

February 16, 2009

Mr. Gary Bonarski, P.E.
Project Manager
New York State Department of
Environmental Conservation
Div. of Environmental Remediation
6274 East Avon-Lima Road
Avon, New York 14414-9519

Re: Brainerd Manufacturing Site Voluntary Cleanup (#V00519-8)
Supplemental Off-site Indoor Air Monitoring Work Plan

Dear Mr. Bonarski:

Pursuant to our recent discussions and e-mail correspondence, please find attached our revised Work Plan for performance of supplemental vapor intrusion monitoring in the neighborhood north of the former Brainerd Manufacturing Site.

If the attached Work Plan meets with your approval, we will send notification letters to the property owners/occupants via certified mail this week.

Thank you for your cooperation. Please do not hesitate to call with any questions.

Sincerely,
Benchmark Environmental Engineering & Science, PLLC



Thomas H. Forbes, P.E.
Project Manager

Att.

c:	A. Shaffer (Despatch)	D. McNaughton (NYSDOH)
	S. Chalifoux (Boylan Brown)	J. Albert (MCHD)
	B. Putzig (NYSDEC)	File: 0040-002-400

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ATTACHMENT 1

OFF-SITE SOIL VAPOR INTRUSION INVESTIGATION WORK PLAN

OFF-SITE SOIL VAPOR INTRUSION INVESTIGATION WORK PLAN

FORMER BRAINERD MANUFACTURING SITE

SOIL VAPOR INTRUSION INVESTIGATION

The soil vapor investigation will characterize subsurface soil vapor and indoor air in the following off-site residences (see Figure 1-1) proposed by the New York State Department of Environmental Conservation (NYSDEC):

Linden Ave.: 933, 935, 937, 939, 941, 940-942, 943, 945, 949, 950, 951, 953, and 955.

Apple St.: 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 19.

Walnut St.: 45 W.

The proposed sampling will be conducted prior to March 31, 2009 (i.e., end of winter 2009 heating season).

SOIL VAPOR INVESTIGATION APPROACH

Benchmark will seek permission to access the above-referenced residences for the purpose of completing the subsurface and indoor air sampling work. A sample notification letter is provided as Attachment 1-1. Benchmark will present an access agreement for each resident to sign, and will establish a mutually agreeable date to conduct the sampling.

The sampling program will consist of collecting and analyzing one sub-slab vapor and one indoor air sample from the basement of each off-site residence. Concurrent with indoor samples, an ambient air sample will be collected from an outdoor location upwind of the properties, as determined on the day of sub-slab vapor sampling field activities.

Sampling probes will be installed in general conformance with the New York State Department of Health (NYSDOH) Soil Vapor Intrusion Guidance (October 2006). At each location, Benchmark personnel will drill an approximately 3/4-inch diameter hole through the concrete slab (est. 4-6 inches thick) using a hand-held hammer drill. Following advancement through the concrete, approximately 6 inches of soil/stone will be hand-augered from the hole. Cuttings will be swept aside with a whisk broom to assure an adequate surface seal. A 1/4-inch tygon tube, provided by the laboratory, will then be inserted into the concrete core hole to a maximum depth of 2 inches below the bottom of the concrete slab and sealed using natural modeling clay to prohibit infiltration of ambient air into the sample tubing.

Once the sample probes are installed, the probe and tubing will be purged (three volumes) using a calibrated syringe as required by NYSDOH (2006) guidance. Prior to purging, helium tracer gas will be introduced to a shroud above the sample point. Helium gas concentration in the shroud will be measured with a field helium detector. Purge gas will be injected into a Tedlar bag and will be checked with the field helium detector (capable of detecting low ppm levels). If purge gas helium concentration is measured at greater than 10% of shroud concentration, the surface seal integrity will be considered compromised and a new seal will be installed. The purging and sampling flow rates shall not exceed 0.2 liters per minute per the 2006 NYSDOH

guidance. Following satisfactory seal integrity testing, sample collection tubing will be connected to the dedicated canister and samples will be collected over an approximate 24-hour period. Indoor air samples will be concurrently collected from the same floor level as the subslab samples. Indoor samples will be collected in a 6-liter Summa canister fitted with a 24-hour regulator. As discussed above, a common outdoor ambient air sample will also be collected to establish background ambient air concentrations during soil vapor collection. The outdoor sample will be placed on a stepladder or other surface at 3-5 feet above grade. Figure 1 shows the locations of the proposed on-site and off-site residential soil vapor sampling locations.

