



DuPont Engineering

November 4, 2009

Mr. Frank Faranca
New Jersey Department of Environmental Protection
Division of Responsible Party Site Remediation
401 East State Street
P.O. Box 028
Trenton, New Jersey 08625-0028

**RE: Addendum to Vapor Interim Remedial Measure Work Plan
Vapor Intrusion Investigation – Phase II Program
DuPont Pompton Lakes Works
Pompton Lakes, New Jersey**

Dear Mr. Faranca:

Enclosed for your review and approval is the addendum to the June 16, 2008 *Vapor Interim Remedial Measure Work Plan*. This addendum presents the approach for the Phase II vapor intrusion investigation to address the vapor pathway in off-site areas of shallow groundwater contamination for the DuPont Pompton Lakes Works Site in Pompton Lakes, New Jersey.

If you have any questions, please contact Al Boettler at (302) 892-0647 or myself at (973) 492-7733.

Sincerely,

A handwritten signature in black ink that reads "David E. Epps".

David E. Epps, P.G.
Project Director, Pompton Lakes Works
DuPont Corporate Remediation Group

cc: Clifford Ng – USEPA Region 2
PLW Central File

To: David Epps – DuPont, Corporate Remediation Group *cc:* M. Distler – O'Brien & Gere
From: Norma Eichlin – O'Brien & Gere
Re: Vapor Intrusion Investigation – Phase II Program
Addendum to Vapor Interim Remedial Measure Work Plan
DuPont Pompton Lakes Works
Pompton Lakes, New Jersey
File: 3914/43110
Date: October 27, 2009
October 29, 2009 REVISED
November 4, 2009 REVISED

Background

This Technical Memorandum presents the approach for the Phase II vapor intrusion investigation being conducted to address the vapor pathway in off-site areas of shallow groundwater contamination for the E.I. du Pont de Nemours and Company (DuPont) Pompton Lakes Works (PLW) Site in Pompton Lakes, New Jersey. This work is a continuation of the sub-slab soil gas sampling program that was conducted at seven residences as part of the *Vapor Intrusion Investigation and Remedial Action Work Plan* (VIIWP) dated June 25, 2007 and the ongoing vapor mitigation program being implemented in accordance with the *Vapor Interim Remedial Measure Work Plan* (VIRMWP) dated June 16, 2008. As such, this technical memorandum will be considered an addendum to the VIRMWP.

A program was initiated by DuPont in July 2008 that consisted of additional sampling to assist in the understanding of the vapor pathway as well as the installation of vapor mitigation systems at residences located within the 1 microgram per liter (ug/L) shallow groundwater isoconcentration contour boundary for tetrachloroethane (PCE) and trichloroethene (TCE). Figure 6 of the VIRMWP depicts this area and is referred to as the “vapor mitigation area”. This program has been carried out under the direction of the New Jersey Department of Environmental Protection (NJDEP) and the U.S. Environmental Protection Agency (USEPA), and in accordance with the NJDEP-approved VIRMWP.

The additional sampling, conducted in late 2008, consisted of concurrent sub-slab soil gas and indoor air sampling to better understand the vapor pathway beneath the vapor mitigation area. The results confirmed the presence of elevated levels of PCE and TCE in the sub-slab soil gas at 97% of the properties tested and was considered by NJDEP to be representative of the entire groundwater plume area. As such, NJDEP and DuPont continue to recommend installation of vapor mitigation systems at all properties within the vapor mitigation area.

To date, there have been a number of property owners that have not elected to have a vapor mitigation system installed at their residence. In July 2009, NJDEP notified these property owners in writing that, based on their lack of a response, it would be concluded that those property owners were not interested in having a system installed. Furthermore, if the property owner did not accept the installation of a vapor mitigation system by DuPont, that NJDEP would subsequently direct DuPont to conduct sub-slab soil gas sampling at the residence, as required in NJDEP's *Vapor Intrusion Guidance* (VIG), to complete the investigation of their property. Based on the results of that sampling, a course of action would be recommended.

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Scope of Work

NJDEP has directed DuPont to initiate the next phase of the overall vapor intrusion program which is to conduct sub-slab soil gas and indoor air sampling at properties within the groundwater plume area where systems have not yet been installed. This sampling, as outlined in NJDEP's VIG, is to be conducted during the months of November through March which correlates to a time at which a structure may be under maximum potential depressurization. The decision matrix to be used for data evaluation collected during this program is provided as Figure 1.

The first step in this program will be an evaluation of the data collected as part of the additional investigation conducted in 2008. If the concurrent sub-slab soil gas and indoor air sampling was conducted outside the time period of November through March at a given residence, re-sampling will be conducted as part of this Phase II program, unless the sub-slab soil gas concentrations are greater than 10x the Site-Specific Sub-Slab Soil Gas Comparison Levels. If this scenario exists, re-sampling will not be conducted as the potential for lower concentrations during the sampling period would be very unlikely and the decision point for sub-slab is not dependent on indoor air concentrations. If the sampling was conducted during the time period of November through March, re-sampling will not be conducted. The results of the previously collected samples will be used to determine the recommended next course of action.

The next step will consist of DuPont sending letters to property owners that have not elected to install a mitigation system, outlining the elements of the Phase II program and requesting an access agreement for the sampling. Upon receipt of the access agreement, the property owners will be contacted to schedule the sampling appointments or, conversely, document if the property owner declines sampling or denies access to their residence.

Following the requirements in NJDEP's VIG, the indoor air sample will be collected prior to the sub-slab sample at the structure undergoing investigation (to avoid the potential for cross-contamination between the soil gas and indoor air). The indoor air sample canister will be set up on Day 1. Twenty-four (24) hours later (on Day 2), the indoor air sample canister will be picked up and a sample port will be drilled in the slab for collection of a sub-slab soil gas sample. Twenty-four (24) hours later (on Day 3), the sub-slab soil gas canister will be picked up. Sampling will also include completion of a building survey and performance and documentation of a chemical inventory. Work will be conducted in accordance with the sampling methodologies, protocols, and analytical parameters outlined in the NJDEP-approved VIRMWP.

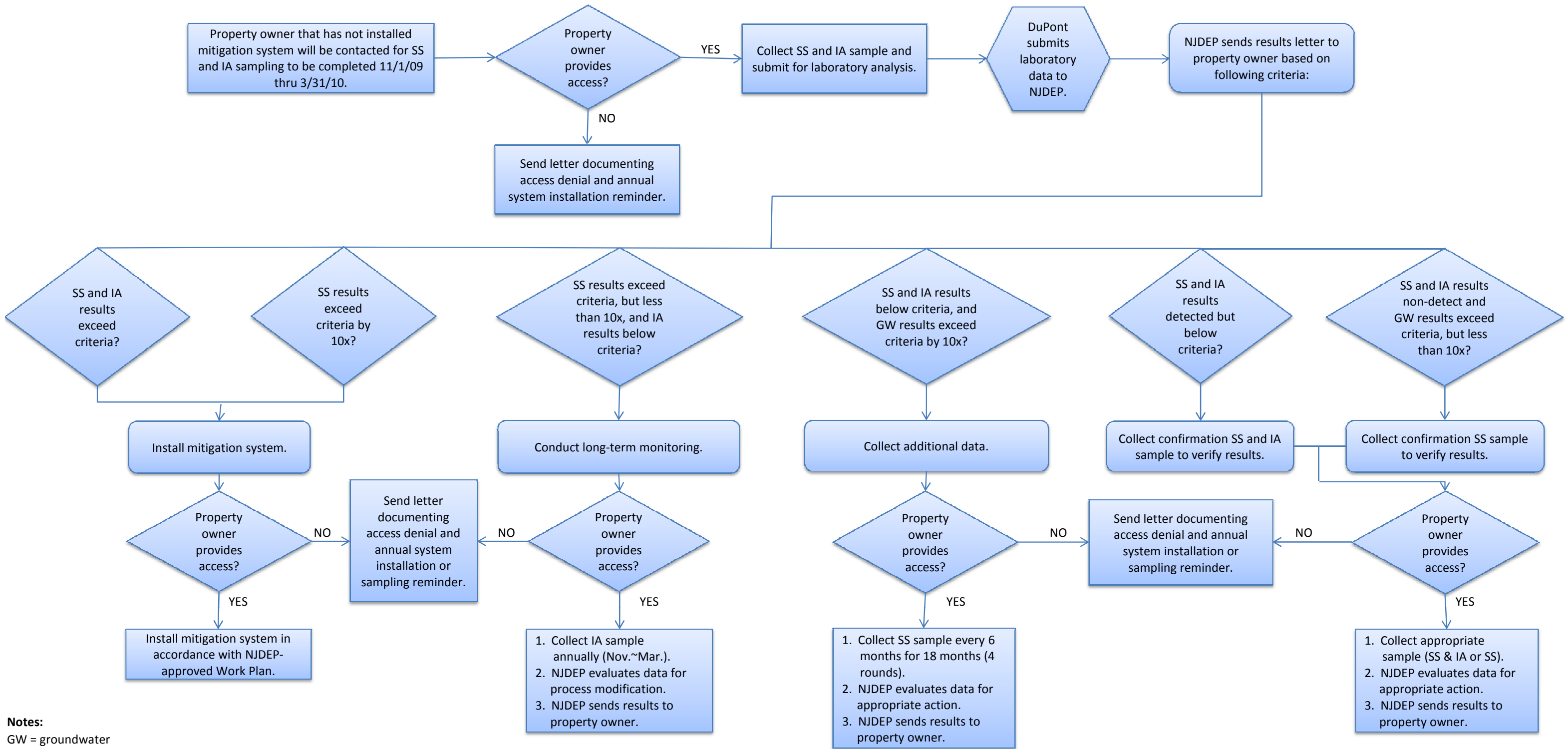
Once the analytical data is received from the laboratory, DuPont will submit the data packages to NJDEP for validation. DuPont will mail the preliminary results to the property owner. This will be followed by a letter from NJDEP documenting their evaluation of the data and recommended course of action. Based on the results of the sampling, the recommended course of action may consist of different options as outlined on the attached decision matrix (Figure 1). A property owner may still elect, at any time, to have a mitigation system installed as outlined in the original DuPont vapor mitigation program.

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Reporting

A Remedial Investigation Report will be prepared that includes data collected as part of the overall vapor intrusion investigation conducted during March 2008 through March 2010. This report will be submitted to NJDEP by June 30, 2010.

Figure 1
 DuPont Pompton Lakes Works
 Vapor Mitigation Area
 Phase II Sampling Program



Notes:
 GW = groundwater
 IA = indoor air
 SS = sub-slab
 SS criteria = Site-Specific Sub-Slab Soil Gas Comparison Levels
 IA criteria = Site-Specific Indoor Air Comparison Levels
 GW criteria = Groundwater Screening Levels