The Department of Natural Resources and Environmental Control Division – Site Investigation and Restoration Branch (DNREC-SIRB) adopts this policy to provide guidance and consistency in the evaluation of vapor intrusion risk from investigation to remediation.

**Definition of Vapor Intrusion**

**Acute Exposure** – Exposure to a chemical or situation for a short period of time. (EPA 2007).

**Vapor Intrusion (VI)**- is the migration of volatile chemicals from the subsurface into overlying buildings. Volatile chemicals may include volatile organic compounds, select semi-volatile organic compounds and some inorganic analytes such as mercury and hydrogen sulfide. Methane should be considered where it is appropriate (ITRC 2007).

** Preferential Pathway**- An increased component of soil gas flow into a building due to natural conditions (gravel, etc.) or manmade conditions (utility corridors, sumps, drains, pits or elevator shafts, etc.) The presence of any of these does not necessarily indicate that a preferential pathway exists. (ITRC 2007)

**Chemicals of Potential Concern (COPC)** - Chemicals that are potentially site-related and whose data are of sufficient quality for use in the quantitative risk assessment (EPA Risk Assessment Guidance for Superfund, Vol. I Part A, 1989).

**Contaminants of Concern (COC)** - chemicals or contaminants determined to be present at the site in sufficient concentrations to present a health risk (HSCA Guidance 1994).

**Remedial Action** – the containment, contaminant mass or toxicity reduction, isolation, treatment, removal, cleanup, or monitoring of hazardous substances released into the environment, or the taking of such other actions as may be necessary to prevent, minimize, or mitigate harm, or risk of harm to the public health, welfare, or the
environment which may result from a release or an imminent threat of a release of hazardous substances (HSCA Regulations).

Purpose
The General Assembly of the State of Delaware enacted the Hazardous Substance Cleanup Act (HSCA), (7 Del. C. Ch.91) in 1990 to eliminate or minimize the risk to public health, welfare and the environment from the release of hazardous substances.

The Act provided authority to the Department of Natural Resources and Environmental Control (DNREC) to enforce the provisions of the Act. The Secretary of DNREC was tasked to establish regulations by which to implement the provisions of the Act, which were generated and adopted in 1994 (Secretary's Order 94-SF-0013). Media-specific descriptions for the general risk levels used to determine the need for cleanup were specified in the regulations promulgated in 1996 as a cancer risk of 1x10-5 or a Hazard Index value of 1.0 for non-cancer risk (Section 9.0 – Cleanup Levels).

Vapor intrusion has only recently been recognized as a risk to human health. As a result, no media-specific description has been drafted for the previously - unrecognized VI Pathway, although all media at all sites are subject to the general provisions of Subsection 9.1.

This policy will:
- Identify VI as a pathway by which humans can be exposed to dangerous levels of invisible and otherwise unnoticeable toxic vapors
- To provide a temporary supplement to Section 9 of the HSCA Regulations – Cleanup Levels (other media-specific procedures are presented for groundwater, surface water, and soil).
- Determine when a vapor intrusion investigation should be conducted.
- To provide the procedures which serve to evaluate the Vapor Intrusion risk?

Policy

The following steps need to be performed for the evaluation of vapor intrusion risk from investigation to remediation stage. A flowchart depicting these steps is included in Attachment I.

| After initial investigation and any step after, at the discretion of DNREC, the PRP may propose remediation. |

A. Initial Evaluation – How Do I Determine Whether I Need to Evaluate VI on my Property?

Step 1 Evaluate if hazardous vapor intrusion condition exists at the Site which require emergency response. Emergency conditions exist if any one of the following is present:
- Odor
- High vapor concentrations (OSHA PELs or IDLH levels are being exceeded)
- Explosive levels are present
- Physiological effects of vapor intrusion
- Presence of a wet basement where NAPL is present
- Any other hazardous condition which requires immediate response

Contact 911
or DNREC Emergency Response Branch at 1-800-662-8802 and take immediate remedial actions as directed.

Step 2 Does Sufficient Data exist to evaluate if vapor intrusion could present a risk?

