/19 09:06
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Ethanol	339	10.0	--	639	18.8	--		2

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	93		60-140
bromochloromethane	103		60-140
chlorobenzene-d5	93		60-140

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001

Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-07
Client ID: 6
Sample Location:

Date Collected: 03/17/19 17:30
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/27/19 22:55
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.439	0.200	--	2.17	0.989	--		1
Chloromethane	0.552	0.200	--	1.14	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Ethanol	36.1	5.00	--	68.0	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	4.55	1.00	--	10.8	2.38	--		1
Trichlorofluoromethane	0.446	0.050	--	2.51	0.281	--		1
Isopropanol	1.90	0.500	--	4.67	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.056	0.050	--	0.429	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	1.07	0.500	--	3.16	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-07
Client ID: 6
Sample Location:

Date Collected: 03/17/19 17:30
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	0.477	0.020	--	2.33	0.098	--		1
Tetrahydrofuran	2.08	0.500	--	6.13	1.47	--		1
1,2-Dichloroethane	0.026	0.020	--	0.105	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.149	0.100	--	0.476	0.319	--		1
Carbon tetrachloride	0.088	0.020	--	0.554	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	1.29	0.050	--	4.86	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.076	0.020	--	0.330	0.087	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-07
Client ID: 6
Sample Location:

Date Collected: 03/17/19 17:30
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p/m-Xylene	0.272	0.040	--	1.18	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.058	0.020	--	0.247	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	0.097	0.020	--	0.421	0.087	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	0.039	0.020	--	0.192	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	95		60-140
bromochloromethane	103		60-140
chlorobenzene-d5	98		60-140

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-08
Client ID: 7
Sample Location:

Date Collected: 03/17/19 18:35
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/27/19 23:34
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.438	0.200	--	2.17	0.989	--		1
Chloromethane	0.581	0.200	--	1.20	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Ethanol	30.4	5.00	--	57.3	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	3.26	1.00	--	7.74	2.38	--		1
Trichlorofluoromethane	0.367	0.050	--	2.06	0.281	--		1
Isopropanol	1.61	0.500	--	3.96	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.057	0.050	--	0.437	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.800	0.500	--	2.36	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001

Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-08
Client ID: 7
Sample Location:

Date Collected: 03/17/19 18:35
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	0.413	0.020	--	2.02	0.098	--		1
Tetrahydrofuran	1.60	0.500	--	4.72	1.47	--		1
1,2-Dichloroethane	0.020	0.020	--	0.081	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.143	0.100	--	0.457	0.319	--		1
Carbon tetrachloride	0.077	0.020	--	0.484	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	1.04	0.050	--	3.92	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.064	0.020	--	0.278	0.087	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-08
Client ID: 7
Sample Location:

Date Collected: 03/17/19 18:35
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p/m-Xylene	0.240	0.040	--	1.04	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.049	0.020	--	0.209	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	0.080	0.020	--	0.347	0.087	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	0.036	0.020	--	0.177	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	94		60-140
bromochloromethane	103		60-140
chlorobenzene-d5	97		60-140

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001

Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-09
Client ID: 8
Sample Location:

Date Collected: 03/17/19 18:18
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/28/19 00:14
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.433	0.200	--	2.14	0.989	--		1
Chloromethane	0.532	0.200	--	1.10	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Ethanol	28.0	5.00	--	52.8	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	2.55	1.00	--	6.06	2.38	--		1
Trichlorofluoromethane	0.371	0.050	--	2.08	0.281	--		1
Isopropanol	1.22	0.500	--	3.00	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.058	0.050	--	0.445	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.574	0.500	--	1.69	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-09
Client ID: 8
Sample Location:

Date Collected: 03/17/19 18:18
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	0.388	0.020	--	1.89	0.098	--		1
Tetrahydrofuran	1.14	0.500	--	3.36	1.47	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.186	0.100	--	0.594	0.319	--		1
Carbon tetrachloride	0.070	0.020	--	0.440	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	0.868	0.050	--	3.27	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.058	0.020	--	0.252	0.087	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-09
Client ID: 8
Sample Location:

Date Collected: 03/17/19 18:18
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p/m-Xylene	0.210	0.040	--	0.912	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.044	0.020	--	0.187	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	0.074	0.020	--	0.321	0.087	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	0.035	0.020	--	0.172	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	97		60-140
bromochloromethane	104		60-140
chlorobenzene-d5	100		60-140

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-10
Client ID: 9
Sample Location:

Date Collected: 03/17/19 18:06
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/28/19 00:54
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.438	0.200	--	2.17	0.989	--		1
Chloromethane	0.539	0.200	--	1.11	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Ethanol	41.2	5.00	--	77.6	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	4.49	1.00	--	10.7	2.38	--		1
Trichlorofluoromethane	0.433	0.050	--	2.43	0.281	--		1
Isopropanol	1.97	0.500	--	4.84	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.058	0.050	--	0.445	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.997	0.500	--	2.94	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-10
Client ID: 9
Sample Location:

Date Collected: 03/17/19 18:06
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	0.470	0.020	--	2.30	0.098	--		1
Tetrahydrofuran	2.12	0.500	--	6.25	1.47	--		1
1,2-Dichloroethane	0.024	0.020	--	0.097	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.159	0.100	--	0.508	0.319	--		1
Carbon tetrachloride	0.081	0.020	--	0.510	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	1.36	0.050	--	5.13	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.073	0.020	--	0.317	0.087	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-10
Client ID: 9
Sample Location:

Date Collected: 03/17/19 18:06
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p/m-Xylene	0.269	0.040	--	1.17	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.044	0.020	--	0.187	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	0.093	0.020	--	0.404	0.087	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	0.038	0.020	--	0.187	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	94		60-140
bromochloromethane	102		60-140
chlorobenzene-d5	97		60-140

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001

Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-11
Client ID: 10
Sample Location:

Date Collected: 03/17/19 17:25
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/28/19 01:34
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.438	0.200	--	2.17	0.989	--		1
Chloromethane	0.602	0.200	--	1.24	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	0.022	0.020	--	0.049	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Ethanol	103	5.00	--	194	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	4.76	1.00	--	11.3	2.38	--		1
Trichlorofluoromethane	0.369	0.050	--	2.07	0.281	--		1
Isopropanol	3.64	0.500	--	8.95	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.061	0.050	--	0.468	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.904	0.500	--	2.67	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-11
Client ID: 10
Sample Location:

Date Collected: 03/17/19 17:25
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	1.89	0.020	--	9.23	0.098	--		1
Tetrahydrofuran	1.79	0.500	--	5.28	1.47	--		1
1,2-Dichloroethane	0.027	0.020	--	0.109	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.168	0.100	--	0.537	0.319	--		1
Carbon tetrachloride	0.074	0.020	--	0.465	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	0.030	0.020	--	0.201	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	1.23	0.050	--	4.64	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.065	0.020	--	0.282	0.087	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-11
Client ID: 10
Sample Location:

Date Collected: 03/17/19 17:25
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p/m-Xylene	0.234	0.040	--	1.02	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.051	0.020	--	0.217	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	0.086	0.020	--	0.374	0.087	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	0.041	0.020	--	0.202	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	95		60-140
bromochloromethane	103		60-140
chlorobenzene-d5	95		60-140

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-12
Client ID: 11
Sample Location:

Date Collected: 03/17/19 17:19
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/28/19 02:14
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.427	0.200	--	2.11	0.989	--		1
Chloromethane	0.608	0.200	--	1.26	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Ethanol	119	5.00	--	224	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	3.23	1.00	--	7.67	2.38	--		1
Trichlorofluoromethane	0.198	0.050	--	1.11	0.281	--		1
Isopropanol	3.48	0.500	--	8.55	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.055	0.050	--	0.422	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-12
Client ID: 11
Sample Location:
Sample Depth:

Date Collected: 03/17/19 17:19
Date Received: 03/18/19
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	2.96	0.020	--	14.5	0.098	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	0.023	0.020	--	0.093	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.151	0.100	--	0.482	0.319	--		1
Carbon tetrachloride	0.075	0.020	--	0.472	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	0.044	0.020	--	0.295	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	0.645	0.050	--	2.43	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	0.020	0.020	--	0.136	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.029	0.020	--	0.126	0.087	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-12
Client ID: 11
Sample Location:

Date Collected: 03/17/19 17:19
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p/m-Xylene	0.086	0.040	--	0.374	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.054	0.020	--	0.230	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	0.033	0.020	--	0.143	0.087	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	0.028	0.020	--	0.138	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	95		60-140
bromochloromethane	104		60-140
chlorobenzene-d5	99		60-140

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-13
Client ID: 12
Sample Location:

Date Collected: 03/17/19 17:55
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/28/19 02:54
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.433	0.200	--	2.14	0.989	--		1
Chloromethane	0.543	0.200	--	1.12	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Ethanol	57.6	5.00	--	109	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	4.91	1.00	--	11.7	2.38	--		1
Trichlorofluoromethane	0.418	0.050	--	2.35	0.281	--		1
Isopropanol	2.33	0.500	--	5.73	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.060	0.050	--	0.460	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	1.04	0.500	--	3.07	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-13
Client ID: 12
Sample Location:

Date Collected: 03/17/19 17:55
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	0.246	0.020	--	1.20	0.098	--		1
Tetrahydrofuran	1.77	0.500	--	5.22	1.47	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.153	0.100	--	0.489	0.319	--		1
Carbon tetrachloride	0.085	0.020	--	0.535	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	0.980	0.050	--	3.69	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.058	0.020	--	0.252	0.087	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-13
Client ID: 12
Sample Location:

Date Collected: 03/17/19 17:55
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p/m-Xylene	0.210	0.040	--	0.912	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.048	0.020	--	0.204	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	0.074	0.020	--	0.321	0.087	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	0.030	0.020	--	0.147	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	96		60-140
bromochloromethane	104		60-140
chlorobenzene-d5	99		60-140

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001

Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-14
Client ID: 12D
Sample Location:

Date Collected: 03/17/19 17:55
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/28/19 03:34
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.421	0.200	--	2.08	0.989	--		1
Chloromethane	0.526	0.200	--	1.09	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Ethanol	56.4	5.00	--	106	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	3.91	1.00	--	9.29	2.38	--		1
Trichlorofluoromethane	0.314	0.050	--	1.76	0.281	--		1
Isopropanol	2.16	0.500	--	5.31	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.054	0.050	--	0.414	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.872	0.500	--	2.57	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-14
Client ID: 12D
Sample Location:
Sample Depth:

Date Collected: 03/17/19 17:55
Date Received: 03/18/19
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	0.218	0.020	--	1.06	0.098	--		1
Tetrahydrofuran	1.54	0.500	--	4.54	1.47	--		1
1,2-Dichloroethane	0.021	0.020	--	0.085	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.148	0.100	--	0.473	0.319	--		1
Carbon tetrachloride	0.083	0.020	--	0.522	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	1.53	0.050	--	5.77	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.084	0.020	--	0.365	0.087	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-14
Client ID: 12D
Sample Location:

Date Collected: 03/17/19 17:55
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p/m-Xylene	0.331	0.040	--	1.44	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.053	0.020	--	0.226	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	0.111	0.020	--	0.482	0.087	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	0.032	0.020	--	0.157	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	99		60-140
bromochloromethane	107		60-140
chlorobenzene-d5	102		60-140

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001

Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-15
Client ID: 13
Sample Location:

Date Collected: 03/17/19 17:41
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/28/19 04:14
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.427	0.200	--	2.11	0.989	--		1
Chloromethane	0.554	0.200	--	1.14	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Ethanol	13.5	5.00	--	25.4	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	40.4	1.00	--	96.0	2.38	--		1
Trichlorofluoromethane	0.309	0.050	--	1.74	0.281	--		1
Isopropanol	0.878	0.500	--	2.16	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.057	0.050	--	0.437	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-15
Client ID: 13
Sample Location:

Date Collected: 03/17/19 17:41
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	0.124	0.020	--	0.606	0.098	--		1
Tetrahydrofuran	0.586	0.500	--	1.73	1.47	--		1
1,2-Dichloroethane	0.020	0.020	--	0.081	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.322	0.100	--	1.03	0.319	--		1
Carbon tetrachloride	0.050	0.020	--	0.315	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	0.651	0.050	--	2.45	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.030	0.020	--	0.130	0.087	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-15
Client ID: 13
Sample Location:

Date Collected: 03/17/19 17:41
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p/m-Xylene	0.110	0.040	--	0.478	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	0.036	0.020	--	0.156	0.087	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	0.031	0.020	--	0.186	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	96		60-140
bromochloromethane	104		60-140
chlorobenzene-d5	98		60-140

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-16
Client ID: 14
Sample Location:

Date Collected: 03/17/19 17:40
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/28/19 04:53
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.421	0.200	--	2.08	0.989	--		1
Chloromethane	0.537	0.200	--	1.11	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Ethanol	9.61	5.00	--	18.1	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	51.2	1.00	--	122	2.38	--		1
Trichlorofluoromethane	0.317	0.050	--	1.78	0.281	--		1
Isopropanol	0.641	0.500	--	1.58	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-16
Client ID: 14
Sample Location:

Date Collected: 03/17/19 17:40
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	0.105	0.020	--	0.513	0.098	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.348	0.100	--	1.11	0.319	--		1
Carbon tetrachloride	0.054	0.020	--	0.340	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	0.502	0.050	--	1.89	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.023	0.020	--	0.10	0.087	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-16
Client ID: 14
Sample Location:

Date Collected: 03/17/19 17:40
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p/m-Xylene	0.082	0.040	--	0.356	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	0.029	0.020	--	0.126	0.087	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	0.031	0.020	--	0.186	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	98		60-140
bromochloromethane	107		60-140
chlorobenzene-d5	99		60-140

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-17
Client ID: 15
Sample Location:

Date Collected: 03/17/19 18:58
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/28/19 06:41
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	0.425	0.200	--	2.10	0.989	--		1
Chloromethane	0.566	0.200	--	1.17	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	0.025	0.020	--	0.055	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Ethanol	44.8	5.00	--	84.4	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	6.00	1.00	--	14.3	2.38	--		1
Trichlorofluoromethane	0.425	0.050	--	2.39	0.281	--		1
Isopropanol	2.75	0.500	--	6.76	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	0.058	0.050	--	0.445	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	1.30	0.500	--	3.83	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-17
Client ID: 15
Sample Location:
Sample Depth:

Date Collected: 03/17/19 18:58
Date Received: 03/18/19
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	1.24	0.020	--	6.06	0.098	--		1
Tetrahydrofuran	2.78	0.500	--	8.20	1.47	--		1
1,2-Dichloroethane	0.025	0.020	--	0.101	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	0.152	0.100	--	0.486	0.319	--		1
Carbon tetrachloride	0.086	0.020	--	0.541	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	1.57	0.050	--	5.92	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	0.079	0.020	--	0.343	0.087	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1910754-17
Client ID: 15
Sample Location:

Date Collected: 03/17/19 18:58
Date Received: 03/18/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p/m-Xylene	0.292	0.040	--	1.27	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	0.060	0.020	--	0.255	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	0.100	0.020	--	0.434	0.087	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	0.038	0.020	--	0.187	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	96		60-140
bromochloromethane	105		60-140
chlorobenzene-d5	99		60-140

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 03/27/19 16:44

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-17 Batch: WG1220285-4								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 03/27/19 16:44

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-17 Batch: WG1220285-4								
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001
Lab Number: L1910754
Report Date: 03/28/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 03/27/19 16:44

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-17 Batch: WG1220285-4								
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,2,4-Trichlorobenzene	0.066	0.050	--	0.490	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Lab Control Sample Analysis
Batch Quality Control

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001

Lab Number: L1910754
Report Date: 03/28/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-17 Batch: WG1220285-3								
Propylene	88		-		70-130	-		25
Dichlorodifluoromethane	91		-		70-130	-		25
Chloromethane	91		-		70-130	-		25
Freon-114	92		-		70-130	-		25
Vinyl chloride	93		-		70-130	-		25
1,3-Butadiene	93		-		70-130	-		25
Bromomethane	90		-		70-130	-		25
Chloroethane	97		-		70-130	-		25
Ethanol	76		-		40-160	-		25
Vinyl bromide	92		-		70-130	-		25
Acetone	75		-		40-160	-		25
Trichlorofluoromethane	97		-		70-130	-		25
Isopropanol	83		-		40-160	-		25
1,1-Dichloroethene	94		-		70-130	-		25
Tertiary butyl Alcohol[1]	94		-		70-130	-		25
Methylene chloride	91		-		70-130	-		25
3-Chloropropene	102		-		70-130	-		25
Carbon disulfide	87		-		70-130	-		25
Freon-113	93		-		70-130	-		25
trans-1,2-Dichloroethene	94		-		70-130	-		25
1,1-Dichloroethane	94		-		70-130	-		25
Methyl tert butyl ether	95		-		70-130	-		25
Vinyl acetate	105		-		70-130	-		25

Lab Control Sample Analysis
Batch Quality Control

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001

Lab Number: L1910754
Report Date: 03/28/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-17 Batch: WG1220285-3								
2-Butanone	95		-		70-130	-		25
cis-1,2-Dichloroethene	94		-		70-130	-		25
Ethyl Acetate	105		-		70-130	-		25
Chloroform	93		-		70-130	-		25
Tetrahydrofuran	95		-		70-130	-		25
1,2-Dichloroethane	90		-		70-130	-		25
n-Hexane	95		-		70-130	-		25
1,1,1-Trichloroethane	98		-		70-130	-		25
Benzene	89		-		70-130	-		25
Carbon tetrachloride	107		-		70-130	-		25
Cyclohexane	95		-		70-130	-		25
1,2-Dichloropropane	98		-		70-130	-		25
Bromodichloromethane	101		-		70-130	-		25
1,4-Dioxane	98		-		70-130	-		25
Trichloroethene	95		-		70-130	-		25
2,2,4-Trimethylpentane	97		-		70-130	-		25
cis-1,3-Dichloropropene	92		-		70-130	-		25
4-Methyl-2-pentanone	96		-		70-130	-		25
trans-1,3-Dichloropropene	105		-		70-130	-		25
1,1,2-Trichloroethane	93		-		70-130	-		25
Toluene	94		-		70-130	-		25
2-Hexanone	103		-		70-130	-		25
Dibromochloromethane	114		-		70-130	-		25

Lab Control Sample Analysis
Batch Quality Control

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001

Lab Number: L1910754
Report Date: 03/28/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-17 Batch: WG1220285-3								
1,2-Dibromoethane	102		-		70-130	-		25
Tetrachloroethene	94		-		70-130	-		25
Chlorobenzene	93		-		70-130	-		25
Ethylbenzene	96		-		70-130	-		25
p/m-Xylene	95		-		70-130	-		25
Bromoform	119		-		70-130	-		25
Styrene	94		-		70-130	-		25
1,1,2,2-Tetrachloroethane	96		-		70-130	-		25
o-Xylene	95		-		70-130	-		25
4-Ethyltoluene	93		-		70-130	-		25
1,3,5-Trimethybenzene	92		-		70-130	-		25
1,2,4-Trimethylbenzene	95		-		70-130	-		25
Benzyl chloride	97		-		70-130	-		25
1,3-Dichlorobenzene	99		-		70-130	-		25
1,4-Dichlorobenzene	98		-		70-130	-		25
1,2-Dichlorobenzene	96		-		70-130	-		25
1,2,4-Trichlorobenzene	102		-		70-130	-		25
Hexachlorobutadiene	95		-		70-130	-		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001

Lab Number: L1910754
Report Date: 03/28/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-17 QC Batch ID: WG1220285-5 QC Sample: L1910754-04 Client ID: 4						
Dichlorodifluoromethane	0.436	0.427	ppbV	2		25
Chloromethane	0.552	0.565	ppbV	2		25
Freon-114	ND	ND	ppbV	NC		25
Vinyl chloride	ND	ND	ppbV	NC		25
1,3-Butadiene	ND	ND	ppbV	NC		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Ethanol	45.7	51.4	ppbV	12		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	6.25	6.42	ppbV	3		25
Trichlorofluoromethane	0.404	0.392	ppbV	3		25
Isopropanol	2.13	2.15	ppbV	1		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
Tertiary butyl Alcohol[1]	ND	ND	ppbV	NC		25
Methylene chloride	ND	ND	ppbV	NC		25
3-Chloropropene	ND	ND	ppbV	NC		25
Carbon disulfide	ND	ND	ppbV	NC		25
Freon-113	0.056	0.058	ppbV	4		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
Methyl tert butyl ether	ND	ND	ppbV	NC		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001

Lab Number: L1910754
Report Date: 03/28/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-17 QC Batch ID: WG1220285-5 QC Sample: L1910754-04 Client ID: 4						
2-Butanone	0.883	0.896	ppbV	1		25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC		25
Ethyl Acetate	ND	ND	ppbV	NC		25
Chloroform	1.02	1.00	ppbV	2		25
Tetrahydrofuran	1.78	1.79	ppbV	1		25
1,2-Dichloroethane	0.022	0.024	ppbV	9		25
n-Hexane	ND	ND	ppbV	NC		25
1,1,1-Trichloroethane	ND	ND	ppbV	NC		25
Benzene	0.146	0.155	ppbV	6		25
Carbon tetrachloride	0.082	0.081	ppbV	1		25
Cyclohexane	ND	ND	ppbV	NC		25
1,2-Dichloropropane	ND	ND	ppbV	NC		25
Bromodichloromethane	0.024	ND	ppbV	NC		25
1,4-Dioxane	ND	ND	ppbV	NC		25
Trichloroethene	ND	ND	ppbV	NC		25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC		25
Heptane	ND	ND	ppbV	NC		25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC		25
4-Methyl-2-pentanone	ND	ND	ppbV	NC		25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC		25
1,1,2-Trichloroethane	ND	ND	ppbV	NC		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001

Lab Number: L1910754
Report Date: 03/28/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-17 QC Batch ID: WG1220285-5 QC Sample: L1910754-04 Client ID: 4						
Toluene	1.12	1.10	ppbV	2		25
2-Hexanone	ND	ND	ppbV	NC		25
Dibromochloromethane	ND	ND	ppbV	NC		25
1,2-Dibromoethane	ND	ND	ppbV	NC		25
Tetrachloroethene	ND	ND	ppbV	NC		25
Chlorobenzene	ND	ND	ppbV	NC		25
Ethylbenzene	0.071	0.069	ppbV	3		25
p/m-Xylene	0.250	0.247	ppbV	1		25
Bromoform	ND	ND	ppbV	NC		25
Styrene	0.055	0.054	ppbV	2		25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC		25
o-Xylene	0.089	0.088	ppbV	1		25
4-Ethyltoluene	ND	ND	ppbV	NC		25
1,3,5-Trimethybenzene	ND	ND	ppbV	NC		25
1,2,4-Trimethylbenzene	0.048	0.050	ppbV	4		25
Benzyl chloride	ND	ND	ppbV	NC		25
1,3-Dichlorobenzene	ND	ND	ppbV	NC		25
1,4-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC		25
Hexachlorobutadiene	ND	ND	ppbV	NC		25

Project Name: EMBASSY SUITES

Project Number: 18-00996N-001

Lab Number: L1910754

Report Date: 03/28/19

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check		Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1910754-01	1	01216	Flow 5	03/14/19	286660		-	-		-	Pass	4.5	4.0	12
L1910754-01	1	323	2.7L Can	03/14/19	286660	L1909569-01	Pass	-		-5.3	-	-	-	-
L1910754-02	2	0814	Flow 5	03/14/19	286660		-	-		-	-	4.6	4.5	-
L1910754-02	2	2300	2.7L Can	03/14/19	286660	L1909569-01	Pass	-		-16.0	-	-	-	-
L1910754-03	3	0335	Flow 5	03/14/19	286660		-	-		-	Pass	4.6	4.3	7
L1910754-03	3	2332	2.7L Can	03/14/19	286660	L1909569-01	Pass	-		-6.3	-	-	-	-
L1910754-04	4	0096	Flow 5	03/14/19	286660		-	-		-	Pass	4.7	4.4	7
L1910754-04	4	1724	2.7L Can	03/14/19	286660	L1909569-01	Pass	-		-4.0	-	-	-	-
L1910754-05	5	0829	Flow 5	03/14/19	286660		-	-		-	Pass	4.9	4.5	9
L1910754-05	5	2199	2.7L Can	03/14/19	286660	L1909569-02	Pass	-		-5.5	-	-	-	-
L1910754-06	5D	0981	Flow 5	03/14/19	286660		-	-		-	Pass	4.5	4.2	7
L1910754-06	5D	527	2.7L Can	03/14/19	286660	L1909569-01	Pass	-		-6.3	-	-	-	-
L1910754-07	6	01176	Flow 5	03/14/19	286660		-	-		-	Pass	4.9	4.3	13
L1910754-07	6	450	2.7L Can	03/14/19	286660	L1909569-01	Pass	-		-5.5	-	-	-	-
L1910754-08	7	0270	Flow 5	03/14/19	286660		-	-		-	Pass	4.5	4.5	0

Project Name: EMBASSY SUITES

Project Number: 18-00996N-001

Lab Number: L1910754

Report Date: 03/28/19

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check		Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1910754-08	7	2177	2.7L Can	03/14/19	286660	L1909569-01	Pass	-		-6.0	-	-	-	-
L1910754-09	8	01247	FLOW 5	03/14/19	286660		-	-		-	Pass	4.4	4.4	0
L1910754-09	8	363	2.7L Can	03/14/19	286660	L1909569-01	Pass	-		-5.5	-	-	-	-
L1910754-10	9	0064	Flow 5	03/14/19	286660		-	-		-	Pass	4.5	4.5	0
L1910754-10	9	2428	2.7L Can	03/14/19	286660	L1909569-02	Pass	-		-5.7	-	-	-	-
L1910754-11	10	0347	Flow 5	03/14/19	286660		-	-		-	Pass	4.5	4.2	7
L1910754-11	10	456	2.7L Can	03/14/19	286660	L1909569-01	Pass	-		-6.6	-	-	-	-
L1910754-12	11	0286	Flow 5	03/14/19	286660		-	-		-	Pass	4.5	3.9	14
L1910754-12	11	339	2.7L Can	03/14/19	286660	L1909569-01	Pass	-		-5.1	-	-	-	-
L1910754-13	12	01001	Flow 5	03/14/19	286660		-	-		-	Pass	4.5	4.5	0
L1910754-13	12	485	2.7L Can	03/14/19	286660	L1909569-01	-	-		-8.0	-	-	-	-
L1910754-14	12D	0285	Flow 5	03/14/19	286660		-	-		-	Pass	4.5	4.2	7
L1910754-14	12D	347	2.7L Can	03/14/19	286660	L1909569-02	Pass	-		-0.3	-	-	-	-
L1910754-15	13	0842	Flow 5	03/14/19	286660		-	-		-	Pass	4.5	4.5	0
L1910754-15	13	320	2.7L Can	03/14/19	286660	L1909569-02	Pass	-		-5.3	-	-	-	-

Project Name: EMBASSY SUITES

Lab Number: L1910754

Project Number: 18-00996N-001

Report Date: 03/28/19

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check		Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1910754-16	14	01025	Flow 5	03/14/19	286660		-	-		-	Pass	4.5	4.4	2
L1910754-16	14	2769	2.7L Can	03/14/19	286660	L1909569-02	Pass	-		-1.8	-	-	-	-
L1910754-17	15	01057	Flow 5	03/14/19	286660		-	-		-	Pass	4.9	4.5	9
L1910754-17	15	2278	2.7L Can	03/14/19	286660	L1909569-02	Pass	-		-7.2	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1909569
Report Date: 03/28/19

Air Canister Certification Results

Lab ID: L1909569-01
Client ID: CAN 376 SHELF 4
Sample Location:

Date Collected: 03/12/19 09:00
Date Received: 03/12/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 03/14/19 16:07
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1909569
Report Date: 03/28/19

Air Canister Certification Results

Lab ID: L1909569-01
Client ID: CAN 376 SHELF 4
Sample Location:

Date Collected: 03/12/19 09:00
Date Received: 03/12/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1909569
Report Date: 03/28/19

Air Canister Certification Results

Lab ID: L1909569-01
Client ID: CAN 376 SHELF 4
Sample Location:

Date Collected: 03/12/19 09:00
Date Received: 03/12/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1909569
Report Date: 03/28/19

Air Canister Certification Results

Lab ID: L1909569-01
Client ID: CAN 376 SHELF 4
Sample Location:

Date Collected: 03/12/19 09:00
Date Received: 03/12/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1909569
Report Date: 03/28/19

Air Canister Certification Results

Lab ID: L1909569-01
Client ID: CAN 376 SHELF 4
Sample Location:

Date Collected: 03/12/19 09:00
Date Received: 03/12/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	97		60-140
Bromochloromethane	98		60-140
chlorobenzene-d5	97		60-140

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L1909569

Project Number: CANISTER QC BAT **Report Date:** 03/28/19

Air Canister Certification Results

Lab ID: L1909569-01
Client ID: CAN 376 SHELF 4
Sample Location:

Date Collected: 03/12/19 09:00
Date Received: 03/12/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/14/19 16:07
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1909569
Report Date: 03/28/19

Air Canister Certification Results

Lab ID: L1909569-01
Client ID: CAN 376 SHELF 4
Sample Location:

Date Collected: 03/12/19 09:00
Date Received: 03/12/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L1909569

Project Number: CANISTER QC BAT **Report Date:** 03/28/19

Air Canister Certification Results

Lab ID: L1909569-01
Client ID: CAN 376 SHELF 4
Sample Location:

Date Collected: 03/12/19 09:00
Date Received: 03/12/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	98		60-140
bromochloromethane	99		60-140
chlorobenzene-d5	99		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1909569
Report Date: 03/28/19

Air Canister Certification Results

Lab ID: L1909569-02
Client ID: CAN 390 SHELF 5
Sample Location:

Date Collected: 03/12/19 09:00
Date Received: 03/12/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 03/14/19 19:40
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1909569
Report Date: 03/28/19

Air Canister Certification Results

Lab ID: L1909569-02
Client ID: CAN 390 SHELF 5
Sample Location:

Date Collected: 03/12/19 09:00
Date Received: 03/12/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1909569
Report Date: 03/28/19

Air Canister Certification Results

Lab ID: L1909569-02
Client ID: CAN 390 SHELF 5
Sample Location:

Date Collected: 03/12/19 09:00
Date Received: 03/12/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1909569
Report Date: 03/28/19

Air Canister Certification Results

Lab ID: L1909569-02
Client ID: CAN 390 SHELF 5
Sample Location:

Date Collected: 03/12/19 09:00
Date Received: 03/12/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1909569
Report Date: 03/28/19

Air Canister Certification Results

Lab ID: L1909569-02
Client ID: CAN 390 SHELF 5
Sample Location:

Date Collected: 03/12/19 09:00
Date Received: 03/12/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	98		60-140
Bromochloromethane	99		60-140
chlorobenzene-d5	99		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1909569
Report Date: 03/28/19

Air Canister Certification Results

Lab ID: L1909569-02
Client ID: CAN 390 SHELF 5
Sample Location:

Date Collected: 03/12/19 09:00
Date Received: 03/12/19
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/14/19 19:40
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1909569
Report Date: 03/28/19

Air Canister Certification Results

Lab ID: L1909569-02
Client ID: CAN 390 SHELF 5
Sample Location:

Date Collected: 03/12/19 09:00
Date Received: 03/12/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L1909569

Project Number: CANISTER QC BAT **Report Date:** 03/28/19

Air Canister Certification Results

Lab ID: L1909569-02
Client ID: CAN 390 SHELF 5
Sample Location:

Date Collected: 03/12/19 09:00
Date Received: 03/12/19
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	98		60-140
bromochloromethane	100		60-140
chlorobenzene-d5	100		60-140

Project Name: EMBASSY SUITES
Project Number: 18-00996N-001

Lab Number: L1910754
Report Date: 03/28/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
N/A	Present/Intact

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1910754-01A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-SIM(30)
L1910754-02A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-SIM(30)
L1910754-03A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-SIM(30)
L1910754-04A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-SIM(30)
L1910754-05A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-SIM(30)
L1910754-06A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-SIM(30)
L1910754-07A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-SIM(30)
L1910754-08A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-SIM(30)
L1910754-09A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-SIM(30)
L1910754-10A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-SIM(30)
L1910754-11A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-SIM(30)
L1910754-12A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-SIM(30)
L1910754-13A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-SIM(30)
L1910754-14A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-SIM(30)
L1910754-15A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-SIM(30)
L1910754-16A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-SIM(30)
L1910754-17A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-SIM(30)

*Values in parentheses indicate holding time in days

Project Name:	EMBASSY SUITES	**Lab Number:**	L1910754
Project Number:	18-00996N-001	**Report Date:**	03/28/19

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: Data Usability Report

Project Name:	EMBASSY SUITES	**Lab Number:**	L1910754
Project Number:	18-00996N-001	**Report Date:**	03/28/19

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: Data Usability Report

REFERENCES

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AIR ANALYSIS

ALPHA ANALYTICAL — CHAIN OF CUSTODY

PAGE 1 OF 2

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 3/19/19

ALPHA Job #: L1910754

Client Information

Client: JMT
Address: 19 British American Blvd
Latham NY 12110
Phone: 518-782-0883
Fax:
Email: padel@jmt.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Embassy Suites
Project Location:
Project #: 18-~~00996~~009960N-001
Project Manager: Paul Adel
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☐ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☐

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	ANALYSIS TO-15	TO-15 SIM	APH Subset Non-petroleum HCs ☐	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
10754.01	1	3/17/19	10:10	17:57	-29.97	-5.03	AA	KO	2.7	323	0216	X					
.02	2		10:12	19:01	-29.83	-14.00				2300	0814						Extended time, high flow
.03	3		10:15	18:16	-30.53	-6.31				2332	0335						
.04	4		10:22	18:30	-29.90	-3.70				~~1724~~	0096						
.05	5		10:37	18:01	-29.15	-5.40				2199	0829						
.06	5D		10:37	18:01	-29.63	-6.26				527	0981						
.07	6		10:31	17:30	-29.86	-5.24				450	01176						
.08	7		10:29	18:35	-30.27	-5.93				2177	0270						
.09	8		10:27	18:18	-29.97	-5.30				363	01247						
.10	9		10:24	18:04	-30.01	-5.49				2425	0064						

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type: Cs

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time:
	3/18/19 0800	Robert Haine AAL	3/18/19 0930
	3/18/19 0930		03/18/19 0930
	03/19/19 0650		3/19/19 0650

Form No: 101-02 Rev: (25-Sep-15)

AIR ANALYSIS

PAGE 2 OF 2

CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 3/19/19

ALPHA Job #: L1910754

Client Information

Client: JMT
Address: 19 British American Blvd
Latham NY 12110
Phone: 518-782-0032
Fax:
Email: padel@jmt.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Embassy Suites
Project Location:
Project #: 18-009960-001
Project Manager: Paul Adel
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☐ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☐

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	ID Can	ID - Flow Controller	ANALYSIS TO-15	TO-15 SIM	APH (subtract Non-petroleum HCs ☐)	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
10754.11	10	3/17/19	10:05	17:25	-30.09	-6.33	AA	KO	2.7	456	0547	X					
.12	11		09:59	17:19	-29.79	-4.33				339	0286						
.13	12		10:50	17:55	-29.26	-7.95				485	01001						
.14	12D		10:50	17:55	-30.40	-0.2				347	0225						
.15	13		10:40	17:41	-30.16	-6.89				320	0847						
.16	14		10:44	17:40	-30.3	-3.32				2765	01025						
.17	15		10:39	18:58	-29.70	-7.91				2278	01057						

*SAMPLE MATRIX CODES

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type: C

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time:
	3/18/19 0900	Robert Hain, AAL	3-18-19 09:30
	3/18/19 0930		03/18/19 0930
	03/19/19 0650		3/19/19 0650

Form No: 101-02 Rev: (25-Sep-15)