During the testing program, an indoor air quality questionnaire and building inventory form will be completed by Benchmark, with input from the property owner/occupant (see Attachment 1-2). Indications of potential external contaminant sources will be highlighted in the sampling report.

Upon completion of the sampling, canister valves will be sealed and shipped under chain-of-custody command to Test America, Inc., an NYSDOH certified laboratory, for VOC analysis in accordance with USEPA Method TO-15. Test America will be required to achieve method detection limits at or below those specified in the NYSDOH soil vapor intrusion guidance.

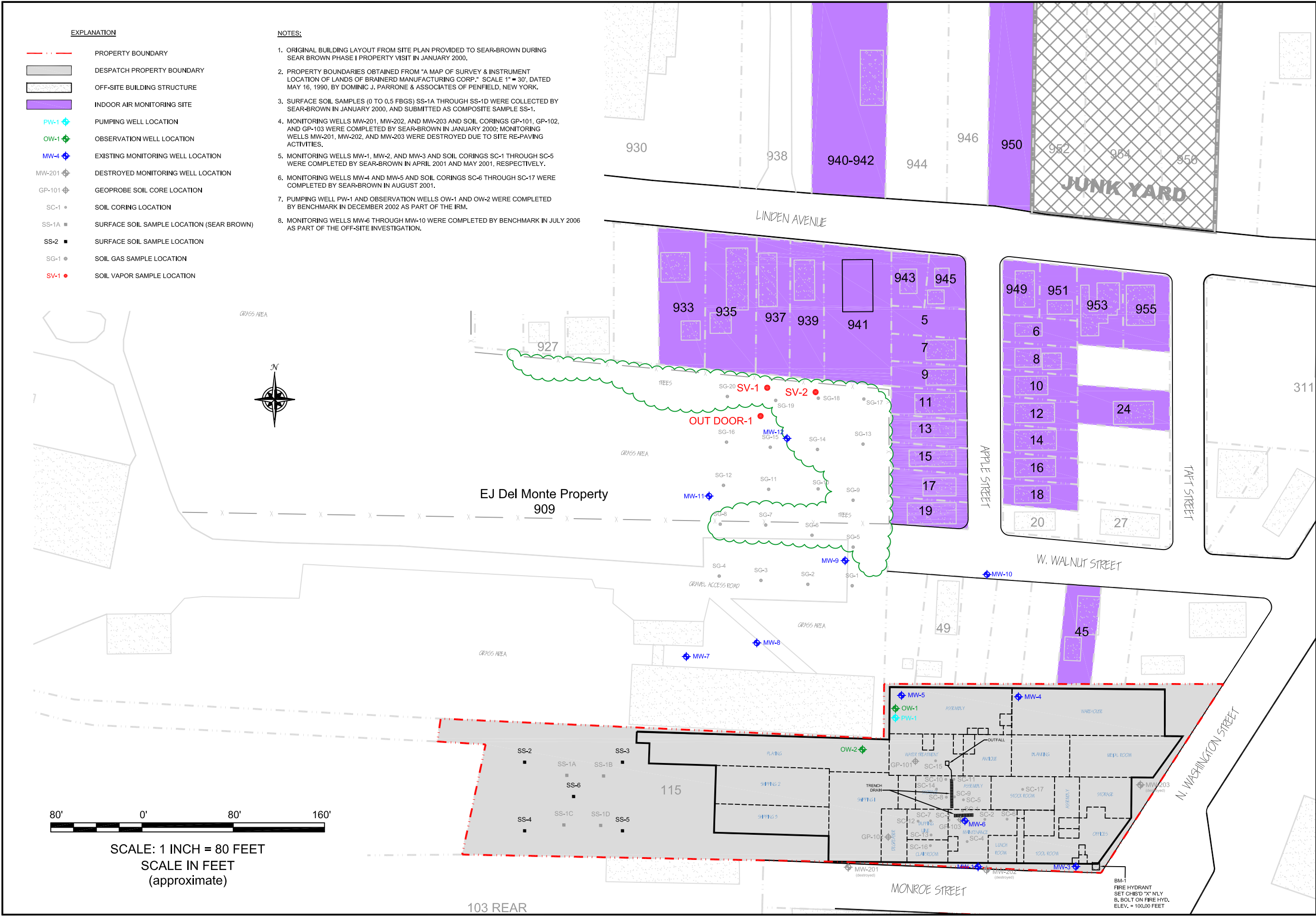
SOIL VAPOR INVESTIGATION REPORT

Following receipt of the data, the results will be summarized and discussed relative to NYSDOH Matrix 1 and Matrix 2 thresholds. The summary report will include recommendations to address potential exposures, if any, and for further sampling, if warranted. Key findings from the building and chemical inventory will be presented as well. A results notification letter will also be developed and presented to the NYSDEC and NYSDOH for review prior to transmitting the data to the individual property owners.