In this step, it is important to determine if the data is of sufficient quality and quantity to determine if vapor intrusion could present a risk. For instance, only one soil sample that has volatile organic chemicals is not enough to determine if a realistic risk exists at the Site. At this point it is appropriate to develop a conceptual site model (CSM). The model needs to include known or suspected sources, contaminant migration pathways, receptors, and exposure pathways. An example for the development for CSM is found in Appendix B of the November 2005 American Petroleum Institute document entitled “Collecting and Interpreting Soil Gas Samples from the Vadose Zone-A Practical Strategy for Assessing the Subsurface Vapor-to-Indoor Air Migration Pathway at Petroleum Hydrocarbon Sites”. The conceptual site model must be updated each time more information becomes available.

Step 3 Identify sites which may have VI issue

Screen the list of chemicals of potential concern (COPC) against Table 1. If the COPCs are not listed on Table 1 as both toxic and volatile then the site is not a risk for vapor intrusion (Go to Step 11). Methane, radon and tert-butyl alcohol (TBA) are special exceptions to Table 1. Methane is a volatile chemical, which is not toxic but presents certain environmental risks. Radon is volatile and toxic but naturally occurring. TBA is not included on the Table 1 list but certain states, such as New Jersey, have chosen to include it as COPC. DNREC will evaluate the risk from these compounds on a site by site basis.

Step 4 Building and/or Preferential Pathway Location

Are there any current or future buildings within 100 feet of the contamination (groundwater or soil vapor)? Are there any preferential pathways near the contamination to present a potential risk, based on best professional judgment? If the answer is yes proceed to the next step. If no then go to Step 11.
Step 5  Screen available data

Evaluate the available data using the Johnson and Ettinger (J&E) Model (EPA 2003) or Table 2. Other models will be considered on a Site by Site basis.

There are three basic J&E model types- Groundwater, Soil Gas and Non-Aqueous Phase Liquid (NAPL) and soil. Either generic or advanced model may be used (based on the amount of data available at the Site). DNREC requires that the data used for screening is either the groundwater data or the soil gas data. Soil data should not be used as it does not represent soil gas conditions as well as the other data types. Generally as a conservative measure, the worst-case values should be used.

The J&E model can not be used when any of the following conditions are present:

- A preferential pathway exists.
- Building foundation is in contact with groundwater
- Very small building air exchange rates (e.g., <0.25/h)
- Buildings with crawlspace structures or other significant openings to the subsurface (e.g., earthen floors, stone buildings, etc.)
- Very shallow vapor sources (e.g., depths less than 5 ft below foundation level);
- Relatively shallow vapor sources (e.g., depths less than 15 ft below foundation level), and one or more of the following:
  - buildings with significant openings to the subsurface (e.g., sumps, unlined crawlspace, earthen floors), or
  - significant preferential pathways, either naturally-occurring and/or anthropogenic (see discussion in Question 4), or
  - buildings with very low air exchange rates (e.g., < 0.25/hr) or very high sustained indoor/outdoor pressure differentials (e.g., > 10 Pascals), or

When J&E model can not be used, the following options should be used:

- Use another model approved by DNREC
- Conduct field investigation per a DNREC approved work plan.

If the results exceed 1X10^-6 or hazard index (HI) of 0.1 then proceed to field investigations. If it does not exceed then a risk does not exist (go to Step 11).

Step 6  Evaluate exceedances above DNREC’s Screening Levels

If this screening indicates that a vapor intrusion into indoor exceeds 1x10^-6 or HI of 0.1 then the screening process continues to conducting onsite investigation.
B. What To Do If Further Evaluation of VI is needed?

Step 7  Design/Perform Vapor Intrusion Investigation

Work Plan Development

Sampling requirements, analytical methods and sampling procedures will be covered in future DNREC guidance documents or policies.

Work plans must describe the number, location and depth of proposed samples. The work plan may differ for chlorinated solvents and petroleum contaminants as petroleum hydrocarbon vapors tend to degrade as they migrate vertically due to biological degradation. If preferential pathways are determined to exist, these need to be included in the field investigation.

Investigation Strategy

Investigation should proceed from an outside to indoor investigation in a systematic fashion. Other strategies will be evaluated on a Site by Site basis. The investigation should proceed along the lines presented below:

1) Delineate the vapor source (groundwater or soil gas)
2) Collect soil vapor samples adjacent to the footing of the building/house.
   DNREC prefers four samples to be collected from around the perimeter of the building. More samples may be necessary based on the size of the building.
3) Collect subslab samples from the interior of the building. Prior to collecting any samples indoors, it will be necessary to obtain permission to sample indoors (access agreement for HSCA sites). If the building(s) use is as a residence, it will be necessary to talk to the DNREC public information officer and determine the strategy about how to talk to the home owner(s), etc.
4) Collect indoor air samples.

