



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

**SUBJECT:** North Penn Area 12 Superfund Site  
Five-Year Review Addendum

**FROM:** Rombel G. Arquines, RPM (3HS21)

**TO:** Ron Borsellino, Director, HSCD (3HS00)

**THRU:** Peter Ludzia, Chief, Eastern PA Remedial Branch (3HS21)  
and  
Jim Webb, Associate Director, OSSR (3HS20)



Please find attached a Five Year Review Addendum (Addendum) for the North Penn Area 12 Superfund Site (Site). This Addendum has been prepared to address three issues identified in the Site's second Five-Year Review Report, which was signed on September 28, 2010.

The first issue addresses the on-going evaluation of the effectiveness of the groundwater collection system. The system was optimized by the addition of a new extraction well in 2007. The Addendum documents the recent installation of three new monitoring wells and a timeline to evaluate the adjusted system and better delineate the groundwater plume.

The second issue addresses the deferral of the Site's protectiveness statement determination until a vapor intrusion (VI) evaluation was performed by the Responsible Party. The evaluation was completed and EPA concluded that VI is not a concern at the Site. The Addendum documents EPA's determination that the Site is protective in the short term and expected to be fully protective of human health and the environment when the groundwater cleanup goals are met.

The final issue addresses the potential need for additional institutional controls (ICs) at the Site regarding VI. Based on the VI evaluation conclusions, EPA determined that the present groundwater ICs were sufficient. The Addendum documents EPA's evaluation and its decision that no new ICs regarding VI are necessary to protect future residents or workers at the Site.

On-going groundwater cleanup and monitoring for VOCs will continue at the Site, as will Five-Year Reviews. The next Five-Year Review is due by September 28, 2015.

I recommend that you sign this Addendum to the 2010 Five-Year Review Report for the North Penn Area 12 Superfund Site.



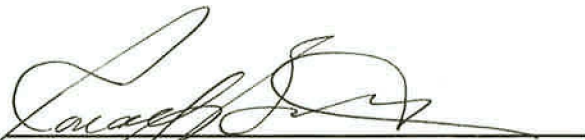
**Addendum to the  
North Penn Area 12 Superfund Site  
Five-Year Review Report (September 28, 2010)  
Worcester Township, Pennsylvania**

**PREPARED BY:**

**U.S. Environmental Protection Agency  
Region III  
Philadelphia, Pennsylvania**

**Approved by:**

**Date:**

  
**Ronald J. Borsellino, Director  
Hazardous Site Cleanup Division  
U.S. EPA, Region III**

  
**September 24, 2012**

## Introduction

A Five-Year Review Addendum (Addendum) is generally completed for site remedies when the protectiveness determination is deferred until further information is obtained. When deferring protectiveness in the Five-Year Review Report, the United States Environmental Protection Agency (EPA) provides a timeframe for when the information will be obtained and a protectiveness statement can be made. An Addendum may be prepared at any time prior to the completion of the next Five-Year Review as outstanding issues are resolved.

The second Five-Year Review for the North Penn Area 12 Superfund Site (Site) was signed by Ronald J. Borsellino, Director of the Hazardous Site Cleanup Division Region III, on September 28, 2010. In this Five-Year Review, EPA deferred its determination regarding the protectiveness of the remedy until a vapor intrusion (VI) evaluation was performed by the Responsible Party (RP). The milestone date set for the completion of the vapor intrusion evaluation was October 30, 2012. The original protectiveness statement from the 2010 Five-Year Review Report reads as follows:

*The assessment of this second Five-Year Review found that the remedy was constructed in accordance with the requirements of the Record of Decision (ROD), dated September 30, 1997, and is functioning as designed. There is no exposure to contaminated groundwater because residents are on a public water system, and the groundwater extraction system is effectively capturing the plume. However, a protectiveness determination of the remedy cannot be made at this time. The vapor intrusion pathway was previously evaluated in 2002 using the Johnson & Ettinger Model, which EPA has since determined to be an inappropriate model given the specific conditions at the North Penn 12 Site. **The protectiveness determination is therefore being deferred until another vapor intrusion assessment is completed, including the collection of subslab, indoor, and outdoor air samples, which may take approximately two years. It is expected that after the VI assessment is completed and reviewed, a protectiveness determination will be made and documented in an addendum to this second Five-Year Review.** EPA expects the Site will be fully protective of human health and the environment when the groundwater cleanup goals are met, and the issues related to the vapor intrusion pathway are assessed and addressed.*

This Addendum describes the progress that EPA has made on the issues raised in the 2010 Five-Year Review, provides an updated protectiveness determination for the Site's remedy, and confirms the date that the next Five-Year Review is due.



