BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

July 17, 2008
Revised October 6, 2008

Mr. Ed Hampston
New York State Department of
Environmental Conservation
Division of Environmental Remediation
625 Broadway - 12th Floor
Albany, NY 12233-7013

Re: Enarc-O Machine Products Site, Lima, New York - Site No. 826011
Proposed Modification to Groundwater Monitoring Program and
Vapor Intrusion Investigation Work Plan

Dear Mr. Hampston:

On behalf of our client, Kaddis Manufacturing Corp. (Kaddis), we wish to again thank you, Mr. White and Ms. Kenney for taking the time to meet with us at the Enarc-O facility last month. As we discussed, Kaddis has expended considerable resources on the investigation, cleanup, and post-remedial monitoring of chlorinated organic releases from the prior facility owner, and believes that the data justify a reduction in the groundwater monitoring program as well as reclassification of the Site. We understand that prior to reclassification, the NYSDEC needs to be assured that no potential unacceptable on-site or off-site soil vapor intrusion issues exist or, if present, are addressed through acceptable mitigation controls. Toward that end, we have prepared this correspondence to present our proposed scope of work for an on-site and off-site soil vapor intrusion investigation, and to identify our proposed reduced groundwater monitoring program.

PROPOSED SOIL VAPOR INTRUSION INVESTIGATION

The soil vapor investigation will characterize subsurface soil vapor and indoor air in the former source area of the Manufacturing Plant as well as nearby residences downgradient of the site. Specifically, we propose at this time to characterize the eastern area of the manufacturing facility as well as the closest residences northwest (1167 Bragg St.) and northeast (7880 Martin Rd.) of the Site. These off-site locations are proposed based on their proximity to the Site and the familiarity of the associated property owners with the remedial actions and ongoing monitoring program, as the former supply wells at these residences are included in the routine groundwater monitoring program. If warranted by the results of this sampling event, the investigation may be expanded to other residences further downgradient of the Site. The proposed sampling will be conducted between November 15 and December 1, 2008 to allow for further sampling this heating season, if warranted.

726 Exchange Street, Suite 624 | Buffalo, NY 14210
phone: (716) 856-0599 | fax: (716) 856-0583

SOIL VAPOR INVESTIGATION APPROACH

Benchmark will seek permission to access the above-referenced residences for the purpose of installing and sampling the soil vapor points. 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; one sub-slab and one indoor air sample within the Manufacturing Plant in the vicinity of the former excavation area; and one indoor air sample inside the work/office space to the northeast of the Manufacturing Plant (see Figure 1). Samples from 7880 Martin Road, which recently underwent construction of a new home by the current owners, will be collected from whichever structure is occupied as the owner's primary residence at the time of sampling. Concurrent with indoor samples, an 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 ¼-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 an 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, the attached indoor air quality questionnaire and building inventory form will be completed by Benchmark, with input from the property owner/plant staff. 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.

SOIL VAPOR INVESTIGATION SCHEDULING

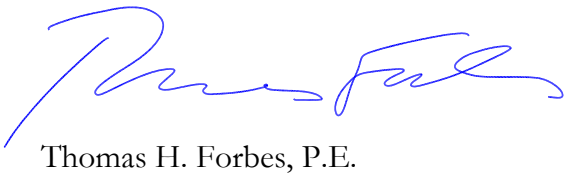
We propose conducting the above-described sampling early in the heating season (i.e., latter half of November 2008) assuming Benchmark has been granted access permission by the residents. Benchmark will provide the NYSDEC and NYSDOH with sufficient notice such that a representative may be present during the installation and/or sampling at these locations.

PROPOSED REDUCED GROUNDWATER MONITORING PROGRAM

As discussed above, Kaddis believes that the groundwater monitoring data and remedial actions to date justify a reduction in the groundwater monitoring program. Specifically, we propose implementing groundwater sampling on a 15-month basis, beginning in September 2008, to provide a minimum of one sampling event per year and seasonal rotation. The number of wells sampled during each event would be limited to MW-201D, MW-3, MW-5, and the deep supply well (see Figure 1). To facilitate sampling, passive diffusion bags will be used in lieu of conventional bailer or low flow sampling techniques. Attachment 2 includes Benchmark's field operating procedure for passive diffusion bag sampling. (Note that although Attachment 2 indicates that there is no maximum duration between bag deployment and retrieval, Benchmark will plan to deploy bags approximately 1 month prior to the scheduled monitoring event).

