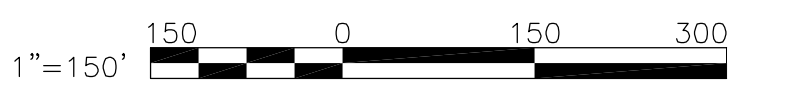
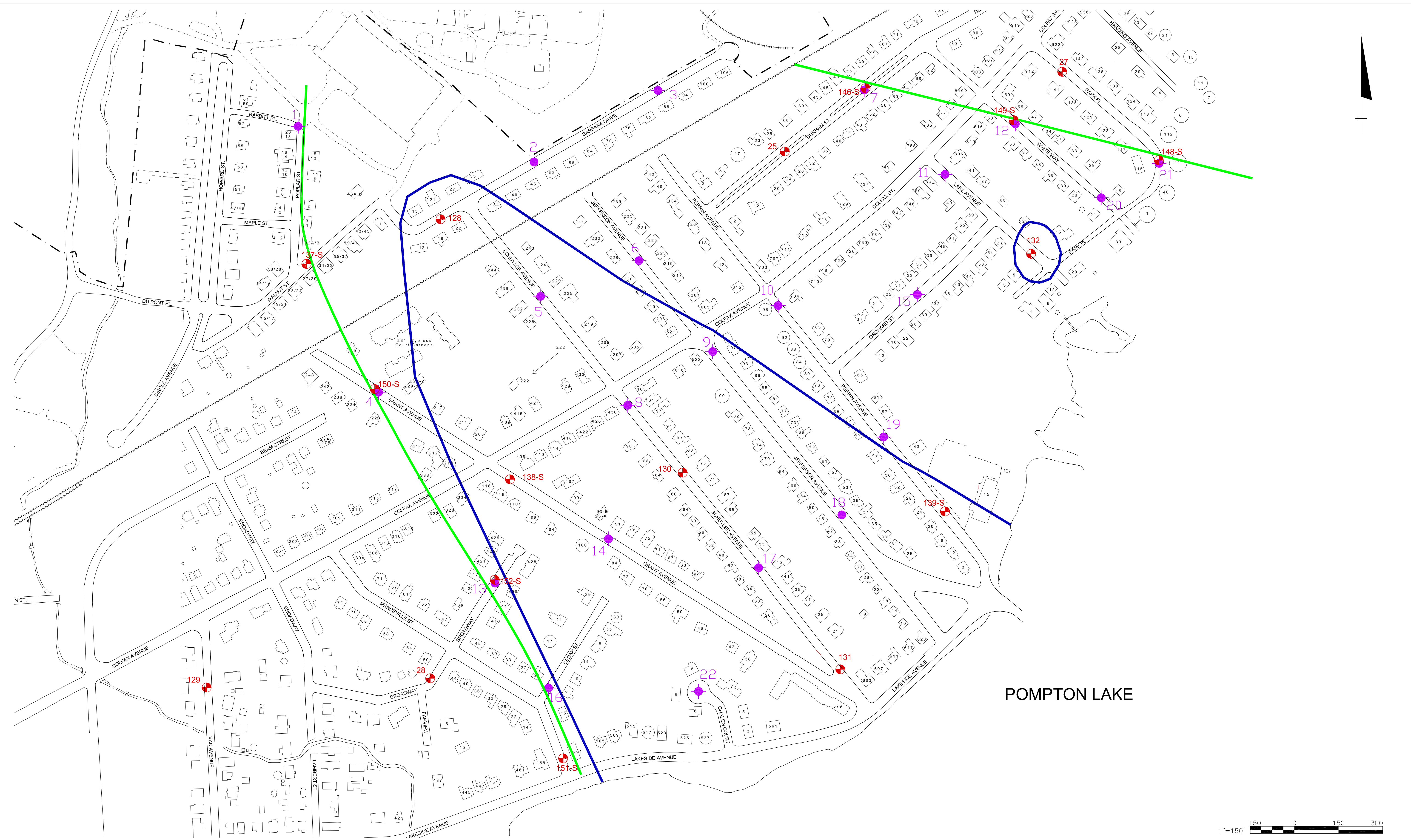
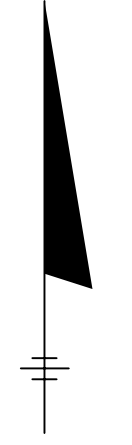


GUIDANCE SHEET

This package contains the following information to assist you in understanding the work that has been completed at your property and options available to you as part of the vapor intrusion program being implemented at the Pompton Lakes Works Site.