The reason for collecting indoor air samples last is that many common household items contain VOCs at levels sufficient to cause a background issue (i.e. Is the source from household products or from the subsurface). For this reason, prior to collecting any indoor samples, it is necessary to identify any potential issue with background by conducting a detailed survey of the interior of the building and removing or otherwise isolating any VOC containing products. Attachment IV is a copy of the draft survey form. A detailed list of VOC containing items can be found in the October 2005 New Jersey Department of Environmental Protection Vapor Intrusion Guidance (Appendix H).
Upon DNREC’s discretion, additional or alternative investigations may be conducted to determine if vapors present a risk to indoor air. For instance, tracer gases may be used to determine the attenuation factor (ratio of indoor air concentration to subslab concentration) of the concrete slab. This allows a concentration of subslab gas to be reasonably extrapolated to an indoor concentration (subslab X attenuation factor).

Step 8  Evaluate Data Quality

After the data is collected, update the CSM and evaluate if there are any data gaps. If there are any data gaps then go back to Step 7.

Step 9  Perform Risk Analysis

Evaluate the Site data using the J&E model, or other DNREC-approved model to determine the risk. DNREC will consider different input parameters to the site specific risk calculator to evaluate commercial buildings or other situations on a site by site basis.

Step 10  Evaluate the Risk Results

If the risk is below 1X10⁻⁵ or HI of 1.0 then proceed to Step 11.

If the risk exceeds 1X10⁻⁵ or HI of 1.0 then proceed to Step 12.

Step 11  No Further Action

DNREC will make a no further action determination.

OSHA Considerations

The Occupational Safety and Health Administration (OSHA) regulates worker exposure to volatile chemicals present in industrial workplaces. The Department will generally defer to OSHA’s standards and requirements and forego corrective action in occupational settings where the contaminants of concern from vapor intrusion are the same as job related chemical exposures regulated by OSHA. These workers fall under the Hazard Communication requirements of OSHA and workplace exposure to chemicals is monitored and is likely to predominate over vapor intrusion exposure.

However, in some cases although the Site is industrial, it may be in a strip mall or adjacent to a higher risk use or group. For instance, dry cleaner in a strip mall next to residence or daycare. In this case, the lower risk-based numbers would be used.

In addition, other individuals and workers who are not exposed to chemicals as part of their normal employment (office workers, etc), are not included in the OSHA Hazard Communication program, and vapor intrusion may be their primary exposure pathway. The Department will employ its own risk-based numbers in these instances.
C. What To Do If Remediation of VI is needed?

Step 12 Evaluate the remedial options
Conduct Remediation

Presumptive Remedial options:
1) Subslab Depressurization
2) Vapor Barrier with passive venting
Other remedial options considered on a case by case basis

A vapor barrier must consist of a barrier material and passive venting system (perforated piping under the slab and piping to the roof). The gas diffuses into the piping and being lighter than air rises out of the vent pipes on the roof. The reason for adding a passive venting system is that any small hole in the barrier or other imperfection in the barrier will allow vapors to enter the building. The passive venting will prevent vapors from collecting under the building. In addition, in the event that the passive venting system is determined to be ineffective, a small fan can be attached to change the system to an active venting system.

The determination that the passive system is ineffective will be determined by DNREC on a site by site basis (generally when periodic indoor sampling results indicates that a risk above $1 \times 10^{-5}$ still exists in the building even with passive venting).

Vapor barrier design will not be considered complete without a venting system. Air permitting requirements from the DNREC Division of Air and Waste Management Air Quality Management Section are as follows:

- Less than 0.2 lbs/day- No permit
- 0.2 to 10 lbs/day- Self permit
- 10 lbs/day-permit required

However, as regulations may change, please contact the DNREC Air Quality Management Section to confirm that permits will not be required.

The design for the vapor mitigation system must be approved prior to installation. The design must be certified by a Delaware Professional Engineer or certified radon installer. DNREC will accept material as a vapor barrier from certified manufactures of vapor barriers. DNREC, upon its discretion, will also accept other materials as vapor barriers provided that they meet the following criteria:

i. Permeability of the barrier or Permeance ASTM E 1745-97 (2004) less than 0.01 perms.

ii. Strength of material- puncture resistance (ASTM D1709-04) and tensile strength (ASTM D882-00)

iii. Resistance to COC on site- ASTM E154-99, Section 14

This policy will be distributed to all approved HSCA consultants and appear on the DNREC-SIRB web page. The changes will appear in any new revision of the Remediation Standards Guidance.