## **Progress Since the September 2010 Five-Year Review**

The following chart summarizes issues identified in the 2010 Five-Year Review Report:

### **Issues**

<b>Issue</b>	<b>Affects Current Protectiveness (Y/N)</b>	<b>Affects Future Protectiveness (Y/N)</b>
#1 Optimization Effectiveness	No	No
#2 New Vapor Intrusion Framework	Yes	Yes
#3 Possible new development	No	Yes

The following chart summarizes recommendations for and follow-up actions to the issues identified above:

### **Recommendations and Follow-Up Actions**

<b>Issue</b>	<b>Recommendations and Follow-up Actions</b>	<b>Party Responsible</b>	<b>Oversight Agency</b>	<b>Milestone Date</b>	<b>Affects Protectiveness (Y/N)</b>	
					<b>Current</b>	<b>Future</b>
#1	Evaluate the effectiveness of the groundwater collection system, which now includes a new extraction well. Develop a more complete delineation of the plume.	RPs (Schlumberger /RMT)	EPA	10/30/2012	No	No
#2	Conduct vapor intrusion sampling (subslab, indoor/outdoor air) in on-site structures closest to the TCE plume, as well as in potentially impacted existing off-site residences.	RPs (Schlumberger /RMT)	EPA	10/30/2012	Yes	Yes
#3	Evaluate need for institutional controls to address groundwater contamination and vapor intrusion pathway exposures which potentially affect off-site development.	EPA	EPA	12/30/2011	No	Yes

EPA has taken the following actions to resolve the issues identified above:

**Issue #1 (Optimization Effectiveness):** In order to evaluate the effectiveness of the groundwater collection system, which includes a new extraction well constructed in 2007, and to develop a more complete delineation of the plume, EPA oversaw the RP's installation of three new monitoring wells in August of 2012. The groundwater at the site continues to be sampled semi-annually and a System Effectiveness Evaluation Report analyzing well data since the installation of the new extraction well will be submitted by the RP to EPA in 2013. This analysis

will include well data from the three new monitoring wells and develop a more complete delineation of the plume.

**Issue #2 (New Vapor Intrusion Framework):** The 2010 Five-Year Review deferred the determination of protectiveness for the Site until another VI assessment was completed and reviewed. In 2012, EPA oversaw the completion and analysis of the RP's VI investigation, including the collection of subslab, indoor, and outdoor air samples. EPA approved the Site Characterization Report: Vapor Intrusion Evaluation (May 11, 2012), which concluded that concentrations of Site-related contaminants of concern detected in the shallow groundwater did not impact the sub-slab soil or indoor air quality at levels of concern at the representative buildings tested. EPA concluded that VI was not a concern at the Site. Per the 2010 Five-Year Review, this Addendum documents EPA's determination that the Site is protective in the short term and expected to be fully protective of human health and the environment when the groundwater cleanup goals are met. An updated protectiveness statement is found in the next section of this Addendum.

**Issue #3 (Possible New Development):** EPA reviewed the current groundwater institutional controls (ICs) and evaluated the need for additional ICs to address vapor intrusion at the Site due to possible new development and potential for VI issues at the Site. EPA determined that the present groundwater ICs were sufficient and that no new ICs were necessary at this time to protect future residents or workers because the 2012 VI assessment concluded that VI did not have any impacts at the Site. This determination is documented in a Memo to File dated June 26, 2012.

### **Protectiveness Statement**

The updated protectiveness statement for the North Penn Area 12 Site is as follows:

*The assessment of the second Five-Year Review found that the remedy was constructed in accordance with the requirements of the Record of Decision (ROD), dated September 30, 1997, and is functioning as designed. There is no exposure to contaminated groundwater because residents are on a public water system, and the groundwater extraction system is effectively capturing the plume. The protectiveness determination was deferred in the second Five-Year Review until another vapor intrusion assessment was completed, including the collection of subslab, indoor, and outdoor air samples. In 2012, the vapor intrusion assessment was completed and reviewed. EPA concluded that vapor intrusion was not an issue at the Site. Therefore, EPA determines that the Site is protective of human health and the environment in the short term and EPA expects the Site will be fully protective of human health and the environment when the groundwater cleanup goals are met.*

### **Next Five-Year Review**

The next Five-Year Review Report for the North Penn Area 12 Superfund Site is required five years from the date of the last Five-Year Review. This third Five-Year Review for the Site must be completed by September 28, 2015.