1. Vapor Intrusion Investigation Area – This figure depicts the original vapor intrusion investigation boundary based on the screening levels in place during 2008 and the revised boundary based on the 2013 New Jersey Department of Environmental Protection (NJDEP) groundwater vapor intrusion screening levels.
2. Property Worksheet – This sheet lists the activities that have been completed at your property under the U.S. Environmental Protection Agency (USEPA) and NJDEP-approved work plans. Relevant results collected to date at the property are presented and include investigation sampling (i.e., sub-slab soil gas, indoor air) as well as whether a sub-slab depressurization system is in place to eliminate the vapor pathway or long-term monitoring of indoor air is being completed for continued assessment of the vapor pathway. Based on this information, options appropriate for the property are listed at the bottom of the worksheet. These options are consistent with the guidelines set forth in NJDEP’s *Vapor Intrusion Technical Guidance* (March 2013) and the approved work plans.
3. Data Tables – Relevant data tables for your property are included as back-up to the Property Worksheet. The data tables (sub-slab soil gas, indoor air collected during heating season) include the 2013 NJDEP vapor intrusion screening levels for comparison purposes.
4. Options Details – Based on the appropriate options listed on the Property Worksheet, a detailed explanation is provided on this page(s) so that you fully understand the steps involved in each option applicable for your property. The evaluation and options are consistent with the guidelines set forth in NJDEP’s *Vapor Intrusion Technical Guidance* (March 2013) and the approved work plans.
5. Contact Information – This page lists contact information for USEPA, NJDEP, and the Pompton Lakes Works facility if you have any questions.



LEGEND

- PROPERTY BOUNDARY
- SHALLOW MONITORING WELL
WELL ID
- TEMPORARY WELL LOCATION
WELL ID
- ORIGINAL VAPOR INTRUSION INVESTIGATION BOUNDARY (BASED ON 2008 SCREENING LEVELS)
- REVISED VAPOR INTRUSION INVESTIGATION BOUNDARY (BASED ON 2013 SCREENING LEVELS)

VAPOR INTRUSION INVESTIGATION AREA
OCTOBER 2014

Property Worksheet

Pompton Lakes Works Site Vapor Intrusion Program

Property Address: _____

Relevant activities completed at your property to date:

| | |
|---|--|
| 1. Is your property located within the revised boundary based on the 2013 NJDEP Ground Water Vapor Intrusion Screening Levels? (see map) | |
| 2. <u>Sub-Slab Soil Gas</u> – Has pre-installation sub-slab soil gas data been collected? If yes, do concentrations of site-related constituents of concern exceed March 2013 NJDEP sub-slab soil gas screening levels? | |
| 3. <u>Indoor Air</u> – Has pre-installation indoor air data been collected during the heating season? If yes, do concentrations of site-related constituents of concern exceed March 2013 NJDEP indoor air screening levels? | |
| 4. Has a sub-slab depressurization system been installed to eliminate the vapor pathway? | |
| 5. Is long-term monitoring of indoor air being completed for continued assessment of the vapor pathway? | |

Based on the activities listed above, the options available to you are listed below. Please see the next attachment which provides you with detailed descriptions of those options should you choose to take an action (not required).

