

Berninger Environmental, Inc.

groundwater consultants and geologists

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June 18, 2008

Ms. Kiera Becker

Project Manager

New York State Department of Environmental Conservation

Division of Environmental Remediation

Remedial Bureau C

625 Broadway, 11th Floor

Albany, New York 12233-7015

Re: Schmukler's Dry Cleaners, Brownfield Cleanup Agreement Site No. C360088
City of New Rochelle, Westchester County
Remedial Investigation Work Plan

Dear Ms. Becker:

Berninger Environmental, Inc. (BEI) on behalf of our client, HNJ Realty, LLC, is providing a letter report on limited indoor air, ambient air and sub-slab soil vapor samples collected associated with one residential structure located adjacent to the dry cleaners on March 27, 2008. This sampling was performed during remedial investigation activities undertaken during the most recent heating season. BEI was not granted access to any other planned sampling locations within the heating season.

Soil Vapor Study

The limited sampling locations (see attached figure) were selected to collect and evaluate the sub-slab soil vapor sample, indoor air and ambient air quality in accordance with the February 2005 Draft New York State Department of Health (NYSDOH) "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" protocols (revised 2006). These sampling locations included the ambient outdoor (OA-2), indoor (IA-1) and sub-slab (SS-2) sampling within the 17 May Street, New Rochelle, New York residence.

The SS-1 sample was collected using a hand operated core drilling system to implant a soil vapor sampling probe consisting of food-grade polyethylene tubing at 2-inches below the concrete basement floor. After setting up the core hole, the penetration was sealed using hydraulic cement around the top of the sampling probe. Subsequent to sealing, the annular space within the tubing was purged a minimum of one to three volumes of soil gas using a personal sampling pump. During purging and sampling, the flow rate did not exceed 0.2 liters per minute. A pre-set regulator and dedicated summa cannister were used to procure the sub-slab soil gas sample. Again, the regulator used had a flow rate less than 0.2 liters per minute. Sufficient volume was collected to achieve the detection limits required to evaluate the data relative to the guidelines issued by the NYSDOH.

As specified by the NYSDEC, an ambient (outdoor) and an indoor air sample were also collected. The ambient outdoor air sample was collected at a representative breathing height (3 to 5 feet above grade), at an upwind location - see attached chemical inventory and floor plans. The indoor air sample was collected at a representative breathing height (3 to 5 feet above grade) within the basement, proximate to the sub-slab sampling location (see attachments). The air regulators were set to obtain approximately twenty-four (24) hours of sampling time; the vacuum readings required that the testing be stopped prior to 24 hours to ensure that a negative pressure remained.

After the required pressure changes were observed on the cannister gauge, the cannister was sealed, and packaged for transport. The field sampling team maintained the following sample log sheet which summarized the following:

- a. sample identification,
- b. date and time of sample collection,
- c. sampling depth,
- d. identity of samplers,
- e. sampling methods and devices,
- f. purge volumes,
- g. volume of soil vapor extracted,
- h. the type of canisters used, the vacuum before and after samples collected,
- i. apparent moisture content (dry, moist, saturated, etc.) of the sampling zone, and
- j. chain of custody protocols and records used to track samples from sampling point to analysis.

After collection, the sub-slab sampling location was also field screened with a PID; this information was recorded in the field book. PID results were less than 0.1 parts per million (ppm) response units.

Upon completion of the day's sample collection, the summa canisters were transported under strict chain-of-custody to an NYSDOH-ELAP certified laboratory H2M Laboratories, Inc. located in Melville, New York for VOC analysis by EPA Method TO-15 methodology. The shallow boring associated with sub-slab soil vapor testing was abandoned by bentonite grout to grade.

Laboratory Analysis

The three samples were analyzed by H2M Laboratories, Inc., an NYSDOH ELAP-Certified laboratory. Summary data sheets are included in as an appendix of this report. An independent third party validation was performed on this data - see attached appendices. The results of the laboratory analysis of the three samples were compared to the *Background Indoor Air Levels of Volatile Organic Compounds in Homes Sampled by the New York State Department of Health, 1989-1996* published by the NYSDOH Bureau of Toxic Substance Assessment in 1997 and included in the NYSDOH *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*, as well as NYSDOH Air Guidance Values (specific to indoor air) also included in the NYSDOH guidance document.

As indicated in Table 1, numerous VOCs were detected in each of the three samples. Of the VOCs present, particular focus was on the concentrations of Tetrachloroethene (PCE), a common dry-cleaning chemical and its typical breakdown products such as Trichloroethene (TCE).

PCE and TCE typically detected at concentrations of less than 100 micrograms per cubic meter (mcg./cu.m) and 5 mcg./cu.m, respectively, in soil gas exterior to a home, generally do not result in significant indoor air impacts. Furthermore, based upon NYSDOH recent long term studies on these types of compounds in indoor air, PCE and TCE can be typically detected at concentrations of 2.9 mcg./cu.m and 0.48 mcg./cu.m, respectively, or less in buildings not known to be affected by a chemical spill or other significant sources of these chemicals.

TCE concentrations were below its Method Detection Limit (MDL) for all of the three sampling locations. The testing results for the sub-slab soil vapor sample reported 2.58 mcg./cu.m of PCE. The outdoor ambient air

sample reported 1.63 mcg./cu.m of PCE. The indoor air sample in the basement did not report a detectable concentration of PCE above MDL.

Based upon this comparison, at this time, no PCE or TCE concentrations were present in the sub-slab vapor of the 17 May Street residence that exceed any specifically identified NYSDOH requirements (e.g., VOC matrix tables). A letter has been developed for distribution to this residence with an overview of NYSDOH Fact Sheets on these compounds that summarized these facts for NYSDEC review and approval.

Summary and Conclusions

As required, BEI has obtained sub-slab soil gas data at the closest adjoining residence to the Schmuklers facility in accordance with sampling guidelines for same. BEI was denied access to the other planned sampling locations. Based upon testing of this property, no PCE or TCE concentrations were identified present in subsurface (sub-slab) or in indoor air that exceeded any specifically identified NYSDOH requirement for monitoring, mitigation or other activities.

Please feel free to contact me if you have any questions.

Sincerely,
Berninger Environmental, Inc.

A handwritten signature in black ink, appearing to read "Walter Berninger". The signature is fluid and cursive, with the first name "Walter" and last name "Berninger" clearly distinguishable.

Walter Berninger
President/Consultant

enc.

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June 18, 2008

DRAFT LETTER

Residence

17 May Street, New Rochelle, New York

Dear Sir or Madam,

Enclosed are the laboratory test results for the indoor air (basement) sample and sub slab sample collected from your home on March 27, 2008 by Berninger Environmental, Inc. under the direction of the New York State Department of Health (NYSDOH). These samples were obtained to help assess whether environmental contamination from historic operations at the dry cleaner (Schmuklers Dry Cleaners) may be affecting indoor air quality in your home. The air samples were tested for tetrachloroethene (PCE), a common dry cleaning chemical and related compounds.

In air, concentrations of PCE is measured in units of micrograms of PCE per cubic meter of air. These units are abbreviated as "mcg/cu.m" PCE was detected at a concentration of 2.58 mcg./cu.m in the beneath the concrete slab. No PCE was detected in the indoor air in the basement. PCE was also detected in the outdoor air at 1.63 mcg./cu.m exterior to the Schmuklers Dry Cleaners during the sampling event (see attached).

PCE is typically detected at concentrations of 2.9 mcg./cu.m or less in buildings not known to be affected by a chemical spill or other significant source of PCE. This is based upon NYSDOH recent long term studies on these types of compounds in indoor air¹. The PCE concentrations measured in your home were below the typical background concentrations, and they indicate that a source of PCE is not affecting indoor air quality in your home or establishment. No other related volatile organic compounds were identified at concentrations of concern.

The PCE concentrations detected in your home or establishment do not exceed the New York State Department of Health, (NYSDOH) air quality guidelines of 100 mcg./cu.m. Enclosed is a NYSDOH fact sheet entitled "Tetrachloroethene (PCE) in Indoor and Outdoor Air dated May 2003" which provides information about the NYSDOH guideline. As the fact sheet explains, the guideline is not a line between levels that cause health effects and those that do not. In addition, it is based on the assumption that people are continuously exposed to PCE in air all day, every day, for as long as a life time, which, is not likely the case for typical occupancy of a residence.

Please note that a remediation system to control any soil vapors emanating from the Schmuklers Dry Cleaners site will be installed as part of the overall remedial process being undertaken to control or reduce off-site migration of the Volatile Organic Compounds (VOCs).

If you have any health-related questions, please contact Mr. Carl Obermeyer, Public Health Specialist II of the New York State Department of Health (NYSDOH) at (845) 794-2045. If you have any questions relating to the environmental investigation of the Schmuklers Dry Cleaners' site, please contact Ms. Kiera Becker of the New York State Department of Environmental Conservation (NYSDEC) at 1-518-402-9662.

Sincerely,

Berninger Environmental, Inc.

Walter Berninger
President/Consultant

¹NYSDOH study was conducted from 1997 to 2003 for homes heated with fuel oil.

**TABLE 1 - SUMMARY OF VOLATILE ORGANIC COMPOUNDS DETECTED (TO-15)
IN INDOOR AND OUTDOOR AMBIENT AIR**

					Ambient					
Berninger Environmental Inc. Sample ID:			IA1 17 MAY ST	SS2 17MAY ST	OA2 17 MAY ST	NYSDOH Study		NYSDOH Database		NYSDOH Air Guidance Values
Sample Locations:			17 May Street	17 May Street	17 May Street					
Laboratory ID:			0804017-001A	0804017-003A	0804017-002A	Homes in NYS 1997 - 2003		Homes in NYS 1989 - 1996		
Sampling Date:			3/27/2008	3/27/2008	3/27/2008	Indoor	Outdoor	Indoor	Outdoor	Guideline is specific to indoor air
Cas #	Analyte	Units:								
75-71-8	Dichlorodifluoromethane	ug/m3	2.87	3.12	3.07	<0.25 - 4.1	<0.25 - 4.2	<1.0	<1.0	NA
74-87-3	Chloromethane	ug/m3	1.2	0.58	1.4	<0.25 - 1.8	<0.25 - 1.8	<1.0 - <2.6	<1 - <2.8	NA
75-01-4	Vinyl Chloride	ug/m3	ND	ND	ND	<0.25	<0.25	<1	<1	NA
75-69-4	Trichlorofluoromethane	ug/m3	1.52	2.25	1.69	1.1 - 5.4	<0.25 - 2.2	<1.0 - 3.8	<1.0	NA
75-09-2	Methylene Chloride	ug/m3	69.5	7.19	40	0.3 - 6.6	<0.25 - 0.7	<3.0 - 5.6	<1.0 - <7.6	60
110-54-3	Hexane	ug/m3	15	15.3	1.27	NA	NA	<1.0 - 3.6	<1.0 - <3.6	NA
156-59-2	cis-1,2-Dichloroethene	ug/m3	ND	ND	ND	<0.25	<0.25	<1 - <10	<1 - <10	NA
67-66-3	Chloroform	ug/m3	2.25	1.86	ND	<0.25 - 0.5	<0.25	<1.0 - <8.8	<1.0 - <4.8	NA
110-82-7	Cyclohexane	ug/m3	4.16	4.16	ND	<0.25 - 2.6	<0.25 - 0.3	NA	NA	NA
540-84-1	2,2,4-Trimethylpentane	ug/m3	9.9	9.62	ND	NA	NA	NA	NA	NA
71-43-2	Benzene	ug/m3	4.95	6.61	1.18	1.1 - 5.9	0.6 - 2.2	<3.2 - 5	<1.6 - 5	NA
142-82-5	Heptane	ug/m3	6.48	10.8	1.07	NA	NA	NA	NA	NA
79-01-6	Trichloroethene	ug/m3	ND	ND	ND	<0.25	<0.25	<1 - <5.4	<1 - <5.4	5
108-88-3	Toluene	ug/m3	36.6	95.3	6.56	3.5 - 25	0.6 - 2.4	6.5 - 25	<2.0 - 6.1	NA
127-18-4	Tetrachloroethene	ug/m3	ND	2.58	1.63	<0.25 - 1.1	<0.25 - 0.3	<1.6 - <10	<1.6 - <6.8	100
100-41-4	Ethylbenzene	ug/m3	6.86	10.5	ND	0.4 - 2.8	<0.25 - 0.5	<3.4 - 4.8	<1 - <5	NA
1330-20-7	Xylene (m,p)	ug/m3	13.9	27.8	1.91	0.5 - 5.6	<0.25 - 0.5	<4.4 - 9.5	<1.4 - <10	NA
95-47-6	Xylene (o)	ug/m3	4.52	8.81	ND	0.4 - 3.1	<0.25 - 0.7	<3.8 - 5.0	<1 - <10	NA
622-96-8	4-Ethyltoluene	ug/m3	1.52	2.46	ND	NA	NA	NA	NA	NA
108-67-8	1,3,5-Trimethylbenzene	ug/m3	ND	2.26	ND	0.3 - 1.7	<0.25 - 0.3	<1.0 - 5.0	<1.0 - <10	NA
95-63-6	1,2,4-Trimethylbenzene	ug/m3	3.54	9.39	1.13	0.7 - 4.3	<0.25 - 0.8	<4.4 - 7.0	<1.0 - <10	NA

Note:

Bolded and highlighted values represent concentrations detected exceeding applicable NYSDOH Background Concentrations and/or Guidance Values

NA - Not Available

ND - Not Detected above method detection limits

**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 William Schlageter Date/Time Prepared 4/27/08 8:16
Preparer's Affiliation Berninger Environmental Inc Phone No. 631 589 4521
Purpose of Investigation RI - Schumacher's Cleaners

1. OCCUPANT:

Interviewed: Y/N

Last Name: Guillospe First Name: Frank (Super)
Address: 17 MAY ST, New Rochelle, NY
County: Westchester

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location 20 Age of Occupants 1yrs to 60+

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

Interviewed: Y/N

Last Name: Shapiro First Name: Hal

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Su.

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

☒ Residential
☐ Industrial

☐ School
☐ Church

☐ Commercial/Multi-use
Other: _____

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? 6

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 3

Building age 1902

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

through conduits - steam electrical
Basement to 1st floor

Airflow near source

Outdoor air infiltration

Open windows / Basement door

Infiltration into air ducts

N/A

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

- a. Above grade construction: wood frame concrete stone brick
- b. Basement type: full crawlspace slab other _____
- c. Basement floor: concrete dirt stone other _____
- d. Basement floor: uncovered covered covered with _____
- e. Concrete floor: unsealed sealed sealed with epoxy
- f. Foundation walls: poured block stone other _____
- g. Foundation walls: unsealed sealed sealed with paint
- h. The basement is: wet damp dry moldy
- i. The basement is: finished unfinished partially finished
- j. Sump present? Y / N
- k. Water in sump? Y / N / not applicable

Basement/Lowest level depth below grade: 3 (feet)

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

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	<u>Heat pump</u>	Hot water baseboard
Space Heaters	<u>Stream radiation</u>	Radiant floor
Electric baseboard	Wood stove	Outdoor wood boiler Other _____

The primary type of fuel used is:

<u>Natural Gas</u>	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: gas

Boiler/furnace located in: Basement Outdoors Main Floor Other _____

Air conditioning: Central Air Window units Open Windows None

Are there air distribution ducts present?

Y / N

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

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

2 Res

2nd Floor

2 Res

3rd Floor

2 Res.

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? 16 yrs ago

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? _____

j. Has painting/staining been done in the last 6 months?

Y/N Where & When? 7 yrs

k. Is there new carpet, drapes or other textiles?

(Y)/N Where & When? 2nd Floor 1 yr ago

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: Sewer

(Y)/N

Do any of the building occupants use solvents at work?

Y/(N)

(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist)

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work?

Y/N

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

Yes, use dry-cleaning regularly (weekly)

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? Y/(N) Date of Installation: _____

Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: Public Water Drilled Well Driven Well Dug Well Other: _____

Sewage Disposal: Public Sewer Septic Tank Leach Field Dry Well Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: _____

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

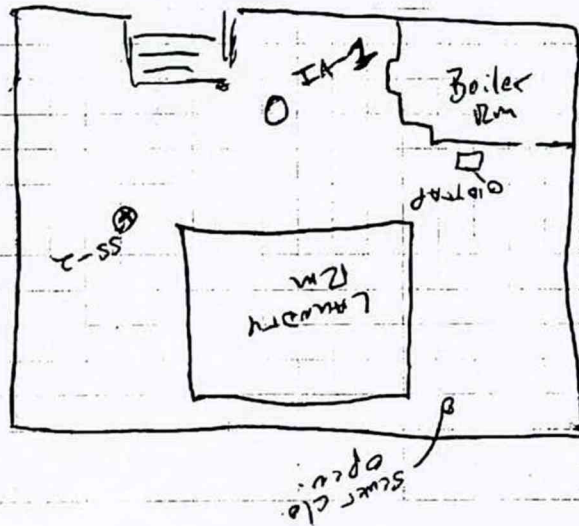
c. Responsibility for costs associated with reimbursement explained? Y/N

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

11. FLOOR PLANS

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

Basement:

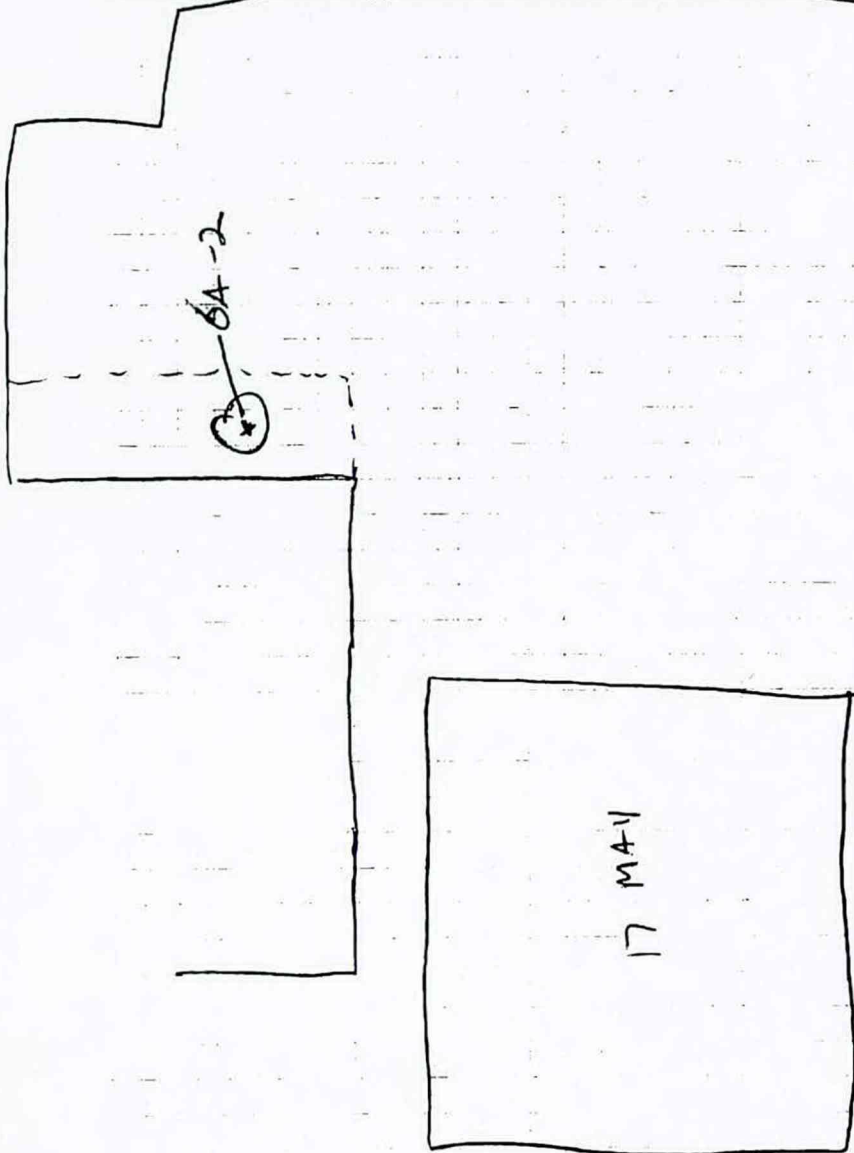


First Floor:

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.



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.**

Sub-s/43

SS

T° - 50°
cloudy
Rainy

Sample ID# SS-2 17 May St - Can # 3401 - Reg # 1012

DATE + Time: 3/27/07 9:34:00 -

Depth - 6" - 2" Below Slab

Samplers: WS/JM/USC

Sampling methods: 24 hr bag

Purge volume - 9:32:19 - 9:33:40

Canister size - 6L

Vacuum Before - -30 lb

Vacuum After -

Moisture content - Dry

COC protocols -

Indoor Air

Sample ID - IA-1 17 May St Can # 3395 Reg # 01008

Date and time - 3/27/08 9:37

Sampling height - 4 ft

Samplers - WS/JM/

Sampling method + devices - 24 hr.

Sample volume - 6L

Vacuum Before + After - -30 lb

Outdoor Air

Sample ID OA-2 17 May St Can # 1623 Reg # 01005

Date & Time 3/27/08 - 9:55:55

Sample height 4.5 ft

Samplers WS/JM

Method 24 hr

Volume 6L/10L

Vacuum -30 B + A