Please contact us if you have any questions or wish to further discuss the proposed Work Plan.

Sincerely,
Benchmark Environmental Engineering & Science, PLLC



Thomas H. Forbes, P.E.
Project Manager

Att.
File: 0127-001-104

c: M. Tedeschi (Kaddis)
C. Slater (Harter Secrest & Emery)
J. White (NYSDEC)
J. Kenney (NYSDOH)

DATE: JULY 2008
DRAFTED BY: BCH

F:\CAD\Benchmark\Harter, Secrest, & Emery\Kaddis - Enarc-O\Figure 1; Site Plan (revised 07-17-08).dwg

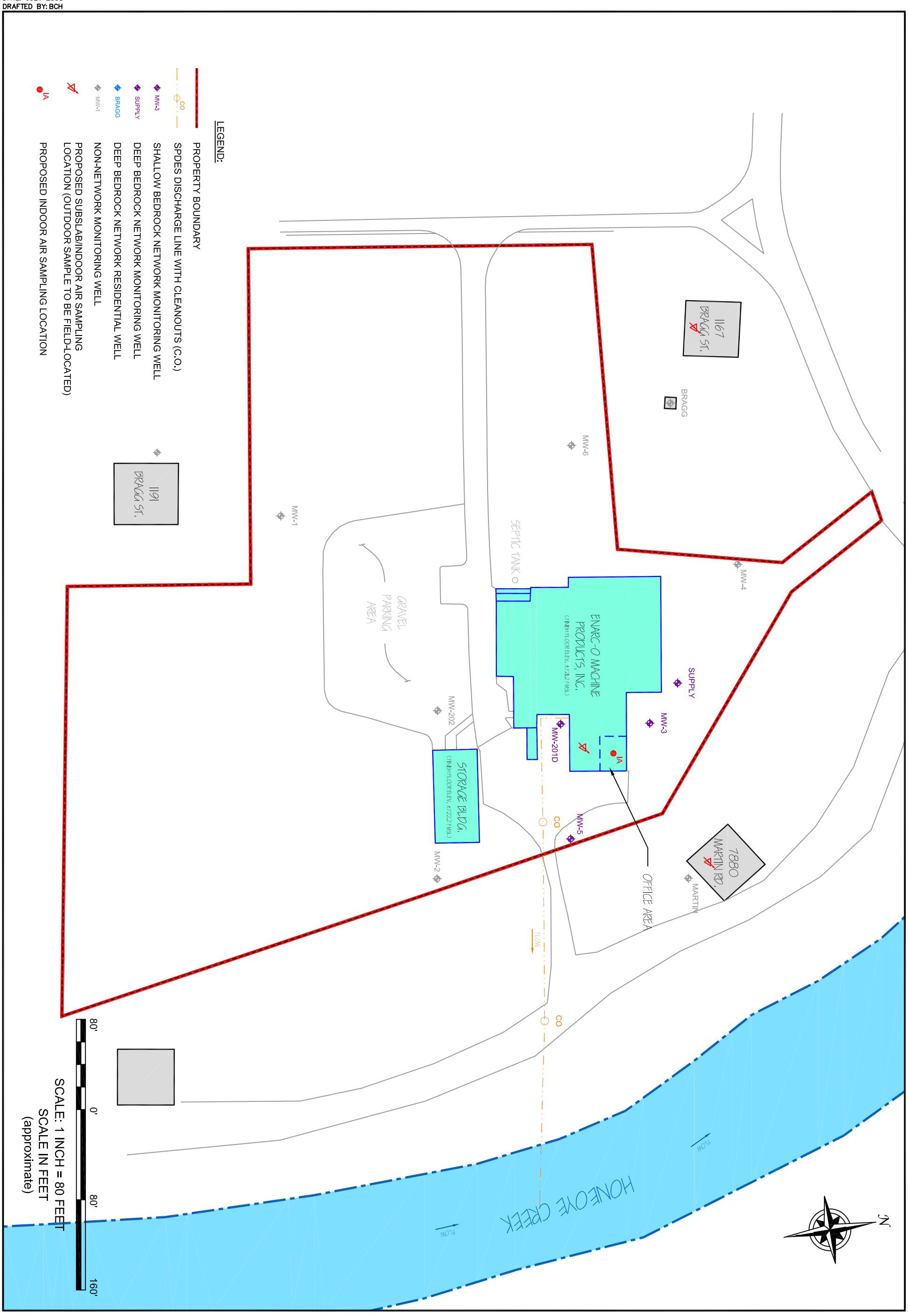


FIGURE 1

SITE PLAN

GROUNDWATER MONITORING & INDOOR AIR MONITORING PLAN

ENARC-O MACHINE PRODUCTS
LIMA, NEW YORK

PREPARED FOR
KADDIS MANUFACTURING CORPORATION

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
726 EXCHANGE STREET
SUITE 624
BUFFALO, NEW YORK 14210
(716) 856-0599

JOB NO.: 0127-001-104

ATTACHMENT 1

INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY FORM

BENCHMARK

BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

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)

☐ Residential	☐ School	☐ Commercial/Multi-use
☐ Industrial	☐ Church	☐ Other:

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

☐ Ranch	☐ 2-Family	☐ 3-Family
☐ Raised Ranch	☐ Split Level	☐ Colonial
☐ Cape Cod	☐ Contemporary	☐ Mobile Home
☐ Duplex	☐ Apartment House	☐ Townhouse/Condo
☐ 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)? yes no If yes, how many?

Other Characteristics:

Number of floors Builing age

Is the building insulated? yes no How air tight? tight average not tight

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:	☐ wood frame	☐ concrete	☐ stone
b. Basement type:	☐ full	☐ crawlspace	☐ slab
c. Basement floor:	☐ concrete	☐ dirt	☐ stone
d. Basement floor:	☐ uncovered	☐ covered	☐ covered with
e. Concreter floor:	☐ unsealed	☐ sealed	☐ sealed with
f. Foundation walls:	☐ poured	☐ block	☐ stone
g. Foundation walls:	☐ unsealed	☐ sealed	☐ sealed with
h. The basement is:	☐ wet	☐ damp	☐ dry
i. The basement is:	☐ finished	☐ unfinished	☐ partially finished
j. Sump present?	☐ yes	☐ no	
k. Water in Sump?	☐ yes	☐ no	☐ not applicable

Basement/Lowest level depth below grade:

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

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)

- ☐ Hot air circulation
- ☐ Heat pump
- ☐ Hot water baseboard
- ☐ Space Heaters
- ☐ Steam 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
- ☐ Other _____

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? ☐ 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 ☐ Occaisionally ☐ 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? _____

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

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.