Sample Collection to Evaluate Appropriate Actions

| |
|--------------------------------------|
| Conduct or complete Phase 2 sampling |
| Conduct termination sampling |

Installation of Sub-Slab Depressurization System to Eliminate Vapor Pathway

| |
|------------------------------|
| Continue operation of system |
| Install system |

Long-Term Monitoring of Indoor Air for Continued Assessment of Vapor Pathway

| |
|-------------------------------|
| Continue long-term monitoring |
| Conduct long-term monitoring |

OPTION DETAILS
SAMPLE COLLECTION TO EVALUATE APPROPRIATE ACTIONS

CONDUCT OR COMPLETE PHASE 2 SAMPLING
(Page 1)

Description

Sufficient data has not been collected to assess the appropriate next steps. Therefore, the property owner is electing to either conduct Phase 2 sampling (sub-slab soil gas and indoor air) or complete the Phase 2 sampling process if data has already been collected and additional sampling is warranted to assess appropriate next steps. Work under both scenarios will be conducted in accordance with the U.S. Environmental Protection Agency (USEPA) and New Jersey Department of Environmental Protection (NJDEP)-approved *Vapor Intrusion Investigation Technical Memorandum – Phase II Program* dated November 4, 2009.

Implementation Steps

1. The property owner will be contacted to schedule the collection of the appropriate samples. Although sub-slab soil gas samples can be collected at any time of the year, indoor air samples must be collected during the heating season (November 1st through March 31st) in accordance with the NJDEP vapor intrusion guidance. In cases where both types of samples are collected, indoor air samples will be collected first and followed by sub-slab soil gas samples.
2. One indoor air sample will be collected in the basement (or in the first floor for buildings with slab-on-grade). The indoor air sample will be collected over a 24-hour period using a stainless-steel canister with flow controller.

A building survey and chemical inventory will be completed to document the presence of consumer/household products and materials as well as building characteristics.

An ambient (outdoor) air sample will be collected simultaneously with the indoor air sample to provide background concentrations outside the building being sampled. The sample location will be selected based on a forecast of the prevailing wind direction for the 24-hour sampling period.

The indoor and ambient air samples will be analyzed for the full list of volatile organic compounds by a NJDEP-certified laboratory.

3. One sub-slab soil gas sample will be collected from a 3/8-inch diameter, temporary sample point in the basement (or on the first floor for buildings with slab-on-grade) of the building. The temporary sample point will be created in the concrete flooring using a drill bit. The hole will be advanced to just below the concrete slab. If additional sampling events are performed, the initial temporary sample point will be re-drilled so that re-sampling can be conducted in the same location.

OPTION DETAILS
SAMPLE COLLECTION TO EVALUATE APPROPRIATE ACTIONS

CONDUCT OR COMPLETE PHASE 2 SAMPLING
(Page 2)

The sample will be collected from tubing inserted into the temporary sample point. The annulus between the tubing and the temporary sample point will be sealed to prevent leaks. The tubing will be purged and the sample will then be collected in a stainless-steel canister with flow controller. The sample duration will be dependent on property owner availability (ideally, 24-hour).

A building survey and chemical inventory will be completed to document the presence of consumer/household products and materials as well as building characteristics.

The sub-slab soil gas sample will be analyzed for the full list of volatile organic compounds by a NJDEP-certified laboratory.

4. NJDEP will issue correspondence to the property owner that summarizes the sampling results and states appropriate next steps in accordance with Figure 1 of the USEPA and NJDEP-approved *Vapor Intrusion Investigation Technical Memorandum – Phase II Program*.

OPTION DETAILS
SAMPLE COLLECTION TO EVALUATE APPROPRIATE ACTIONS

CONDUCT TERMINATION SAMPLING
(Page 1)

Description

Based on available data, termination sampling is applicable at the property. The property owner has elected to undergo termination sampling for the purpose of receiving correspondence from the U.S. Environmental Protection Agency (USEPA) and New Jersey Department of Environmental Protection (NJDEP) that vapor intrusion is not occurring.

A sub-slab depressurization system or long-term monitoring of indoor air can be terminated if site-related concentrations of constituents are below the March 2013 NJDEP screening levels for two rounds of sampling (one round performed during the heating season). The decision for termination will be based on current analytical results and consistent with NJDEP vapor intrusion guidance.

Implementation Steps

1. The property owner will contact USEPA or NJDEP requesting termination sampling which can be conducted by NJDEP, DuPont, or an approved contractor under the third-party program.
2. The property owner will then be contacted to schedule the collection of the appropriate termination samples. In accordance with NJDEP vapor intrusion guidance, two rounds of sampling are required with at least one of the rounds collected during the heating season (November 1st through March 31st). Each round of sampling will consist of the collection of an indoor air sample (with corresponding outdoor air) and sub-slab soil gas sample.

If a sub-slab depressurization system is in place, it will need to be turned off 30 days prior to sampling and turned back on when sampling is completed.

Indoor air samples will be collected first and be followed by sub-slab soil gas samples.

3. One indoor air sample will be collected in the basement (or in the first floor for buildings with slab-on-grade). The indoor air sample will be collected over a 24-hour period using a stainless-steel canister with flow controller.

A building survey and chemical inventory will be completed to document the presence of consumer/household products and materials as well as building characteristics.

OPTION DETAILS
SAMPLE COLLECTION TO EVALUATE APPROPRIATE ACTIONS

CONDUCT TERMINATION SAMPLING

(Page 2)

An ambient (outdoor) air sample will be collected simultaneously with the indoor air sample to provide background concentrations outside the building being sampled. The sample location will be selected based on a forecast of the prevailing wind direction for the 24-hour sampling period.

The indoor and ambient air samples will be analyzed for the full list of volatile organic compounds by a NJDEP-certified laboratory.

4. One sub-slab soil gas sample will be collected from a 3/8-inch diameter, temporary sample point in the basement (or on the first floor for buildings with slab-on-grade) of the building. The temporary sample point will be created in the concrete flooring using a drill bit. The hole will be advanced to just below the concrete slab. If additional sampling events are performed, the initial temporary sample point will be re-drilled so that re-sampling can be conducted in the same location.

The sample will be collected from tubing inserted into the temporary sample point. The annulus between the tubing and the temporary sample point will be sealed to prevent leaks. The tubing will be purged and the sample will then be collected in a stainless-steel canister with flow controller. The sample duration will be dependent on property owner availability (ideally, 24-hour).

A building survey and chemical inventory will be completed to document the presence of consumer/household products and materials as well as building characteristics.

The sub-slab soil gas sample will be analyzed for the full list of volatile organic compounds by a NJDEP-certified laboratory.

5. If site-related concentrations of constituents are below both the March 2013 NJDEP Indoor Air Screening Levels and Soil Gas Screening Levels for the first round of sampling, Implementation Steps 3 and 4 will be repeated in completion of the required second round of sampling. However, if site-related concentrations of constituents are above the screening levels and determined to be related to the vapor intrusion pathway, vapor intrusion is still occurring and mitigation should continue.
6. If site-related concentrations of constituents are below the March 2013 NJDEP screening levels for both rounds of sampling, then correspondence will be submitted by either DuPont or an approved third-party contractor to USEPA and NJDEP for concurrence of termination.

OPTION DETAILS
SAMPLE COLLECTION TO EVALUATE APPROPRIATE ACTIONS

CONDUCT TERMINATION SAMPLING

(Page 3)

7. USEPA/NJDEP will issue correspondence to the property owner that summarizes the sampling results and states that the vapor pathway is not complete, if site-related concentrations of constituents are below the March 2013 NJDEP screening levels.
8. If a sub-slab depressurization system exists, termination arrangements will be made with the property owner to remove (if requested) any equipment associated with the system or relinquish the system to the property owner (no further maintenance or electrical reimbursement provided) for their continued use (i.e., radon mitigation). If the system is removed, necessary repairs to the building will be made.

If long-term monitoring of indoor air is in place, then no further sampling will be conducted.

OPTION DETAILS
INSTALLATION OF SUB-SLAB DEPRESSURIZATION SYSTEM TO
ELIMINATE VAPOR PATHWAY

CONTINUE OPERATION OF SYSTEM
(Page 1)

Description

Under this option, the property has an installed sub-slab depressurization system that is currently being maintained by DuPont's contractor or an approved third-party contractor. Routine maintenance (regularly scheduled inspections and preventive maintenance), non-routine maintenance (system component malfunction), and electrical reimbursement will continue to be conducted in support of the long-term and effective operation of the system.

Implementation Steps

1. For routine maintenance, the property owner will be contacted on a quarterly basis (for the first 12 months after system installation to verify proper operation) or annual basis (if the first year of inspections show that the system is operating in accordance with performance specifications) to schedule an inspection of the system.

IT IS EXTREMELY IMPORTANT THAT ACCESS BE GRANTED BY THE PROPERTY OWNER SO THAT THE CONTRACTOR CAN FULLY INSPECT THE SYSTEM TO ASSESS WHETHER IT IS OPERATING EFFECTIVELY.

During each visit, the entire system will be inspected for proper installation (such as system components properly secured) and proper operation (such as system pressures). If the system needs to be modified (through adjustment of system suction point valves), it will be re-commissioned (that is, depressurization will be re-verified). Additionally, the basement/crawlspace floor slab will be inspected and any new significant cracks or other openings that are observed that may impact the operating efficiency of the system will be sealed with caulk, or other methods as appropriate.

Results of all maintenance will be reported to the U.S. Environmental Protection Agency (USEPA), New Jersey Department of Environmental Protection (NJDEP), and property owner on an annual basis.

2. Property owners have been given a telephone number to use at any time if they have questions or if they suspect a problem with the system (such as the audible alarm sounding). Calls by owners will be responded to by conducting a non-routine maintenance visit to inspect and repair, if necessary, the system.

OPTION DETAILS
INSTALLATION OF SUB-SLAB DEPRESSURIZATION SYSTEM TO
ELIMINATE VAPOR PATHWAY

CONTINUE OPERATION OF SYSTEM

(Page 2)

3. DuPont will reimburse property owners who have an installed system for its electrical usage. Checks will be issued twice a year – during January/February to cover electric usage for January through May and during July/August to cover usage for June through December.

The reimbursement amount will be calculated using the maximum power consumption rating of the system fan(s) installed and the highest residential supply price of electricity at the time which is the cost that Jersey Central Power & Light (JCP&L) charges to supply electricity to property owners in the Borough of Pompton Lakes.

OPTION DETAILS
INSTALLATION OF SUB-SLAB DEPRESSURIZATION SYSTEM TO
ELIMINATE VAPOR PATHWAY

INSTALL SYSTEM
(Page 1)

Description

Under this option, the property owner has elected to install a sub-slab depressurization system by either DuPont's contractor or an approved contractor under the third-party program (1) in accordance with the U.S. Environmental Protection Agency (USEPA) and New Jersey Department of Environmental Protection (NJDEP)-approved *Vapor Interim Remedial Measure Work Plan* dated June 16, 2008 or (2) due to sub-slab soil gas/indoor air sample results that have been evaluated and reported to the property owner by either USEPA or NJDEP.

Implementation Steps

System Design

1. The property owner will be contacted to schedule a design visit which will consist of diagnostic testing in order to develop a preliminary design of the system and to obtain the property owner's acceptance of system details such as the fan and stack location and electrical tie-ins. Pressure field extension tests (also referred to as communication tests) will be performed to assess if sub-slab conditions are conducive to sub-slab depressurization, and if so, to determine the quantity and location of system suction points.
2. In addition to communication testing during the design visit, an evaluation will be conducted for the presence of materials suspected of containing asbestos or mold, which may potentially be disturbed during system installation. Any samples collected as part of this evaluation will be analyzed in accordance with State and Federal regulations. Backdraft tests will also be conducted on each combustion device located in the basement. The property owner will be notified if any of these conditions exist.
3. A design drawing will be generated and certified by a New Jersey-licensed Professional Engineer, Licensed Site Remediation Professional (LSRP), or NJDEP-certified radon contractor. The drawing will be provided to the property owner, who will sign the drawing indicating their approval of the system layout.

System Installation

1. Upon receipt of the property owner-approved drawing and receipt of a building and electrical permit from the Borough of Pompton Lakes (and other approvals as necessary), installation can commence.

OPTION DETAILS
INSTALLATION OF SUB-SLAB DEPRESSURIZATION SYSTEM TO
ELIMINATE VAPOR PATHWAY

INSTALL SYSTEM
(Page 2)

2. The property owner will be contacted to schedule the installation of the system. The main trunk system suction point will be installed with a pressure gage (U-tube manometer) and an audible alarm that will alert the building occupants in the event of a system malfunction. Labels, placed on system components, will provide a telephone number of a contact that the property owner can call for questions and repairs. Slab cracks, holes, and other openings that potentially impact the operation of the system will be sealed, caulked, or covered. Covers will also be installed over the top of sumps (if not already present) to limit potential vapor transport from the sump to indoor air.

System Commissioning

1. After installation, the system will be commissioned to document that it was installed properly, is achieving the design criteria, and is performing in accordance with defined performance specifications. System commissioning will take place immediately following installation and again during post-installation sampling (approximately 30 days after installation).
2. During the commissioning process, system components will be described and pointed out to the property owner. A fact sheet will also be provided to the property owner to instruct on how to check the system and how to request non-routine maintenance if there is a suspected problem with the system.
3. Completion and close out of the permit process will be coordinated with the Borough of Pompton Lakes in order to obtain a certificate of approval.

Post-Installation Verification Sampling

1. The property owner will be contacted to schedule the collection of an indoor air sample approximately 30 days after system installation and commissioning. Post-installation indoor air sampling is conducted to evaluate the indoor air quality after the vapor pathway has been eliminated through installation of the system.

One indoor air sample will be collected in the basement (or in the first floor for buildings with slab-on-grade). The indoor air sample will be collected over a 24-hour period using a stainless-steel canister with flow controller.

A building survey and chemical inventory will be completed to document the presence of consumer/household products and materials as well as building characteristics.

OPTION DETAILS
INSTALLATION OF SUB-SLAB DEPRESSURIZATION SYSTEM TO
ELIMINATE VAPOR PATHWAY

INSTALL SYSTEM
(Page 3)

An ambient (outdoor) air sample will be collected simultaneously with the indoor air sample to provide background concentrations outside of the building being sampled. The sample location will be selected based on a forecast of the prevailing wind direction for the 24-hour sampling period.

The indoor and ambient air samples will be analyzed for the full list of volatile organic compounds by a NJDEP-certified laboratory.

2. A Remedial Measure Report will be prepared which outlines the activities completed at the property where a system has been installed. This report will be reviewed and approved by NJDEP with correspondence of the fact issued to the property owner along with a copy of the Remedial Measure Report (to be provided by the contractor that prepared the report).

Operation and Maintenance

1. The property owner will be contacted on a quarterly basis (for the first 12 months after system installation to verify proper operation) or annual basis (if the first year of inspections show that the system is operating in accordance with performance specifications) to schedule an inspection of the system.

IT IS EXTREMELY IMPORTANT THAT ACCESS BE GRANTED BY THE PROPERTY OWNER SO THAT THE CONTRACTOR CAN FULLY INSPECT THE SYSTEM TO ASSESS WHETHER IT IS OPERATING EFFECTIVELY.

During each visit, the entire system will be inspected for proper installation (such as system components properly secured) and proper operation (such as system pressures). If the system needs to be modified (through adjustment of system suction point valves), it will be re-commissioned (that is, depressurization will be re-verified). Additionally, the basement/crawlspace floor slab will be inspected and any new significant cracks or other openings that are observed that may impact the operating efficiency of the system will be sealed with caulk, or other methods as appropriate.

Results of all maintenance will be reported to the USEPA, NJDEP, and property owner on an annual basis.

2. Property owners will be given a telephone number to use at any time if they have questions or if they suspect a problem with the system (such as the audible alarm sounding). Calls by owners will be responded to by conducting a non-routine maintenance visit to inspect and repair, if necessary, the system.

OPTION DETAILS
INSTALLATION OF SUB-SLAB DEPRESSURIZATION SYSTEM TO
ELIMINATE VAPOR PATHWAY

INSTALL SYSTEM
(Page 4)

3. DuPont will reimburse property owners who have an installed system for its electrical usage. Checks will be issued twice a year – during January/February to cover electric usage for January through May and during July/August to cover usage for June through December.