SOIL VAPOR INVESTIGATION SCHEDULING

We propose conducting the above-described sampling prior to March 31, 2009, as soon as Benchmark has been granted access permission by the residents. Benchmark will provide the NYSDEC and NYSDOH with sufficient notice such that a representative may be present during the installation and/or sampling at these locations, if desired.

FIGURES



ATTACHMENT 1-1

SAMPLE RESIDENTIAL SAMPLING NOTICE LETTER

February 16 2009

[Property Owner/Occupant]

[Street Address]

East Rochester, NY 14445

VIA CERTIFIED MAIL

Re: 115 N. Washington Street, East Rochester, New York
Indoor Air Sampling

Dear Owner's/Occupant's Name:

As you may know, environmental investigation and remediation is being conducted at the former Brainerd Manufacturing Site at 115 N. Washington Street in the Village of East Rochester by the property's current owner, Despatch Industries, Inc. ("Despatch"). Despatch is working under a Voluntary Clean-up Agreement in cooperation with the New York State Department of Environmental Conservation ("NYSDEC") and the New York State Department of Health ("NYSDOH") to investigate and remedy contamination on their property.

The investigation work completed to date has involved installation of several groundwater monitoring wells. Sample results from these wells indicate groundwater contamination has migrated offsite to the northwest. The main contaminants detected were trichloroethylene (TCE) and tetrachloroethylene (PCE). These chemicals are solvents formerly used at the facility to clean metal parts. Exposure to contaminated groundwater is not expected because the area is served by public water and a groundwater collection and treatment system has been in operation on the Brainerd Site for several years. However, additional testing is required to confirm that solvent vapors are not migrating from the groundwater to the indoor air in homes north of Washington Street.

Our company, Benchmark Environmental Engineering and Science, PLLC ("Benchmark"), is the engineering firm conducting the investigation and clean-up of the property on behalf of Despatch. I write to ask your assistance in completing our environmental investigation work. By conducting the soil vapor intrusion sampling at your home, Benchmark along with the State, will evaluate the potential for soil vapor intrusion at your home.

Our records indicate that you are the property owner of [Street Address]. We are requesting your cooperation in allowing a representative from Benchmark to enter your property, at a pre-arranged and mutually agreed upon date and time, to collect an indoor air sample from the basement area of the house, as well as an air sample from beneath the basement floor (sub-slab). Outdoor air samples will also be collected in the area during the indoor air sampling event.

Prior to sampling, a building inventory form will be completed to identify potential air sampling interference by characterizing the occurrence and use of chemicals and products used and stored in your home. The indoor air sampling will consist of a one-time placement

of an air sampling canister in the basement area for a period of approximately 24 hours. The sub-slab sampling will involve drilling a small (less than 1-inch diameter) hole through the basement floor to retrieve an air sample immediately beneath the slab. Following sample collection, the hole in the basement floor will be patched. After the samples are analyzed and the data are validated, you will receive a letter transmitting the data and building inventory form for your property and explaining the sample results.

We would like to perform the sample collection work prior to March 31st. Accordingly, we would ask that you kindly contact Mr. Nathan Munley of Benchmark at 716-856-0599 by February 25th so we can schedule the work. Mr. Munley can also answer any questions you may have regarding the sampling procedure.

For additional information about the site and the remediation activities that are being carried out, please review the Remedial Investigation Work Plan on reserve at the East Rochester Public Library. Please also refer to the enclosed NYSDOH "Frequently Asked Questions on Soil Vapor Intrusion" guide for general information regarding vapor intrusion.