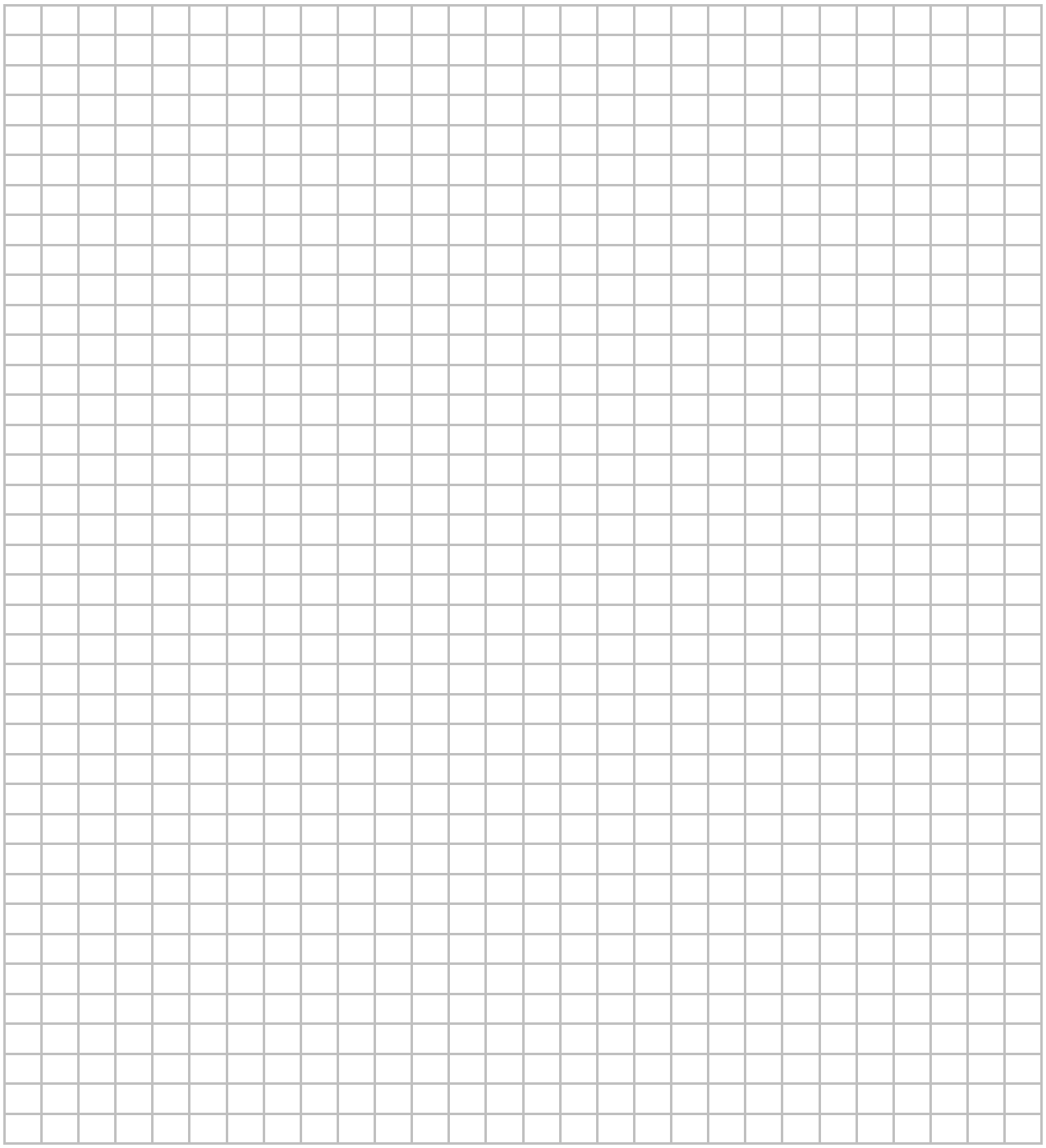
Basement:

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 spetic 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 structure that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition 1	Chemical Ingredients	Field Instrument Reading (units)	Photo (Y/N)

Notes:

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

ATTACHMENT 2

PASSIVE DIFFUSION BAG
FIELD OPERATING PROCEDURE

BENCHMARK

FOP 081.0

GROUNDWATER SAMPLE COLLECTION PROCEDURES FOR PASSIVE DIFFUSION BAG SAMPLERS

PURPOSE

This procedure describes the methods for collecting volatile organic compound (VOC) groundwater samples from monitoring wells and domestic supply wells using passive diffusion bag samplers (PDBs). The PDB sampler is a semi-permeable low-density polyethylene membrane designed to allow VOCs to flow into the bag until equilibrium is maintained between the VOCs in the formation and in the PDB.