The reimbursement amount will be calculated using the maximum power consumption rating of the system fan(s) installed and the highest residential supply price of electricity at the time which is the cost that Jersey Central Power & Light (JCP&L) charges to supply electricity to property owners in the Borough of Pompton Lakes.

OPTION DETAILS
LONG-TERM MONITORING OF INDOOR AIR FOR CONTINUED
ASSESSMENT OF VAPOR PATHWAY

CONTINUE LONG-TERM MONITORING

Description

Under this option, the property is currently undergoing annual long-term monitoring of indoor air based on the results of Phase 2 sampling conducted in accordance with the U.S. Environmental Protection Agency (USEPA) and New Jersey Department of Environmental Protection (NJDEP)-approved *Vapor Intrusion Investigation Technical Memorandum – Phase II Program* dated November 4, 2009. Based on the results of the Phase 2 sampling at the time, the property owner was given an option to either install a sub-slab depressurization system or conduct long-term monitoring (without system installation) as appropriate actions.

Implementation Steps

1. The property owner will be contacted on an annual basis to schedule the collection of an indoor air sample. Long-term monitoring of indoor air must take place during the heating season (November 1st through March 31st) in accordance with NJDEP vapor intrusion guidance.
2. One indoor air sample will be collected in the basement (or in the first floor for buildings with slab-on-grade).

The indoor air sample will be collected over a 24-hour period using a stainless-steel canister with flow controller. A building survey and chemical inventory will be completed to document the presence of consumer/household products and materials as well as building characteristics.

An ambient (outdoor) air sample will be collected simultaneously with the indoor air sample to provide background concentrations outside the building being sampled. The sample location will be selected based on a forecast of the prevailing wind direction for the 24-hour sampling period.

The indoor and ambient air samples will be analyzed for the full list of volatile organic compounds by a NJDEP-certified laboratory.

3. NJDEP will issue correspondence to the property owner that summarizes the sampling results and states whether the current action is still protective of human health or if modifications are necessary.

OPTION DETAILS
LONG-TERM MONITORING OF INDOOR AIR FOR CONTINUED
ASSESSMENT OF VAPOR PATHWAY

CONDUCT LONG-TERM MONITORING

Description

Under this option, the property has just undergone Phase 2 sampling in accordance with the U.S. Environmental Protection Agency (USEPA) and New Jersey Department of Environmental Protection (NJDEP)-approved *Vapor Intrusion Investigation Technical Memorandum – Phase II Program* dated November 4, 2009. Sub-slab soil gas results indicate site-related concentrations of constituents are above (but less than ten times) the March 2013 NJDEP Soil Gas Screening Levels. Indoor air results indicate site-related concentrations of constituents are below the March 2013 NJDEP Indoor Air Screening Levels. Based on these results, the property owner has been informed of the option to either install a sub-slab depressurization system or conduct long-term monitoring (without system installation) as appropriate actions. This option pertains to the property owner electing for long-term monitoring of indoor air to be conducted by either DuPont’s contractor or an approved contractor under the third-party program.

Implementation Steps

1. The property owner will be contacted on an annual basis to schedule the collection of an indoor air sample. Long-term monitoring of indoor air must take place during the heating season (November 1st through March 31st) in accordance with NJDEP vapor intrusion guidance.
2. One indoor air sample will be collected in the basement (or in the first floor for buildings with slab-on-grade). The indoor air sample will be collected over a 24-hour period using a stainless-steel canister with flow controller.

A building survey and chemical inventory will be completed to document the presence of consumer/household products and materials as well as building characteristics.

An ambient (outdoor) air sample will be collected simultaneously with the indoor air sample to provide background concentrations outside of the building being sampled. The sample location will be selected based on a forecast of the prevailing wind direction for the 24-hour sampling period.

The indoor and ambient air samples will be analyzed for the full list of volatile organic compounds by a NJDEP-certified laboratory.

3. NJDEP will issue correspondence to the property owner that summarizes the sampling results and states whether the current action is still protective of human health or if modifications are necessary.

CONTACT INFORMATION

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