

# Memorandum

To: Ms. Caroline Eigenbrodt, Environmental Engineer, Division of Environmental

Remediation, New York State Department of Environmental Conservation

From: Melissa Harclerode, Project Manager, CDM Smith

Date: May 3, 2017

Subject: Villa Cleaners 2017 Vapor Intrusion Assessment

# Villa Cleaners Indoor and Sub-Slab Air Assessment

# **Background and Site History**

Sub-slab depressurization systems (SSDS) were installed at the Villa Cleaners Site in June 2011 to mitigate sub-slab vapor and indoor air contaminated with chlorinated volatile organic compounds. In 2014, a vapor intrusion (VI) assessment was performed to monitor the contaminant concentrations and efficacy each SSDS. Due to access issues, the following properties were not evaluated:1893, 1895, and 1899A. Based on the New York State Department of Health (NYSDOH) 2006 *Guidance for Evaluating Soil Vapor Intrusion in the State of New York Soil Vapor/Indoor Air Matrix 1 and Matrix 2*, the 2014 investigation results determined that each building sampled for VI no longer met the criteria of "mitigate". Technical Memorandum *Villa Dry Cleaners Air Assessment* documenting the 2014 investigation and findings was submitted to the New York State Department of Environmental Conservation (NYSDEC) on April 11, 2014. The SSDS at each sampled property continued to operate following the sampling event, with the exception of 1899B which was not functioning before or during the sampling event. The broken SSDS at 1899B Deer Park Avenue was determined to be acceptable by NYSDEC because the 2014 investigation concluded that no further action was required. The purpose of the 2017 VI investigation was to re-evaluate the efficacy of the SSDS at each property.

## 2017 Indoor Air and Sub-Slab Vapor Sampling

The 2017 indoor air and sub-slab vapor sampling event was conducted in accordance with the *Villa Dry Cleaners Site Management Plan (SMP) (August 2012)*. The SSDS for each building was shut off in December 2016 to allow adequate time for the sub-slab vapor and indoor air quality in each building to return to natural conditions. Subsequently, the VI investigation was conducted on March 7 and 8, 2017. Sub-slab vapor and indoor air samples were collected in each of the properties in Crazy Billy's Plaza, including 1887, 1889, 1891, 1893, 1895, 1897, 1899A, and 1899B Deer Park Avenue, Deer Park, NY (**Figure 1**). Sub-slab vapor and indoor air samples were co-located except in cases where the indoor air sample was relocated to be more representative of indoor air conditions. One duplicate indoor air sample was collected at 1899A, one duplicate sub-slab vapor sample was collected at 1899B, and one outdoor air sample was collected at 1897 Deer Park Avenue. The

sample was placed in the rear parking lot to provide a baseline of outdoor ambient conditions, away from the busier front parking lot which has more vehicle exhaust. All air samples were collected using 6-liter summa canisters over a 24-hour period. Samples were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) TO-15 method by TestAmerica Laboratories, Inc. *New York State Department of Health Indoor Air Quality Questionnaire and Building Inventory Center for Environmental Health* forms were filled out for each property with the exception of 1899A Deer Park Avenue, and are included as **Appendix A**.

# **Deviations from the SMP**

CDM Smith performed indoor air sampling in January 2017 to evaluate performance of the SSDS's at each property associated with the Villa Cleaners Site. Since sub-slab vapor samples were not collectively simultaneously, the results of this event were disregarded. Subsequently, VI sampling was performed in March 2017.

# Sub-slab Depressurization System Status

When each SSDS was turned off in December 2016, CDM Smith noted that all systems were functioning with the exception of System 1 at 1889 Deer Park Avenue (Villa Cleaners). Also, System 4 at 1893 Deer Park Avenue had to be shut off via a fuse box in the building. The systems were returned to their pre-December 2016 condition on March 28th, 2017.

# Summary of Vapor Intrusion Sampling Results

Indoor air and ambient air results were compared to *NYSDOH Guidance Appendix C Table C2- EPA 2001 Building Assessment and Survey Evaluation (BASE) Database, SUMMA canister method, 90<sup>th</sup> percentile (EPA BASE 90<sup>th</sup> Percentile). These values provide background concentrations of VOCs expected in typical indoor and outdoor locations. VI investigation results are presented in Tables 1, 2, and 3. Table 4 presents a comparison of investigation results NYSDOH (2006) Guidance for Evaluating Soil Vapor Intrusion in the State of New York Soil Vapor/Indoor Air Matrix 1 and Matrix 2. Results of the VI investigation are summarized by matrix result. Duplicate sample values were used in the evaluations when their concentrations were higher than their parent sample. The Data Usability Summary Report is provided as Appendix B.* 

# 1899A Deer Park Avenue - Monitor/Mitigate

The results for trichloroethene (TCE), vinyl chloride, and carbon tetrachloride were compared to Matrix 1 of the NYSDOH Soil Vapor Guidance. The following actions are suggested by the matrix:

- TCE was detected at 0.62 micrograms per cubic meter (μg/m³) in sub-slab vapor and 4.6 μg/m³ in indoor air. Therefore, NYSDOH guidance suggests taking reasonable and practical actions to identify source(s) and reduce exposures.
- Carbon Tetrachloride was detected at  $0.64~\mu g/m^3$  in sub-slab vapor and  $0.54~\mu g/m^3$  in indoor air. Therefore, NYSDOH guidance suggests taking reasonable and practical actions to identify source(s) and reduce exposures.

The results for tetrachloroethene (PCE), 1,1-dichloroethene (DCE), cis-1,2-DCE, and 1,1,1-trichloroethane (TCA) were compared to Matrix 2 of the NYSDOH soil vapor guidance. The following actions are suggested by the matrix:

PCE was detected at 130 μg/m³ in sub-slab vapor and 7 μg/m³ in indoor air. Therefore,
 NYSDOH guidance suggests mitigating/monitoring the impact to indoor air quality. CDM
 Smith recommends continued operation of the property's SSDS to mitigate the impact to VI.

No further action is suggested by the matrices for vinyl chloride, cis-1,2 DCE, 1,1,1-TCA and 1,1-DCE. Indoor air concentrations of non site-related contaminants that exceeded *NYSDOH Guidance Appendix C Table C2- EPA 2001 Building Assessment and Survey Evaluation (BASE) Database, SUMMA canister method, 90th percentile (EPA BASE 90th Percentile)* include 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 4-ethyltoluene, ethylbenzene, m,p-Xylene, n-heptane, o-xylene, and styrene. The presence of these compounds is most likely due to the current operation of the property as an automotive repair shop. The operator of the business at this property did not give permission to the field crew to complete the *New York State Department of Health Indoor Air Quality Questionnaire and Building Inventory Center for Environmental Health* form.

## 1889 and 1891 Deer Park Avenue - Monitor

The results for TCE, vinyl chloride, and carbon tetrachloride were compared to Matrix 1 of the NYSDOH Soil Vapor Guidance. The following actions are suggested by the matrix:

- TCE was detected at 3.7 μg/m³ in sub-slab vapor and 0.21 U μg/m³ in indoor air at 1889 Deer Park Avenue and 11 μg/m³ in sub-slab vapor and 0.31 μg/m³ in indoor air at 1891 Deer Park Avenue. Therefore, NYSDOH guidance suggests no further action at 1889 Deer Park Avenue and additional monitoring at 1891 Deer Park Avenue.
- Carbon Tetrachloride was detected at 0.37 μg/m³ in sub-slab vapor and 0.25 U μg/m³ in indoor air at 1889 Deer Park Avenue and 0.5 U μg/m³ in sub-slab vapor and 0.7 μg/m³ in indoor air at 1891 Deer Park Avenue. Therefore, NYSDOH guidance suggests no further action at 1889 Deer Park Avenue and taking reasonable and practical actions to identify source(s) and reduce exposures at 1891 Deer Park Avenue.

The results for PCE, 1,1-DCE, cis-1,2-DCE, and 1,1,1-TCA were compared to Matrix 2 of the NYSDOH soil vapor guidance. The following actions are suggested by the matrix:

PCE was detected at 140 µg/m³ in sub-slab vapor and 1.4 U µg/m³ in indoor air at 1889 Deer Park Avenue and 310 µg/m³ in sub-slab vapor and 1.4 U µg/m³ in indoor air at 1891 Deer Park Avenue. Therefore, NYSDOH guidance suggests continued monitoring to determine whether concentrations in the indoor air or sub-slab vapor have changed. CDM Smith recommends continued operation of the properties' SSDS to mitigate the impact to VI and

consideration of a semi-annual monitoring program to evaluate if the SSDS could be shutdown.

No further action is suggested by the matrices for vinyl chloride, cis-1,2 DCE, 1,1,1-TCA and 1,1-DCE. Indoor air concentrations of non site-related contaminants that exceeded *NYSDOH Guidance Appendix C Table C2- EPA 2001 Building Assessment and Survey Evaluation (BASE) Database, SUMMA canister method, 90th percentile (EPA BASE 90th Percentile)* include acetone in both buildings and methyl ethyl ketone in 1889 Deer Park Avenue. The presence of these compounds is most likely due to current operations at the properties. 1889 Deer Park Avenue is a nail salon which uses multiple cosmetic products, including nail polish remover. 1891 Deer Park Avenue is an insurance agency, where Clorox bleach, Windex, and Palmolive cleaning products are used, and painting was done within the past six months.

# 1887, 1893, 1895, 1897, and 1899B Deer Park Avenue – Take Reasonable and Practical Actions to Identify Source(s) and Reduce Exposures

The results for TCE, vinyl chloride, and carbon tetrachloride were compared to Matrix 1 of the NYSDOH Soil Vapor Guidance. The following actions are suggested by the matrix:

- TCE was detected in each building, with sub-slab vapor detections ranging from 0.46 to 4.8 μg/m³ and indoor air detections ranging from 0.27 to 1.4 μg/m³. Therefore, NYSDOH guidance suggests taking reasonable and practical actions to identify source(s) and reduce exposures at 1887, 1893, 1895, and 1897 Deer Park Avenue. Regarding TCE, no further action is suggested at 1899B Deer Park Avenue due to a sub-slab vapor concentration below 5 μg/m³ and non-detect in indoor air.
- Carbon Tetrachloride was detected in each building, with sub-slab vapor detections ranging from 0.48 to 0.62 μg/m³ and indoor air detections ranging from 0.47 to 0.52 μg/m³.
   Therefore, NYSDOH guidance suggests taking reasonable and practical actions to identify source(s) and reduce exposures at all of the buildings.

The results for PCE, 1,1-DCE, cis-1,2-DCE, and 1,1,1-TCA were compared to Matrix 2 of the NYSDOH soil vapor guidance. The following actions are suggested by the matrix:

- PCE was detected at 8.6 μg/m³ in sub-slab vapor and 4 μg/m³ in indoor air at 1897 Deer Park Avenue. Therefore, NYSDOH guidance suggests taking reasonable and practical actions to identify source(s) and reduce exposures.
- PCE was detected in the remaining buildings, with sub-slab vapor detections ranging from 2.2 to 37 μg/m³ and indoor air was detected a 1.4 U μg/m³ in each remaining building. Therefore NYSDOH guidance suggests no further action at 1887, 1893, 1895, and 1899B Deer Park Avenue.

No further action is suggested by the matrices for vinyl chloride, cis-1,2 DCE, 1,1,1-TCA and 1,1-DCE. Indoor air concentrations of non site-related contaminants that exceeded *NYSDOH Guidance Appendix C Table C2- EPA 2001 Building Assessment and Survey Evaluation (BASE) Database, SUMMA canister method, 90th percentile (EPA BASE 90th Percentile)* include 1,2-dichloroethane, benzene, n-heptane, n-hexane, and toluene, which were detected only at 1887 Deer Park Avenue. The presence of these compounds may be due to current operations at the properties. 1887 Deer Park Avenue is a liquor store and uses multiple petroleum based cleaning products, refrigerant, WD-40, and primer.

There were no indoor air exceedances at 1893, 1895, and 1899B Deer Park Avenue. There were no exceedances of NYSDOH Guidance Appendix C Table C2- EPA 2001 Building Assessment and Survey Evaluation (BASE) Database, SUMMA canister method, 90th percentile (EPA BASE 90th Percentile) for the outdoor ambient air sample.

### **Conclusions**

Based on the sampling results, CDM Smith concludes that site-related contamination of PCE and TCE is still impacting indoor air quality at the Site, and recommends the following:

- The 1899A Deer Park Avenue: continued operation of the SSDS to mitigate PCE concentrations detected in indoor air and sub-slab vapor along with a continued semi-annual monitoring program.
- The 1889 and 1891 Deer Park Avenue: continued operation of the properties' SSDS to mitigate the impact to VI due to PCE (1889 and 1891) and TCE (1891) concentrations in indoor air and sub-slab vapor. A semi-annual monitoring program is recommended to determine if SSDS's can be shut down and the property transitioned to long-term monitoring.
- The 1887, 1893, 1895, 1897, and 1899B Deer Park Avenue: take reasonable and practical actions to identify source(s) and reduce exposures due to concentrations of PCE, TCE, and carbon tetrachloride as per the NYSDOH Soil Vapor Intrusion Matrices. Based on the 2014 and 2017 investigation results, CDM Smith recommends shutting down the SSDSs, followed by long-term monitoring to confirm VI migration is not occurring.

# Table 1 Indoor Air Sampling Results Villa Cleaners NYSDEC Site # 152188 Deer Park, NY

	Sample:	103538-1887-IA-030817	103538-1889-IA-030817	103538-1891-IA-030817	103538-1893-IA-030817	103538-1895-IA-030817	103538-1897-IA-030817	103538-1899A-IA-030817	103538-1899B-IA-030817	103538-9899A-IA-030817
	Location:	103538-1887-IA	103538-1889-IA	103538-1891-IA	103538-1893-IA	103538-1895-IA	103538-1897-IA	103538-1899A-IA	103538-1899B-IA	103538-1899A-IA
	Sample Date:	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017
	Sample Type:	N	N	N	N	N	N	N	N	FD
	NYSDOH Indoor Air									
Chemical Name	Criteria <sup>1</sup>	a alu	4 4 10	4 4 10	4 4 111	4 4 10	a alu	4 4 10	4 4 10	
1,1,1-Trichloroethane	20.6	1.1 U	1.1 U	1.1 U 1.4 U	1.1 U	1.1 U 1.4 U	1.1 U	1.1 U 1.4 U	1.1 U 1.4 U	1.1 U
1,1,2,2-Tetrachloroethane 1,1,2-Trichloro-1,2,2-Trifluoroethane	NL NL	1.4 U 1.5 U	1.4 U 1.5 U	1.4 U	1.4 U 1.5 U	1.4 U	1.4 U 1.5 U	1.4 U	1.4 U	1.4 U 1.5 U
1.1.2-Trichloroethane	<1.5	1.1 U	1.5 U	1.5 U	1.1 U					
1,1-Dichloroethane	<0.7	0.81 U	0.81 U	0.81 U						
1,1-Dichloroethene	<1.4	0.79 U	0.79 U	0.79 U						
1,2,4-Trichlorobenzene	<6.8	3.7 U	3.7 U	3.7 U						
1,2,4-Trimethylbenzene	9.5	2.6	0.98 U	13	1	9.7				
1,2-Dibromoethane (Ethylene Dibromide)	<1.5	1.5 U	1.5 U	1.5 U						
1,2-Dichlorobenzene	<1.2	1.2 U	1.2 U	1.2 U						
1,2-Dichloroethane	< 0.9	2	0.81 U	0.81 U	0.81 U					
1,2-Dichloropropane	<1.6	0.92 U	0.92 U	0.92 U						
1,2-Dichlorotetrafluoroethane	NL 3.7	1.4 U 0.98 U	1.4 U 4.9	1.4 U 0.98 U	1.4 U 3.9					
1,3,5-Trimethylbenzene (Mesitylene) 1,3-Butadiene	<3.0	0.98 U <b>0.47</b>	0.98 U 0.44 U	<b>4.9</b> 0.44 U	0.98 U 0.44 U	0.46				
1,3-Butadierie 1,3-Dichlorobenzene	< 3.0	1.2 U	1.2 U	1.2 U						
1.4-Dichlorobenzene	5.5	1.2 U	1.2 U	1.2 U						
1,4-Dioxane (P-Dioxane)	NL NL	18 U	18 U	18 U						
2,2,4-Trimethylpentane	NL	75	0.93 U	0.93 U	1.2	0.93 U	0.93 U	1.9	0.93 U	2.1
2-Chlorotoluene	NL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone	NL	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Ethyltoluene	3.6	0.98 U	4.2	0.98 U	3.5					
Acetone	98.9	79	4400 J	880 J	61	25	15	46	14	57
Allyl Chloride (3-Chloropropene)	NL 9.4	1.6 U	1.6 U 0.64 U	1.6 U <b>0.79</b>	1.6 U <b>1.5</b>	1.6 U <b>0.76</b>	1.6 U 0.64 U	1.6 U 1.6	1.6 U 0.68	1.6 U 1.8
Benzene Benzyl Chloride	9.4 <6.8	<b>12</b> 1 U	0.64 U	1 U	1.5 1 U	1 U	0.64 U	1.6 1 U	1 U	1.8
Bromodichloromethane	NL	1.3 U	1.3 U	1.3 U						
Bromoform	NL NL	2.1 U	2.1 U	2.1 U						
Bromomethane	<1.7	0.78 U	0.78 U	0.78 U						
Butane	NL	670 J	1100 J	100 J	1.2 U	5.3	3.9	9.5	8.9	10
Carbon Disulfide	4.2	1.6 U	1.6 U	1.6 U						
Carbon Tetrachloride	<1.3	0.51	0.25 U	0.7	0.5	0.5	0.47	0.51	0.52	0.54
Chlorobenzene	<0.9	0.92 U	0.92 U	0.92 U						
Chlorodifluoromethane	NL 1.1	<b>2.6</b> 1.3 U	1.8 U 1.3 U	1.8 U 1.3 U	1.8 U	1.8 U 1.3 U	1.8 U 1.3 U	1.8 U	1.8 U 1.3 U	1.8 U
Chloroethane Chloroform	<1.1 1.1	0.98 U	0.98 U	0.98 U	1.3 U 0.98 U	0.98 U	0.98 U	1.3 U 0.98 U	0.98 U	1.3 U 0.98 U
Chloromethane	3.7	1.3	1 U	2.1	1.5	1.2	1.2	1.3	1.3	1.4
Cis-1,2-Dichloroethylene	<1.9	0.79 U	2.8	0.79 U	0.79 U	0.79 U				
Cis-1,3-Dichloropropene	<2.3	0.91 U	0.91 U	0.91 U						
Cyclohexane	NL	8.3	0.69 U	0.69 U	0.76	0.69 U	0.69 U	0.84	0.69 U	0.91
Cymene	NL	1.1 U	1.1 U	1.1 U	1.1	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Dibromochloromethane	NL	1.7 U	1.7 U	1.7 U						
Dichlorodifluoromethane	16.5	2.5 U	2.7	2.5	2.5 U	2.5 U	2.5 U	2.5 U	2.5	2.5 U
Dichloroethylenes	NL 5.7	1.6 U	2.8	1.6 U	1.6 U	1.6 U				
Ethylbenzene Hexachlorobutadiene	5.7 <6.8	<b>4.8</b> 2.1 U	2.1 U	0.87 U 2.1 U	<b>0.99</b> 2.1 U	0.87 U 2.1 U	0.87 U 2.1 U	41 2.1 U	0.87 U 2.1 U	<b>42</b> 2.1 U
Isopropanol	NL	35	6500 J	1800 J	4100 J	1300 J	220 J	12 U	12 U	12 U
Isopropylbenzene (Cumene)	NL NL	0.98 U	0.98 U	0.98 U						
m,p-Xylene	22.2	16	3.5	2.2 U	2.8	2.2 U	2.2 U	140	2.2 U	140
Methyl Ethyl Ketone (2-Butanone)	12.0	6.8	60	3.9	2	4.1	2.9	2.7	1.5 U	4.2
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	6.0	2 U	2 U	2 U	2 U	2 U	2 U	2.8	2 U	2 U
Methyl Methacrylate	NL	5.4	3700 J	300 J	3.8	2 U	2 U	2 U	2 U	2 U
Methylene Chloride	10.0	1.7 U	1.7 U	1.7 U						
Naphthalene	5.1	2.6 U	2.6 U	2.6 U						
N-Butylbenzene	NL .2.4	1.1 U	1.1 U	1.1 U						
N-Heptane N-Hexane	<3.6 10.2	21 41	0.82 U 0.7 U	0.82 U <b>0.89</b>	2.7	1.2 0.98	0.82 U 0.7 U	84 1.5	0.82 U 0.7 U	93 1.7
N-Propylbenzene	10.2 NL	0.98 U	0.7 U 0.98 U	0.89 0.98 U	0.98 U	0.98 U	0.7 U 0.98 U	0.98 U	0.7 U 0.98 U	0.98 U
O-Xylene (1,2-Dimethylbenzene)	7.9	4.9	0.76 0	0.97 U	0.91	0.87 U	0.48 U	18	0.98 U	18
. , (.,= =		1	-1		I		19			



# Table 1 Indoor Air Sampling Results Villa Cleaners NYSDEC Site # 152188 Deer Park, NY

	Sample:	103538-1887-IA-030817	103538-1889-IA-030817	103538-1891-IA-030817	103538-1893-IA-030817	103538-1895-IA-030817	103538-1897-IA-030817	103538-1899A-IA-030817	103538-1899B-IA-030817	103538-9899A-IA-030817
	Location:	103538-1887-IA	103538-1889-IA	103538-1891-IA	103538-1893-IA	103538-1895-IA	103538-1897-IA	103538-1899A-IA	103538-1899B-IA	103538-1899A-IA
	Sample Date:	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017
	Sample Type:		N	N	N	N	N	N	N	FD
I	NYSDOH Indoor Air									
Chemical Name	Criteria <sup>1</sup>									
Sec-Butylbenzene	NL	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Styrene	1.9	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	28	0.85 U	11
T-Butylbenzene	NL	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Tert-Butyl Alcohol	NL	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U
Tert-Butyl Methyl Ether	11.5	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
Tetrachloroethylene (PCE)	15.9	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	4	5.5	1.4 U	7
Tetrahydrofuran	NL	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U
Toluene	43.0	55	6.1	4	7.8	5.5	1.2	260 J	5	280 J
Total Xylenes	NL	20	4.6	3 U	3.7	3 U	3 U	150	3 U	150
Frans-1,2-Dichloroethene	NL	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U
rans-1,3-Dichloropropene	<1.3	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U
Trichloroethylene (TCE)	4.2	0.67	0.21 U	0.31	1.4	0.27	0.53	4.1	0.21 U	4.6
Trichlorofluoromethane	18.1	1.5	1.3	1.4	1.4	1.5	1.3	1.3	1.3	1.4
Vinyl Bromide	NL	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U
/inyl Chloride	<1.9	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Notes:										
All results are in micrograms per cubic meter										
N = Normal Field Sample										
D = Field Duplicate Sample										
= The analyte was positively identified; the asso			tration of the analyte in the	sample.						
J = The analyte was analyzed for, but was not de										
JJ = The analyte was not detected above the sam										
- NYSDOH Building Assessment and survey evaluation	iation (RASE) database	e, Suiviivia® canister metho	a 90th percentile (2001)							
NL = Screening criteria not listed										
Detected results are bolded										

Detected results are bolded

NYSDOH Indoor Air Exceedance



# Table 2 Sub-slab Vapor Sampling Results Villa Cleaners NYSDEC Site # 152188 Deer Park, NY

	100500 1007 00 000017	400500 4000 00 000047	100500 1001 00 000017	100500 1000 00 000017	100500 1005 00 000017	100500 1005 00 000015		1,00500 10000 00 000017	
Sample:	103538-1887-SS-030817	103538-1889-SS-030817	103538-1891-SS-030817	103538-1893-SS-030817	103538-1895-SS-030817	103538-1897-SS-030817	103538-1899A-SS-030817	103538-1899B-SS-030817	103538-9899B-SS-030817
Location:	103538-1887-SS	103538-1889-SS	103538-1891-SS	103538-1893-SS	103538-1895-SS	103538-1897-SS	103538-1899A-SS	103538-1899B-SS	103538-1899B-SS
Sample Date:	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017
Sample Type:	N	N	N	N	N	N	N	N	FD
Chemical Name									
1.1.1-Trichloroethane	1.1 U	1.1 U	2.2 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
1,1,2,2-Tetrachloroethane	1.4 U	1.4 U	2.7 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.5 U	1.5 U	3.1 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
1,1,2-Trichloroethane	1.1 U	1.1 U	2.2 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
1,1-Dichloroethane	0.81 U	0.81 U	1.6 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U
1,1-Dichloroethene	0.79 U	0.79 U	1.6 U	0.79 U	0.79 U	0.79 U	0.79 U	1.9	2
1,2,4-Trichlorobenzene	3.7 U	3.7 U	7.4 U	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U
1,2,4-Trimethylbenzene	5.6	0.98 U	2 U	0.98 U	0.98 U	0.98 U	0.98 U	1.2	1.2
1,2-Dibromoethane (Ethylene Dibromide)	1.5 U	1.5 U	3.1 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
1,2-Dichlorobenzene	1.2 U	1.2 U	2.4 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
1,2-Dichloroethane	0.81 U	0.81 U	1.6 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U
1,2-Dichloropropane	0.92 U	0.92 U	1.8 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U
1,2-Dichlorotetrafluoroethane 1,3,5-Trimethylbenzene (Mesitylene)	1.4 U 2.4	1.4 U 0.98 U	2.8 U 2 U	1.4 U 0.98 U	1.4 U 0.98 U	1.4 U 0.98 U	1.4 U 0.98 U	1.4 U 0.98 U	1.4 U 0.98 U
1,3-Butadiene	0.44 U	0.98 U 0.44 U	0.88 U	0.98 U 0.44 U	0.98 U 0.44 U	0.44 U	0.98 U 0.44 U	0.98 U 0.44 U	0.98 U 0.44 U
1,3-Dichlorobenzene	1.2 U	1.2 U	2.4 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
1.4-Dichlorobenzene	1.2 U	1.2 U	2.4 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
1,4-Dioxane (P-Dioxane)	18 U	18 U	36 U	18 U	18 U	18 U	18 U	18 U	18 U
2,2,4-Trimethylpentane	1	0.93 U	1.9 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U
2-Chlorotoluene	1 U	1 U	2.1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone	4.2	2 U	4.1 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Ethyltoluene	1.4	0.98 U	2 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
Acetone	43	740 J	510 J	280 J	51	16	29	100 J	100 J
Allyl Chloride (3-Chloropropene)	1.6 U	1.6 U	3.1 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Benzene	0.64 U	0.64 U	1.3 U	1.3	0.64 U	0.64 U	0.64 U	0.73	0.74
Benzyl Chloride	1 U	1 U	2.1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	1.3 U	1.3 U	2.7 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Bromoform	2.1 U	2.1 U	4.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
Bromomethane	0.78 U	0.78 U <b>160 J</b>	1.6 U <b>96</b>	0.78 U 1.2 U	0.78 U	0.78 U	0.78 U <b>50</b>	0.78 U <b>140 J</b>	0.78 U <b>140 J</b>
Butane Corbon Disulfida	2.5	160 J	3.1 U	1.2 U 1.6 U	22 1.6 U	1.3	1.6 U	140 J 1.6 U	140 J 1.6 U
Carbon Disulfide Carbon Tetrachloride	0.48	0.37	0.5 U	0.6	0.54	0.55	0.64	0.62	0.61
Chlorobenzene	0.48 0.92 U	0.92 U	1.8 U	0.8 0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U
Chlorodifluoromethane	1.8 U	1.8 U	3.5 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
Chloroethane	1.3 U	1.3 U	2.6 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Chloroform	0.98 U	5.4	2 U	1.9	2.2	1.5	0.98 U	0.98 U	0.98 U
Chloromethane	4.3	1 U	2.1 U	1 U	1 U	1 U	3.7	1 U	1 U
Cis-1,2-Dichloroethylene	0.79 U	0.79 U	1.6 U	0.79 U	0.79 U	1.2	0.79 U	0.79 U	0.79 U
Cis-1,3-Dichloropropene	0.91 U	0.91 U	1.8 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U
Cyclohexane	0.69 U	0.69 U	1.4 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
Cymene	1.1 U	1.1 U	2.2 U	7	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Dibromochloromethane	1.7 U	1.7 U	3.4 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
Dichlorodifluoromethane	3.1	61	9.2	6.8	16	2.7	2.8	2.7	2.8
Dichloroethylenes	1.6 U	1.6 U	3.2 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Ethylbenzene Hexachlorobutadiene	<b>1.9</b> 2.1 U	0.87 U 2.1 U	1.7 U 4.3 U	<b>6.1</b> 2.1 U	0.87 U 2.1 U	0.87 U	0.87 U	0.87 U	0.87 U 2.1 U
	2.1 U 12 U	69	4.3 U 290 J	2.1 U 1800 J	2.1 U 110 J	2.1 U 12 U	2.1 U 12 U	2.1 U	64
Isopropanol Isopropylbenzene (Cumene)	0.98 U	0.98 U	2 <b>90 J</b> 2 U	370 J	0.98 U	0.98 U	0.98 U	<b>62</b> 0.98 U	0.98 U
m,p-Xylene	3.3	2.2 U	4.3 U	4.1	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
Methyl Ethyl Ketone (2-Butanone)	3.1	5.6	5.7	4.5	2.3	2.9	3.2	5	4.2
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	2.2	2 U	4.1 U	2 U	2 U	2.7 2 U	2 U	2.4	2.3
Methyl Methacrylate	2 U	34	15	2 U	2 U	2 U	2 U	2 U	2 U
	-10	_ ~·l	• •	-10			<u> </u>	, ~ <sub> </sub> ~	<u>-</u>  -



# Table 2 Sub-slab Vapor Sampling Results Villa Cleaners NYSDEC Site # 152188 Deer Park, NY

	Sample:	103538-1887-SS-030817	103538-1889-SS-030817	103538-1891-SS-030817	103538-1893-SS-030817	103538-1895-SS-030817	103538-1897-SS-030817	103538-1899A-SS-030817	103538-1899B-SS-030817	103538-9899B-SS-030817
	Location:	103538-1887-SS	103538-1889-SS	103538-1891-SS	103538-1893-SS	103538-1895-SS	103538-1897-SS	103538-1899A-SS	103538-1899B-SS	103538-1899B-SS
	Sample Date:	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017
	Sample Type:	N	N	N	N	N	N	N	N	FD
Methylene Chloride		1.7 U	1.7 U	3.5 U	1.7 U	1.7 U	1.7 U	5.3	1.7 U	1.7 U
Naphthalene				5.2 U			2.6 U			
N-Butylbenzene		1.1 U	1.1 U	2.2 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
N-Heptane		0.91	1.3	1.6 U	1.3	0.82 U	0.82 U	5.6	0.82 U	0.82 U
N-Hexane		0.85	0.7 U	1.4 U	1.5	0.75	0.7 U	1.6	0.7 U	0.7 U
N-Propylbenzene		1.3	0.98 U	2 U	10	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
O-Xylene (1,2-Dimethylbenzene)	)	2.3	0.87 U	1.7 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U
Sec-Butylbenzene		1.1 U	1.1 U	2.2 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Styrene		0.85 U	4.5	1.7 U	0.85 U	0.85 U	0.85 U	1.2	0.85 U	0.85 U
T-Butylbenzene		1.1 U	1.1 U	2.2 U	19	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Tert-Butyl Alcohol		15 U	15 U	30 U	19	15 U	15 U	15 U	50	52
Tert-Butyl Methyl Ether		0.72 U	0.72 U	1.4 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
Tetrachloroethylene (PCE)		21	140	310	37	2.2	8.6	130	5.6	5.6
Tetrahydrofuran		15 U	15 U	29 U	15 U	15 U	15 U	15 U	15 U	15 U
Toluene		2.7	3.2	1.6	5.7	2.4	0.75 U	11	3.7	3.9
Total Xylenes		5.6	3 U	6.1 U	4.1	3 U	3 U	3 U	3 U	3 U
Trans-1,2-Dichloroethene		0.79 U	0.79 U	1.6 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U
Trans-1,3-Dichloropropene		0.91 U	0.91 U	1.8 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U
Trichloroethylene (TCE)		0.21 U	3.7	11	4.8	0.52	1	0.62	0.44	0.46
Trichlorofluoromethane		1.6	1.6	2.2 U	1.6	1.5	1.5	1.6	1.5	1.5
Vinyl Bromide		0.87 U	0.87 U	1.7 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U
Vinyl Chloride		0.1 U	0.1 U	0.2 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U

Notes:

All results are in micrograms per cubic meter N = Normal Field Sample

FD = Field Duplicate Sample

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U = The analyte was analyzed for, but was not detected above the sample reporting limit.

UJ = The analyte was not detected above the sample reporting limit; and the reporting limit is approximate.

Detected results are bolded



# Table 3 **Outdoor Ambient Air Sampling Results** Villa Cleaners **NYSDEC Site # 152188** Deer Park, NY

Cotation:   103333-1897-OA   377/2017   AB   377/2017   AB		Sample:		7-OA-030817
Chemical Name		Sample Date:	3/7/	2017
Chemical Name		Sample Type:	A	.B
1.1.1-trichloroethane	Chemical Name			
1.1.2 Trichloro-1.2.2 J. Trifluproethane			1.1	U
1.1.2=Trichloroethane	1,1,2,2-Tetrachloroethane	NL	1.4	U
1.1-Dichforoethene		+		_
1.1-Dichloroentene				_
12.4 Trinchlyberzene				_
1.2-Dichlorobentane (Ethylene Dibromide)				_
12-Dichloropenzene	1,2,4-Trimethylbenzene	5.8	0.98	U
1.2-Dichloropropane				_
1,2-Dichloropropane	,			
1.2-Dichlorotetrafluoroethane				
1.3-Firmethylbenzene (Mesitylene)   2.7   0.98   U   1.3-Butadiene   <3.4   0.444   U   1.3-Dichlorobenzene   <2.2   1.2   U   1.4-Dichlorobenzene   1.2   1.2   U   1.4-Dichlorobenzene   1.2   1.2   U   U   1.4-Dichlorobenzene   NL   18   U   2.2-4-Trimethylpentane   NL   0.93   U   2.2-Chlorofoluene   NL   1   U   U   V   V   V   V   V   V   V   V				
1.3-Dichlorobenzene	,			
1.4-Dichlorobenzene				_
1.4-Dioxane (P-Dioxane)				
2.2.4-Trimethylpentane				
2-Chlorotoluene				
2-Hexanone				
Acetone				
Allyl Chloride (3-Chloropropene)   N.L   1.6   U				U
Benzyl Chloride				
Benzyl Chloride				
Bromodichloromethane				
Bromoform				
Butane		NL		U
Carbon Disulfide         3.7         1.6         U           Carbon Tetrachloride         0.7         0.51           Chloroberene         <0.8	Bromomethane	<1.6	0.78	U
Carbor Tetrachloride         0.7         0.51           Chlorobenzene         <0.8				
Chlorobenzene         <0.8         0.92         U           Chlorodifluoromethane         NL         1.8         U           Chloroform         0.6         0.98         U           Chloromethane         3.7         1.3         U           Chis-1,2-Dichloropethylene         <1.8				U
Chlorodifluoromethane         NL         1.8         U           Chloroform         0.6         0.98         U           Chloromethane         3.7         1.3         U           Cis-1,2-Dichloroethylene         <1.8		+		H
Chloroform         0.6         0.98         U           Chloromethane         3.7         1.3           Cis-1,2-Dichloroethylene         <1.8				_
Chloromethane         3.7         1.3           Cis-1,2-Dichloroethylene         <1.8		<1.2	1.3	U
Cis-1,2-Dichloroethylene         <1.8				U
Cis-1,3-Dichloropropene         <2.2				- 11
Cyclohexane         NL         0.69         U           Cymene         NL         1.1         U           Dibromochloromethane         NL         1.7         U           Dichlorodifluoromethane         8.1         2.5         U           Dichloroethylenes         NL         1.6         U           Ethylbenzene         3.5         0.87         U           Hexachlorobutadiene         <6.4				
Dibromochloromethane				
Dichlorodiffuoromethane         8.1         2.5         U           Dichloroethylenes         NL         1.6         U           Ethylbenzene         3.5         0.87         U           Hexachlorobutadiene         <6.4		NL	1.1	U
Dichloroethylenes         NL         1.6         U           Ethylbenzene         3.5         0.87         U           Hexachlorobutadiene         <6.4				
Ethylbenzene         3.5         0.87         U           Hexachlorobutadiene         <6.4				
Hexachlorobutadiene				
Isopropanol   NL				
m,p-Xylene         12.8         2.2         U           Methyl Ethyl Ketone (2-Butanone)         11.3         1.5         U           Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)         1.9         2         U           Methyl Methacrylate         NL         2         U           Methylene Chloride         6.1         1.7         U           Naphthalene         4.9         2.6         U           N-Butylbenzene         NL         1.1         U           N-Heythane         2.2         0.82         U           N-Hexane         6.4         0.7         U           N-Propylbenzene         NL         0.98         U           O-Xylene (1,2-Dimethylbenzene)         4.6         0.87         U           Sec-Butylbenzene         NL         1.1         U           Styrene         1.3         0.85         U           T-Butylbenzene         NL         1.1         U           Tert-Butyl Alcohol         NL         15         U           Tert-Butyl Methyl Ether         6.2         0.72         U           Tetrachloroethylene (PCE)         6.5         1.4         U           Tetrachloroethylene         NL				U
Methyl Ethyl Ketone (2-Butanone)         11.3         1.5         U           Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)         1.9         2         U           Methyl Methacrylate         NL         2         U           Methylene Chloride         6.1         1.7         U           Naphthalene         4.9         2.6         U           N-Butylbenzene         NL         1.1         U           N-Heytane         8.4         0.7         U           N-Hexane         6.4         0.7         U           N-Propylbenzene         NL         0.98         U           O-Xylene (1,2-Dimethylbenzene)         4.6         0.87         U           Sec-Butylbenzene         NL         1.1         U           Styrene         1.3         0.85         U           T-Butylbenzene         NL         1.1         U           Tert-Butyl Alcohol         NL         1.5         U           Tert-Butyl Methyl Ether         6.2         0.72         U           Tetrachloroethylene (PCE)         6.5         1.4         U           Tetrahydrofuran         NL         15         U           Total Xylenes         NL				
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)         1.9         2         U           Methyl Methacrylate         NL         2         U           Methylene Chloride         6.1         1.7         U           Naphthalene         4.9         2.6         U           N-Butylbenzene         NL         1.1         U           N-Heptane         2.2         0.82         U           N-Hexane         6.4         0.7         U           N-Propylbenzene         NL         0.98         U           O-Xylene (1,2-Dimethylbenzene)         4.6         0.87         U           Sec-Butylbenzene         NL         1.1         U           Styrene         1.3         0.85         U           T-Butylbenzene         NL         1.1         U           Tert-Butyl Alcohol         NL         1.5         U           Tert-Butyl Methyl Ether         6.2         0.72         U           Tetrachloroethylene (PCE)         6.5         1.4         U           Tetrahydrofuran         NL         15         U           Total Xylenes         NL         3         U           Trans-1,2-Dichloroethene         NL         0.91<				
Methyl Methacrylate         NL         2         U           Methylene Chloride         6.1         1.7         U           Naphthalene         4.9         2.6         U           N-Butylbenzene         NL         1.1         U           N-Heptane         2.2         0.82         U           N-Hexane         6.4         0.7         U           N-Propylbenzene         NL         0.98         U           O-Xylene (1,2-Dimethylbenzene)         4.6         0.87         U           Sec-Butylbenzene         NL         1.1         U           Styrene         1.3         0.85         U           T-Butylbenzene         NL         1.1         U           Tert-Butyl Alcohol         NL         15         U           Tert-Butyl Methyl Ether         6.2         0.72         U           Tetrachloroethylene (PCE)         6.5         1.4         U           Tetrahydrofuran         NL         15         U           Toluene         33.7         0.85         Total Xylenes         NL         3         U           Trans-1,2-Dichloroethene         NL         0.79         U         Trans-1,3-Dichloropropene				
Methylene Chloride         6.1         1.7         U           Naphthalene         4.9         2.6         U           N-Butylbenzene         NL         1.1         U           N-Heptane         2.2         0.82         U           N-Hexane         6.4         0.7         U           N-Propylbenzene         NL         0.98         U           O-Xylene (1,2-Dimethylbenzene)         4.6         0.87         U           Sec-Butylbenzene         NL         1.1         U           Styrene         1.3         0.85         U           T-Butylbenzene         NL         1.1         U           Tert-Butyl Alcohol         NL         1.5         U           Tert-Butyl Methyl Ether         6.2         0.72         U           Tetrachloroethylene (PCE)         6.5         1.4         U           Tetrahydrofuran         NL         15         U           Toluene         33.7         0.85           Total Xylenes         NL         3         U           Trans-1,2-Dichloroethene         NL         0.91         U           Trichloroethylene (TCE)         1.3         0.21         U				
Naphthalene         4.9         2.6         U           N-Butylbenzene         NL         1.1         U           N-Heptane         2.2         0.82         U           N-Hexane         6.4         0.7         U           N-Propylbenzene         NL         0.98         U           O-Xylene (1,2-Dimethylbenzene)         4.6         0.87         U           Sec-Butylbenzene         NL         1.1         U           Styrene         1.3         0.85         U           T-Butylbenzene         NL         1.1         U           Tert-Butyl Alcohol         NL         15         U           Tert-Butyl Methyl Ether         6.2         0.72         U           Tetrachloroethylene (PCE)         6.5         1.4         U           Tetrahydrofuran         NL         15         U           Toluene         33.7         0.85           Total Xylenes         NL         3         U           Trans-1,2-Dichloroethene         NL         0.91         U           Trichloroethylene (TCE)         1.3         0.21         U				
N-Heptane         2.2         0.82         U           N-Hexane         6.4         0.7         U           N-Propylbenzene         NL         0.98         U           O-Xylene (1,2-Dimethylbenzene)         4.6         0.87         U           Sec-Butylbenzene         NL         1.1         U           Styrene         1.3         0.85         U           T-Butylbenzene         NL         1.1         U           Tert-Butyl Alcohol         NL         15         U           Tert-Butyl Methyl Ether         6.2         0.72         U           Tetrachloroethylene (PCE)         6.5         1.4         U           Tetrahydrofuran         NL         15         U           Toluene         33.7         0.85           Total Xylenes         NL         3         U           Trans-1,2-Dichloroethene         NL         0.79         U           Trans-1,3-Dichloropropene         <1.4	Naphthalene			
N-Hexane         6.4         0.7         U           N-Propylbenzene         NL         0.98         U           O-Xylene (1,2-Dimethylbenzene)         4.6         0.87         U           Sec-Butylbenzene         NL         1.1         U           Styrene         1.3         0.85         U           T-Butylbenzene         NL         1.1         U           Tert-Butyl Alcohol         NL         15         U           Tert-Butyl Methyl Ether         6.2         0.72         U           Tetrachloroethylene (PCE)         6.5         1.4         U           Tetrahydrofuran         NL         15         U           Toluene         33.7         0.85           Total Xylenes         NL         3         U           Trans-1,2-Dichloroethene         NL         0.79         U           Trans-1,3-Dichloropropene         <1.4		l l		
N-Propylbenzene         NL         0.98         U           O-Xylene (1,2-Dimethylbenzene)         4.6         0.87         U           Sec-Butylbenzene         NL         1.1         U           Styrene         1.3         0.85         U           T-Butylbenzene         NL         1.1         U           Tert-Butyl Alcohol         NL         15         U           Tert-Butyl Methyl Ether         6.2         0.72         U           Tetrachloroethylene (PCE)         6.5         1.4         U           Tetrahydrofuran         NL         15         U           Toluene         33.7         0.85           Total Xylenes         NL         3         U           Trans-1,2-Dichloroethene         NL         0.79         U           Trans-1,3-Dichloropropene         <1.4				
O-Xylene (1,2-Dimethylbenzene)         4.6         0.87         U           Sec-Butylbenzene         NL         1.1         U           Styrene         1.3         0.85         U           T-Butylbenzene         NL         1.1         U           Tert-Butyl Alcohol         NL         15         U           Tert-Butyl Methyl Ether         6.2         0.72         U           Tetrachloroethylene (PCE)         6.5         1.4         U           Tetrahydrofuran         NL         15         U           Toluene         33.7         0.85           Total Xylenes         NL         3         U           Trans-1,2-Dichloroethene         NL         0.79         U           Trans-1,3-Dichloropropene         <1.4				_
Sec-Butylbenzene         NL         1.1         U           Styrene         1.3         0.85         U           T-Butylbenzene         NL         1.1         U           Tert-Butyl Alcohol         NL         15         U           Tert-Butyl Methyl Ether         6.2         0.72         U           Tetrachloroethylene (PCE)         6.5         1.4         U           Tetrahydrofuran         NL         15         U           Toluene         33.7         0.85           Total Xylenes         NL         3         U           Trans-1,2-Dichloroethene         NL         0.79         U           Trans-1,3-Dichloropropene         <1.4				
T-Butylbenzene         NL         1.1         U           Tert-Butyl Alcohol         NL         15         U           Tert-Butyl Methyl Ether         6.2         0.72         U           Tetrachloroethylene (PCE)         6.5         1.4         U           Tetrahydrofuran         NL         15         U           Toluene         33.7         0.85           Total Xylenes         NL         3         U           Trans-1,2-Dichloroethene         NL         0.79         U           Trans-1,3-Dichloropropene         <1.4	Sec-Butylbenzene	NL	1.1	
Tert-Butyl Alcohol         NL         15         U           Tert-Butyl Methyl Ether         6.2         0.72         U           Tetrachloroethylene (PCE)         6.5         1.4         U           Tetrahydrofuran         NL         15         U           Toluene         33.7         0.85           Total Xylenes         NL         3         U           Trans-1,2-Dichloroethene         NL         0.79         U           Trans-1,3-Dichloropropene         <1.4				
Tert-Butyl Methyl Ether         6.2         0.72         U           Tetrachloroethylene (PCE)         6.5         1.4         U           Tetrahydrofuran         NL         15         U           Toluene         33.7         0.85           Total Xylenes         NL         3         U           Trans-1,2-Dichloroethene         NL         0.79         U           Trans-1,3-Dichloropropene         <1.4	-			
Tetrachloroethylene (PCE)         6.5         1.4         U           Tetrahydrofuran         NL         15         U           Toluene         33.7 <b>0.85</b> Total Xylenes         NL         3         U           Trans-1,2-Dichloroethene         NL         0.79         U           Trans-1,3-Dichloropropene         <1.4				
Tetrahydrofuran         NL         15         U           Toluene         33.7 <b>0.85</b> Total Xylenes         NL         3         U           Trans-1,2-Dichloroethene         NL         0.79         U           Trans-1,3-Dichloropropene         <1.4				
Total Xylenes         NL         3         U           Trans-1,2-Dichloroethene         NL         0.79         U           Trans-1,3-Dichloropropene         <1.4	Tetrahydrofuran	NL		U
Trans-1,2-Dichloroethene         NL         0.79         U           Trans-1,3-Dichloropropene         <1.4				
Trans-1,3-Dichloropropene<1.40.91UTrichloroethylene (TCE)1.30.21U				
Trichloroethylene (TCE) 1.3 0.21 U				-
Trichlorofluoromethane 4.3 1.3	Trichlorofluoromethane	4.3		
Vinyl Bromide NL 0.87 U		NL	0.87	
Vinyl Chloride         <1.8         0.1         U           Notes:		<1.8	0.1	U

All results are in micrograms per cubic meter N = N and Field Sample

FD = Field Duplicate Sample

- J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

  U = The analyte was analyzed for, but was not detected above the sample reporting limit.

  UJ = The analyte was not detected above the sample reporting limit; and the reporting limit is approximate.

  1 NYSDOH Building Assessment and survey evaluation (BASE) database, SUMMA® canister method 90th percentile (2001)

NL = Screening criteria not listed

Detected results are bolded

NYSDOH Outdoor Air Exceedance



# Table 4 NYSDOH Soil Vapor Intrusion Guidance Matrix Action Table Villa Cleaners NYSDEC Site # 152188 Deer Park, NY

Address	Sample*	1,1,1-Trichloroethane	1,1-Dichloroethene	Carbon tetrachloride	cis-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl chloride
1887 Deer Park Ave.	1887-IA	1.1 U	0.79 U	0.51	0.79 U	1.4 U	0.67	0.1 U
1007 Deel Park Ave.	1887-SS	1.1 U	0.79 U	0.48	0.79 U	21	0.21 U	0.1 U
1889 Deer Park Ave.	1889-IA	1.1 U	0.79 U	0.25 U	0.79 U	1.4 U	0.21 U	0.1 U
1009 Deel Park Ave.	1889-SS	1.1 U	0.79 U	0.37	0.79 U	140	3.7	0.1 U
1891 Deer Park Ave.	1891-IA	1.1 U	0.79 U	0.7	0.79 U	1.4 U	0.31	0.1 U
1891 Deel Park Ave.	1891-SS	2.2 U	1.6 U	0.5 U	1.6 U	310	11	0.2 U
1893 Deer Park Ave.	1893-IA	1.1 U	0.79 U	0.5	0.79 U	1.4 U	1.4	0.1 U
1093 Deel Park Ave.	1893-SS	1.1 U	0.79 U	0.6	0.79 U	37	4.8	0.1 U
1895 Deer Park Ave.	1895-IA	1.1 U	0.79 U	0.5	0.79 U	1.4 U	0.27	0.1 U
1090 Deel Park Ave.	1895-SS	1.1 U	0.79 U	0.54	0.79 U	2.2	0.52	0.1 U
1897 Deer Park Ave.	1897-IA	1.1 U	0.79 U	0.47	2.8	4	0.53	0.1 U
1097 Deel Park Ave.	1897-SS	1.1 U	0.79 U	0.55	1.2	8.6	1	0.1 U
1899A Deer Park Ave.	1899A-IA	1.1 U	0.79 U	0.54**	0.79 U	7**	4.6**	0.1 U
1077A DEEL PAIK AVE.	1899A-SS	1.1 U	0.79 U	0.64	0.79 U	130	0.62	0.1 U
1899B Deer Park Ave.	1899B-IA	1.1 U	0.79 U	0.52	0.79 U	1.4 U	0.21 U	0.1 U
1899B Deef Park Ave.	1899B-SS	1.1 U	2**	0.62	0.79 U	5.6	0.46**	0.1 U

### Notes:

The below recommendations are based on the NYSDOH soil vapor intrusion guidance matrices.

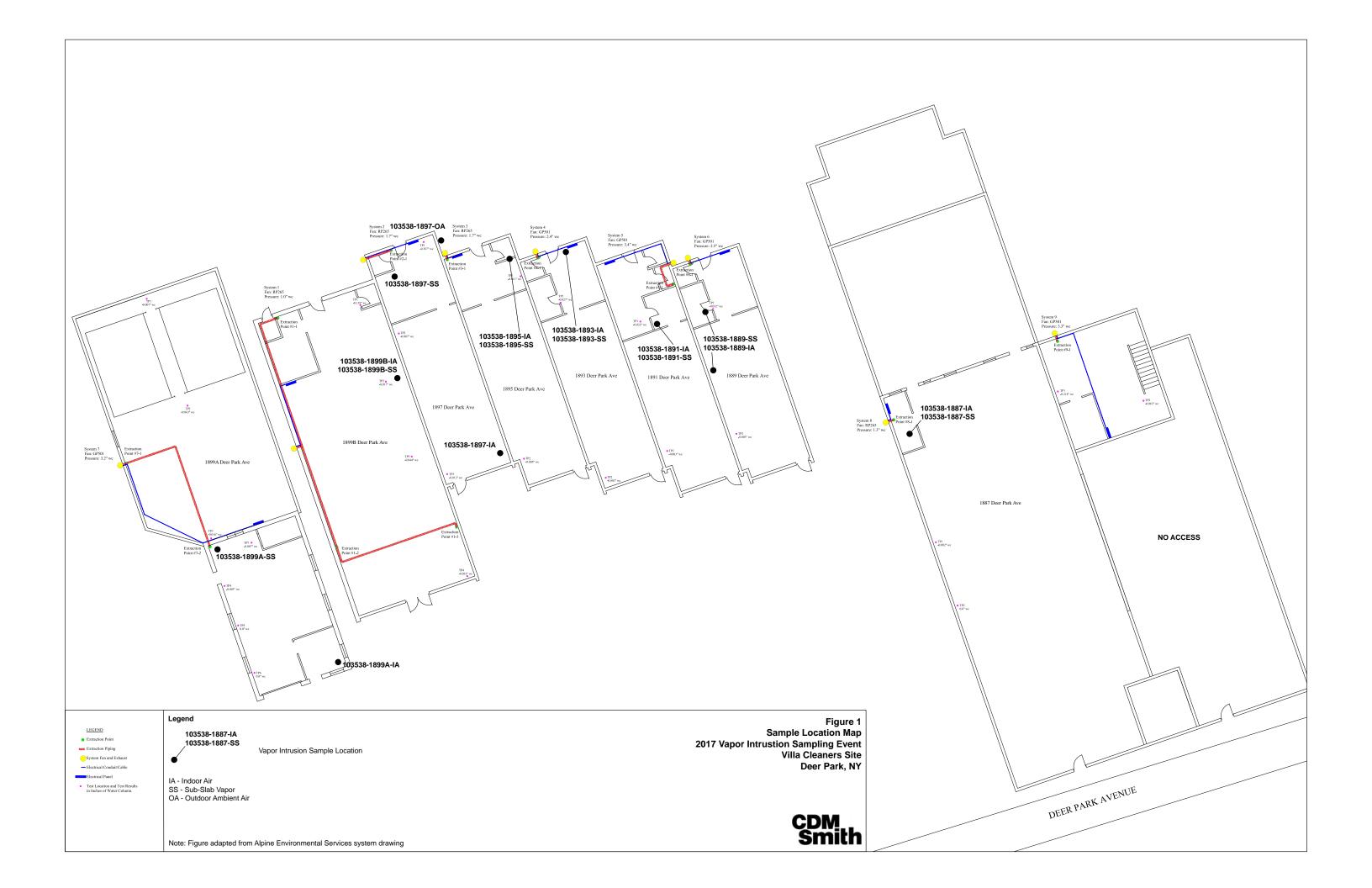
- No further action
- Take reasonable and practical actions to identify source(s) and reduce exposures
- MONITOR
- MONITOR / MITIGATE

All results in micrograms per cubic meter

U = The analyte was analyzed for, but was not detected above the sample reporting limit.

- \* Sample ID abbreviated for clarity
- \*\* duplicate value used because concentration is higher





# Appendix A

NYSDOH Indoor Air Quality and Building Inventory Questionnaires

# 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.

reparer's Name 71an	Liao	Date/Time Prepared	3/8/17
reparer's Affiliation CD	M Smith	Phone No. 732 -	225 - 7000
eurpose of Investigation	Villa Chan	vers	
. OCCUPANT:			165
nterviewed: Y/N			
ast Name: Peterson		First Name: Billy	
		: Deer Park N7	
county: Suffork			
ome Phone:	Off	fice Phone: 631-667-8076	
umber of Occupants/perso	ons at this location	on 3 Age of Occupants 18	-70
OWNER OR LANDLO	RD: (Check if	same as occupant)	
nterviewed: Y/N			
ast Name: Peterson		First Name: Billy	- Y,
ddress: 1887 Dee	r Park A	ve. Deer gark, NY	
ounty:			
	Off	fice Phone: 631 - 667 - 8070	
BUILDING CHARACT	ERISTICS		
ype of Building: (Circle a	ppropriate respo	onse)	
Residential Industrial	School Church	Commercial/Multi-use Other: Ligyor Store	

If the property is residential, type? (Circle appropria	ate response)
Ranch 2-Family	3-Family
Raised Ranch Split Level	Colonial
Cape Cod Contemporary	Mobile Home NO
Duplex Apartment House	Townhouses/Condos
Modular Log Home	Other:
If multiple units, how many?	
If the property is commercial, type?	
Business Type(s) liquor store	
Does it include residences (i.e., multi-use)? Y	If yes, how many?
Other characteristics:	
Number of floors Build	ling age_1963
Is the building insulated? Y N How	air tight? Tight / Average / Not Tight
4. AIRFLOW	
Use air current tubes or tracer smoke to evaluate air	irflow patterns and qualitatively describe:
Airflow between floors	
NIA	
Airflow near source	
	3
Outdoor air infiltration	
	9
y	
	4
Infiltration into air ducts	
	- The state of the

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

a. Above grade construc	ction: wood fra	me concrete	stone	brick
b. Basement type:	full	crawlspace	slab	other
c. Basement floor:	concrete	dirt	stone	other
d. Basement floor:	uncovere	d covered	covered with	1
e. Concrete floor:	unsealed	sealed	sealed with	*
f. Foundation walls:	poured	block	stone	other
g. Foundation walls:	unsealed	sealed	sealed with	
h. The basement is:	wet	damp	dry	moldy
i. The basement is:	finished	unfinished	partially fini	shed
j. Sump present?	Y/N		No baseme	n1
k. Water in sump?	Y/N/not application		Lot Dollari	710
			¥	,
6. HEATING, VENTING	and AIR CONDITION		that apply)	ry)
Hot air circulation Space Heaters Electric baseboard	Heat pum Stream ra Wood sto	p Hot diation Rad	water baseboard liant floor door wood boiler	17
The primary type of fuel use	ed is:			
Natural Gas Electric Wood	Fuel Oil Propane Coal	Ker Sola	osene ar	
Domestic hot water tank fue	led by: Natura	al gas		
Boiler/furnace located in:	Basement O	utdoors (Mai	n Floor	Othor
		utdoors	II I IOOI	Other

Are there air distribution ducts present?



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.

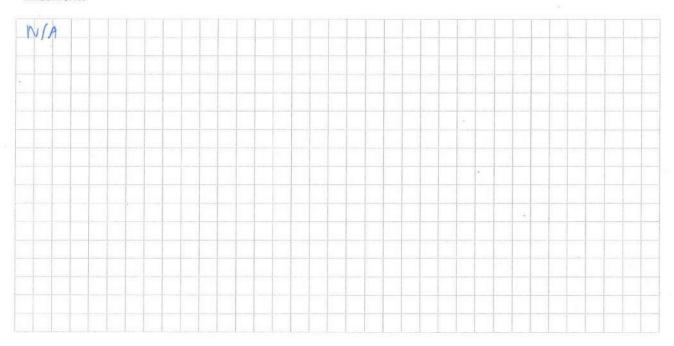
Along celling and wall	
	76°
8	
7. OCCUPANCY	
Is basement/lowest level occupied? Full-time Occ	casionally Seldom Almost Never
Level General Use of Each Floor (e.g., familyr	oom, bedroom, laundry, workshop, storage)
Basement	
1st Floor Mayore Store operations	
2 <sup>nd</sup> Floor	
3 <sup>rd</sup> Floor	
4 <sup>th</sup> Floor	
8. FACTORS THAT MAY INFLUENCE INDOOR AIR	QUALITY
a. Is there an attached garage?	Y / N)
b. Does the garage have a separate heating unit?	Y/N/NA
c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car)	Y/N/NA Please specify
d. Has the building ever had a fire?	Y /N When?
e. Is a kerosene or unvented gas space heater present?	Y /(N) Where?
f. Is there a workshop or hobby/craft area?	Y/N Where & Type?
g. Is there smoking in the building?	Y / N How frequently?
h. Have cleaning products been used recently?	Y (N) When & Type? Fabuloso cleaner window cleaner
i. Have cosmetic products been used recently?	Y/N When & Type?

j. Has painting/staining been done in the last 6 months?	Y / N Where & When?
k. Is there new carpet, drapes or other textiles?	Y N Where & When?
l. Have air fresheners been used recently?	Y N When & Type?
m. Is there a kitchen exhaust fan?	Y/N If yes, where vented?
n. Is there a bathroom exhaust fan?	Y / N If yes, where vented?
o. Is there a clothes dryer?	Y /N If yes, is it vented outside? Y / N
p. Has there been a pesticide application?	Y/N When & Type?
Are there odors in the building?  If yes, please describe:	Y/N
Do any of the building occupants use solvents at work?  (e.g., chemical manufacturing or laboratory, auto mechanic or a boiler mechanic, pesticide application, cosmetologist	auto body shop, painting, fuel oil delivery,
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 response)	dry-cleaning service? (Circle appropriate
Yes, use dry-cleaning regularly (weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry-cleaning service	No Unknown
Is there a radon mitigation system for the building/structure Is the system active or passive? Active/Passive	e? Y/N Date of Installation:
9. WATER AND SEWAGE	
Water Supply: Public Water Drilled Well Driver	n Well Dug Well Other:
Sewage Disposal: Public Sewer Septic Tank Leach	Field Dry Well Other:
10. RELOCATION INFORMATION (for oil spill residentia	al emergency)
a. Provide reasons why relocation is recommended:	
b. Residents choose to: remain in home relocate to frie	ends/family relocate to hotel/motel
c. Responsibility for costs associated with reimbursemen	nt explained? Y/N
d. Relocation package provided and explained to resider	nts? Y/N

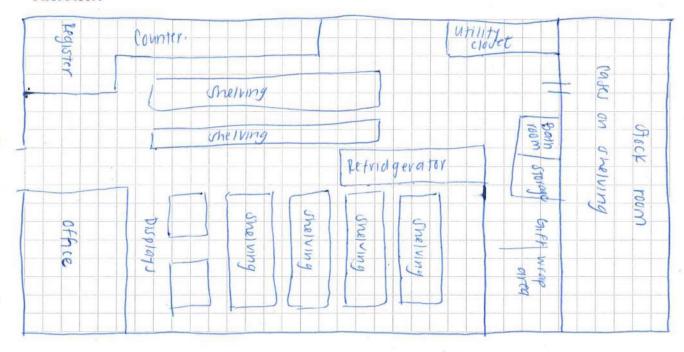
# 11. FLOOR PLANS

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

# **Basement:**



# First Floor:

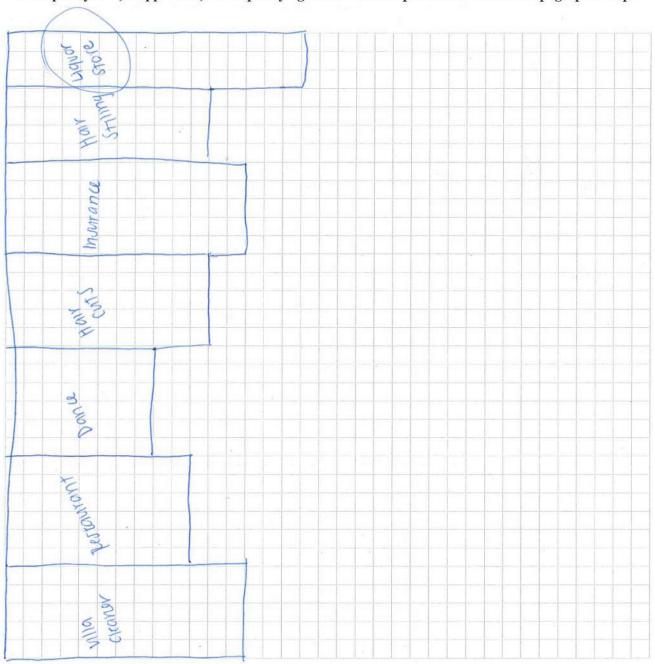


Entrana

# 12. OUTDOOR PLOT

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

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



## 13. PRODUCT INVENTORY FORM

Make & Model of field instrument used:	

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

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo** Y/N
closet	Chass Cleaner	3202	и.	sodium. Xythre, outforate	0	-
cioset	ALL Pro Retrigerant	20 ot.	W	alkylene ghrol, naonopytyl ether	ð	N
closet	WD-40	8 02.	u	Aliphane h-larocarbon petroleum pased ail	0	N
				hadrocarbon	0	N
closet	korkat cleaner	3× 3202.	Ч	hutoxy ethanol nonyl phenoky poly ethanol hydrotreated light distillate.	0	N
closet	vil-based primer	Igal	И	titanium dioxare, aromate	0	N
				n-idro carbons		
		-		1 18	1	25
					5	
	15					
				*		
					4	
			7 7	· c		
		2				
	10		1956		75	
					9	

<sup>\*</sup> Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D)

<sup>\*\*</sup> Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.



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

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

Preparer's Name 1190		Date/Time	Drangrad 3/	8/17
Preparer's Affiliation CDM Smlt	· h			
reparer's Affiliation	77	Phone No	732-225	7000
Purpose of Investigation VIII 4	(caner)			
. OCCUPANT:				*
nterviewed: Y/N				
ast Name: Mancudo	First Name:	Linda		
Address: 1889 Deer Park	ove. Deer Po	ark NT		2
County: Suffolk				
Iome Phone:	Office Phone:	31 - 243 - 133	3	
Tumber of Occupants/persons at this lo		-	s40 -50	
OWNER OR LANDLORD: (Chec.	k if same as occup			
iterviewed: Y/N		Cra 27	B111-15	
ast Name: Peterson	First Name:	Billy .		9
ddress: 1887 Deer Park A	ve Decr Pa	VK NT		
ounty: Suffolk			*	
ome Phone:	Office Phone:	31-667-803	10	
DIM DING CHADA CTEDICTICS				
BUILDING CHARACTERISTICS				
ype of Building: (Circle appropriate re	esponse)			
	-cp onse)			

If the property is resident	ial, type? (Circle appropri	ate response)		
Ranch	2-Family	3-Family	610	
Raised Ranch	Split Level	Colonial	No	
Cape Cod	Contemporary	Mobile Home		
Duplex	Apartment House	Townhouses/C	ondos	
Modular	Log Home	Other:	Olidos	
Wodulai	Log Home	Other.		
If multiple units, how man	ny?		8	
If the property is commer	cial, type?		- , -	
Business Type(s)	air salon			
Does it include residen	ces (i.e., multi-use)? Y/	If yes,	how many?	-
Other characteristics:				
Number of floors_	Buile	ding age1963		
Is the building insulated	1? Y / W How	air tight? Tight /	Average / Not Tig	ht ,
4. AIRFLOW				9
Use air current tubes or tr	va a a va a va de como la como	inflow nattorns ar	nd qualitativaly d	acariba:
Ose all cuffent tubes of th	acer smoke to evaluate a	iii iiow patterns ai	iu quantatively u	escribe.
and the second second		V		
Airflow between floors				
NA			de la companya della companya della companya de la companya della	
- 237				
	po sel com			
				3.
Airflow near source				,
Moderate our flow	from front to bac	k and via	vent and A	1 c unit
- II				
Outdoor air infiltration				
	0			
Mini mall Minin	nal			
	8 2		- 1	
21				
T. C1	9			
Infiltration into air ducts				
not observed				
				7)

			(Circle all that	Thhr)	
			ho l	atment	
a. Above grade construct	ion: wood frame	concrete	stone	brick	
b. Basement type:	full	crawlspace	slab	other	
c. Basement floor:	concrete	dirt	stone	other	
d. Basement floor:	uncovered	covered	covered with	1	
e. Concrete floor:	unsealed	sealed	sealed with		
f. Foundation walls:	poured	block	stone	other	
g. Foundation walls:	unsealed	sealed	sealed with		
h. The basement is:	wet	damp	dry	moldy	
i. The basement is:	finished	unfinished	partially fini	shed	
j. Sump present?	Y/N				
k. Water in sump?	Y/N/not applicabl	e			
M Trace In Sump.	1 / 11 / not application				
Basement/Lowest level depth	below grade:	(feet)			
	T	oximate size (e.g	., cracks, utility	y ports, drai	ins)
	linoleum	oximate size (e.g	., cracks, utility	y ports, dra	ins)
		oximate size (e.g	., cracks, utility	y ports, drai	ins)
Floor covered with	linoltum			y ports, drai	ins)
Floor covered with	d AIR CONDITION	ING (Circle all t	nat apply)		ins)
HEATING, VENTING and Type of heating system(s) used Hot air circulation Space Heaters	d AIR CONDITION in this building: (ci  Heat pump  Stream radia	ING (Circle all the control of the c	nat apply) y – note prima vater baseboard nt floor		ins)
HEATING, VENTING and Hot air circulation	d AIR CONDITION in this building: (ci	ING (Circle all the control of the c	nat apply) y – note prima vater baseboard		ins)
HEATING, VENTING and Type of heating system(s) used Hot air circulation Space Heaters Electric baseboard	d AIR CONDITION  I in this building: (ci  Heat pump  Stream radia  Wood stove	ING (Circle all the control of the c	nat apply) y – note prima vater baseboard nt floor	ry)	ins)
Heating, Venting and Type of heating system(s) used Hot air circulation Space Heaters Electric baseboard	d AIR CONDITION  I in this building: (ci  Heat pump  Stream radia  Wood stove	ING (Circle all the control of the c	nat apply)  y – note prima  vater baseboard  nt floor  oor wood boiler	ry)	ins)
HEATING, VENTING and Type of heating system(s) used Hot air circulation Space Heaters Electric baseboard  Natural Gas Electric Wood	d AIR CONDITION  I in this building: (ci  Heat pump Stream radia Wood stove  is:  Fuel Oil Propane Coal	ING (Circle all the rcle all that apple that we have a reconstruction and the reconstruction and the reconstruction are reconstructed to the reconstruction and the reconstruction are reconstructed to the reconstruction and reconstructed to the reconstruction and reconstructed to the reconstruction and reconstructed to the recons	nat apply)  y – note prima  vater baseboard  nt floor  oor wood boiler	ry)	ins)
HEATING, VENTING and Type of heating system(s) used Hot air circulation Space Heaters Electric baseboard The primary type of fuel used Natural Gas Electric Wood  Comestic hot water tank fueled	d AIR CONDITION  I in this building: (ci  Heat pump Stream radia Wood stove  is:  Fuel Oil Propane Coal  d by: Natural	IING (Circle all the rcle all that applied that we have a record and the rcle all that applied that we have a rcle all that applied that applied the rcle all that applied tha	nat apply)  y – note prima  vater baseboard  nt floor  oor wood boiler  ene	ry)	ins)

Are there air distribution ducts present?



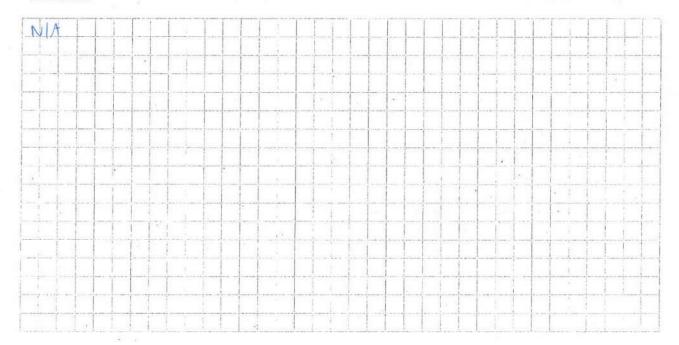
Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

2 Alc unity in wall'	
· · · · · · · · · · · · · · · · · · ·	
. OCCUPANCY	
s basement/lowest level occupied? Full-time Occasionally Seldom Almost N	ever
General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, s	torage)
Basement N/A	
st Floor Hair Jalon. Operation.	72
end Floor	5,
rd Floor	
<sup>th</sup> Floor	
3. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY	*
a. Is there an attached garage?	
b. Does the garage have a separate heating unit?  Y/N/NA	
c. Are petroleum-powered machines or vehicles  Y/N/NA	
stored in the garage (e.g., lawnmower, atv, car)  Please specify	
d. Has the building ever had a fire?  Y/N When?	
e. Is a kerosene or unvented gas space heater present?	1,00
f. Is there a workshop or hobby/craft area?  Y (N) Where & Type?	
g. Is there smoking in the building?  YN How frequently?	
h. Have cleaning products been used recently?  Y/N When & Type?	
i. Have cosmetic products been used recently?  (Y) N When & Type?	ool (andit
and	Styling a

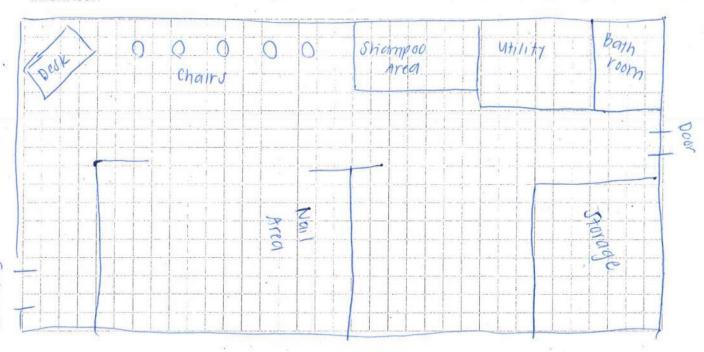
# 11. FLOOR PLANS

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

# Basement:



# First Floor:

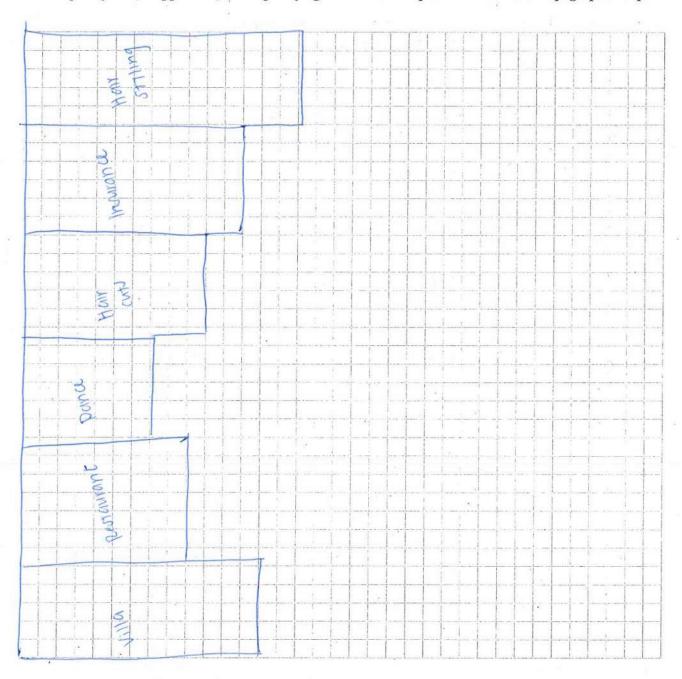


5	
j. Has painting/staining been done in the last 6 months?	Y/N Where & When?
k. Is there new carpet, drapes or other textiles?	Y /N Where & When?
I. Have air fresheners been used recently?	Y/N When & Type?
m. Is there a kitchen exhaust fan?	Y (N) If yes, where vented?
n. Is there a bathroom exhaust fan?	Y (N) If yes, where vented?
o. Is there a clothes dryer?	Y (N) If yes, is it vented outside? Y / N
p. Has there been a pesticide application?	Y/N When & Type?
Are there odors in the building?  If yes, please describe:	Y/M
(e.g., chemical manufacturing or laboratory, auto mechanic or a 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 response)	a dry-cleaning service? (Circle appropriate
Yes, use dry-cleaning regularly (weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry-cleaning service	Unknown
Is there a radon mitigation system for the building/structur Is the system active or passive? Active/Passive	re? Y/N Date of Installation:
a with the transfer of the tra	* *
9. WATER AND SEWAGE	w Well Dow Well Others
	n Well Dug Well Other:
Sewage Disposal: Public Sewer Septic Tank Leach	n Field Dry Well Other:
10. RELOCATION INFORMATION (for oil spill residenti	al emergency)
a. Provide reasons why relocation is recommended:	
b. Residents choose to: remain in home relocate to fri	ends/family relocate to hotel/motel
c. Responsibility for costs associated with reimbursement	nt explained? Y/N
d. Relocation package provided and explained to reside	

# 12. OUTDOOR PLOT

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

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



# 13. PRODUCT INVENTORY FORM

Make & Model of field instrument used:	Multi Fac	PID	
--	-----------	-----	--

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

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y/N
Nails	Nail Polish/	602	used	Autoril	1.3	N
Nails	Remover	(1	used	1c	1-3	N
Hair	mampool Conditioner	70 oz.	used	Various	1-3	N
Hair	Styling Aids	20 02.	used	Various	1-3	N
	3		*	i.		
	x ====================================	N N				
				a a		
	0.4			· · · · · · · · · · · · · · · · · · ·		1
	(1)			TI I		
	4 (1) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4			•		
	×				± (3)	
	×					
7						
,						
		32		100		

<sup>\*</sup> Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D)

<sup>\*\*</sup> Photographs of the front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.



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

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

Preparer's Name 1100 Ligo	_ Date/Time Pr	repared 3	18/17
Preparer's Affiliation CDM Smith	Phone No	732-22	5-7000
Purpose of Investigation Villa Cleaners	90		
	- No.		
1. OCCUPANT:			
Interviewed: Y N			
Last Name: Traina First Name:	Joseph	p	
Address: 1891 Deer Park Ave. Decr Park			
County: Jaj Tee Insurance agency Loutto	IK County	)	
Home Phone: <u>631-242-3900</u> Office Phone:			
Number of Occupants/persons at this location / Age Note: My. Traina requests anathreal data	of Occupants	38	
7. A 180		4	
2. OWNER OR LANDLORD: (Check if same as occupant Interviewed: YN)	)		
Last Name: Peterson First Name:	3117 .		
Address: 1887 Deer Park Ave. Deer Po	ark		
County: Suffolk	•	3.	
Home Phone: Office Phone: 631	- 667-80	70	
3. BUILDING CHARACTERISTICS			
Type of Building: (Circle appropriate response)			
Residential School Commercial/Industrial Church Other: In	Multi-use		*

If the property is residential, type? (Circ	le appropriate respo	nse)		
Ranch 2-Family	3-Fan			
Raised Ranch Split Leve		7.*		
	orary Mobi			
		houses/Condos		
Modular Log Home	Otner			
If multiple units, how many?				
If the property is commercial, type?				
Business Type(s) hyuran w	Agrney	VI I		11%
Does it include residences (i.e., multi-	use)? Y (N	If yes, how many?		
Other characteristics:			Œ	
Number of floors	Building age_			
Number of moors	Dunding age_			
Is the building insulated? Y / 🕅	How air tight?	? Tight / Average / N	ot Tight	÷
4. AIRFLOW				
9			3.5	
Use air current tubes or tracer smoke to Airflow between floors	evaluate airmow pa	atterns and quantativ	ery describe:	
N/A	- Lagrana - Lagran		100	
		2 14	1	
Airflow near source				
Moderate (back door)				
THE CHAPTER STORY				
4				
·				
Outdoor air infiltration				
Moderate (Front door)				
		y y		
	10	E E		
			ě.	
Infiltration into air dust-				
Infiltration into air ducts				
Not observed		1.*		
	1	100		

5. BASEMENT AND CO	NSTRU	CTION CHARA	ACTERISTIC	CS (Circle all that a	
a. Above grade constru	ction:	wood frame	concrete	stone	brick
b. Basement type:		full	crawlspace	slab	other
c. Basement floor:		concrete	dirt	stone	other
d. Basement floor:		uncovered	covered	covered with	RH 1
e. Concrete floor:		unsealed	sealed	sealed with _	
f. Foundation walls:		poured	block	stone	other
g. Foundation walls:	10	unsealed	sealed	sealed with _	
h. The basement is:	v	wet	damp	dry	moldy
i. The basement is:		finished	unfinished	partially finis	hed
j. Sump present?	,	Y/N			
k. Water in sump?	Y/N	/ not applicable			
Basement/Lowest level dep	th below	grade:	(feet)		
Norw observed		· · · · · · · · · · · · · · · · · · ·			porto, armitoj
6. HEATING, VENTING Type of heating system(s) u		CONDITIONI		that apply)	у)
Hot air circulation Space Heaters Electric baseboard		Heat pump Stream radiati Wood stove	ion Rad	water baseboard liant floor door wood boiler	Other
The primary type of fuel us	ed is:				
Natural Gas Electric Wood		Fuel Oil Propane Coal	Ker- Sola	osene ar	1
Domestic hot water tank fu	eled by: _	Nonwal	gas.		*
Boiler/furnace located in:	Basem	nent Outdo	oors Mai	n Floor	Other
Air conditioning:	Centra	LAir Windo	ow units Ope	n Windows	None

Are there air distribution ducts present?



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.

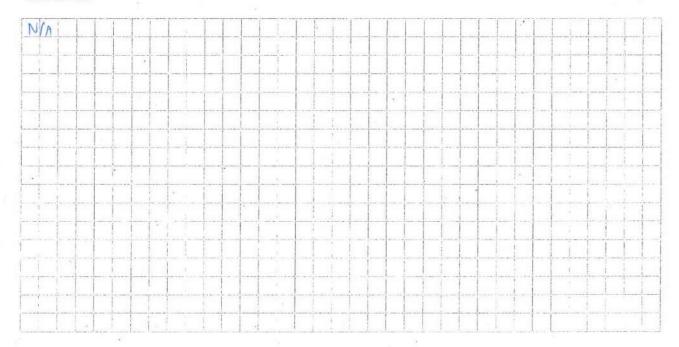
Funs alo	ng ceiling			
				le le
	6 V		42	- Call
20   ES	)		444	
7. OCCUPA	ANCY	•		
Is basement/l	owest level occupied? Full-time	Occasionally	Seldom	Almost Never
Level	General Use of Each Floor (e.g., far	nilyroom, bedro	oom, laundry, wo	rkshop, storage)
Basement				
1 <sup>st</sup> Floor	Business Purposes			
2 <sup>nd</sup> Floor				N 100
3 <sup>rd</sup> Floor	<i>y</i>			
4 <sup>th</sup> Floor		e - F	X	
8. FACTORS	S THAT MAY INFLUENCE INDOOR	AIR QUALIT	Y	is .
a. Is there	an attached garage?		Y/N	
b. Does the	garage have a separate heating unit?		Y/N/NA	
	oleum-powered machines or vehicles 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 kero	sene or unvented gas space heater pres	ent?	Y N Where?	
f. Is there a	workshop or hobby/craft area?	Y/W	Where & Type?	
g. Is there	smoking in the building?	Y/N	How frequently	?
h. Have cle	aning products been used recently?	YN	When & Type?	
i. Have cos	metic products been used recently?	YN	When & Type?	St.

j. Has painting/staining been done in the last 6 months?		Where & Wh		
k. Is there new carpet, drapes or other textiles?	Y/N	Where & Wh	en? New ru	ngs/car
l. Have air fresheners been used recently?	Y/N	When & Typ	e?	
m. Is there a kitchen exhaust fan?	Y/N	If yes, where	vented?	
n. Is there a bathroom exhaust fan?	Y/N	If yes, where	vented?	
o. Is there a clothes dryer?	Y/N	If yes, is it ve	ented outside?	Y/N
p. Has there been a pesticide application?	Y/N	When & Typ	e?	-
Are there odors in the building?  If yes, please describe:	Y / (N)			
o any of the building occupants use solvents at work? e.g., chemical manufacturing or laboratory, auto mechanic of oiler mechanic, pesticide application, cosmetologist	Y/N or auto body	shop, painting	, fuel oil deliv	very,
If yes, what types of solvents are used?				ल.
If yes, are their clothes washed at work?	Y/N			
o any of the building occupants regularly use or work a		ning service?	(Circle approp	oriate
o any of the building occupants regularly use or work at		ning service? No Unknown	(Circle approp	oriate
Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry-cleaning service  sthere a radon mitigation system for the building/structure.	t a dry-clea	No Unknown		oriate
Yes, use dry-cleaning regularly (weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry-cleaning service sthere a radon mitigation system for the building/structus the system active or passive?  Active/Passive	t a dry-clea	No Unknown		oriate
Yes, use dry-cleaning regularly (weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry-cleaning service sthere a radon mitigation system for the building/structus the system active or passive?  Active/Passive	t a dry-clea	No Unknown		
Yes, use dry-cleaning regularly (weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry-cleaning service sthere a radon mitigation system for the building/structus the system active or passive?  Active/Passive  WATER AND SEWAGE  Vater Supply:  Public Water Drilled Well Driv	t a dry-clea	No Unknown Date of Instal	lation:	
Yes, use dry-cleaning regularly (weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry-cleaning service there a radon mitigation system for the building/structure the system active or passive?  WATER AND SEWAGE Water Supply: Public Water Drilled Well Drivewage Disposal: Public Sewer Septic Tank Lead	t a dry-clea ure? Y/N ven Well	Date of Instal  Dug Well  Dry Well	lation:	
Yes, use dry-cleaning regularly (weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry-cleaning service  there a radon mitigation system for the building/structure the system active or passive?  Active/Passive  WATER AND SEWAGE  Vater Supply: Public Water Drilled Well Drive ewage Disposal: Public Sewer Septic Tank Lead	t a dry-clea ure? Y/N ven Well ch Field	Date of Instal  Dug Well  Dry Well	lation:	
Oo any of the building occupants regularly use or work at esponse)  Yes, use dry-cleaning regularly (weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry-cleaning service  s there a radon mitigation system for the building/structus the system active or passive?  Active/Passive  WATER AND SEWAGE  Vater Supply:  Public Water Drilled Well Driv	t a dry-clea ure? Y/N ven Well ch Field	No Unknown  Date of Instal  Dug Well  Dry Well  ency)	lation:	
Oo any of the building occupants regularly use or work at esponse)  Yes, use dry-cleaning regularly (weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry-cleaning service  Is there a radon mitigation system for the building/structus the system active or passive?  Active/Passive  WATER AND SEWAGE  Vater Supply:  Public Water Drilled Well Drive ewage Disposal:  Public Sewer Septic Tank Lead  O. RELOCATION INFORMATION (for oil spill resident as Provide reasons why relocation is recommended:	t a dry-clea ure? Y/N ven Well ch Field	Date of Instal  Dug Well  Dry Well  ency)	Other: Other:	

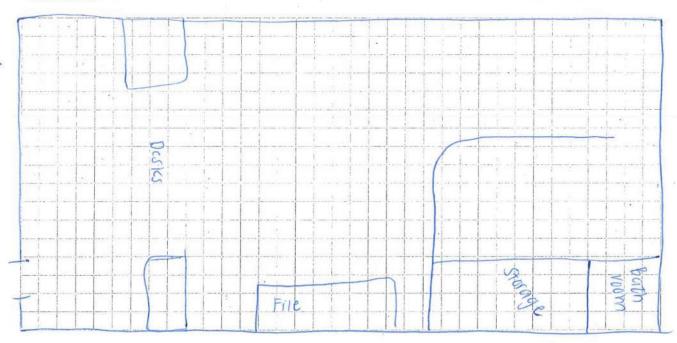
#### 11. FLOOR PLANS

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

#### Basement:



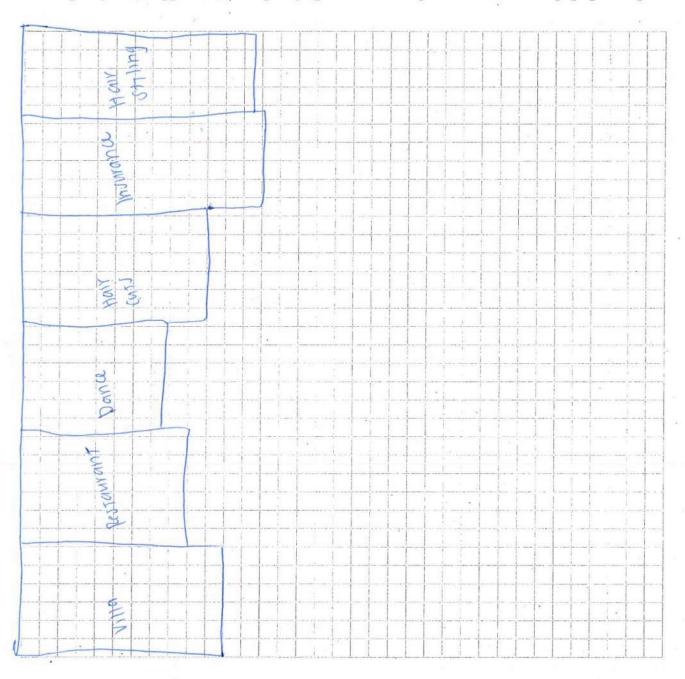
#### First Floor:



#### 12. OUTDOOR PLOT

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

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



#### 13. PRODUCT INVENTORY FORM

Make & Model of field instrument used:	Multi Rae	PID	
--	-----------	-----	--

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

no products observed

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo **  Y/N
Bathroum	Clurox	1 gai	N	Sodium hypochlorite sodium hydroxide 2- nexomothanoli lavramire	0	7
Bathroom	Windex	6802	И	2- nexo Methanol , lavramire oxide. isopropanol amire, ammunia	0	7
Bathroom	Palmolive.	2802	И	Ethanol	0	7
	10		-	v v		
				2		
	(4)					
				,	1	
				8	4	
	*					
	*	-			-	
- 2						
				* * * * * * * * * * * * * * * * * * * *	**	
	2.	2	154c			
r	9	-				

<sup>\*</sup> Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D)

<sup>\*\*</sup> Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.



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

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

Preparer's Name Tian Ligo Date/Time Prepared	3/8/17
Preparer's Affiliation CDM Smith Phone No. 737	125-7000
Purpose of Investigation Villa Citanics	
1. OCCUPANT:	
Interviewed: Y/N	
Last Name: Taylor First Name: Nicky	
Address: 1893 Deer Park Ave. Deer Park NT	_
County: Suffolk	
Home Phone: Office Phone: 031 - 839 - 7860	
Number of Occupants/persons at this location Age of Occupants 75 - 3	35
2. OWNER OR LANDLORD: (Check if same as occupant)	
Interviewed: Y/N Crazy Billic	
Last Name: Peterson First Name: Billy	
Address: 1887 Deer Park Ave. Deer Park NT	_
County: Suffolk	
Home Phone: Office Phone: 631-667-8070	198 11 p.:
	8
B. BUILDING CHARACTERISTICS	
Type of Building: (Circle appropriate response)	
Residential School Commercial/Multi-use Industrial Church Other:	
Barber Shop.	

If the property is resident	ial, type? (Circle appropr	riate response)			
Ranch	2-Family	3-Family			
Raised Ranch	Split Level	Colonial			
Cape Cod	Contemporary	Mobile Home	a		
Duplex	Apartment House	Townhouses/			
Modular	Log Home	Other:			
Wodulai	Log Home	Outer			
If multiple units, how man	ny?				
If the property is commer	cial, type?				
Business Type(s) bo	wher Shop	·			
Does it include residen	ces (i.e., multi-use)? Y/	If yes	s, how many?_		
Other characteristics:					
Number of floors_	_ Bui	lding age 1963			
		1 110 m11		mt t	
Is the building insulated	I? Y / N Hov	v air tight? Tight	:/Average/No	t Tight	
	9.				
4 AIDELOW					
4. AIRFLOW					*
Airflow between floors				ily describe	
10//	· · · · · · · · · · · · · · · · · · ·				
Airflow near source					
none observed					
1.0.0 00011.00			*		
	*				
, il					
	A second				
0 11 : 61 4:					
Outdoor air infiltration					
light ( Front do	Y.)	222			*
.0	•			*	
			111		
Infiltration into air ducts					

5. BASEMENT AND CON	STRUC'	TION CHA	RACTERI	STICS (	Circle all that a	pply)	
a. Above grade construc	tion:	wood frame	e concre	ete	stone	brick	
b. Basement type:		full	crawls	space	slab	other	-
c. Basement floor:		concrete	dirt		stone	other	
d. Basement floor:		uncovered	covere	ed	covered with	V_v : V	
e. Concrete floor:		unsealed	sealed		sealed with _		
f. Foundation walls:		poured	block		stone	other	
g. Foundation walls:		unsealed	sealed		sealed with _		
h. The basement is:		wet	damp		dry	moldy	
i. The basement is:		finished	unfinis	shed	partially finish	ned	
j. Sump present?	F: 01	Y/N	8	m f	basement	-	6
k. Water in sump?	Y/N/	not applicab	le	1/0	polaris		
Basement/Lowest level deptl	helow g	rade:	(feet)				
none observed				* *	•		
	(4)						
5. HEATING, VENTING a  Type of heating system(s) use  Hot air circulation  Space Heaters  Electric baseboard			ircle all the	at apply Hot wa Radian	- note primar	y) Other	
The primary type of fuel use	d is:						
Natural Gas Electric Wood		Fuel Oil Propane Coal		Kerose Solar	ne .		
Domestic hot water tank fuel	ed by: _	Natural !	gas		-		
Boiler/furnace located in:	Baseme	ent Out	doors	Main F	Toor	Other	
Air conditioning:	Central	Air Wir	ndow units	Open V	Vindows	None	

Are there air distribution ducts present?



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.

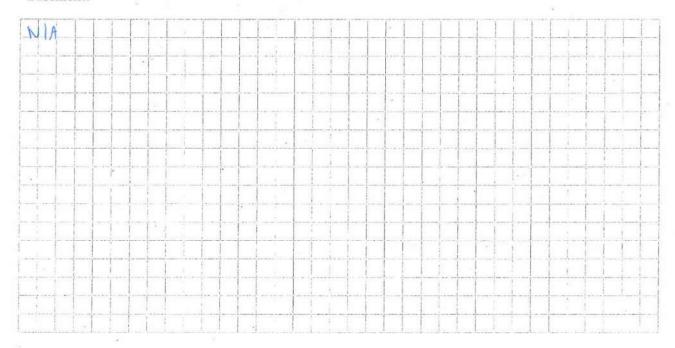
runs alen	g wall I ceiling			
	1		16.	
(A)		3	8	20
	-	***************************************		
7. OCCUPA	NCY			
Is basement/lo	owest level occupied? Full-time	Occasionally	Seldom	Almost Never
Level	General Use of Each Floor (e.g., fan	nilyroom, bedro	om, laundry, wo	orkshop, storage)
		*		
Basement	NA	-	3 (8)	
1st Floor	Business use			
2 <sup>nd</sup> Floor				JE.
3 <sup>rd</sup> Floor				
4 <sup>th</sup> Floor		,		
8. FACTORS	THAT MAY INFLUENCE INDOOR	AIR QUALITY	,	1
a. Is there a	n attached garage?		YN	
b. Does the	garage have a separate heating unit?		Y/N/NA	
The Strain County of the Count	leum-powered machines or vehicles the garage (e.g., lawnmower, atv, car)		Y/N/NA Please specify_	* * - ,-,-
d. Has the b	uilding ever had a fire?		Y (N) When?	
e. Is a keros	ene or unvented gas space heater prese	ent?	Y/N Where?	
f. Is there a	workshop or hobby/craft area?	Y/N	Where & Type?	
g. Is there si	moking in the building?	Y/N	How frequently	?
h. Have clea	ning products been used recently?	Y/N	When & Type?	
i. Have cosn	netic products been used recently?	N(A)	When & Type?	Inea Butter
				Pommade.

			5			
j. Has painting/sta	nining been done	in the last 6 mo	onths? Y/	Where &	When?	
k. Is there new car	rpet, drapes or o	ther textiles?		Where &		
l. Have air fresher	ners been used re	ecently?	YI	When &	Гуре?	
m. Is there a kitch	nen exhaust fan?		Y/	If yes, wh	ere vented?_	
n. Is there a bath	room exhaust fa	n?	YY	If yes, wh	ere vented?_	
o. Is there a clothe	es dryer?		YI	If yes, is i	t vented outs	side? Y / N
p. Has there been	a pesticide appli	cation?	YI	When &	Гуре?	
Are there odors in If yes, please desc	the building?	ffee	(Y)1	1	*	
Do any of the building (e.g., chemical manufaboiler mechanic, pest	acturing or laboraticide application,	ntory, auto mech cosmetologist	anic or auto bo	dy shop, pain	ting, fuel oil	delivery,
	•					
If yes, are their clo	thes washed at wo	ork?	Y/1	1		
	cleaning regularly	(weekly)		No	*	ppropriate
	cleaning infreque a dry-cleaning se		· less)	Unknown	*	
Is there a radon mit Is the system active o		r the building/s Active/Passive	structure? Y /	N Date of In	stallation:	∂*
		*				
9. WATER AND SE	WAGE					
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	N (for oil spill re	esidential eme	rgency)	-5	
a. Provide reason	ns why relocation	n is recommend	led:			
b. Residents cho	ose to: remain in	home reloca	ate to friends/fa	mily re	locate to hot	el/motel
c. Responsibility	for costs associa	ted with reimb	ursement expl	ained? Y	/N	
d. Relocation pa	ckage provided a	and explained to	o residents?	Y	/N	

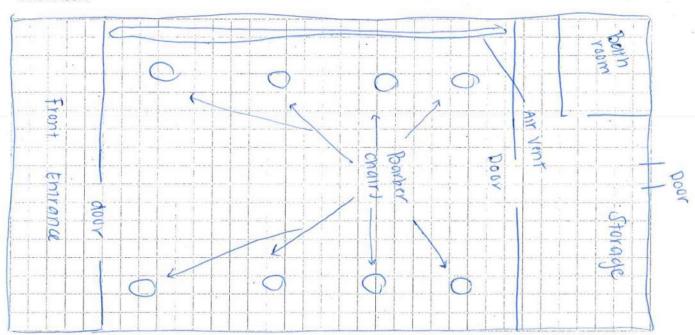
#### 11. FLOOR PLANS

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

#### Basement:



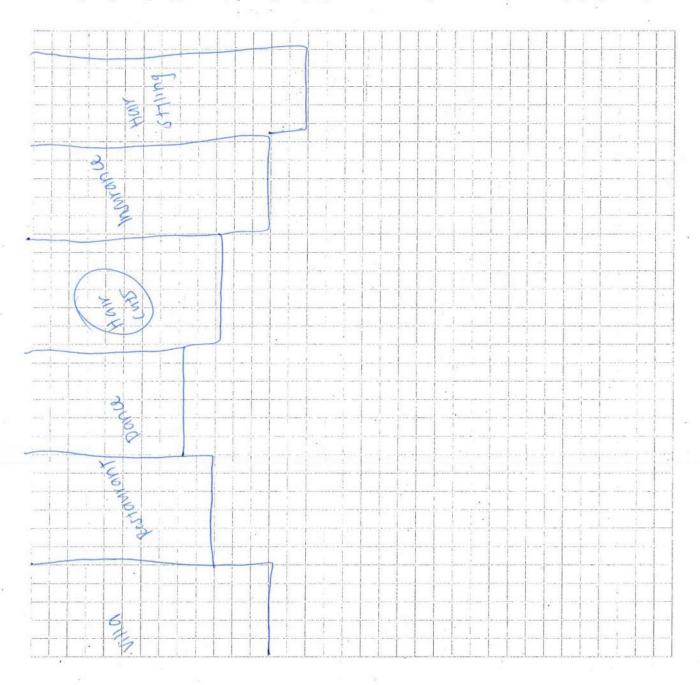
#### First Floor:



#### 12. OUTDOOR PLOT

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

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



#### 13. PRODUCT INVENTORY FORM

Make & Model of field instrument used:	Multi	fac	PIL	
--	-------	-----	-----	--

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

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo **  Y/N
Shop	Shampor / Conditioner	20 or	h	Vorrious	0.8	7
Shop	Styling Aids	2002	U	Various	0.8	N
	,	· ·	)1	a a		
		e .				
0.50						
			*)			-
	*			9		
				*		
		4				
2 17	DE E			×		
				N 2 4.4		
	· ·			7		
i	*		. 3			
N N N N N N N N N N N N N N N N N N N						
				* 1		
	0 (0)	,		N The state of the		
	1			×	April 1	
TI .						
	,			,		

<sup>\*</sup> Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D)

<sup>\*\*</sup> Photographs of the front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

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

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

Preparer's Name Tian Uao Date/Time Prepared 318117
Preparer's Affiliation CDM Smith Phone No. 732 - 225 - 7000
Purpose of Investigation VIIIa Cleaner
1. OCCUPANT:
Interviewed: YN Dream Panetrs Academy
Last Name: Pan First Name: Pan
Address: 1895 Deer Park Ave Deer Park NT
County: Suffolk
Home Phone: Office Phone: 031 - 392 - 1960
Number of Occupants/persons at this location Age of Occupants
2. OWNER OR LANDLORD: (Check if same as occupant)  Crazy Billy U  Interviewed: Y/N
Last Name: Petersun First Name: Billy
Address: 1887 Deer Park Ave. Deer Park
County: Suffolk
Home Phone: Office Phone: 631-667-8070
3. BUILDING CHARACTERISTICS
Type of Building: (Circle appropriate response)
Residential School Commercial/Multi-use Industrial Church Other:
pance Club

If the property is resident	ial, type? (Circle appropri	ate response)	
Ranch	2 Family	2 Family	
	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 man	ny?		
If the property is commer	cial, type?	6.00	
Business Type(s)	Chadl	24	
Does it include residence	ces (i.e., multi-use)? Y/	If yes, how many	?
Other characteristics:			
Number of floors	Duit	ling age 1963	
Number of floors	_ Build	ling age 1960	
Is the building insulated	1? Y N How	air tight? Tight / Average /	Not Tight
4. AIRFLOW			
Use air current tubes or tr	acer smoke to evaluate a	irflow patterns and qualita	tively describe:
Airflow between floors			
1971			
-			
		4.	*
Airflow near source		· ·	
None observed		1	
Outdoor air infiltration			
mini matt minima	a I		
State High Repaired			
	· · · · · · · · · · · · · · · · · · ·		
To City of the state of the sta			
Infiltration into air ducts			
not observed			N

5. BASEMENT AND CO.	NSTRU	CTION CHARA	ACTERISTIC	S (Circle all that	apply)
a. Above grade constru	ction:	wood frame	concrete	stone	brick
b. Basement type:		full	crawlspace	slab	other
c. Basement floor:		concrete	dirt	stone	other
d. Basement floor:		uncovered	covered	covered with	1
e. Concrete floor:		unsealed	sealed	sealed with	, (f
f. Foundation walls:		poured	block	stone	other
g. Foundation walls:		unsealed	sealed	sealed with	
h. The basement is:		wet	damp	dry	moldy
i. The basement is:		finished	unfinished	partially finis	shed
j. Sump present?		Y/N		Slab o	in grade
k. Water in sump?	Y/N	I / not applicable		2	
hone observed					
6. HEATING, VENTING : Type of heating system(s) us  Hot air circulation Space Heaters Electric baseboard		*	cle all that app Hot on Rad		
The primary type of fuel use	ed is:				
		n -1 0"	17	Place Miles	
Natural Gas Electric Wood	•	Fuel Oil Propane Coal	Sola	osene r	
Domestic hot water tank fue	led by:				
Boiler/furnace located in:	Baser	nent Outdo	ors Main	1 Floor	Other
Air conditioning:	Centr	al Air Windo	ow units Ope	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.

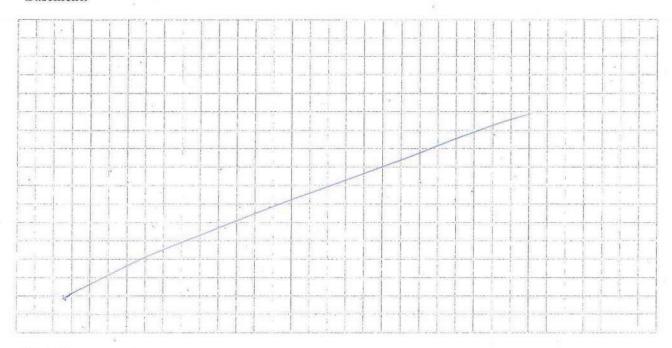
AIr duc	ts on ceiling I wall interface	(R)		
-				
-		*	*	
7. OCCUP	PANCY			
Is basement	t/lowest level occupied? Full-time	Occasionally	Seldom	Almost Never
Level	General Use of Each Floor (e.g., fan	nilyroom, bedro	oom, laundry, v	vorkshop, storage)
Basement				
1 <sup>st</sup> Floor				
2 <sup>nd</sup> Floor			,	
3 <sup>rd</sup> Floor				
4 <sup>th</sup> Floor			+	
8. FACTOR	RS THAT MAY INFLUENCE INDOOR	AIR QUALITY	Y	
a. Is there	an attached garage?		YN	
b. Does th	e garage have a separate heating unit?		Y/N/NA	
	roleum-powered machines or vehicles n 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 ker	osene or unvented gas space heater prese	ent?	Y N Where	?
f. Is there	a workshop or hobby/craft area?	YN	Where & Type	e?
g. Is there	smoking in the building?	YIN	How frequentl	y?
h. Have cl	eaning products been used recently?	YIN	When & Type	?
i. Have cos	smetic products been used recently?	YN	When & Type	?

j. Has painting/staining been done in the last 6 months?	YIN Where & When? Walls / basebac
k. Is there new carpet, drapes or other textiles?	Y/N Where & When?
1. Have air fresheners been used recently?	Y/N When & Type?
m. Is there a kitchen exhaust fan?	Y/N If yes, where vented?
n. Is there a bathroom exhaust fan?	Y /N If yes, where vented?
o. Is there a clothes dryer?	Y (N) If yes, is it vented outside? Y / N
p. Has there been a pesticide application?	Y/N When & Type?
Are there odors in the building?  If yes, please describe:	YN
Do any of the building occupants use solvents at work? (e.g., chemical manufacturing or laboratory, auto mechanic or a boiler mechanic, pesticide application, cosmetologist	Y N auto body shop, painting, fuel oil delivery,
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 response)	dry-cleaning service? (Circle appropriate
Yes, use dry-cleaning regularly (weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry-cleaning service	No Unknown
Is there a radon mitigation system for the building/structure Is the system active or passive? Active/Passive	e? Y N Date of Installation:
9. WATER AND SEWAGE	
Water Supply: Public Water Drilled Well Driver	n Well Dug Well Other:
Sewage Disposal: Public Sewer Septic Tank Leach	rield Dry Well Other:
10. RELOCATION INFORMATION (for oil spill residentia	al emergency)
a. Provide reasons why relocation is recommended:	
b. Residents choose to: remain in home relocate to frie	ends/family relocate to hotel/motel
c. Responsibility for costs associated with reimbursemen	at explained? Y/N
d. Relocation package provided and explained to residen	nts? Y/N

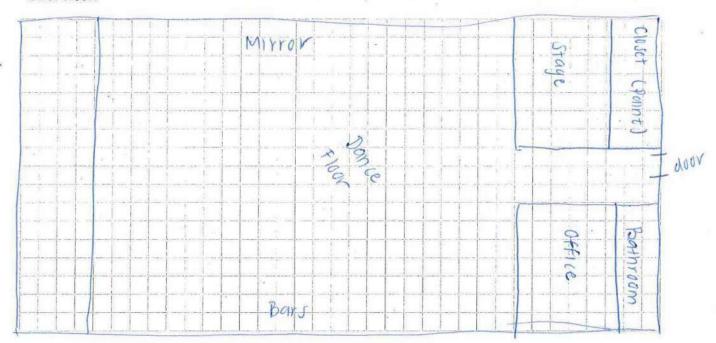
#### 11. FLOOR PLANS

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

#### Basement:



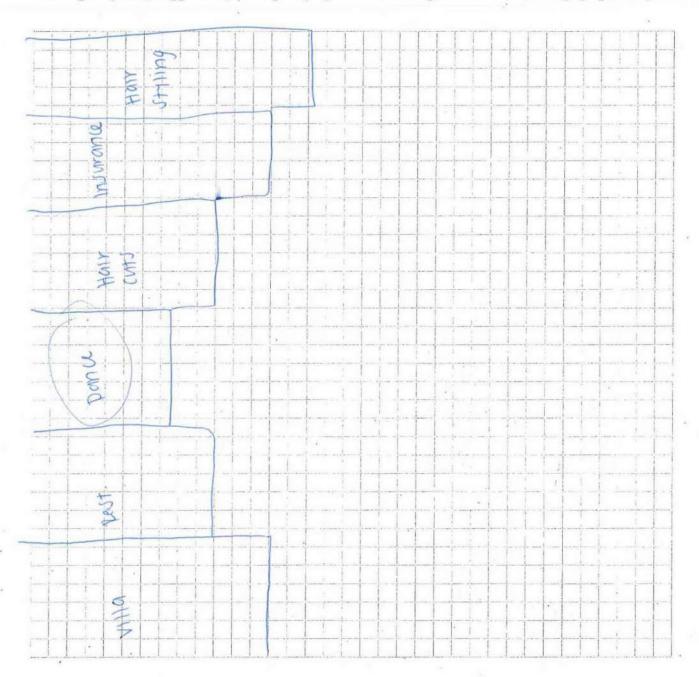
#### First Floor:



#### 12. OUTDOOR PLOT

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

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



13	DDADY	TOTAL PATE	CECTATION COLUMN	THEFT
13.	PRODU	CIIN	VENTORY	FORM

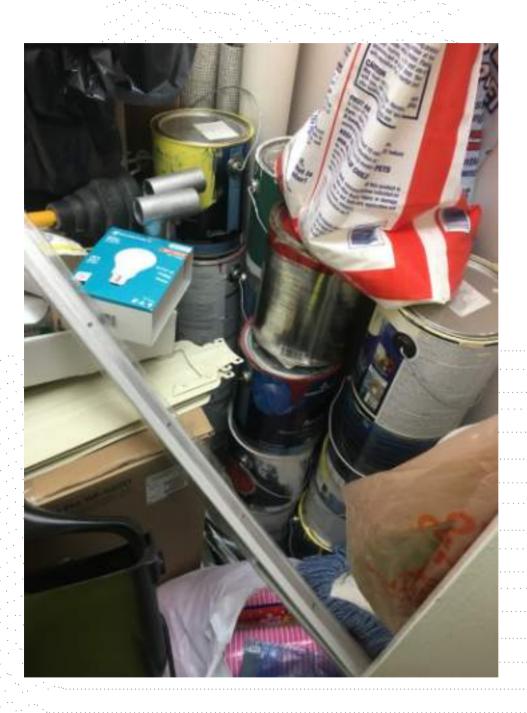
Make & Model of field instrument used:	Multi	Rae	PD	
--	-------	-----	----	--

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

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo** Y/N
Closet	Paint Cans	991	open/wed	Lutex Paint-	0.0	7
		•				
-						
				*		
	(#)			(a)		
				A ( ) - ( )		
			•	*		
						C .
	×					
		(4)	115		′	
					-	
				*	1	

<sup>\*</sup> Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D)

<sup>\*\*</sup> Photographs of the front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.



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

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

Preparer's Name Tian Liao Date/Time Prepared 3/8/17
Preparer's Affiliation CDM Sm11h Phone No. 732 25 - 7000
Purpose of Investigation Villa Ckanery
1. OCCUPANT:
Interviewed: Y/N Pominican Restourant 5
(A. C. 1010 CA (OF).
Last Name: First Name:
Address: 1889 Deer Park Ave. Deer Park.
County: Suffalk
Home Phone: <u>\\ \sigma_3\) \cdot  \qu</u>
Number of Occupants/persons at this location Age of Occupants 18 - 25
2. OWNER OR LANDLORD: (Check if same as occupant)
Interviewed: Y/N Crazz Bills
Last Name: Peterson First Name: Billy
Address: 1887 Deer Park Ave. Deer Park
County: Suffelk
Home Phone: Office Phone: Office Phone: Office Phone:
B. BUILDING CHARACTERISTICS
Type of Building: (Circle appropriate response)
Residential School Commercial/Multi-use
Industrial Church Other:
Restaurant

If the property is residenti	al, type? (Circle appropri	ate respo	onse)	3
			No	
Ranch	2-Family	3-Fai		
Raised Ranch	Split Level	Colo		
Cape Cod	Contemporary		ile Home	
Duplex	Apartment House		nhouses/Condos	
Modular	Log Home	Othe	r:	
	4		w **	
If multiple units, how man	y?			4
If the property is commercial	cial, type?		* 9	
Business Type(s)	estaurant	1	-	
Does it include residence	es (i.e., multi-use)? Y/	1	If yes, how many?	
Other characteristics:			*	x 1
Number of floors		ding age_	1963	
Is the building insulated	?Y/N How	air tight	? Tight / Average / Not Tight	
			K 1	
4. AIRFLOW				
Use air current tubes or tr	acer smoke to evaluate a	irflow p	atterns and qualitatively des	cribe:
*				
Airflow between floors				
				17 T
NA				
S-1	1011-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-			
				#1
Airflow near source				
minimal (back de	107 1			
	,			
Outdoor air infiltration				
Minimal (former	Seals effective)			
- Company	stone cype			2,
	The second second		IX	-
Infiltration into air ducts				
not observed				

					no ba	
a. Above grade construc	ction:	wood frame	concrete	stone	brick	
b. Basement type:		full	crawlspace	slab	other	70
c. Basement floor:		concrete	dirt	stone	other	
d. Basement floor:		uncovered	covered	covered wit	h	
e. Concrete floor:		unsealed	sealed	sealed with		
f. Foundation walls:		poured	block	stone	other	
g. Foundation walls:	•	unsealed	sealed	sealed with	v.	
h. The basement is:		wet	damp	dry	moldy ·	
i. The basement is:		finished	unfinished	partially fin	ished	
j. Sump present?		Y/N				
k. Water in sump?	Y/N/1	not applicable				
asement/Lowest level dept	h below gr	ade:	(feet)			
lentify potential soil vapor	entry poir	its and approx	ximate size (e.	g., cracks, utili	ty ports, drains)	)
entify potential soil vapor	entry poir	nts and approx	ximate size (e.ş	g., cracks, utili	ty ports, drains)	)
entify potential soil vapor	entry poir				ty ports, drains)	)
entify potential soil vapor	entry poir		ximate size (e.		ty ports, drains)	)
		10			ty ports, drains)	
HEATING, VENTING	and AIR C	CONDITIONI	NG (Circle all	that apply)		
HEATING, VENTING	and AIR C	CONDITIONI	NG (Circle all le all that app	that apply)	ary)	
HEATING, VENTING a  pe of heating system(s) us  Hot air circulation  Space Heaters	and AIR C	CONDITIONING to the condition of the con	NG (Circle all le all that app Hot von Radi	that apply) ly – note prima water baseboard ant floor	ary)	
HEATING, VENTING a  pe of heating system(s) us	and AIR C	CONDITIONII building: (circ Heat pump	NG (Circle all le all that app Hot von Radi	that apply) ly – note prima water baseboard	ary)	
HEATING, VENTING a  ype of heating system(s) us  Hot air circulation Space Heaters Electric baseboard	and AIR C	CONDITIONING to the condition of the con	NG (Circle all le all that app Hot von Radi	that apply) ly – note prima water baseboard ant floor	ary)	
HEATING, VENTING a  ype of heating system(s) us  Hot air circulation Space Heaters Electric baseboard	and AIR Coed in this	CONDITIONING to the condition of the con	NG (Circle all le all that app Hot von Radi	that apply)  ly – note prima  water baseboard ant floor oor wood boile	ary)	
HEATING, VENTING a  ype of heating system(s) us  Hot air circulation Space Heaters Electric baseboard  ne primary type of fuel use  Natural Gas Electric	and AIR Coed in this	CONDITIONING to the condition of the con	NG (Circle all the all that app  Hot von Radia Outd	that apply)  ly – note prima  water baseboard ant floor oor wood boile	ary)	
HEATING, VENTING a  The of heating system(s) us  Hot air circulation Space Heaters Electric baseboard  The primary type of fuel use  Natural Gas	and AIR Coed in this	CONDITIONING to the condition of the con	NG (Circle all le all that app Hot von Radia Outd	that apply)  ly – note prima  water baseboard ant floor oor wood boile	ary)	
HEATING, VENTING a  ype of heating system(s) us  Hot air circulation Space Heaters Electric baseboard ne primary type of fuel use  Natural Gas Electric Wood	and AIR Coed in this	CONDITIONII building: (circ Heat pump Stream radiatio Wood stove  Fuel Oil Propane Coal	NG (Circle all le all that app Hot von Radia Outd	that apply)  ly – note prima  water baseboard ant floor oor wood boile	ary)	
Space Heaters Electric baseboard ne primary type of fuel use Natural Gas Electric	and AIR Coed in this	CONDITIONING building: (circump) Heat pump Stream radiation Wood stove  Fuel Oil Propane Coal	NG (Circle all le all that appoint Radia Outd	that apply)  ly – note prima  water baseboard ant floor oor wood boile	ary)	

Are there air distribution ducts present? Y/N Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram. 7. OCCUPANCY Occasionally Seldom Almost Never Is basement/lowest level occupied? Full-time General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage) Level Basement Restaurant / kitchen 1st Floor 2<sup>nd</sup> Floor 3rd Floor 4th Floor 8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY a. Is there an attached garage? Y/N/NA b. Does the garage have a separate heating unit? c. Are petroleum-powered machines or vehicles Please specify stored in the garage (e.g., lawnmower, atv, car) Y When? d. Has the building ever had a fire? Y/N Where? e. Is a kerosene or unvented gas space heater present? f. Is there a workshop or hobby/craft area? Y/N Where & Type? Y/N) How frequently? g. Is there smoking in the building?

h. Have cleaning products been used recently?

i. Have cosmetic products been used recently?

Y) N When & Type? Floor / Surface Clearer.

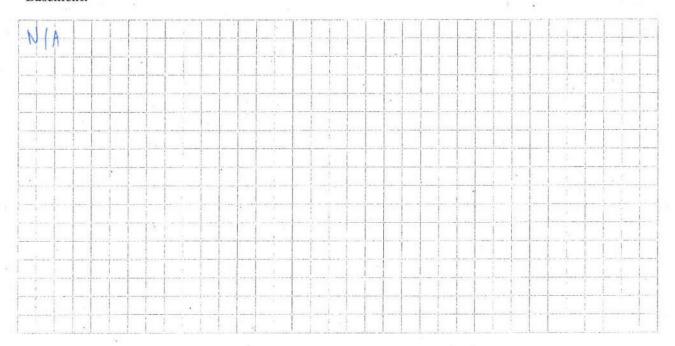
When & Type?

j. Has painting/staining been done in the last 6 months?	Y/N Where & When?
k. Is there new carpet, drapes or other textiles?	Y/N Where & When?
I. Have air fresheners been used recently?	Y/W When & Type?
m. Is there a kitchen exhaust fan?	YN If yes, where vented?
n. Is there a bathroom exhaust fan?	Y/W If yes, where vented?
o. Is there a clothes dryer?	Y/N If yes, is it vented outside? Y/N
p. Has there been a pesticide application?	Y/N When & Type?
Are there odors in the building?  If yes, please describe:  Culture.	Yyn
Do any of the building occupants use solvents at work? (e.g., chemical manufacturing or laboratory, auto mechanic or a 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 response)	dry-cleaning service? (Circle appropriate
Yes, use dry-cleaning regularly (weekly) Yes, use dry-cleaning infrequently (monthly or less) Yes, work at a dry-cleaning service	No Unknown
Is there a radon mitigation system for the building/structure.  Is the system active or passive?  Active/Passive	e? Y/N Date of Installation:
9. WATER AND SEWAGE	
Water Supply: Public Water Drilled Well Driver	n Well Dug Well Other:
Sewage Disposal: Public Sewer Septic Tank Leach	Field Dry Well Other:
10. RELOCATION INFORMATION (for oil spill residentia	al emergency)
a. Provide reasons why relocation is recommended:	
b. Residents choose to: remain in home relocate to frie	ends/family relocate to hotel/motel
c. Responsibility for costs associated with reimbursemen	nt explained? Y/N
d. Relocation package provided and explained to resider	nts? Y/N

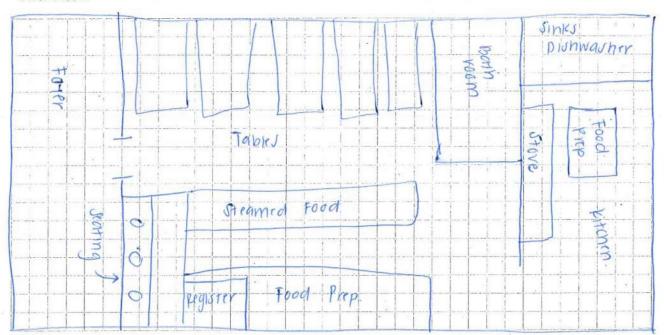
#### 11. FLOOR PLANS

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

#### Basement:



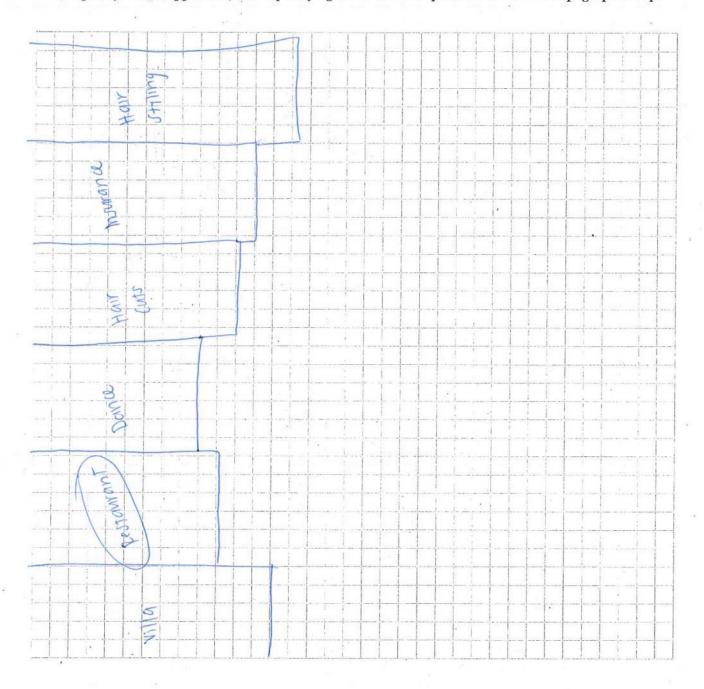
#### First Floor:



#### 12. OUTDOOR PLOT

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

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



		-			
13.	PRODU	CT In	VENT	ORY	FORM

Make & Model of field instrument used:	Multi	Rac	PIP	
--	-------	-----	-----	--

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

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y/N
sink	Dettrgent	1 gar	ч	sodium di chibroiso cyanuvate- sodium carbonate sodium hypo chionte sodium hydroxide hydrogen peroxide D- Chiorene-	0.0	7
kitchen	Clovox	1991	u	sodium hypochlonte sodium hydrexide	0-0	y
kitchen	Cleaner.	Igal	и	D- Chlorene.		
	¥					
-	3 5				3	
			*			
				2		
				8	• •	
	× *		2	8		
	(i)	(a)				
	7.1			'		
				90:	5	*
. •	71	3		€		
	77					
	*			*	F	
				2- 2	2 1	

<sup>\*</sup> Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D)

<sup>\*\*</sup> Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.



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

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

Preparer's Name	liao.	Date/Time P	repared	3/8/	17
Preparer's Affiliation COM					
Purpose of Investigation VIII a	Cleaners.				
		18.1			
1. OCCUPANT:					9
Interviewed: Y/N	* (*)	, 3			
Last Name: Genn	First Name:	John			
Address: 1899B Deer	Park Ave. Dec	er Park NY	181	_	
County: Suffell					
Home Phone: 631-667-465	5 Office Phone:				
Number of Occupants/persons at thi			34	-67	
Number of Occupants/persons at thi	s location 13	Age of Occupants	-		72
2. OWNER OR LANDLORD: (C	heck if same as occup	oant)			
Interviewed: Y/N	0 - 11-01				
Last Name: Pettrum		Bill-		*	
		,			
Address: 1887 Deer Par	F AVE. DEEP	Tark IVI		<del></del> -	
County: UNFfolk		781			
Home Phone:	Office Phone:	631-667	8070		
B. BUILDING CHARACTERIST	ICS				
Type of Building: (Circle appropria	te response)			*	
Residential Sch Industrial Chu	ool Commer	cial/Multi-use	-		125
	Dry	Cleaner			

If the property is reside	ential, type? (Circle approp	priate response)	•
Ranch	2 Family	2 Family	
Ranch Raised Ranch	2-Family	3-Family Colonial	
Cape Cod	Split Level	Mobile Home	
Duplex		Townhouses/Cond	los
Modular		Other:	
iviodulai	Log Home	Offici	<del></del>
If multiple units, how n	1any?		
If the property is comm	ercial, type?	8	
Business Type(s)	Dry Cleaner		**
Does it include resid	ences (i.e., multi-use)? Y	N If yes, how	w many?
Other characteristics:			
Number of floors	<u>l</u> Bu	nilding age 1963	
Is the building insula	ted? Y (N) Ho	ow air tight? Tight / Av	erage / Not Tight
4. AIRFLOW			
			,
Use air current tubes or	tracer smoke to evaluate	e airflow patterns and o	qualitatively describe:
Airflow between floors			
NIA			
IV/I			
<u> </u>		<u> </u>	*
		1-	2
(4)			
۸ !			
Airflow near source			
Minimal Front	to back and e	xnauvi tanj	The state of the s
	94		
Outdoor air infiltration	10		
Tes			
		Α.	
Infiltration into air desta			
Infiltration into air ducts			
NA	*		- /
			120

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all tha
--

a. Above grade constru	ction:	wood frame	concre	te stor	ie	brick	
b. Basement type:		full	crawls	pace state	>	other	NA
c. Basement floor:		concrete	dirt	stor	ıe	other	VA
d. Basement floor:		uncovered	covere	d cov	ered with	NA	-
e. Concrete floor:	(0)	unsealed	sealed	seal	ed with _	Imoleum	ne
f. Foundation walls:	(	poured	block	ston	ie	other	4
g. Foundation walls:	. (1	unsealed	sealed	seal	ed with _		
h. The basement is:	. ,	wet	damp	dry		. moldy	
i. The basement is:	1	finished	unfinis	hed part	ially finish	ned	
j. Sump present?	,	Y/N	1				
k. Water in sump?	Y/N/n	ot applicable					
Basement/Lowest level dept	h below gra	ıde:	(feet)		4		
Identify potential soil vapor	antry nain	te and annea	vimata si	70 (0 7 avaal	ro ntilita	noute dual	ana)
identify potential son vapor	entry poin	is and appro	aimate si	ze (e.g., crac	as, unity	ports, arai	us)
					٠		
unsern.							
*							
6. HEATING, VENTING	and AIR Co	ONDITIONI	NG (Circ	le all that app	ly)		
m 41 11 1 15							
Type of heating system(s) us	sed in this b	uilding: (circ	cle all tha	t apply – not	e primar	y)	
Hot air circulation	Ŧ	Heat pump		Hot water ba	seboard		
Space Heaters		stream radiation	on	Radiant floor			
Electric baseboard		Wood stove	22000	Outdoor woo		Other b	oiler for
The primary type of fuel use	ed is:					Ma	· terror
27							chinery
Natural Gas	G	101					ininert
		uel Oil		Kerosene			ininert
Electric	P	ropane		Kerosene Solar			cmmert
	P						ininer
Electric Wood	F	ropane Coal	oi)				ininer
Electric	F	Propane Coal Furhace	oi)		5	Other	ininer
Electric Wood Domestic hot water tank fue	led by:	t Outdo	ors (	Solar	) ws	Other	inimert

Are there air distribution ducts present?



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.

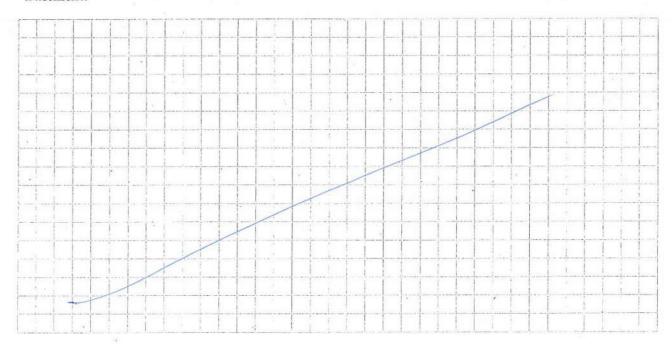
	v.	*	
	9	•	
A			1
		150	
. OCCUPANCY			
s basement/lowest level occupied? Full-time	Occasionally	Seldom	Almost Never
General Use of Each Floor (e.g., fa	milyroom, bedro	om, laundry, w	orkshop, storage)
Basement			
st Floor			
and Floor			
rd Floor			_
th Floor	<i>s</i>		-
th Floor  FACTORS THAT MAY INFLUENCE INDOOR  a. Is there an attached garage?  b. Does the garage have a separate heating unit?  c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car)	R AIR QUALITY	Y/N/NA Y/N/NA Y/N/NA Please specify	
a. Is there an attached garage? b. Does the garage have a separate heating unit? c. Are petroleum-powered machines or vehicles	R AIR QUALITY	Y/N/NA Y/N/NA Please specify Y/N/When	?
<ul> <li>a. Is there an attached garage?</li> <li>b. Does the garage have a separate heating unit?</li> <li>c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car)</li> </ul>		Y/N/NA Y/N/NA Please specify Y/N/When	
a. Is there an attached garage? b. Does the garage have a separate heating unit? c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) d. Has the building ever had a fire?		Y/N/NA Y/N/NA Please specify Y/N/When Y/N/When	?
a. Is there an attached garage? b. Does the garage have a separate heating unit? c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) d. Has the building ever had a fire? e. Is a kerosene or unvented gas space heater pre		Y/N/NA Y/N/NA Please specify Y/N When Y/N Where Where & Type	?
<ul> <li>a. Is there an attached garage?</li> <li>b. Does the garage have a separate heating unit?</li> <li>c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car)</li> <li>d. Has the building ever had a fire?</li> <li>e. Is a kerosene or unvented gas space heater pref. Is there a workshop or hobby/craft area?</li> </ul>		Y/N/NA Y/N/NA Please specify Y/N When Y/N Where Where & Type How frequent	? e? e?

Y (N) Where & When?
Y / N Where & When?
Y / When & Type?
Y (N) If yes, where vented?
Y (N) If yes, where vented?
Y/N If yes, is it vented outside? Y/N
Y (N) When & Type?
YN
Y(N) auto body shop, painting, fuel oil delivery,
Y/N
dry-cleaning service? (Circle appropriate  No Unknown
e? Y/N Date of Installation:
Well Dug Well Other
Field Dry Well Other:
d emergency)
ends/family relocate to hotel/motel
t explained? Y/N
ats? Y/N

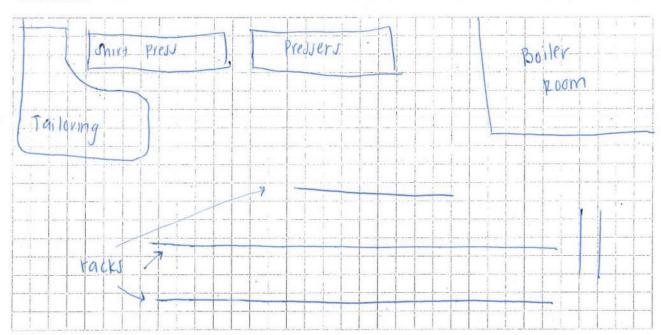
#### 11. FLOOR PLANS

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

#### Basement:



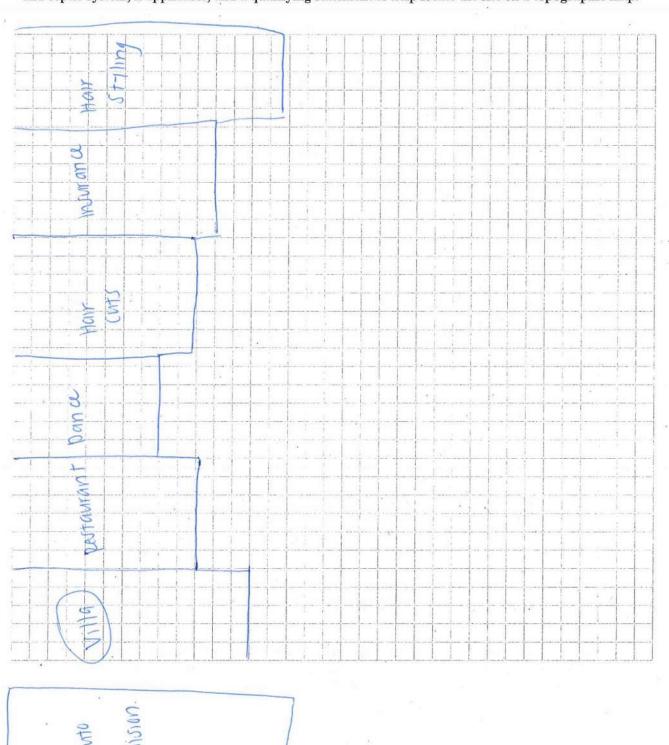
#### First Floor:



#### 12. OUTDOOR PLOT

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

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



#### 13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: Multi fac P)	D
---	---

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

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y/N
None	Observations other	r th	an clean	ning fluids and	0.3	
				detergents sodium carbonate		
	Detergenty	VOLY LOW	И	adum	0.3	1
	Stain Remover	20 oz	Ч	polyethylene, gly rolisotridecyl subtilisius	0.3	Y
	Softener	60 02	N	ethilalionol benzil acetate, ethanol penzil acetate,	0.3	7
	9		•	•		
		-		67	*	
10 2	E				21	
	**			×	(6)	
	18.	¥.		4) 4) 3)		
		9 = =				
	2		2			
	* A *	10	6	à ·		
				W	-4	

<sup>\*</sup> Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D)

<sup>\*\*</sup> 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.





## Appendix B

**Data Usability Summary Report** 

### **Data Validation Services**

120 Cobble Creek Road P.O. Box 208 North Creek, NY 12853

Phone 518-251-4429 harry@frontiernet.net

April 10, 2017

Melissa Harclerode CDM Smith 110 Fieldcrest Ave No 8 6<sup>th</sup> Floor Edison, NJ 08837

RE:

Validation of the NYSDEC Villa Cleaners Site Air Analytical Data Data Usability Summary Report (DUSR)

TestAmerica-VT SDG No. 200-37722-1

Dear Ms. Harclerode:

Review has been completed for the data package generated by TestAmerica Laboratories (TAL-VT) that pertains to air samples collected on 03/08/17 at the Villa Cleaners site. Nineteen 6-L summa canisters were analyzed for a full list of volatile analytes using USEPA method TO-15.

Data validation was performed using guidance from the 2006 USEPA Region II validation SOP HW-31, with consideration for the specific requirements of the analytical methodology. The following items were reviewed:

- \* Data Completeness
- \* Case Narrative
- \* Custody Documentation
- \* Holding Times
- \* Internal Standard Recoveries
- \* Method and Canister Blanks
- \* Laboratory Control Samples (LCSs)
- \* Instrumental Tunes
- \* Initial and Continuing Calibration Standards
- \* Method Compliance
- \* Sample Result Verification

The data review includes evaluation of the specific items noted in The NYS DER-10 Appendix B section 2.0 (c). The items listed above that show deficiencies are discussed within the text of this narrative. The laboratory QC forms illustrating the excursions can be found within the laboratory data package.

Unless noted within this text, the listed items undergoing review were found to be acceptable as outlined in the above-mentioned validation procedure, and as applicable for the methodology. Unless noted specifically in the following text, reported results are substantiated by the raw data, and generated in compliance with project requirements.

**In summary**, sample processing was conducted in compliance with project requirements. Sample results are usable either as reported or with minor qualification as estimated.

The client and laboratory sample identifications and laboratory case narrative are attached to this text, and should be reviewed in conjunction with this report. Also included with this submission is the client EDD, qualified with the validation qualifiers noted below.

#### **Volatile Analyses by EPA TO-15**

Some of the analytes show responses that exceed the established linear range of the instrumentation. In order to achieve low reporting limits for the analytes of concern, the laboratory was instructed to report those samples undiluted. Therefore, the results for those high concentration compounds (laboratory "E" flag) have been qualified as estimated in value.

Holding times and instrument tunes meet requirements. Internal standard recoveries are within the required ranges. Method and batch canister blanks show no contamination. The clean canister certifications were reviewed during validation.

Initial and continuing calibration standard responses were acceptable, with response factors (RRFs) above 0.05, linearity within the 30%RSD limit, and continuing responses not above 30%D.

Mass spectra confirm identifications, and the calculated sample results have been verified.

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,

Judy Harry

#### **VALIDATION DATA QUALIFIER DEFINITIONS**

- U The analyte was analyzed for, but was not detected above the level of the associated reported quantitation limit.
- J The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
- J- The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low.
- J+ The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high.
- UJ The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
- NJ The detection is tentative in identification and estimated in value. Although there is presumptive evidence of the analyte, the result should be used with caution as a potential false positive and/or elevated quantitative value.
- R The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
- EMPC The results do not meet all criteria for a confirmed identification.

  The quantitative value represents the Estimated Maximum Possible Concentration of the analyte in the sample.

# CLIENT and LABORATORY SAMPLE IDs and CASE NARRATIVE

#### **SAMPLE SUMMARY**

Client: CDM Smith, Inc. Job Number: 200-37722-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
200-37722-1	103538-1887-IA-030817	Air	03/08/2017 1310	03/10/2017 1130
200-37722-2	103538-1887-SS-030817	Air	03/08/2017 1310	03/10/2017 1130
200-37722-3	103538-1889-IA-030817	Air	03/08/2017 1248	03/10/2017 1130
200-37722-4	103538-1889-SS-030817	Air	03/08/2017 1248	03/10/2017 1130
200-37722-5	103538-1891-IA-030817	Air	03/08/2017 1315	03/10/2017 1130
200-37722-6	103538-1891-SS-030817	Air	03/08/2017 1315	03/10/2017 1130
200-37722-7	103538-1893-IA-030817	Air	03/08/2017 1259	03/10/2017 1130
200-37722-8	103538-1893-SS-030817	Air	03/08/2017 1255	03/10/2017 1130
200-37722-9	103538-1895-IA-030817	Air	03/08/2017 1230	03/10/2017 1130
200-37722-10	103538-1895-SS-030817	Air	03/08/2017 1230	03/10/2017 1130
200-37722-11	103538-1897-IA-030817	Air	03/08/2017 1321	03/10/2017 1130
200-37722-12	103538-1897-SS-030817	Air	03/08/2017 1321	03/10/2017 1130
200-37722-13	103538-1899A-IA-030817	Air	03/08/2017 1400	03/10/2017 1130
200-37722-14	103538-1899A-SS-030817	Air	03/08/2017 1327	03/10/2017 1130
200-37722-15	103538-9899A-IA-030817	Air	03/08/2017 1400	03/10/2017 1130
200-37722-16	103538-1899B-IA-030817	Air	03/08/2017 1302	03/10/2017 1130
200-37722-17	103538-1899B-SS-030817	Air	03/08/2017 1302	03/10/2017 1130
200-37722-18	103538-9899B-SS-030817	Air	03/08/2017 1302	03/10/2017 1130
200-37722-19	103538-1897-OA-030817	Air	03/08/2017 1200	03/10/2017 1130

## Job Narrative 200-37722-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 3/10/2017 11:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 6 coolers at receipt time were 21.0° C, 21.0° C, 21.0° C, 21.0° C, 21.0° C and 21.0° C.

#### **Receipt Exceptions**

During the canister pressure check performed upon receipt, it was observed that the following sample was received at an elevated residual vacuum level: 103538-9899A-IA-030817 (200-37722-15). The associated flow controller was evaluated upon receipt and was found to be within the acceptable flow range as compared to the original set flow rate.

#### **Air Toxics**

Method(s) TO-15: The concentration(s) of Butane in the following sample(s) exceeded the calibration range of the instrument: 200-37722-A-1. The client was contacted and the sample was analyzed with minimum dilution even though some analytes were outside of the calibration range.

Method(s) TO-15: The concentration(s) of n-Butane, Acetone, Isopropyl alcohol, Methyl methacrylate in the following sample(s) exceeded the calibration range of the instrument: 200-37722-A-3, -5. The client was contacted and the sample was analyzed with minimum dilution even though some analytes were outside of the calibration range.

Method(s) TO-15: The concentration(s) of Isopropyl alcohol in the following sample(s) exceeded the calibration range of the instrument: 200-37722-a-7, -9, -11. The client was contacted and the sample was analyzed with minimum dilution even though some analytes were outside of the calibration range.

Method(s) TO-15: The concentration(s) of Toluene in the following sample(s) exceeded the calibration range of the instrument: 200-37722-A-13, -15. The client was contacted and the sample was analyzed with minimum dilution even though some analytes were outside of the calibration range.

Method(s) TO-15: The concentration(s) of n-Butane, Acetone in the following sample(s) exceeded the calibration range of the instrument: 200-37722-A-4, -17, -18. The client was contacted and the sample was analyzed with minimum dilution even though some analytes were outside of the calibration range.

Method(s) TO-15: The concentration(s) of Acetone, Isopropyl alcohol, Cumene in the following sample(s) exceeded the calibration range of the instrument:200-37722-A-8. The client was contacted and the sample was analyzed with minimum dilution even though some analytes were outside of the calibration range.

Method(s) TO-15: The concentration(s) of Isopropyl alcohol in the following sample(s) exceeded the calibration range of the instrument: 200-37722-A-10. The client was contacted and the sample was analyzed with minimum dilution even though some analytes were outside of the calibration range.

Method(s) TO-15: The concentration(s) of Acetone and Isopropyl alcohol in the following sample(s) exceeded the calibration range of the instrument: 200-37722-A-6. The client was contacted and the sample was analyzed with minimum dilution even though some analytes were outside of the calibration range.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

03/21/2017