STORAGE & HANDLING INFORMATION

The bags will be pre-filled by an NYSDOH-ELAP Certified laboratory with 220 mL of certified laboratory grade (analyte free & deionized) water. Keep bags stored in the shipping pouch, in a dry clean volatile free area to prevent accidental contamination. Do not keep bags in the storage area for longer then two weeks. If additional storage time is required, contact the laboratory for Mylar pouches. Handle each PDB separately with clean nitrile gloves. Always change gloves before handling a new PDB. Avoid handling bags bare-handed.

INSTALLATION

Prior to placement of the PDB into the monitoring well, record bag serial/identification numbers and sample location. Each bag will be equipped with a stainless steel weight and harness line (stainless steel or 3/16 inch twisted polypropylene rope) that will be firmly attached to the protective casing of the monitoring well. Calculate the approximate amount of line needed so the PDB can be suspended at the center of the well screen interval (if using 3/16 inch twisted polypropylene rope take into account any stretching that might occur over

time). After the correct amount of line is calculated, slowly lower the PDB into monitoring well to prevent the PDB from getting caught or hung up in the well casing. After installation note the time and date, carefully lock the monitoring well and proceed to the next location. Laboratory tests have demonstrated that two weeks is the minimum time that is needed for most VOCs in the groundwater formation to reach equilibrium with the analyte free, deionized water in the diffusion bag. After this initial equilibrium period has occurred there is no specific recovery time, thus when the next round of scheduled sampling is needed PDBs from the previous round can be recovered and be replaced by a new PDB.

RECOVERY

After the minimum two week equilibrium period has passed, return to the monitoring well, and carefully unlock well. Note time, date and well ID. Don a new pair of disposable nitrile gloves, and slowly begin to remove PDB; the line should be carefully spooled together and placed in a clean plastic bag large enough to contain all of the retrieval line. The line should not be allowed to contact the ground surface. Upon retrieval of PDB and harness, inspect bag carefully damage, and check serial number or bag ID against previously recorded numbers. The PDB can be opened by removing the threaded screw cap. If PDBs have no threaded screw cap, a pair of scissors can be used to cut a forty-five degree angle at corner of bag. If this type of bag has been supplied, make sure scissors are thoroughly pre-cleaned with Alconox and distilled water between sample locations.

Once bag has been opened, the laboratory supplied 40 ml HCL pre - preserved vial must be filled immediately. PDBs should not be allowed to come into contact with other PDBs, as cross contamination can occur between bags. The vials must be held at a slight

angle and filled slowly so little to no aeration of the groundwater can occur. Vials must be filled with zero headspace (no air bubbles) in the sample. To ensure this, after the vial has been filled, twist cap on tightly; turn vial upside down and lightly tap. If no air bubbles are visible, proceed with filling the next vial. After each vial bottle for that specific monitoring well have been filled, take remaining groundwater (if any) and record groundwater quality for pH, temperature, conductivity and ORP (oxidation reduction potential).

Following sampling, the empty PDBs can be disposed of as solid waste. If additional sampling events are being performed at the site, the PDBs for the next round of sampling can be placed into the well following the same procedures described above.

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

GROUNDWATER WELL
PDB COLLECTION & RECOVERY LOG
(PASSIVE DIFFUSION BAG)

Project Name:	WELL NUMBER:
Project Number:	Sample Matrix: Water
Client:	Weather:

WELL DATA:

Casing Diameter (inches):	Casing Material:
Screened interval (fbTOR):	Screen Material:
Static Water Level (fbTOR):	Bottom Depth (fbTOR):
Elevation Top of Well Riser (fmsl):	Ground Surface Elevation (fmsl): 500.86
Elevation Top of Screen (fmsl):	Stick-up (feet):

PDB DATA:

Depth of PDB in well (fbTOR):	Is PDB harness and line dedicated to sample location?	yes	no
Condition of Well:	Is PDB located at center of screen?	yes	no
Field Personnel:			

Installation:

Date of PDB placement:	
Time of PDB placement:	

Retrieval:

Date of PDB retrieval:	
Time of PDB retrieval:	
Condition of PDB:	

If PDB contains visible sediment, check PDB integrity and re-sample.

COMMENTS:

PREPARED BY: