Vapor Intrusion Investigation Work Plan

1360 East Main Street,
Shrub Oak, New York

April 7, 2026

Prepared for:

Shrub Oak Partners, LLC

Prepared by:

Roux Environmental Engineering and Geology, D.P.C.
209 Shafter Street
Islandia, New York 11749

3950.0001Y129/CV

Table of Contents

Tables

Figures

Appendices

Certification

I, Paul Martorano, P.E, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this Vapor Intrusion Investigation Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Paul Martorano, P.E	April 6, 2026	
NYS Professional Engineer #088403	Date	Signature

1. Introduction

Roux Environmental Engineering and Geology, D.P.C. (Roux) on behalf of Shrub Oak Partners, LLC (referred to herein as the "Volunteer"), has prepared this Vapor Intrusion Investigation Work Plan (VII WP) for the Mr. Cleaners – Shrub Oak Shopping Center Site (NYSDEC Brownfield Cleanup Program Site No. C360117), located at 1360 East Main Street, Shrub Oak, New York (Site). The Site was accepted into the program as Brownfield Cleanup Program Site (BCP) Site #C360117 and the Brownfield Cleanup Agreement (BCA) was executed on January 27, 2014 (Index # C360117-11-13).

The Site is approximately 3.47 acres and comprised of three connected single-story buildings and an asphalt paved parking lot. The footprint of the building is approximately 46,586 square feet and contains eight tenant spaces. The eight tenant spaces are occupied by an ACME Store #2830, drycleaner, pizzeria, United States Postal Service office, Wells Fargo bank, laundromat, nail salon, and a vacant space that was formerly a Chase bank. A figure showing the site location and boundaries of the Site is provided in Figure 1.

On February 19, 2026, the New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYSDOH), issued letters of disapproval for the Remedial Investigation Report (RIR) and Construction Completion Report (CCR) submitted in May of 2025. The disapproval letters identified additional data needs and/or project clarifications related to the groundwater and soil vapor intrusion pathway and the effectiveness of the existing sub-slab depressurization systems (SSDS).

This VII WP has been prepared to address the NYSDEC/NYSDOH comments related to vapor intrusion and indoor air quality. The work described herein will be performed in general accordance with NYSDEC DER-10 and applicable NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York.

2. Scope of Work

The Objective of the proposed VII WP is to further evaluate potential human exposures to subsurface vapors and assess the current performance of the on-site SSDS.

A quality assurance/quality control (QA/QC) sample will be collected during VII to ensure that suitable and verifiable data results from sampling and analyses were performed. All data will be produced in accordance with NYSDEC Analytical Services Protocol (ASP) Category B deliverables and will be reviewed by a qualified data validator independent from the Project. A Data Usability Summary Report (DUSR) will be prepared before data is incorporated into the RIR/CCR for the Site. All data will be submitted to NYSDEC in electronic format, in accordance with DER-10, Section 1.15.

2.1 Vapor Intrusion Evaluation

2.1.1 Site Inspection

On March 11, 2026, Roux conducted a Site inspection to verify access to the existing sub-slab vapor monitoring points (SVMP). This included assessment of accessibility and physical integrity (e.g., seal condition, tubing condition) of each SVMP.

Sampling points proposed for sampling under this VII Work Plan are provided in Table 1. Locations of the sampling points in presented in Figure 2.

2.1.2 SSDS Evaluation

Vacuum measurements will be recorded at each SVMP to document sub-slab pressure conditions while the existing SSDS remains operational. Monitoring points determined to be damaged or inaccessible will not be utilized. Roux may propose installation of additional sampling locations during the Remedial Action Work Plan (RAWP) implementation. System air vacuum, velocity, and flow rate will also be measured at each SSDS blower exhaust stack. This information will be used to prepare an air emission permit package for issuance to the Westchester County Department of Health.

2.1.3 VI Sampling

Prior to sampling, total VOC readings will be collected using a photoionization detector (PID). In addition, tracer gas tests will be performed to verify the integrity of the SVMP seals using the technique described in the NYSDOH Soil Vapor Intrusion Guidance using a portable monitoring device. If possible, degreasers and other suspect VOC-containing products will be removed from the building prior to sampling. The building will also be checked to ensure doors and windows are closed and the heating, ventilation and air conditioning (HVAC) and sub-slab depressurization system (SSDS) blowers are running.

Sub-slab vapor samples will be collected in batch-certified stainless-steel SUMMA® canisters equipped with an appropriate flow control/vacuum gauge and dedicated tubing. The flow controller (pre-set by the laboratory at a rate not to exceed 0.2 liters per minute) will allow a sample to be collected over an 8-hour period. Co-located indoor air samples will be collected adjacent to each of the sub-slab soil vapor locations at approximately 3 feet above ground level. In addition, one outdoor ambient air sample will be collected downwind outside of the building. The indoor air samples will also be collected in batch-certified stainless-steel SUMMA® canisters equipped with flow controllers pre-set for an 8-hour period. For all samples, field

staff will record the location, start and stop times, initial and final canister pressures, flow controller identification, room conditions, weather, and notable observations, as applicable

SUMMA® canisters will be transported to a NYSDOH ELAP-certified laboratory under chain-of-custody procedures. Sub-slab vapor and air samples will be analyzed for Volatile Organic Compounds (VOCs) utilizing USEPA Method TO-15. Eurofins of Edison, New Jersey is intended to be utilized for this investigation.

The analytical procedures will follow available USEPA and NYSDEC protocols including appropriate sample preservation, holding times, and analysis procedures. The field methods will follow manufacturer instructions and established procedures for sampling equipment used.

2.1.4 Building Observations and Product Inventory

Along with sample collection, the building will be inspected (e.g., preferential air flow pathways into adjacent structures, conditions of the concrete slab, etc.) and an inventory of products will be completed in accordance with the NYSDOH Soil Vapor Intrusion Guidance. Sampling activities will be recorded in a field book and associated sampling log (refer to Attachment A). The NYSDOH Indoor Air Quality Questionnaire and Building Inventory Form that is intended to be used for this investigation is provided in Appendix B.

3. Reporting

VII WP activities are planned during heating season on April 8, 2026.

Following receipt of the raw data, the analytical results from the co-located SVMP and indoor air samples will be compared to the appropriate Decision Matrices associated with NYSDOH's Guidance for Evaluating Soil Vapor Intrusion in New York State to determine recommended actions such as: "No Further Action", "Identify Source(s) and Resample or Mitigate", "Monitor" and "Mitigate". Following this initial review, draft Tenant Notification Letters describing the VII findings will be provided to the NYSDOH for approval prior to distribution to tenants.

Effluent data will be used to calculate potential emission rates for each chemical detected in accordance with the NYSDEC's Guidelines for the Evaluation and Control of Ambient Air Contaminants Under 6NYCRR Part 212 (DAR-1).

Data gathered during the implementation of the VII WP that includes, but is not limited to, vapor intrusion evaluation, vacuum pressure readings from each SVMP, effluent concentrations, observations of building construction and preferential pathways, and recommended actions will be used to update the CCR and RIR, and develop the RAWP.

4. VII Work Plan Implementation Schedule

The execution of this Work Plan is anticipated to begin in April 2026. On-site sampling will take 1 day to complete.

Scope of Work	Approximate Start Date
Submit Vapor Intrusion Investigation Work Plan (VII WP)	April 2, 2026
Implementation of VII WP (1-day field work) – tentative, pending approval	April 8, 2026
Meeting with NYSDEC, NYSDOH and Roux to discuss data and potential remedial approach	May 2026
Draft and re-submit revised Construction Completion Report (CCR)	May/June 2026