If you have site-related health questions, please contact Ms. Debby McNaughton of the NYSDOH at (585) 423-8069 or Mr. Jeff Kosmala of the Monroe County Health Department at (585) 753-5470. If you have questions associated with this project and/or wish to contact a NYSDEC representative for further clarification, please contact Mr. Gary E. Bonarski at (585) 226-5328.

Thank you for your anticipated cooperation in this matter.

Sincerely,
Benchmark Environmental Engineering & Science, PLLC

Nathan Munley,
Project Scientist

Thomas H. Forbes, P.E.
Sr. Project Manager

c: D. McNaughton (NYSDOH)
J. Kosmala (MCDH)
G. Bonarski (NYSDEC)

ATTACHMENT 1-2

INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY FORM

INDOOR AIR QUALITY QUESTIONNAIRE & BUILDING INVENTORY

Project Name:	Project No.
Project Location:	Client:
Preparer's Name:	Date/Time:
Preparer's Affiliation:	Phone No:
Purpose of Investigation:	

1. OCCUPANT:

Interviewed: **yes** **no**

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: **yes** **no**

Last Name: First Name:

Address:

County:

Home Phone: Office Phone:

3. BUILDING CHARACTERISTICS

Type of Building: check appropriate response)

- | | | |
|--------------------------------------|---------------------------------|---|
| <input type="checkbox"/> Residential | <input type="checkbox"/> School | <input type="checkbox"/> Commercial/Multi-use |
| <input type="checkbox"/> Industrial | <input type="checkbox"/> Church | <input type="checkbox"/> Other: |

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

- | | | |
|---------------------------------------|--|--|
| <input type="checkbox"/> Ranch | <input type="checkbox"/> 2-Family | <input type="checkbox"/> 3-Family |
| <input type="checkbox"/> Raised Ranch | <input type="checkbox"/> Split Level | <input type="checkbox"/> Colonial |
| <input type="checkbox"/> Cape Cod | <input type="checkbox"/> Contemporary | <input type="checkbox"/> Mobile Home |
| <input type="checkbox"/> Duplex | <input type="checkbox"/> Apartment House | <input type="checkbox"/> Townhouse/Condo |
| <input type="checkbox"/> Modular | <input type="checkbox"/> Log Home | <input type="checkbox"/> Other: |

If multiple units, how many?

If the property is commercial, type?

Business Type(s):

Does it include residences (i.e., multi-use)? **yes** **no** If yes, how many?

Other Characteristics:

Number of floors	Building age
Is the building insulated? yes no	How air tight? tight average not tight

INDOOR AIR QUALITY QUESTIONNAIRE & BUILDING INVENTORY

4. AIR FLOW

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

Airflow between floors

Airflow near source

Outdoor air infiltration

Infiltration into air ducts

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

- | | | | |
|------------------------------|-------------------------------------|-------------------------------------|---|
| a. Above grade construction: | <input type="checkbox"/> wood frame | <input type="checkbox"/> concrete | <input type="checkbox"/> stone |
| b. Basement type: | <input type="checkbox"/> full | <input type="checkbox"/> crawlspace | <input type="checkbox"/> slab |
| c. Basement floor: | <input type="checkbox"/> concrete | <input type="checkbox"/> dirt | <input type="checkbox"/> stone |
| d. Basement floor: | <input type="checkbox"/> uncovered | <input type="checkbox"/> covered | <input type="checkbox"/> covered with _____ |
| e. Concrete floor: | <input type="checkbox"/> unsealed | <input type="checkbox"/> sealed | <input type="checkbox"/> sealed with _____ |
| f. Foundation walls: | <input type="checkbox"/> poured | <input type="checkbox"/> block | <input type="checkbox"/> stone |
| g. Foundation walls: | <input type="checkbox"/> unsealed | <input type="checkbox"/> sealed | <input type="checkbox"/> sealed with _____ |
| h. The basement is: | <input type="checkbox"/> wet | <input type="checkbox"/> damp | <input type="checkbox"/> dry |
| i. The basement is: | <input type="checkbox"/> finished | <input type="checkbox"/> unfinished | <input type="checkbox"/> partially finished |
| j. Sump present? | <input type="checkbox"/> yes | <input type="checkbox"/> no | |
| k. Water in Sump? | <input type="checkbox"/> yes | <input type="checkbox"/> no | <input type="checkbox"/> not applicable |

Basement/Lowest level depth below grade:

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

INDOOR AIR QUALITY QUESTIONNAIRE & BUILDING INVENTORY

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

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

- | | | |
|--|--|--|
| <input type="checkbox"/> Hot air circulation | <input type="checkbox"/> Heat pump | <input type="checkbox"/> Hot water baseboard |
| <input type="checkbox"/> Space Heaters | <input type="checkbox"/> Steam radiation | <input type="checkbox"/> Radiant floor |
| <input type="checkbox"/> Electric baseboard | <input type="checkbox"/> Wood stove | <input type="checkbox"/> Outdoor wood boiler |
| | <input type="checkbox"/> Other _____ | |

The primary type of fuel used is:

- | | | |
|--------------------------------------|-----------------------------------|--------------------------------------|
| <input type="checkbox"/> Natural Gas | <input type="checkbox"/> Fuel oil | <input type="checkbox"/> Kerosene |
| <input type="checkbox"/> Electric | <input type="checkbox"/> Propane | <input type="checkbox"/> Solar |
| <input type="checkbox"/> Wood | <input type="checkbox"/> Coal | <input type="checkbox"/> Other _____ |

Domestic hot water tank fueled by: _____

Boiler/furnace located in:

- | | | | |
|-----------------------------------|-----------------------------------|-------------------------------------|--------------------------------------|
| <input type="checkbox"/> Basement | <input type="checkbox"/> Outdoors | <input type="checkbox"/> Main Floor | <input type="checkbox"/> Other _____ |
|-----------------------------------|-----------------------------------|-------------------------------------|--------------------------------------|

Air Conditioning:

- | | | | |
|--------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|
| <input type="checkbox"/> Central Air | <input type="checkbox"/> Window units | <input type="checkbox"/> Open Windows | <input type="checkbox"/> None _____ |
|--------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|

Are there air distribution ducts present? ☐ yes ☐ no

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., family room, bedroom, laundry, workshop, storage)

Basement

First Floor

Second Floor

Third Floor

Fourth Floor

INDOOR AIR QUALITY QUESTIONNAIRE & BUILDING INVENTORY

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

- a. Is there an attached garage? ☐ yes ☐ no
- b. Does the garage have a separate heating unit? ☐ yes ☐ no ☐ NA
- c. Are petroleum-powered machines or vehicles stored in the garage? ☐ yes ☐ no ☐ NA
(e.g., lawnmower, atv, car) If yes, please specify: _____
- d. Has the building ever had a fire? ☐ yes ☐ no
If yes, when? _____
- e. Is a kerosene or unvented gas space heater present? ☐ yes ☐ no
If yes, where? _____
- f. Is there a workshop or hobby/craft area? ☐ yes ☐ no
If yes, where and type? _____
- g. Is there smoking in the building? ☐ yes ☐ no
If yes, how frequently? _____
- h. Have cleaning products been used recently? ☐ yes ☐ no
If yes, when & type? _____
- i. Have cosmetic products been used recently? ☐ yes ☐ no
If yes, when & type? _____
- j. Has painting/staining been done in the last 6 months? ☐ yes ☐ no
If yes, where & when? _____
- k. Is there new carpet, drapes, or other textiles? ☐ yes ☐ no
If yes, where & when? _____
- l. Have air fresheners been used recently? ☐ yes ☐ no
If yes, when & type? _____
- m. Is there a kitchen exhaust fan? ☐ yes ☐ no
If yes, where vented? _____
- n. Is there a bathroom exhaust fan? ☐ yes ☐ no
If yes, where vented? _____

INDOOR AIR QUALITY QUESTIONNAIRE & BUILDING INVENTORY

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY (continued)

- o. Is there a clothes dryer? ☐ yes ☐ no
 If yes, is it vented outside? yes no
- p. Has there been a pesticide application? ☐ yes ☐ no
 If yes, when & type? _____
- q. Are there odors in the building? ☐ yes ☐ no
 If yes, please describe? _____
- r. Do any of the building occupants use solvents at work? ☐ yes ☐ no
 (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? ☐ yes ☐ no
- s. Do any of the building occupants regularly use or work at a dry-cleaning service?
 (check 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
- t. Is there a radon mitigation system for the building/structure? ☐ yes ☐ no
 If yes, date of installation? _____
 Is the system active or 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? ☐ yes ☐ no
- d. Relocation package provided and explained to residents? ☐ yes ☐ no



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.