DNREC will review this Policy annually or as new information become available and revise as deemed appropriate.

Approved by:  

James Werner, Director  
Division of Air and Waste Management  

Date: 16 MAR 2007

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REFERENCES


ATTACHMENT I
DECISION MAKING FLOWCHART
FOR EVALUATION OF VAPOR INTRUSION
Decision Making Flowchart for Evaluation of Vaper Inhalation Pathway

Step 1: Inhaled standards review or DRC.
Step 5: Screen COPC.
Step 6: Are any COPCs present?

Continue with screening.

Inhalation standards review. Are there any COPCs?

Screen COPCs.

Step 1: Inhaled standards review.

Yes

Yes

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ATTACHMENT II
TABLE I COCS
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1. A chemical is considered sufficiently toxic if the vapor concentration of the pure component (see Appendix D) poses an incremental lifetime cancer risk greater than 10% or a non-cancer hazard index greater than.

2. A chemical is considered sufficiently volatile if its Henry's Law Constant is $1 \times 10^{-8}$ atm-m^3/mol or greater (US EPA, 1991).

3. Users should check off compounds that meet the criteria for toxicity and volatility and are known or reasonably suspected to be present.
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Table 1: Category Details

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<th>Description</th>
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<tr>
<td>B1</td>
<td>Detailed information about B1</td>
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<tr>
<td>B2</td>
<td>Detailed information about B2</td>
</tr>
<tr>
<td>C1</td>
<td>Detailed information about C1</td>
</tr>
<tr>
<td>C2</td>
<td>Detailed information about C2</td>
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Table 2: Further Information

<table>
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<tr>
<th>Code</th>
<th>Information</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>Additional A</td>
</tr>
<tr>
<td>B</td>
<td>Additional B</td>
</tr>
<tr>
<td>C</td>
<td>Additional C</td>
</tr>
</tbody>
</table>

Table 3: Additional Details

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<tr>
<th>Code</th>
<th>Additional Information</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>Further A details</td>
</tr>
<tr>
<td>B</td>
<td>Further B details</td>
</tr>
<tr>
<td>C</td>
<td>Further C details</td>
</tr>
</tbody>
</table>
DNREC SIRB Vapor Intrusion Policy

Field Sampling Form

Sample: __________________________
Sample #: __________________________
(Attach Sample Map)

Project #: __________________________
Project Name: __________________________
Sampled: __________________________
By: __________________________
Date: __________________________
Sampled: __________________________
Time: __________________________

General Site Conditions:

Atmospheric Data:

Source of Data __________________________
Precipitation during sampling __________________________
Amount of Precipitation __________________________
Barometric Pressure __________________________
Temperature __________________________
Wind Speed __________________________
Wind Direction __________________________

Sampling System (check one)

Whole-Air active approach

Whole-Air passive approach Sorbed contaminants-active approach Sorbed contaminants-passive approach

Headspace or extraction approach soil pore liquid headspace approach

Sample Type

Direct Field Sample Field Blank Travel Blank Sample Container Blank Sample Probe Blank Sample Replicate

Spiked ________ cc with ________ of ________

Potential reaction products due to spiking:

System Purge Volume: ________ Purged: ________ Volume: ________

Sorbet Device: Installed: __________________________ Date/time Recovered: __________________________ Date/time

Sample Container Type: ________ Sample Container #: ________

Analytical Method: ________ (Chain of Custody Attached)

Integral Detector: ________ (attach equipment calibration, detections)
Analyzer: __________ to this form 
Analyzer Result: __________
Surface cover: __________
Sample Sampling rate: __________
Depth: __________
Sample Horizon data visual estimates:

Vadose Zone Make-up: Native soil+rock fill rock
Soil Composition: Clay __________ %
Soil Organic matter __________ %
Fine Granular Material __________ %
Coarse Granular Material __________ %

Moisture Content: __________

Other characteristics: Free water present __________ indurated soil discoloration __________
Free product probable connection to __________
contaminant odors surface macropores __________
poor perm. To vapor near slope or vent __________
STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL
CONTROL

INDOOR AIR BUILDING SURVEY & SAMPLING FORM

Survey Completed by: ___________________________ Date: ______

Site Name: ______________________________________
DE#: __________________

**Part I - Occupants**

Building Address: ______________________________________

Property Contact: ____________________________
Owner/Renter/Other: ____________________________

Contact’s Phone: home ( ) ___________ work ( ) ___________
                cell ( ) ______________________

Contact’s Email: ____________________________

Building occupants: Children under age 13 _____ Children age 13-18 _____ Adults _____

Special Health Conditions (respiratory, cardiovascular; partially able or homebound?)

__________________________________________________________
__________________________________________________________
__________________________________________________________

Allergies_________________________________________ Other (describe)
__________________________________________________________

**Part II – Building Characteristics**

19
Building type: single-family residential / trailer or mobile / multi-family residential (duplex, row, apartment?) / office / strip mall / commercial / industrial

Describe building:
1) age
2) construction frame / masonry / steel / other;
3) type of insulation;
4) type of roof
5) general condition and air tightness
6) fireplace or chimney (serviced recently?)

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Number of floors - below grade: ______ (full basement / crawl space / slab) at or above grade:
________________________________________________________________________
________________________________________________________________________

Number of rooms __________ Do windows open?
________________________________________________________________________

Basement size: ______ ft² Basement floor: concrete / dirt / floating / other (specify): __________
________________________________________________________________________

Foundation type: poured concrete / cinder blocks (hollow?) / stone / other (specify):
________________________________________________________________________

Type of ground cover around outside of building: grass / concrete / asphalt / other (specify):
________________________________________________________________________

If vegetation, does it appear stressed? __________ French drain? _______
Flooding experienced? __________

Floor drains present? ______ If yes, trap present? _______ Water in trap? _______

Connected to a: a) sanitary sewer b) storm sewer c) septic system
d) surface discharge
e) unknown

Basement sump present? Yes / No
Sump pump? Yes / No

Type of heating system (circle all that apply):
- hot air circulation
- hot air radiation
- wood
- steam radiation
- hot water radiation
- electric baseboard
- heat pump
- kerosene heater
- other (specify):
- solar/air
- solar/glycol or other heat transfer fluid
- solar/water

If air, when were filters changed last?

Type of ventilation system (circle all that apply):
- central air conditioning
- mechanical fans
- bathroom ventilation fans
- individual air conditioning units
- kitchen
- range hood fan
- other (specify):

Type of fuel utilized (circle all that apply):
- Natural gas
- electric
- fuel oil
- wood-wood pellets
- coal
- solar
- kerosene
- waste oil/ outside (fresh) air intake

Septic system? Yes / Yes (but not used) / No Irrigation/private well?
Yes / Yes (but not used) / No

Public or private well Yes / No
If public, name of company

Existing subsurface depressurization (radon) system in place? Yes / No
and running? Yes / No

Part III - Outside Contaminant Sources

DNREC DEN/Marplot/Brownfields lists (1000-ft. radius):

Previous land use in area:

Other stationary sources nearby:
- Gas stations
- Emission stacks
- Refineries/chemical plants
Waste disposal facilities (LFS & WWTPs)  Hot-mix plants  Fuel
oil tanks
Dry cleaners  Beauty shops  Auto repair/body shops  Road
or roof

repair  w/hot
      tar

Wetlands nearby? (distance and direction)

_____________

Heavy vehicular traffic nearby (or other mobile sources):

_____________

Known groundwater or soil contamination within 1000 feet

_____________

Physical parameters of unsaturated zone (summarize or attach)

_____________

_____________

Sinkholes or Debris Pits

_____________

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to indoor air sampling event.

<table>
<thead>
<tr>
<th>Potential Sources</th>
<th>Location(s)</th>
<th>Removed Prior to Sampling? (Yes / No / NA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline storage cans</td>
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<tr>
<td>Gas-powered equipment</td>
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<tr>
<td>Kerosene storage cans</td>
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<tr>
<td>Paints / thinners / strippers / glues / caulks</td>
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<tr>
<td>Cleaning solvents</td>
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<tr>
<td>Oven cleaners</td>
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<tr>
<td>Carpet / upholstery cleaners</td>
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<tr>
<td>Other house cleaning products/laundry products</td>
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<tr>
<td>Moth balls</td>
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<tr>
<td>Polishes / waxes</td>
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<tr>
<td>Insecticides</td>
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<tr>
<td>Furniture / floor polish</td>
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<tr>
<td>Nail polish / polish remover</td>
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<tr>
<td>Hairspray</td>
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<tr>
<td>Cologne / perfume / after-shave, etc.</td>
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<tr>
<td>Air fresheners</td>
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<tr>
<td>Fuel tank (inside building) (outside)</td>
<td>NA</td>
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<tr>
<td>Wood stove or fireplace</td>
<td>NA</td>
<td></td>
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<tr>
<td>New furniture / upholstery</td>
<td>NA</td>
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<tr>
<td>New carpeting / flooring / paneling</td>
<td>NA</td>
<td></td>
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<tr>
<td>Recent painting in building? Roof repair?</td>
<td>NA</td>
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<tr>
<td>Hobbies - glues, paints, etc.</td>
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<tr>
<td>Toilet or septic additives</td>
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<tr>
<td>Dry drain traps, plugged drains, toilets won't flush</td>
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<tr>
<td>Garbage/spoiled food</td>
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<td>Standing water/tire piles/recent flooding</td>
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<td>Sewage/septage</td>
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<tr>
<td>Dead animals (including unusual numbers of insects)?</td>
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<tr>
<td>Mold/mildew</td>
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<tr>
<td>Wet sheetrock/paneling/flooring</td>
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<td>Neighbors making drugs/Explosives</td>
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<td>Mercury-containing switches or instruments</td>
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<tr>
<td>Alcohol/bleach/disinfectants</td>
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<td>Recent concrete/masonry work</td>
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<td>Flowers</td>
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<td>Pets (specify); scented kitty litter</td>
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<tr>
<td>Compost/manure</td>
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**Part V – Miscellaneous Items**
Do any occupants of the building smoke?  Yes / No  How often?  

Any chronic health problems?  Yes / No

Has anyone smoked within the building within the last 48 hours?  Yes / No

Does the building have an attached garage?  Yes / No
If yes, does garage have heat/ventilation?

Connected to house or separate?  Windows?  Yes / No

If so, is a car usually parked in the garage?  Yes / No

Do the occupants of the building have their clothes dry-cleaned?  Yes / No
If yes, name of dry cleaner

When were dry-cleaned clothes last brought into the building?


Have the occupants ever noticed any unusual odors in the building?  Yes / No

Describe (with location):  Date  Amount

Any known spills of a chemical, fuel or sewage immediately outside or inside the building?  Yes / No  Fires?  Yes / No

Describe (with location):

Have any pesticides/herbicides been applied around the building foundation or in the yard/gardens?  Yes / No

Have any pesticides been applied regionally, e.g. by Mosquito Control or DSWC?  Yes / No
If so, when and which chemicals?

Are odors more noticeable under certain weather conditions? Describe (wind direction/speed/precipitation/temperature/humidity):

---

**Part VI – Sampling Information**

Sample Technician: __________________________ Phone number: (   ) _______ -

Sampler Type: Tedlar / Sorbent / Canister
Analytical Method: TO-15 / TO-17 / other:

Laboratory: __________________________ NJ Certified Lab? Yes / No

---

<table>
<thead>
<tr>
<th>Sample #</th>
<th>Floor</th>
<th>Room</th>
<th>Canister / Tube #</th>
<th>Pump ID # (if applicable)</th>
<th>Sample Start Date / Time</th>
<th>Sample End Date / Time</th>
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<tbody>
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</table>
Sample location(s):
Location(s) in Building

Provide Drawing of Sample

Sample # ______ -

Sample # ______ -

Sample # ______ -

Did the occupants **not** follow any of the “Instructions for Residents” directions?  *Yes / No*

If so, describe modifications: __________________________________________________________

**Part VII - Weather Conditions**

Outside temperature at time of sampling: ______ °F

Expected high temperature: ______ °F  
Expected low temperature: ______ °F

Humidity: ______  Barometric pressure: ______  Ozone: ______

Red/Orange alert?

Was there significant precipitation within 12 hours of (or during) the sampling event?  *Yes / No*
Wind direction and speed

Describe the general weather conditions:

Fill out and attach DNREC SIRB Vapor Intrusion Guidance Document Field Sampling Form 1 to this form.

Part VIII – General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.