TABLES

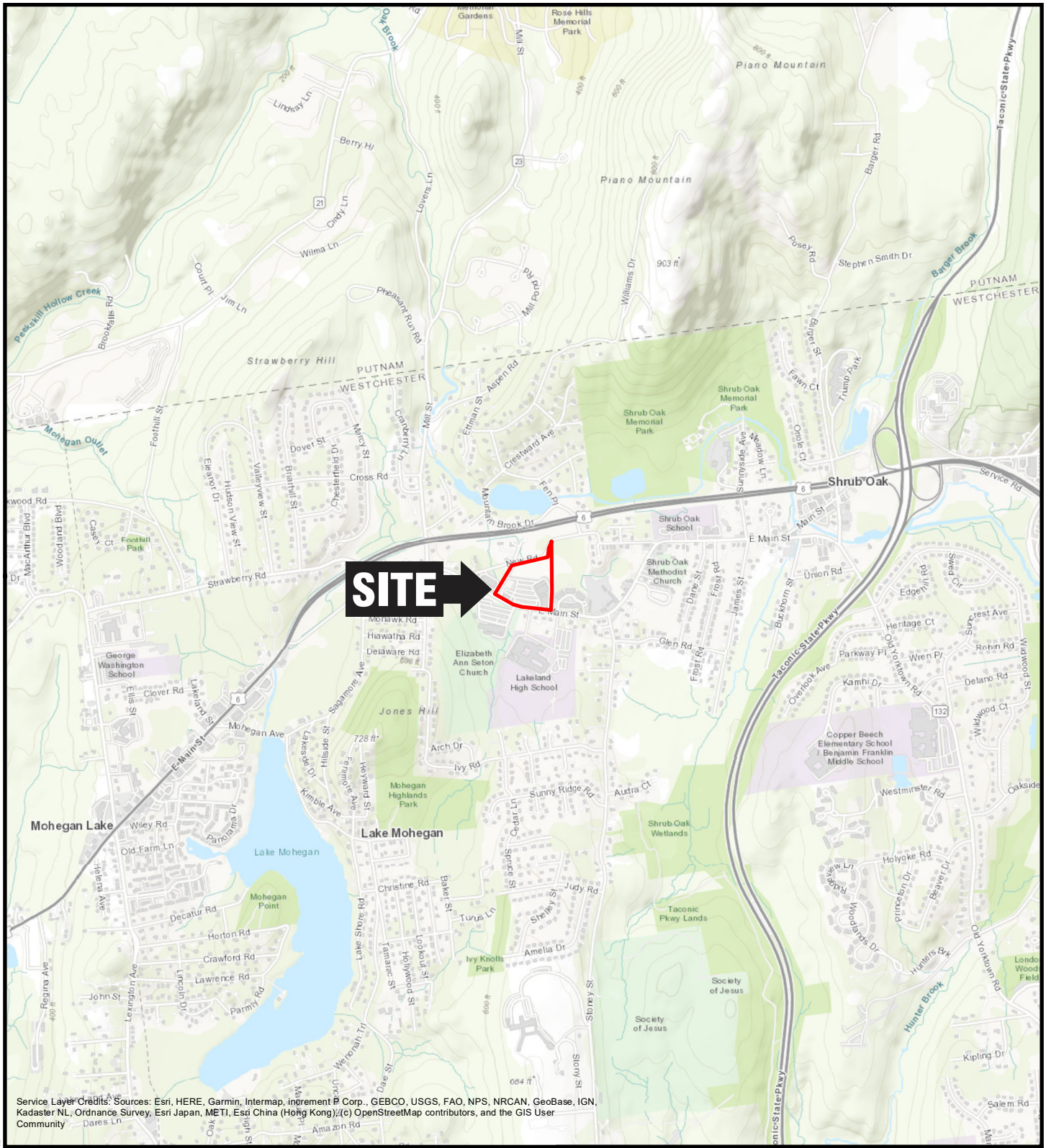
1. Sampling Summary

Table 1. Sampling Summary

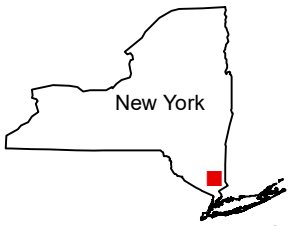
Location	Sample ID	Type	Sampling / Data Collection Type
ACME Store	MP-1	SS Monitoring Point	8hr- sample for VOCs via EPA Method TO-15
	IA-1	Co-located Indoor Air	8hr- sample for VOCs via EPA Method TO-15
	MP-3	SS Monitoring Point	8hr- sample for VOCs via EPA Method TO-15
	IA-3	Co-located Indoor Air	8hr- sample for VOCs via EPA Method TO-15
	VMP-1	Extraction Point	Vacuum reading / Air velocity and Flow Rate (gauging only)
	VMP-2	Extraction Point	Vacuum reading / Air velocity and Flow Rate (gauging only)
	VMP-3	Extraction Point	Vacuum reading / Air velocity and Flow Rate (gauging only)
	V-3	Extraction- Header	Gauging and 1hr-sample for VOCs (TO-15)
Drycleaner	MP-6	SS Monitoring Point	8hr- sample for VOCs via EPA Method TO-15
	IA-6	Co-located Indoor Air	8hr- sample for VOCs via EPA Method TO-15
	MP-15	SS Monitoring Point	8hr- sample for VOCs via EPA Method TO-15
	IA-15	Co-located Indoor Air	8hr- sample for VOCs via EPA Method TO-15
	EP-1	Extraction Point / Stack	Gauging and 1hr-sample for VOCs (TO-15)
Pizzeria	MP-8R	SS Monitoring Point	8hr- sample for VOCs via EPA Method TO-15
	IA-8R	Co-located Indoor Air	8hr- sample for VOCs via EPA Method TO-15
Post Office	MP-13	SS Monitoring Point	8hr- sample for VOCs via EPA Method TO-15
	IA-13	Co-located Indoor Air	8hr- sample for VOCs via EPA Method TO-15
	EP-2 / VMS-2	Extraction Point / Stack	Gauging and 1hr-sample for VOCs (TO-15)

FIGURES

1. Site Location Map
2. Proposed Sampling Point Location Map



QUADRANGLE LOCATION



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Title:

SITE LOCATION MAP

REMEDIAL INVESTIGATION REPORT
NYSDEC BCP SITE NO. C360117
MR. CLEANERS - SHRUB OAK SHOPPING CENTER
1360 EAST MAIN STREET, SHRUB OAK, NEW YORK

Prepared for:

SHRUB OAK PARTNERS LLC

ROUX

Compiled by: P.M.	Date: 03/20/25
Prepared by: M.S.R.	Scale: AS SHOWN
Project Mgr: P.M.	Project: 3950.0001Y000
File: 3950.0001Y106.1.mxd	

FIGURE 1

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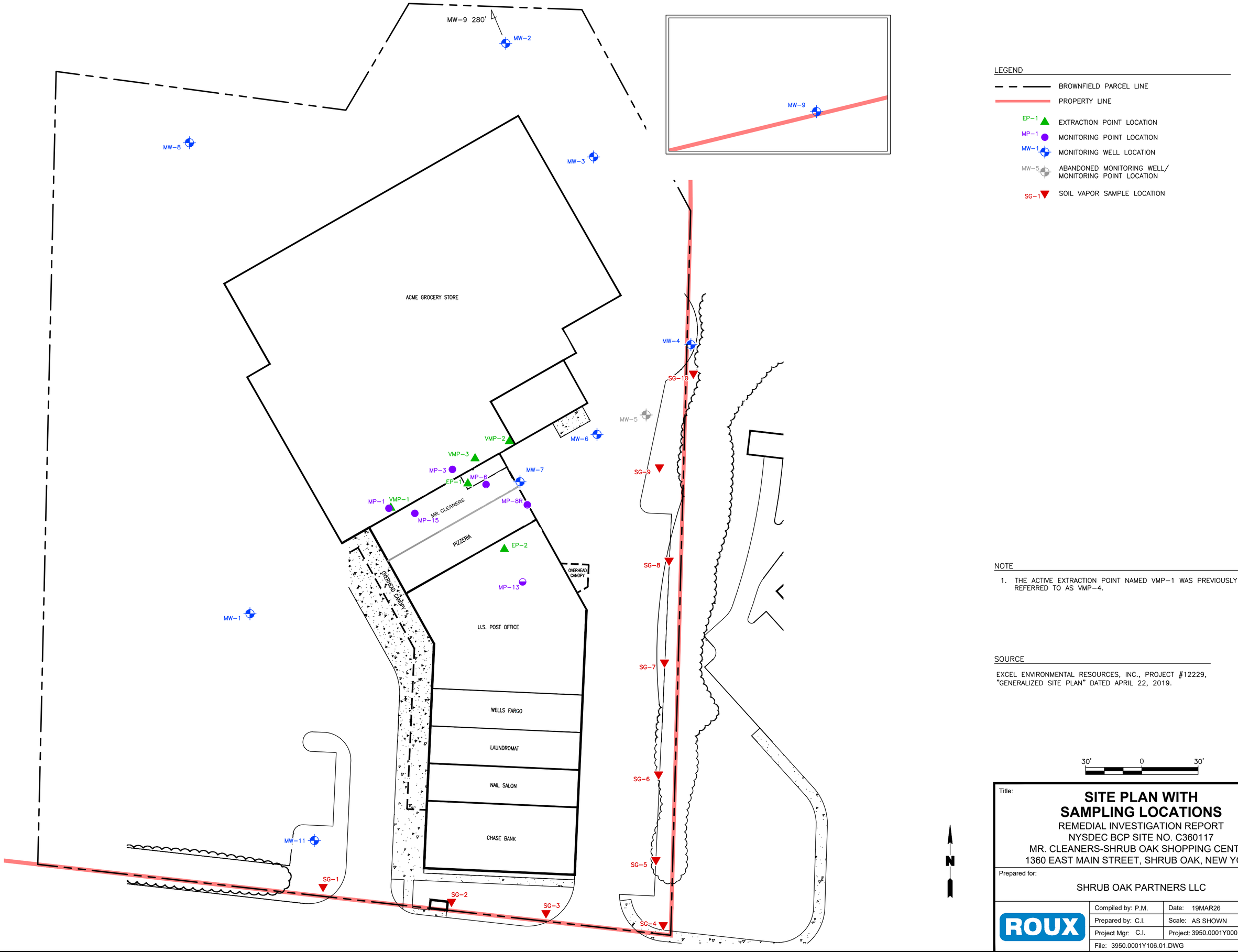

Title:

SITE PLAN WITH SAMPLING LOCATIONS

REMEDIAL INVESTIGATION REPORT
NYSDEC BCP SITE NO. C360117
MR. CLEANERS-SHRUB OAK SHOPPING CENTER
1360 EAST MAIN STREET, SHRUB OAK, NEW YORK

Prepared for:

SHRUB OAK PARTNERS LLC

ROUX

Compiled by: P.M.	Date: 19MAR26	FIGURE
Prepared by: C.I.	Scale: AS SHOWN	2
Project Mgr: C.I.	Project: 3950.0001Y000	
File: 3950.0001Y106.01.DWG		

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APPENDICES

A. Sampling Forms

B. NYS DOH Indoor Air Quality Questionnaire and Building Inventory

APPENDIX A

Sampling Forms

Soil Vapor Sampling Form

Location: _____

Date: _____ **Time:** _____

Weather : _____

Temperature (Start/End): _____ Humidity (Start/End): _____

Wind Magnitude (Sart/End): _____ Wind Direction (Start/End): _____

Barometric Pressure (Start/End): _____ Precipitation (Start/End) _____

Sampling Team: _____

Sampling Location: _____

Site Condition (i.e. any adjacent questionable facilities, vent pipes, tanks, etc. and what type of basements are present)

_____

_____

_____

Prior to commencing the GeoProbe activity, ensure that all the rods were properly deconed and a new disposable tip is present at the end of the rods (if applicable).

Calibrate helium detection meter

Utility Clearance Completed: _____

Sampling Depth: _____ feet below land surface

Sealed at land surface/rod end: _____

Purge Rate: _____ Must be less than 0.2 L/min

Purge Time: _____ note : Assuming 0.17" I.D. tubing purge 15 sec. for every 10 ft of tubing

Helium Rate at enclosure: _____

Helium Rate from sample tubing: _____ Is this rate <20% of the rate at the enclosure **Y / N**

If the Helium readings have a greater ratio than 20% the seals should be rechecked and the tracer gas should be reapplied.

Once the tracer gas screening procedures are completed and no short-circuiting is determined to be present at the location the soil vapor sample can be collected in a lab certified clean summa canister at a rate less than 0.2 L/min.

Finishing pressure should be within 0.5 - 4 in of Hg

Is the Summa Canister Certified Clean and within the proper holding time ? **Y / N**

Starting Pressure: _____ in. of Hg

Starting Time: _____ **Date:** _____

Ending Time: _____ **Date:** _____

Ending Pressure: _____ in. of Hg

Summa Canister Identification #: _____ _____

Flow Regulator ID # _____ _____

Sample ID # _____ **Time** _____

Analysis _____

Laboratory _____

APPENDIX B

NYS DOH Indoor Air Quality Questionnaire and Building Inventory

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 _____ Date/Time Prepared _____

Preparer's Affiliation _____ Phone No._____

Purpose of Investigation_____

1. OCCUPANT:

Interviewed: Y / N

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

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

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

Interviewed: Y / N

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	Commercial/Multi-use
Industrial	Church	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? _____

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_____ 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

_____

_____

_____

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 _____	
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 finished	
j. Sump present?	Y / N			
k. Water in sump?	Y / N / not applicable			

Basement/Lowest level depth below grade: _____(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	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other _____

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: _____

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	_____
1st Floor	_____
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_____

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? _____

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? Y / N
If yes, please describe: _____

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

If yes, what types of solvents are used? _____

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

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

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

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.

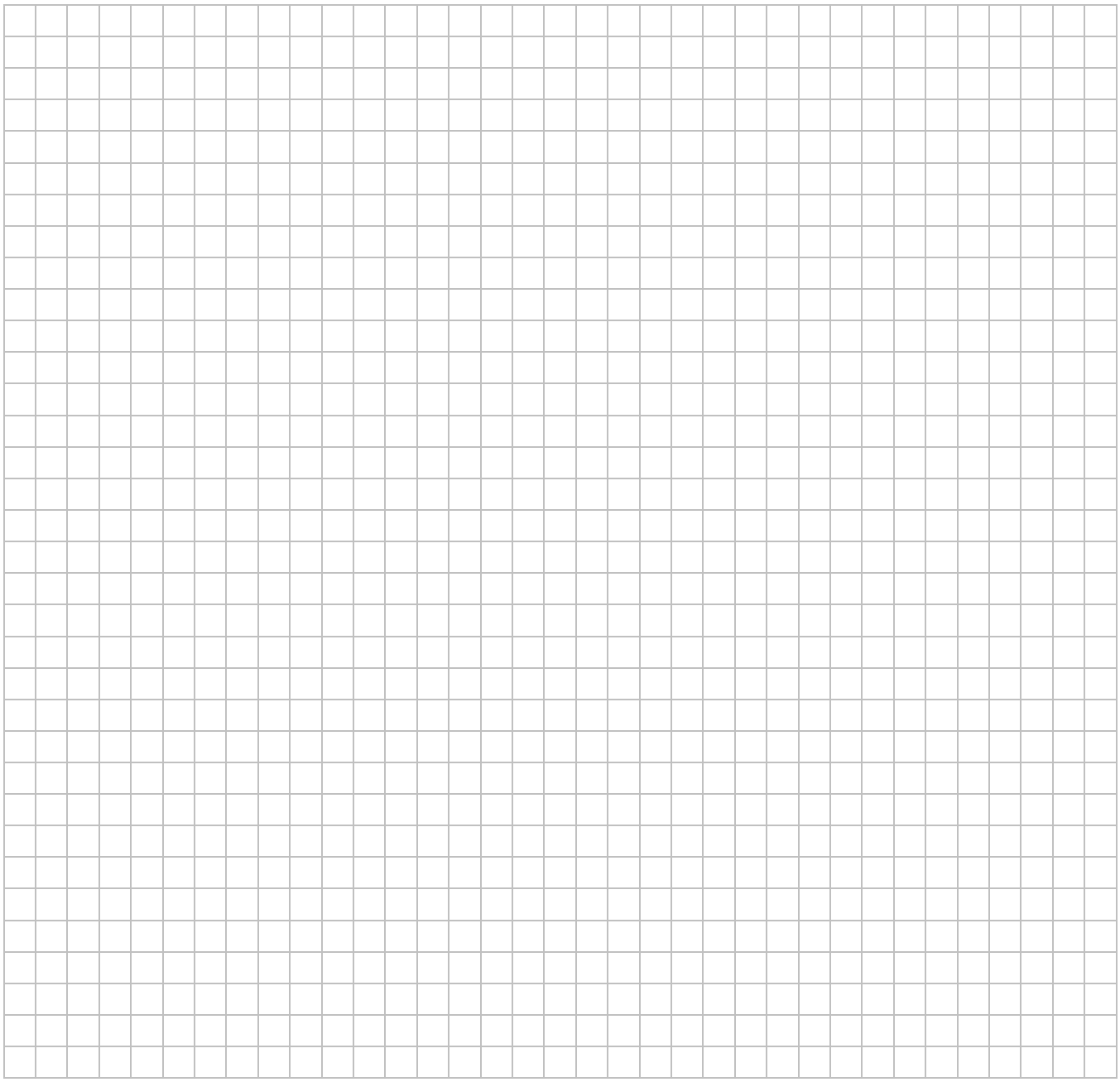
Basement:

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.



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

* 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.