

**SOIL VAPOR INTRUSION & GROUNDWATER
EVALUATION
COSCO
Site Number: 344035**

**Work Assignment No.
D004436-25**

Prepared for:



**SUPERFUND STANDBY PROGRAM
New York State
Department of Environmental Conservation
625 Broadway
Albany, New York 12233**

September 2009

Prepared by:

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1.0 INTRODUCTION

AECOM Technical Services Northeast, Inc. (formerly known as Earth Tech) has been issued Work Assignment # D004436-25 under the New York State Department of Environmental Conservation (NYSDEC) State Superfund Standby Program. The site under this work assignment is COSCO (Site # 344035). The location of the site is shown on Figure 1.

The specific objectives of this project, as defined by the NYSDEC, are to conduct a soil vapor intrusion evaluation and obtain sufficient information to evaluate groundwater conditions. The work was performed in accordance with NYSDEC Division of Environmental Remediation Draft DER-10 Technical Guidance for Site Investigation and Remediation (NYSDEC, 2002) and the Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH, Final, October 2006). The project consisted of soil vapor sampling with co-located indoor air quality air samples, and groundwater sampling from four monitoring wells.

This site characterization report outlines the specific activities completed by AECOM. It identifies and details the methods, procedures, results, and conclusions of those activities. The report has been prepared in general accordance with the provisions of the Immediate Investigation Work Assignment prepared by NYSDEC dated October 2008. As specified in the work assignment, AECOM assisted the NYSDEC project management team in the preparation and implementation of the field investigation program.

1.1 Site Description

Information on the location, history, previous investigations, and site geology are provided in the subsections below.

1.1.1 General/Location

The COSCO site (herein identified as the "site") is a former ^{Sharp} steel fabrication facility, currently being used as a mixed use industrial park, located at 15 West Street (also known as Harriet Tubman Way) in Spring Valley, Rockland County, New York, shown in Figure 1. The site covers approximately 0.3 acres at the northwestern corner of the intersection of Harriet Tubman Way and West Central Avenue. The general area is developed with a mix of commercial and residential properties. The Spring Valley Department of Public Works garage is located immediately north of the COSCO facility, and is separated from the COSCO facility by an abandoned railroad spur.

1.1.2 Operational/Disposal History

A Rockland County Health Department report dated July 1979 indicated that COSCO was using trichloroethene (TCE) in a degreasing process and discharging the rinse-water from their plating operation into a surface water drainage reach behind the facility near the railroad tracks. Investigations between 1979 and 1984 showed concentrations of TCE and perchloroethylene (PCE) up to 59,000 parts per billion (ppb).

1.1.3 Previous Investigations and Remedial History

In 1988, monitoring wells were installed and sampled by the NYSDEC and revealed up to 210 ppb of TCE and 40 ppb of PCE in overburden wells. Bedrock wells were installed and PCE was found at concentrations of 7,700 ppb while TCE was found at 4,300 ppb. A groundwater treatment system was installed on the north side of the property but has been shut down for the past year.

In 2006, Environmental Resources Management (ERM) performed a Vapor Intrusion Evaluation of the property. Volatile organic compound concentrations were detected in the soil gas. The NYSDEC and the New York State Department of Health (NYSDOH) jointly agreed that additional investigation of the

The party rental store at 35 Commerce Street did not include any chemicals containing chlorinated solvents; however, the rented tables, chairs, and other items are cleaned by the renters and stored in the shop. Large roll-up garage doors are used to load the items in and out of the store. This building is immediately adjacent to the paint supply store. Airflow into the garage areas is likely to occur on a regular basis.

2.1 Air Sampling

One indoor air and one sub-slab sample were collected from each of the four residential and two commercial properties. One ambient air sample was collected on each day of sampling from at 37 Commerce Street and 39 Commerce Street. Sub-slab and indoor air samples were collected from the basement level from residential properties and from the ground level from the commercial properties. Summa canisters for ambient air were located to collect a representative sample from the breathing zone at four to six feet above ground.

Where possible, sub-slab vapor samples were located central to the building and away from the foundation walls and apparent penetrations such as water pipes, floor drains, etc. AECOM marked and documented the location of the each sampling point. AECOM used a photoionization detector (PID) to screen indoor air and penetrations such as concrete floor cracks, floor drains, etc., prior to collecting the air samples. Household products containing chlorinated solvents, when found, were removed from the interior of the building prior to and during the sampling effort. Product inventories for each structure are provided in Appendix A. No products were removed from the structures during sampling.

The air samples were collected using 6-liter summa canisters equipped with flow controller valves pre-calibrated at the laboratory.

Indoor air samples were collected by placing the summa canister with 24-hour flow controllers in the breathing zone (4-6 ft above the floor). A length of new Teflon-lined polyethylene tubing was then cut and clamped to the top of the flow regulator.

For the outdoor air sampling, the locations were selected such that they were removed from outdoor operations that are known to generate VOCs (e.g., away from the parking lot due to the presence of motor vehicles). The outdoor (ambient) air samples were collected from the porch of 37 Commerce Street and from 39 Commerce Street.

For the sub-slab samples, after the basement flooring/foundation slab had been inspected, the location of subsurface utilities determined, and the ambient air surrounding the proposed sampling location screened with a PID, an electric drill was used to advance a boring to a depth of no more than 2 inches beneath the basement flooring/foundation slab. Temporary probes were constructed with Teflon tubing. The annular space between the drilled hole and the 1/4" ID sample tubing was filled with modeling clay and the sampling probe sealed to the floor with beeswax, a non-VOC-containing and non-shrinking product. After installation, one to three volumes (i.e., the volume of the sample probe and tube) were purged prior to collecting the samples by connecting the tube to a SKC Model 222-3 pump. After purging, the end of the tubing was connected directly to the summa canister's regulator intake valve. At the completion of the sampling, each borehole was patched to restore the area to its pre-sample condition. Appendix A contains the field information collected during sampling.

All sub-slab, indoor air, and outdoor air samples were sent to TestAmerica Laboratories, Inc., a NYSDOH Environmental Laboratory Approval Program (ELAP #10391) laboratory in South Burlington, Vermont. Proper chain-of-custody (COC) procedures were maintained throughout the sampling event. The samples were analyzed for VOCs by USEPA Method TO-15 with a detection limit of 1.0 $\mu\text{g}/\text{m}^3$ (0.25 $\mu\text{g}/\text{m}^3$ for TCE, vinyl chloride, and chloroethane). The summa canisters were certified clean by the laboratory. The laboratory performed batch QC as required by the analytical method.

- m/p-Xylene
- o-Xylene
- 1,3,5-Trimethylbenzene

A comparison of the concentrations of TCE and PCE in the sub-slab vapor and indoor air samples with the Decision Matrices from NYSDOH (2006) is presented in Table 4. A summary of the recommended actions per the NYSDOH guidance indicated for the structures is provided below.

The following properties showed no TCE or PCE detection in sub-slab but had detections in the indoor air samples. Since there is no evidence to show that the TCE and PCE in the indoor are occurring due to vapor intrusion, AECOM recommends no further action for following properties:

- 43 Commerce Street
- 39 Commerce Street

Concentrations of TCE and PCE was observed in the sub-slab samples at 47 Commerce Street in excess of the decision matrix threshold, however; during the preliminary building chemical inventory, cans of silicon sealant containing chlorinated solvents were observed in the basement of the building and were identified as old and rusty. Other chemicals with no chemical listing were observed and were also noted as being in poor condition. Combined with the exposed soils observed during the inspection, AECOM believes that these chemicals may be the source of the detected concentrations and does not believe that mitigation is warranted at this time.

Since TCE and PCE were not detected in any of the sample, AECOM recommends no further action the following properties:

- 35 Commerce Street
- 41 Commerce Street
- 37 Commerce Street

3.2 Groundwater Samples

Four groundwater samples were collected and submitted for VOC analysis utilizing USEPA SW-846 Method 8260. The groundwater results are compared to the NY Class GA Groundwater Criteria and are presented in Table 5. Class GA criteria were exceeded for a number of chlorinated solvents and other VOCs as summarized below.

- PCE concentrations exceeded criteria in two of four samples, with concentrations of 2 µg/L (MW-18) and 6.2 µg/L (RW-8S).
- TCE concentration exceeded criteria in three samples, with a concentration of 2.7 µg/L (MW-18), 3.1 µg/L (RW-1S), and 6.2 µg/L (RW-8S).
- Concentrations of cis-1,2-dichloroethene (DCE) exceeded criteria in three samples, with a concentration of 5.2 µg/L (MW-18), 3.1 µg/L (RW-1S), and 80 µg/L (RW-8S).
- Concentrations of vinyl chloride (VC) exceeded criteria in two samples, with a concentration of 9.6 µg/L (MW-18) and 29 µg/L (RW-8S).

Redox and dissolved oxygen levels were recorded during as part of the groundwater sampling. These values provide an indication of the potential for reductive dechlorination of TCE and PCE detected in the groundwater.

TABLE 2
COSCO
SPRING VALLEY, NY
SUB-SLAB SAMPLING RESULTS

Sample ID	CAS Number	SS-47-COMM 47 Commerce St Sub-slab	SS-39-COMM 39 Commerce St Sub-slab	35S 35 Commerce St Sub-slab	37S 37 Commerce St Sub-slab	41S 41 Commerce St Sub-slab	43S 43 Commerce St Sub-slab
Type of Sample							
Sampling Date & Time		02/05/2009 0910	02/05/2009 0910	12/10/2008 1051	12/10/2008 1140	12/10/2008 1530	12/10/2008 1555
Dilution Factor		50	24.7	3	8.2	33.9	32
VOLATILE COMPOUNDS (GC/MS)							
1,1,1-Trichloroethane	71-55-6	87 U	27 U	3.3 U	8.7 U	37 U	35 U
Toluene	108-88-3	60 U	79 U	9.8 U	11 U	87 U	53 U
1,1,2,2-Tetrachloroethane	79-34-5	110 U	34 U	4.1 U	11 U	47 U	44 U
1,1,2-Trichloroethane	79-00-5	87 U	27 U	3.3 U	8.7 U	37 U	35 U
1,1-Dichloroethane	75-34-3	65 U	20 U	2.4 U	6.5 U	28 U	26 U
1,1-Dichloroethene	75-35-4	63 U	19 U	2.4 U	6.3 U	27 U	25 U
1,2-Dibromoethane	106-93-4	120 U	38 U	4.8 U	12 U	52 U	49 U
1,2-Dichloroethane	107-06-2	85 U	20 U	2.4 U	6.5 U	28 U	26 U
1,2-Dichloroethene (cis)	156-59-2	970 U	19 U	2.4 U	6.3 U	27 U	25 U
1,2-Dichloroethene (total)	540-59-0	370 U	19 U	2.4 U	6.3 U	27 U	25 U
1,2-Dichloroethene (trans)	156-60-5	63 U	19 U	2.4 U	6.3 U	27 U	25 U
1,2-Dichloropropane	78-87-5	74 U	23 U	2.8 U	7.4 U	31 U	30 U
1,2-Dichlorotetrafluoroethane (Freon 114)	76-14-2	110 U	34 U	4.2 U	11 U	46 U	45 U
1,3,5-Trimethylbenzene	108-87-8	79 U	380 U	8.8 U	29 U	340 U	170 U
1,3-Butadiene	108-99-6	88 U	27 U	3.3 U	9.1 U	38 U	35 U
1,3-Dichloropropene (cis)	10061-01-5	73 U	22 U	2.7 U	7.3 U	31 U	29 U
1,3-Dichloropropene (trans)	10061-02-6	73 U	22 U	2.7 U	7.3 U	31 U	29 U
2,2,4-Trimethylpentane	540-84-1	75 U	23 U	2.6 U	7.5 U	32 U	30 U
3-Chloropropene (allyl chloride)	107-05-1	130 U	38 U	4.7 U	13 U	53 U	50 U
4-Ethyltoluene (p-Ethyltoluene)	622-66-8	79 U	740 U	19 U	69 U	740 U	360 U
Benzene	71-43-2	51 U	16 U	1.9 U	5.1 U	22 U	20 U
Bromodichloromethane	75-27-4	110 U	33 U	4 U	11 U	46 U	43 U
Bromotoluene	75-25-2	170 U	51 U	6.2 U	17 U	70 U	66 U
Bromomethane (Methyl bromide)	74-83-9	62 U	19 U	2.3 U	6.2 U	26 U	25 U
Carbon tetrachloride	56-23-5	100 U	31 U	3.6 U	10 U	43 U	40 U
Chloroethane (ethyl chloride)	75-00-3	110 U	32 U	4 U	11 U	45 U	42 U
Chloroform	67-66-3	78 U	24 U	2.9 U	7.8 U	33 U	31 U
Cyclohexane	110-82-7	55 U	17 U	2.1 U	5.5 U	23 U	22 U
Dibromochloromethane	124-46-1	140 U	42 U	5.1 U	14 U	58 U	55 U
Dichlorodifluoromethane	75-71-8	200 U	59 U	7.4 U	20 U	84 U	79 U
Ethylbenzene	100-41-4	69 U	150 U	6.1 U	15 U	150 U	78 U
Methylene Chloride	75-09-2	140 U	42 U	5.2 U	14 U	59 U	56 U
MTBE (Methyl tert-butyl ether)	1534-04-4	140 U	43 U	5.4 U	15 U	61 U	58 U
n-Heptane	142-62-5	66 U	49 U	4.5 U	9.4 U	70 U	41 U
n-Hexane	110-54-3	140 U	42 U	5.3 U	14 U	60 U	56 U
Tetrachloroethene (PCE)	127-18-4	810 U	33 U	4.1 U	11 U	46 U	43 U
Trichloroethene (TCE)	79-01-6	12000 U	26 U	3.4 U	8.6 U	37 U	34 U
Trichlorofluoromethane (Freon 11)	75-89-4	90 U	28 U	3.8 U	9 U	39 U	36 U
Vinyl bromide	693-60-2	70 U	21 U	2.6 U	7 U	30 U	28 U
Vinyl Chloride	75-01-4	41 U	13 U	1.5 U	4.1 U	17 U	16 U
Xylene (m,p)	1330-20-7	170 U	420 U	16 U	41 U	400 U	290 U
Xylene (o)	95-47-6	59 U	220 U	7.8 U	21 U	280 U	100 U
Xylene (Total)	1330-20-7	69 U	650 U	23 U	61 U	610 U	310 U
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	120 U	38 U	NR	NR	NR	NR
1,2,4-Trichlorobenzene	120-82-1	390 U	86 U	NR	NR	NR	NR
1,2,4-Trimethylbenzene	95-63-6	79 U	1000 U	NR	NR	NR	NR
1,2-Dichlorobenzene	95-50-1	96 U	29 U	NR	NR	NR	NR
1,3-Dichlorobenzene	541-73-1	96 U	29 U	NR	NR	NR	NR
1,4-Dichlorobenzene	106-46-7	96 U	29 U	NR	NR	NR	NR
1,4-Dioxane	123-81-1	1400 U	430 U	NR	NR	NR	NR
2-Chlorotoluene (o-Chlorotoluene)	95-49-8	83 U	25 U	NR	NR	NR	NR
Acetone	67-64-1	950 U	290 U	NR	NR	NR	NR
Carbon disulfide	75-15-0	120 U	37 U	NR	NR	NR	NR
Chlorobenzene	108-90-7	74 U	23 U	NR	NR	NR	NR
Chloromethane (Methyl chloride)	74-87-3	83 U	25 U	NR	NR	NR	NR
Hexachlorobutadiene	87-68-3	170 U	52 U	NR	NR	NR	NR
Isopropanol	67-63-0	980 U	290 U	NR	NR	NR	NR
Methyl Butyl Ketone	591-78-5	180 U	49 U	NR	NR	NR	NR
Methyl ethyl ketone	78-93-3	120 U	35 U	NR	NR	NR	NR
Methyl isobutyl ketone	108-10-1	160 U	49 U	NR	NR	NR	NR
Styrene	100-42-5	68 U	21 U	NR	NR	NR	NR
Tertiary butyl alcohol (TBA)	75-65-0	1200 U	360 U	NR	NR	NR	NR
Tetrahydrofuran	109-99-9	1200 U	350 U	NR	NR	NR	NR

All units in ug/m3

Bold - Compound detected in a concentration greater than the method reporting limits.

NR - Not analyzed.

U - Compound analyzed but not detected at a concentration above the reporting limit.

TABLE 5
COSCO
SPRING VALLEY, NY
GROUNDWATER ANALYTICAL RESULTS

Sample ID	Sample Date	NY Class GA	Groundwater	Criteria	12/23/2008	MM-18	12/23/2008	TR
VOLATILE COMPOUNDS (GC/MS)								
Chloromethane		5	5	5	5	5	5	5
Bromomethane		5	5	5	5	5	5	5
Vinyl Chloride		2	5	5	5	5	5	5
Chloroethane		5	5	5	5	5	5	5
Methylene Chloride		5	3	3	3	3	3	3
Acetone		50	5	5	5	5	5	5
Carbon Disulfide		50	5	5	5	5	5	5
1,1-Dichloroethane		5	2	2	2	2	2	2
1,1-Dichloroethane		5	5	5	5	5	5	5
trans-1,2-Dichloroethane		5	5	5	5	5	5	5
cis-1,2-Dichloroethane		5	5	5	5	5	5	5
Chloroform		7	5	5	5	5	5	5
1,2-Dichloroethane		0.6	2	2	2	2	2	2
2-Butanone		50	5	5	5	5	5	5
1,1,1-Trichloroethane		5	5	5	5	5	5	5
Carbon Tetrachloride		5	2	2	2	2	2	2
Bromodichloromethane		NC	1	1	1	1	1	1
1,2-Dichloropropane		1	1	1	1	1	1	1
cis-1,3-Dichloropropene		NC	5	5	5	5	5	5
Trichloroethene		5	1	1	1	1	1	1
Dibromochloromethane		5	5	5	5	5	5	5
1,1,2-Trichloroethane		1	3	3	3	3	3	3
Benzene		1	1	1	1	1	1	1
trans-1,3-Dichloropropene		NC	5	5	5	5	5	5
Bromotom		NC	4	4	4	4	4	4
4-Methyl-2-Pentanone		NC	5	5	5	5	5	5
2-Hexanone		50	5	5	5	5	5	5
Tetrachloroethene		5	1	1	1	1	1	1
1,1,2,2-Tetrachloroethane		5	1	1	1	1	1	1
Toluene		5	5	5	5	5	5	5
Chlorobenzene		5	5	5	5	5	5	5
Ethylbenzene		5	4	4	4	4	4	4
Styrene		5	5	5	5	5	5	5
Xylene (Total)		10	5	5	5	5	5	5
Total Contident Conc.					19.5	0	0	0
Total Estimated Conc. (TICs)					0	0	0	0

Class GA Groundwater Criteria as published in TOGS 1.1.1, revised through April 2000.
Criteria shown include standards, guidance values, and principal organic contaminant (POC) criteria.

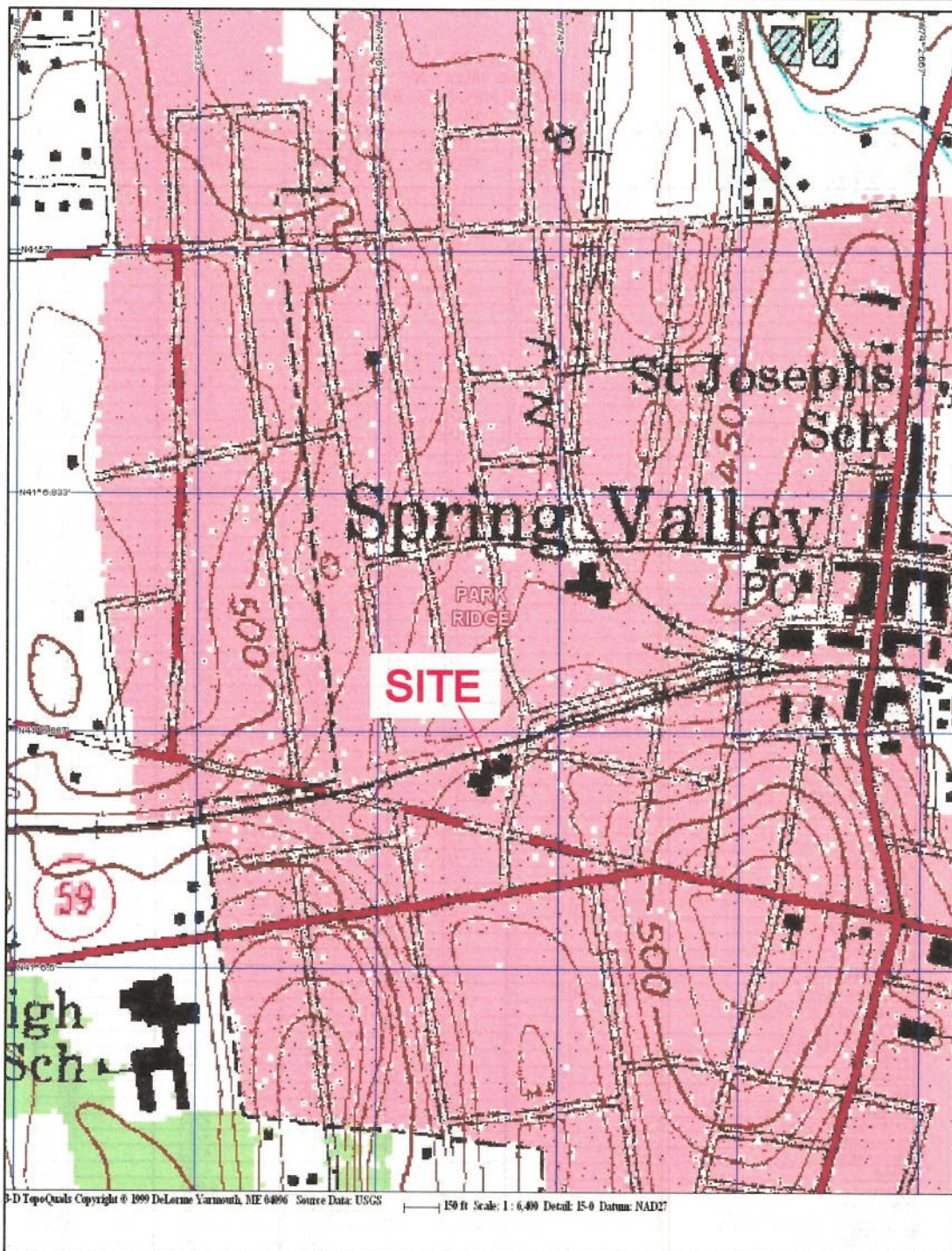
BOLD - concentration exceeds criterion.

NR - Not analyzed.

U - The compound was not detected at the indicated concentration.

J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit.
The concentration given is an approximate value.

B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the



SYMBOL		DESCRIPTIONS		DATE	APPROVED
		REVISIONS			
Prepared by :		For :			
AECOM		NYSDEC			
DESIGNED BY :	VM	COSCO SPRING VALLEY, NEW YORK SITE LOCATION MAP			
DRAWN BY :	VM				
CHECKED BY :	KS				
SUBMITTED BY :	KS	DATE :	SCALE :	FIGURE NO. :	
		SEPTEMBER 2009	AS SHOWN	1	



LEGEND:



AIR SAMPLING LOCATIONS



SITE BOUNDARY

Note:

- One sub-slab and one indoor air sample was collected from each property.
- A total of 6 sub-slab, 6 indoor air and two ambient air samples were collected.
- Each sample was collected in a 6 liter Summa canister over a 24 hour period.

PREPARED BY: DATE: 10/1/2003		REVIEWED BY: DATE: 10/1/2003	
DESIGNED BY: DATE: 10/1/2003		DRAWN BY: DATE: 10/1/2003	
CHECKED BY: DATE: 10/1/2003		SUBMITTED BY: DATE: 10/1/2003	
AECOM		NYSDEC	
CORNO SPRING VALLEY, NEW YORK		AIR SAMPLING LOCATIONS	
SCALE: 1"=400'		PLATE NO. 1 2	

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other: _____

If multiple units, how many? _____

If the property is commercial, type?

Business Type(s) PARTY RENTAL

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

Other characteristics:

Number of floors 1

Building age 2004

Is the building insulated? Y (N)

How air tight? Tight / Average (Not Tight)

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

N/A

Airflow near source

STAGNANT

Outdoor air infiltration

THROUGH DOORS INTO BUILDING. 1 LARGE ROLL UP DOOR

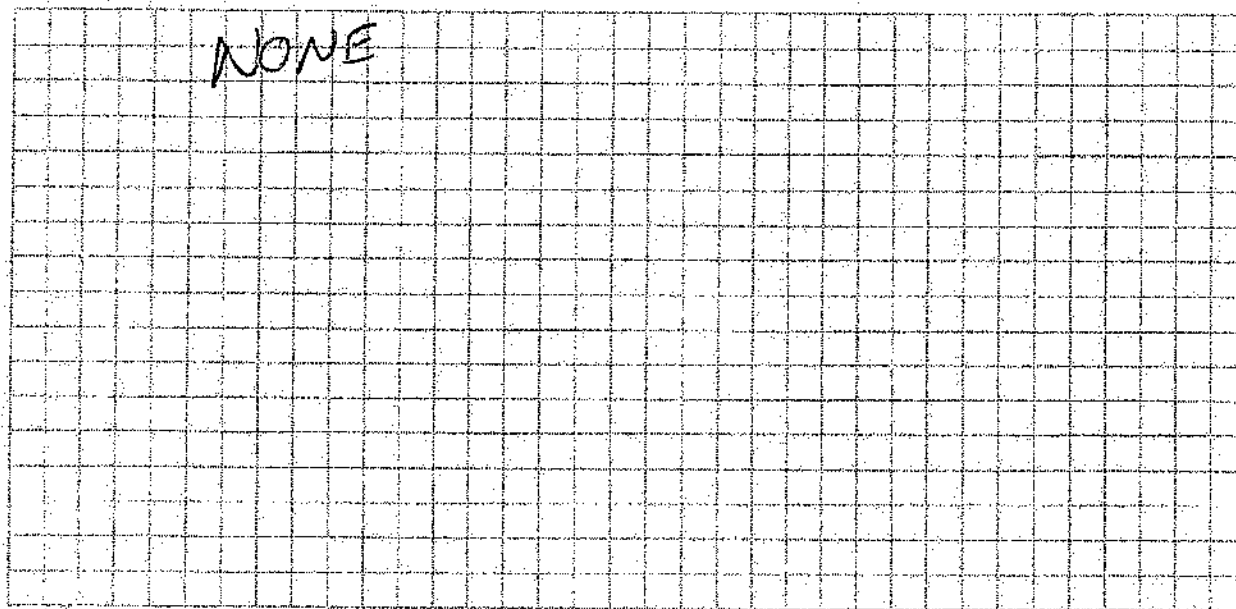
Infiltration into air ducts

N/A Natural Gas Space heaters

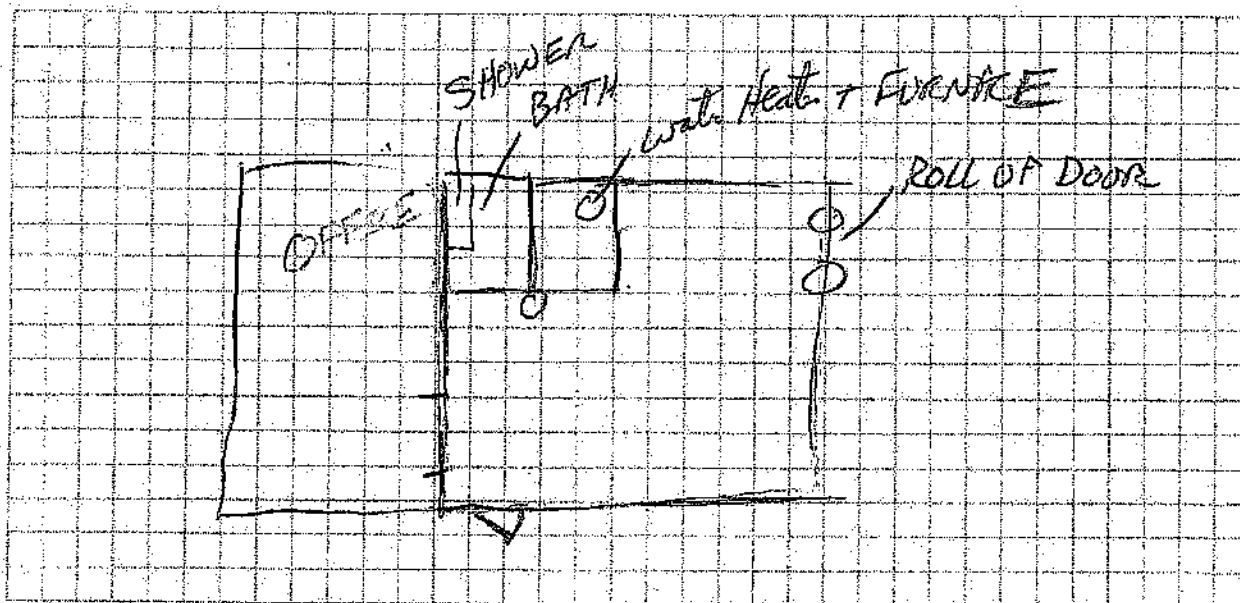
11. FLOOR PLANS

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:



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: MINI RAE 3000

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
	RHINO CARPET CLEANER	1/2 GAL	USED	NOT LISTED		
X2	WRITE AWAY COFFEE/TE REMOVER	1 LB CAN	USED	ETHANOL BENZYL ALCOHOL LIMONENE ISOBUTANE N-BUTANE		
	TURTLE WAX	10.5 OZ		NL		
	GOLD GLASS	14 OZ		NL		
X3	AMWAY CAR WASH	33.8 OZ		NL		
	AMWAY SEE SPRAY	33.8 OZ				
	AMWAY ZOOM	33.8 OZ		2-BUTOXY ETHANOL		
	AMWAY S&S FABRIC FRESHENER	16.9 OZ				
X2	AMWAY SEASON GLAZE	16.9 OZ				
	AMWAY TIRE CARE	8 OZ		NL		
	NOXON METAL POLISH	12 OZ				
	CLOROX	1 GAL				
	HOSPE SPRAY	15 OZ				
	2 EP NO WAX FLOOR CLEANER	32 OZ				
X2	EASY OFF	24 OZ				
	MPL FRESH BREEZE	1 QT				
	GLADE CARPET	32 OZ				

* Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D)

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

35

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

Is basement/lowest level occupied?

Full-time

Occasionally

Seldom

Almost Never

Level

General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)

Basement

N/A

1st Floor

PARTY RENTAL

2nd Floor

3rd Floor

4th 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

FORK LIFT, PROPANE, GAS, PORTABLE GENERATOR

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?

i. Have cosmetic products been used recently?

Y/N

When & Type?

If the property is residential, type? (Circle appropriate response)

Ranch	<u>2-Family</u>	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other: _____

If multiple units, how many? 2

If the property is commercial, type?

Business Type(s) No

Does it include residences (i.e., multi-use) Y/N

If yes, how many? 2

Other characteristics:

Number of floors 2

Building age _____

Is the building insulated? Y/N

How air tight? Tight Average / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

UP From Basement

Airflow near source

Stagnant

Outdoor air infiltration

Windows + DOORS

Infiltration into air ducts

N/A

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

Is basement/lowest level occupied?

Full-time

Occasionally

Seldom

(Almost Never)

Level

General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)

Basement

UN OCCUPIED

1st Floor

Family Room + Kitchen

2nd Floor

Bedrooms

3rd Floor

4th 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? Unknown

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? Unknown

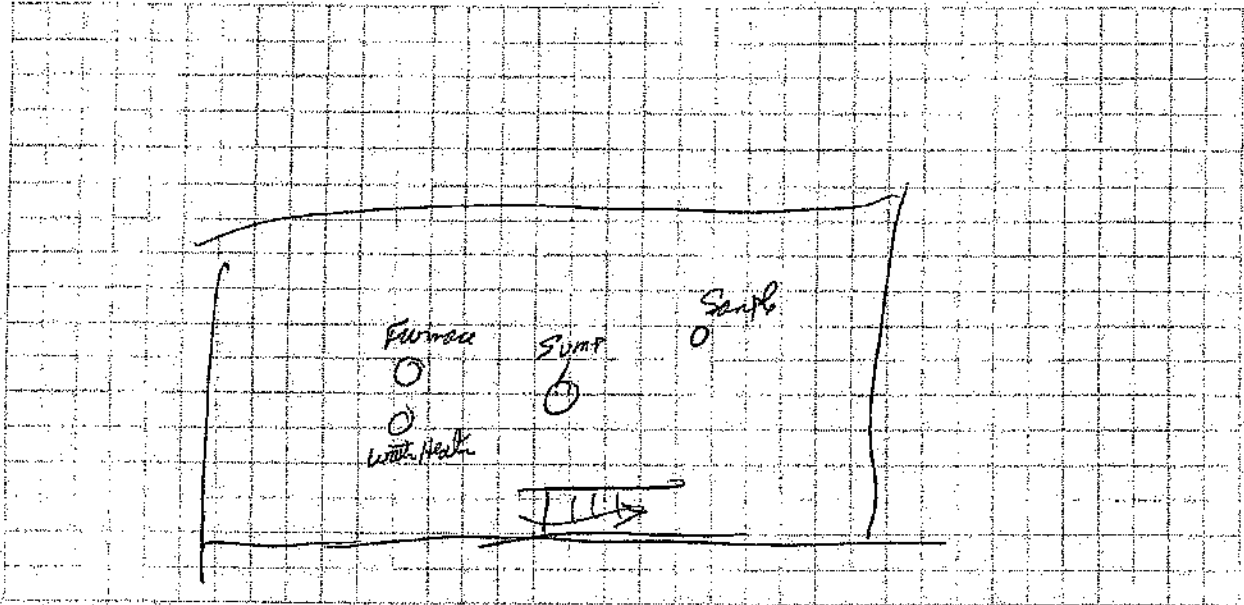
i. Have cosmetic products been used recently?

Y / N When & Type? Unknown

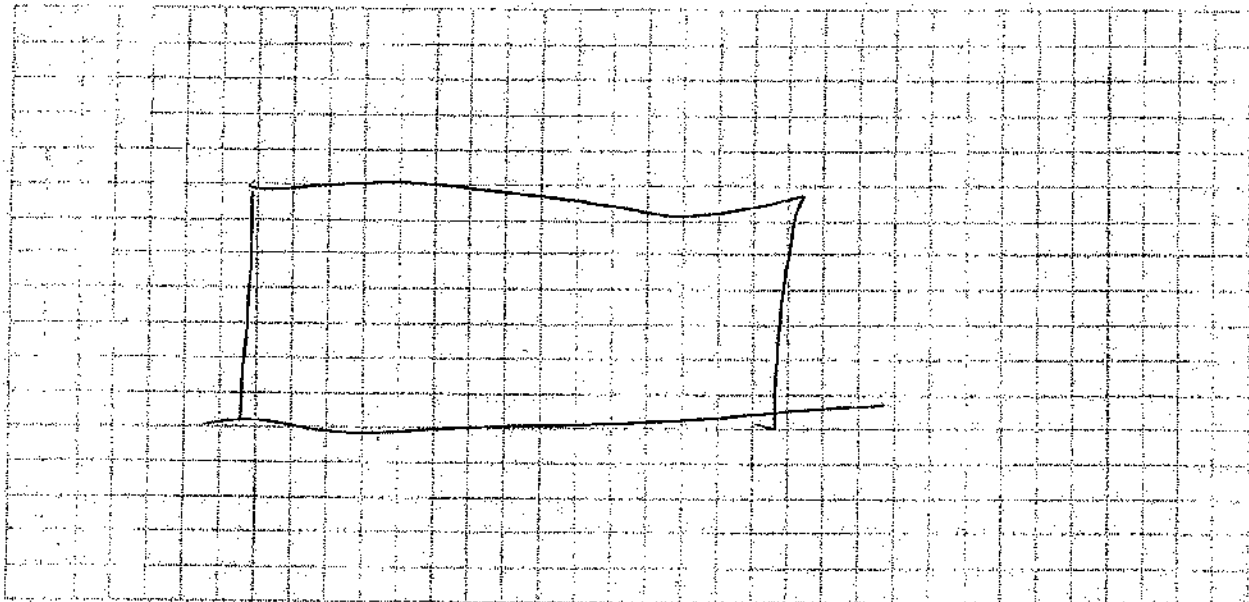
11. FLOOR PLANS

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:



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

AMBIENT
AA-43
CAN 4833
REG 3999
Stand 1448
-28

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

Preparer's Name KEVIN SEISE Date/Time Prepared 12/10/08

Preparer's Affiliation EARTH TECH Phone No. _____

Purpose of Investigation SUI/IAQ

1. OCCUPANT: SUI CAN 20 6716 REG 4748 375 1140
IAQ CAN 2964 REG 3853 37I -26 1142

Interviewed: ☒ Y ☐ N

Last Name: ELLMAN First Name: PHILIP

Address: 37 COMMERCES ELLMOR PAINT SUPPLY CO

County: ROCKLAND

Home Phone: _____ Office Phone: 845-356-1766

Number of Occupants/persons at this location _____ Age of Occupants 718

2. OWNER OR LANDLORD: (Check if same as occupant ☒)

Interviewed: Y / N

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential
Industrial

School
Church

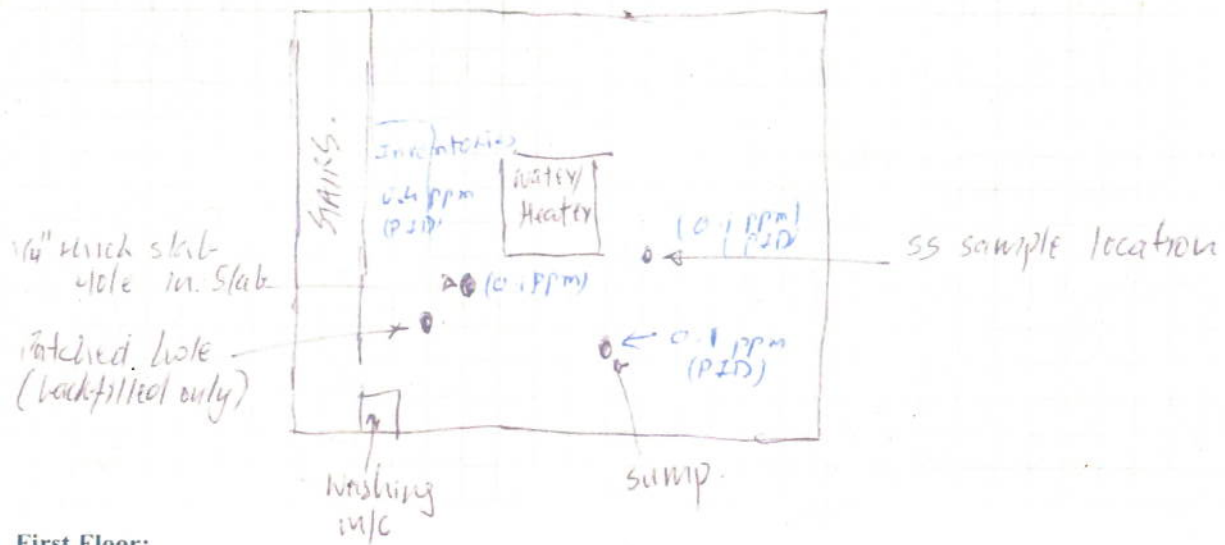
Commercial/Multi-use
Other: _____

PAINT STORE

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:

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

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost Never

Level General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)

Basement Storage

1st Floor Living room / sitting area

2nd Floor bedrooms / bathrooms

3rd Floor _____

4th 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? main floor or very sleeping
- g. Is there smoking in the building? Y (N) How frequently? _____
- h. Have cleaning products been used recently? Y / (N) When & Type? _____
- i. Have cosmetic products been used recently? Y / (N) When & Type? _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	<u>Split Level</u>	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other: _____

If multiple units, how many? _____

If the property is commercial, type? _____

Business Type(s) _____

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

Other characteristics:

Number of floors 2

Building age _____

Is the building insulated? Y / N

How air tight? Tight / Average / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

Airflow near source

Outdoor air infiltration

Infiltration into air ducts

Make & Model of field instrument used: _____

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

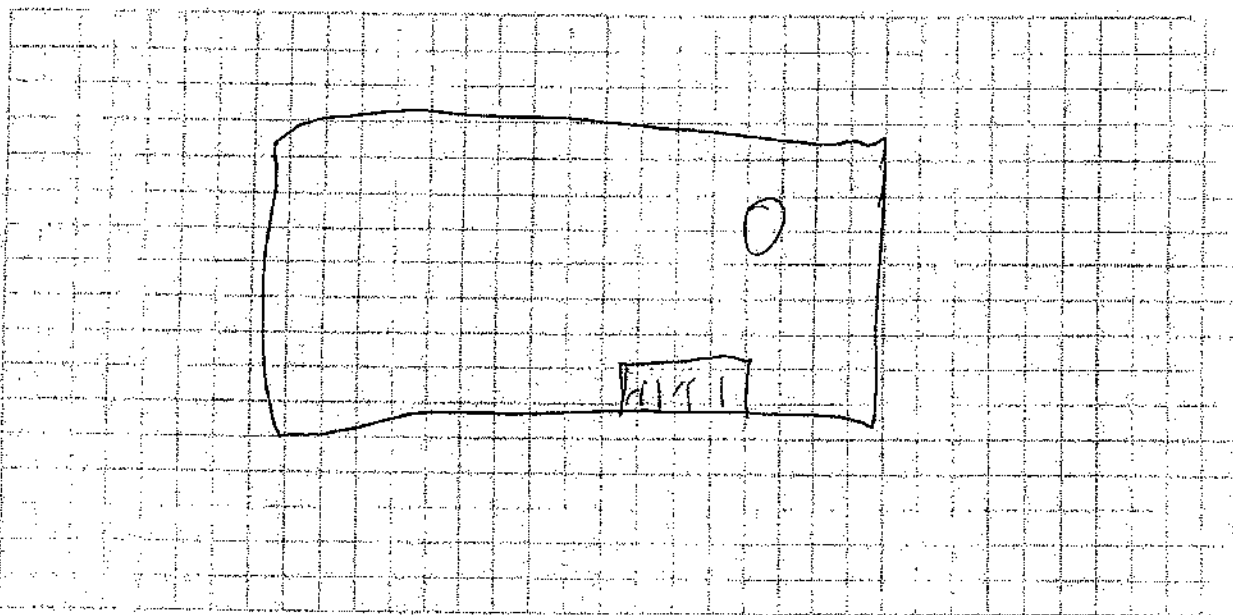
[illegible]

**** 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.**

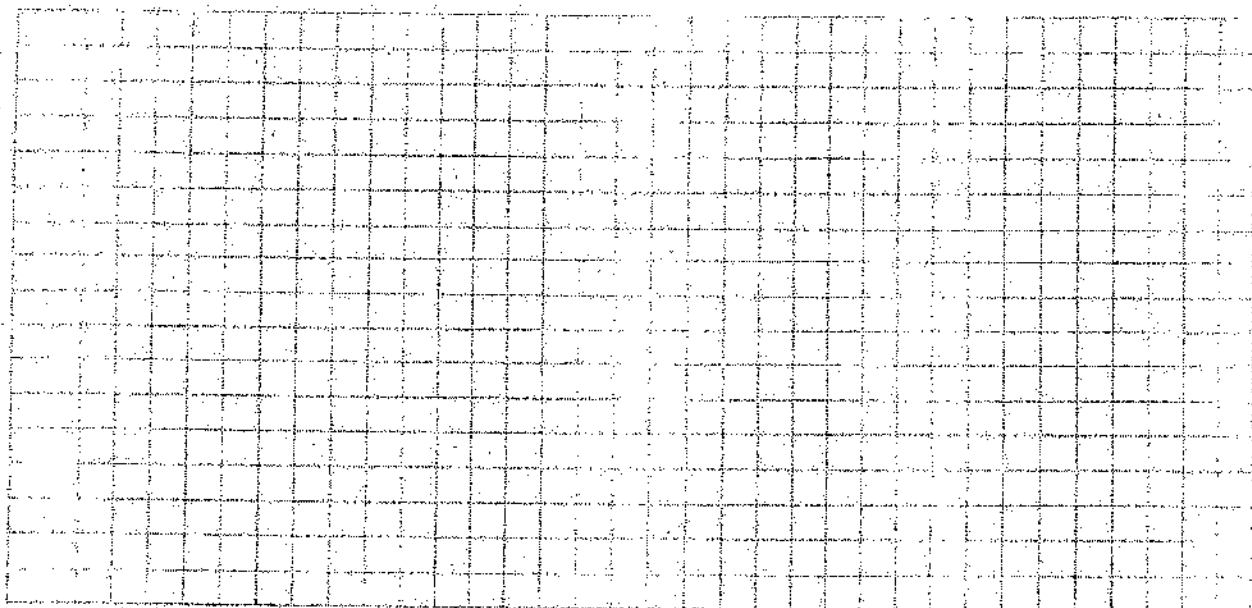
11. FLOOR PLANS

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:



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

Is basement/lowest level occupied?

Full-time

Occasionally

Seldom

☒ Almost Never

Level

General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)

Basement

Unoccupied

1st Floor

Kitchen Family Room

2nd Floor

Bedrooms

3rd Floor

4th 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? Unknown

e. Is a kerosene or unvented gas space heater present?

Y ☒ N Where? West

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? _____

i. Have cosmetic products been used recently?

Y ☒ N When & Type? _____

If the property is residential, type? (Circle appropriate response)

Ranch
Raised Ranch
Cape Cod
Duplex
Modular

2-Family
Split Level
Contemporary
Apartment House
Log Home

3-Family
Colonial
Mobile Home
Townhouses/Condos
Other: _____

If multiple units, how many? 2

If the property is commercial, type?

Business Type(s) _____

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

Other characteristics:

Number of floors 2

Building age Unknown

Is the building insulated? Y / N

How air tight? Tight / Average / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

UP from basement

Airflow near source

Stagnant

Outdoor air infiltration

Windows

Infiltration into air ducts

N/A

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: MINI RAE 3000

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
	GOODBYE CRACKS	40Z	NEW	XENE HEPTANE		
	OOPS AMAZING REMOVER	1 PT	NEW	ACETONE, TOLUENE, METHANOL		
	KRUD KUTTER	1 GAL	NEW	NL		
	PERMATEX HAND CLEANER	140Z	NEW			
	FAST ORANGE	150Z	NEW	METHYL CHLORO ISO THIAZOLONE		
	WD 40	80Z	NEW			
	TSP	160Z				
	Homap Acoustic Texture	160Z	NEW			
	SPRAY TEX Acoustic Popcorn	120Z				
	MEX ALL PURPOSE CLEANER	320Z				
	CROWN SUPRA TOOL	6.50Z		HYDRO CARBON PROPELLANT		
	PAINT THINNERS	-		NAPHTHENE, TOLUENE, METHANOL, ACETONE, N-BUTYL ACETATE, TURPENTINE		

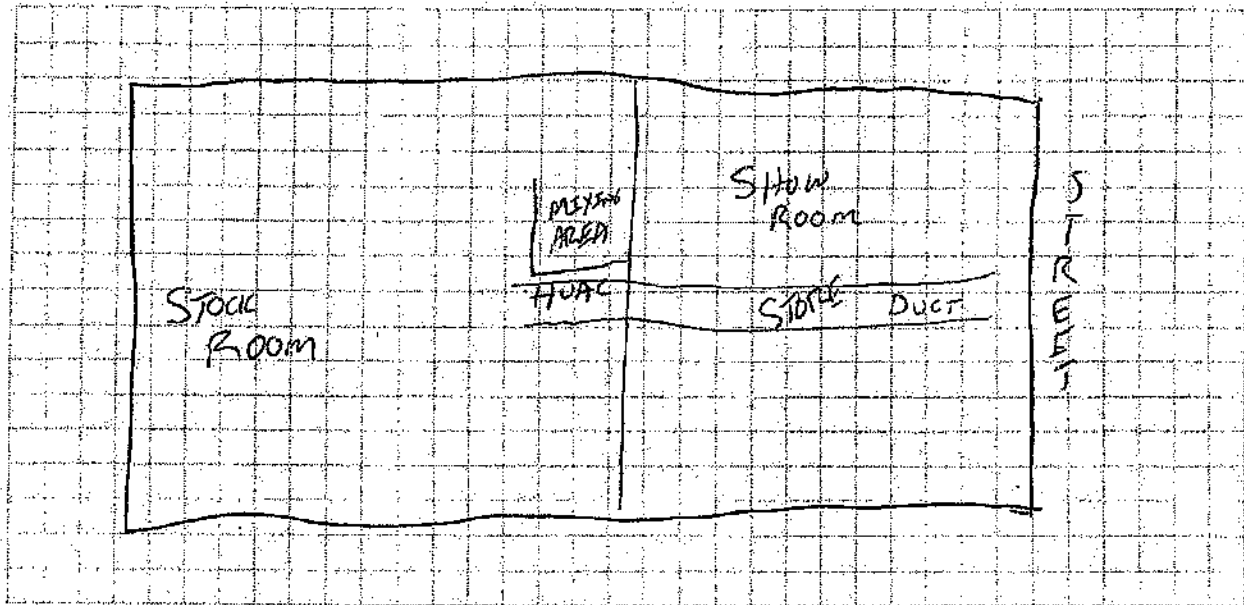
* Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D)

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

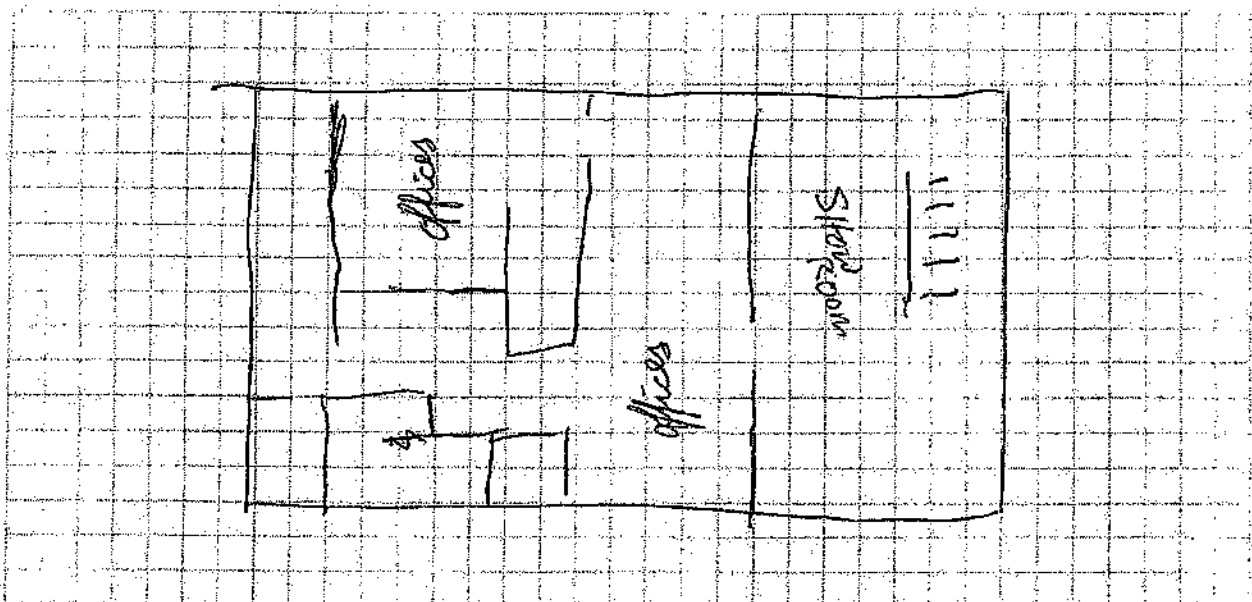
11. FLOOR PLANS

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



FIRST FLOOR SECOND



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.

SECOND FLOOR - CEILING CAVITY PLENUM

7. OCCUPANCY

Is basement/lowest level occupied?

☒ Full-time

☐ Occasionally

☐ Seldom

☐ Almost Never

Level

General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)

Basement

N/A

1st Floor

PAINT STORE

2nd Floor

PAINT STORE

3rd Floor

4th 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? _____

i. Have cosmetic products been used recently?

Y ☒ N When & Type? _____

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: 39 Commerce st, Spring Valley, NY

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) ppm	Photo** Y/N
	Pledge Furniture Polish	18oz	good		0.2	
	on floor laundry stain remover	21.5 FL oz	good			
	Ammonia Cleaner Furniture Polish	12.5oz	good			
	Fosmice Floor Shine	22 FL oz	fair			
	Clorox Clean-up Bleach	9 FL oz	good			
	Path mark fabric softener	32 FL oz				
	MOP & GLO Clean & Shine	32 FL oz	"			
	AJAX	125 fl oz	"			
	M + G Sponges	32 FL oz	"			
	Path mark Clean Ammonia	64 FL oz	"			
	Bolex powder	1 pk	fair			
	Baygon & cupcake refiner	1 pk	"			
	Ultrabright, Path mark bleach	96 - 16 FL oz	good			
	Fab		"			
	CVS, Ammonia Rug cleaner & path mark	64 FL oz	"			
	Wisk stain remover	100 FL oz	"			
	Dow bathroom cleaner	2502	fair			
	Coastal Premium motor oil	1 qt	fair			

* Describe the condition of the product containers as **Unopened (UO)**, **Used (U)**, or **Deteriorated (D)**** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: 39 Commerce street, spring Valley
 127

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) ppm	Photo** Y/N
basement	spray starch	2 23 oz	good		0-2	
basement	Stain Cleaner	20 Fl oz	good			
"	10am cleaner	14 oz	fair			
	stretch gel	10 oz	good			
	wood cleaner	14 oz				
	Solo	1 mt				
	Fabric softener	32 Fl oz	good			
	little boy blue	16 oz	fair			
	bluing	16 oz				
	Dewy	20 Fl oz	good			
	Matured wood					
	laundry stain remover	16 Fl oz	good			
	Glass plus wiper					
	Glass cleaners					
	woodite					
	spot & stain remover	16 Fl oz	good			
	Bluetec					
	Bluing & Brightener	16 Fl oz	good			
	Old english			petroleum distillate		
	Furniture polish	5 Fl oz				
	silicon spray lubricant					
	Agway Ami fuel-7	0.47 lt				
	Armor All					
	cleanser	32 Fl oz				
	CKC 5-56					
		702				
	de-mite	1				
		8 Fl oz				
	Tide powder					

* Describe the condition of the product containers as **Unopened (UO)**, **Used (U)**, or **Deteriorated (D)**

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

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: 47 Commerce st, Spring Valley, NY

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
basement	Stainless Steel Cleaner Metalco	5 cans 1302	old rusted cans	Petroleum distillate methylene chloride	0.2	N
basement	Behr paint acrylic latex	5 cans 12002	opened new cans	Vinyl Acrylic Resin Propylene Glycol Hydroxy Methacrylate	-	N
basement	Moore's Ceiling white	1 can 12002	old rusted	Titanium oxide vinyl Acrylic Resin	-	N
basement	Yellow solvent paint wax Den Sealer	5 gallon 1 can	old rusted	ben scientific Bergerfield Ag	-	N
basement	185 Strapper	1 gallon 1 can	old rusted	-	-	N
basement	Fabulous floor finish	1 gallon 1 can	old rusted	-	-	N
basement	Wall & trim paint	2.719 12002	open dry can	latex enamel	-	N
basement	Good stuff caulk	1202 2 cans	old rusted	-	-	N
basement	silicon sealer	1202 7 cans	old	chlorinated solvents	-	N
basement	Propane torch	3202 1 can	fair	Propane	-	N
11	bleach	1 gallon	good	-	-	N
11	Re former	1 qt	good	-	-	N
11	Pipe join compound	1 502				
	Rich leather foam	10 102				

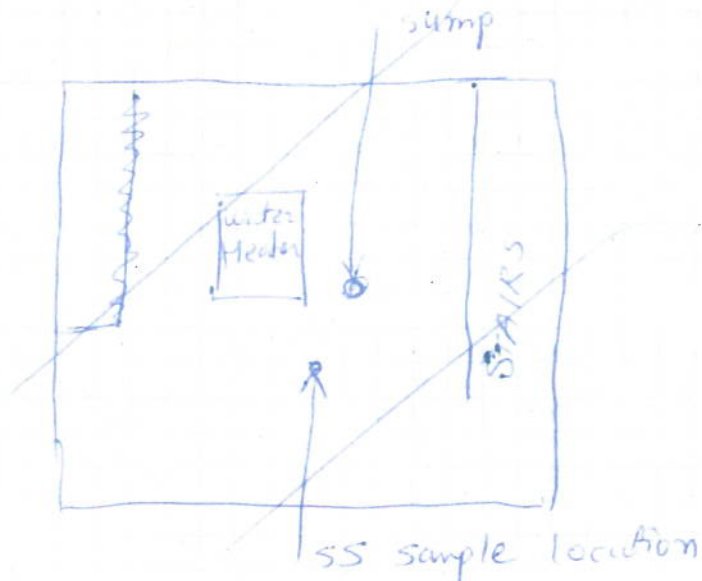
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** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

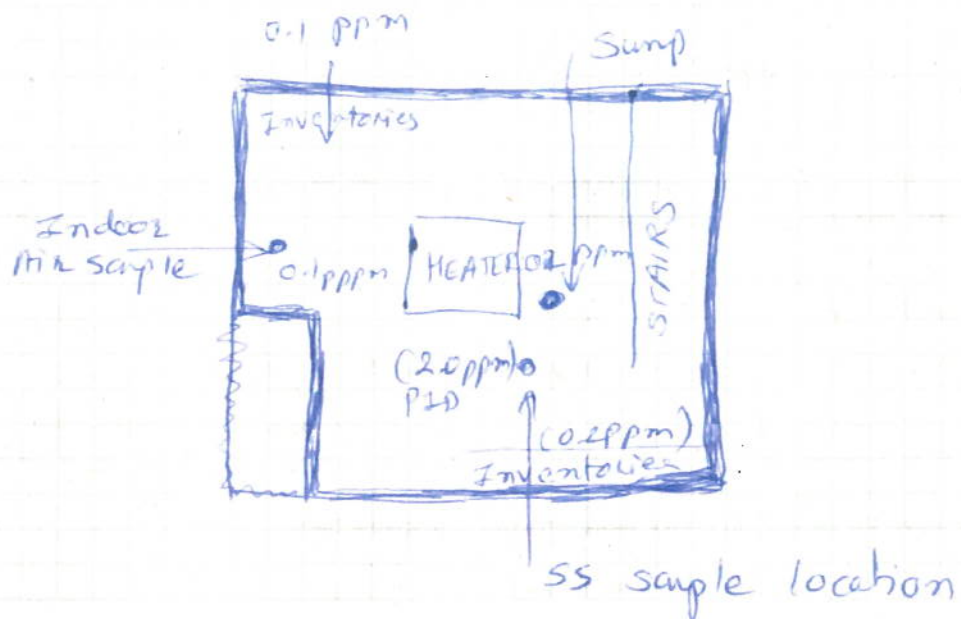
11. FLOOR PLANS

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: Basement



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

Is basement/lowest level occupied?

☒ Full-time

☐ Occasionally

☐ Seldom

☐ Almost Never

Level

General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)

Basement	<u>Storage, laundry, workshop</u>
1 st Floor	<u>Living room, kitchen, dining room</u>
2 nd Floor	<u>Bedrooms, bathrooms</u>
3 rd Floor	<u></u>
4 th Floor	<u></u>

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 ☒ 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? _____

i. Have cosmetic products been used recently?

Y ☒ N

When & Type? _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	<u>Split Level</u>	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other: _____

If multiple units, how many? _____

If the property is commercial, type?

Business Type(s) _____

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

Other characteristics:

Number of floors 2

Building age: _____

Is the building insulated? Y / N

How air tight? Tight Average / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

Airflow near source

Outdoor air infiltration

Infiltration into air ducts

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: 39 commerce street, spring valley

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

39 COMMERCE

Fig 343

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo** Y/N
BASEMENT	PAINT CAN	1 Gall	GOOD	Kaolin, 2,2-butoxyethoxy ethanol	ppm 0.4	N
"	EVERMORE EXTREME SEMI-GLOSS	30 FL OZ X5	"	N/A	-	"
"	CEMENT PATCHER	10 lbs	"		-	"
"	CPVC CEMENT	8 FL OZ X3	"		-	"
"	KRAYLON PAINT	13 FL OZ X4	"		-	"
"	PETITT THINNER	16 FL OZ	"		-	"
"	ZIP CAR WAX	18 FL OZ	"		-	"
"	BBQ GRILL CLEANER	25 FL OZ	"		-	"
"	ZEP 45NC LUBRICANT	1 lb	"	N/A	-	"
"	ALKYLIC URETHANE ENAMEL	30 FL OZ X3	"		-	N
"	2 Gall White paint	2 Gall	"	N/A	-	"
	spot-shor carpet stain remover	1502	"		0.2	
	Famous footwear waxes & stain	(2) 902	fair			
	carpet magic					
	Van Scribes wood polish	1 lb	Fair			
	Dutch boy linseed oil	1 lb	Fair			
	liquid plummer gel	5002	good			
	paint		bad	leached & stained		

* Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D)

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

charcoal starter 1.5 litres good

caulking 12 oz fair

form solution " "

concrete patch 6 FL OZ fair

6 FL OZ (2) good