This image shows a full page of blank graph paper. The grid consists of thin, light gray horizontal and vertical lines that intersect to form small squares across the entire surface. There are no margins, text, or other markings on the paper.

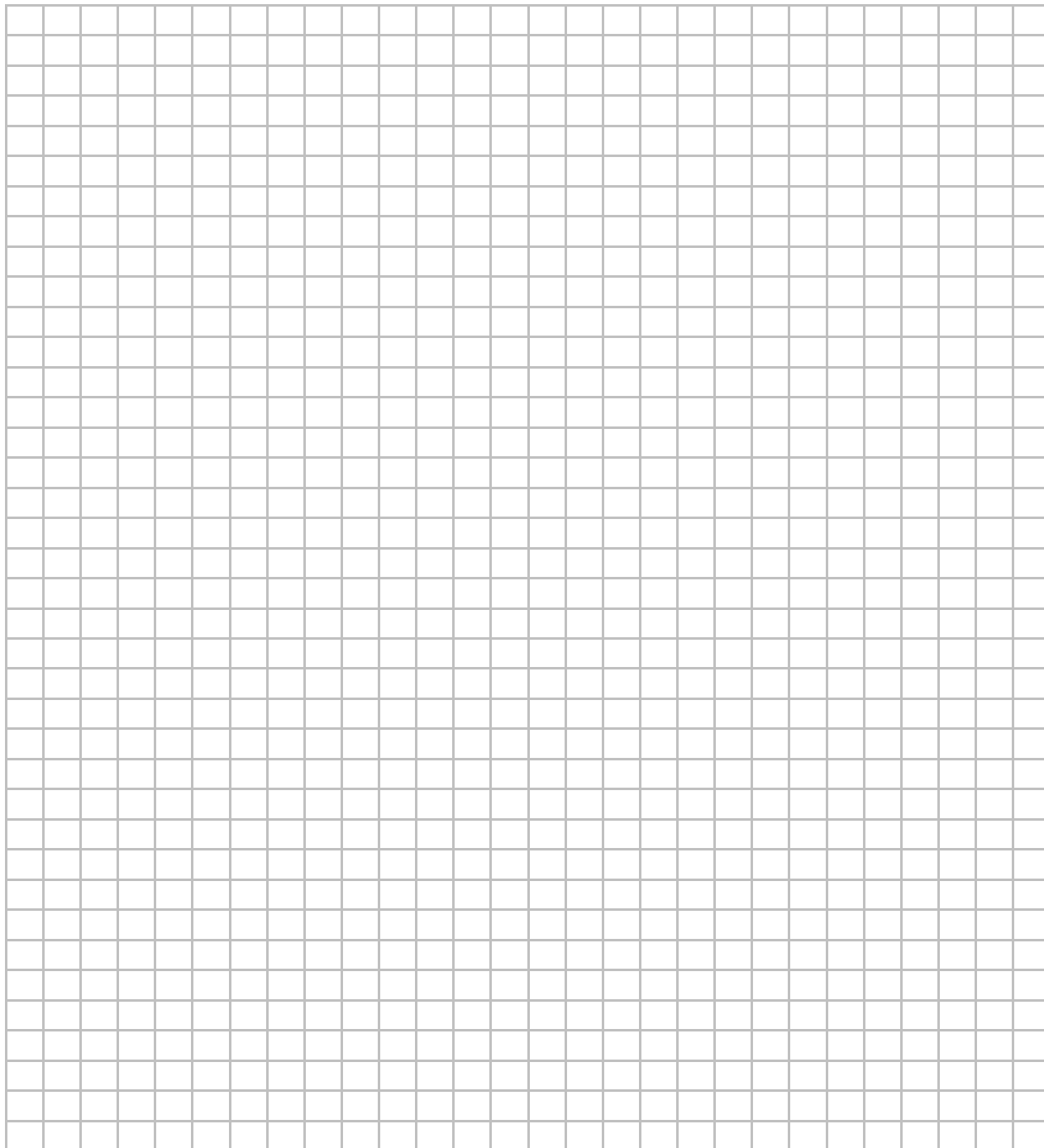
This image shows a full page of blank graph paper. The grid consists of thin, light gray horizontal and vertical lines that intersect to form small squares across the entire surface. There are no margins, text, or other markings on the paper.

INDOOR AIR QUALITY QUESTIONNAIRE & BUILDING INVENTORY

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 spetic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



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

[illegible]

2. 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.