SECOND FIVE-YEAR REVIEW REPORT FOR
Moyer's Landfill Superfund Site
Montgomery County, Pennsylvania

PREPARED BY:

United States Environmental Protection Agency
Region III
Philadelphia, Pennsylvania

Approved by:

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Date:

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List of Acronyms

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EPA	United States Environmental Protection Agency
ESD	Explanation of Significant Differences
ICs	Institutional Controls
MCLs	Maximum Contaminant Levels
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
OU	Operable Unit
O&M	Operations and Maintenance
PADEP	Pennsylvania Department of Environmental Protection
PCOR	Preliminary Close Out Report
POTW	Publicly Owned Treatment Works
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
SARA	Superfund Amendments and Reauthorization Act of 1986
USACE	U.S. Army Corps of Engineers

Executive Summary

The remedy for the Moyer's Landfill Superfund Site in Collegeville, Lower Providence Township, Montgomery County, Pennsylvania included grading and leveling the site, constructing retaining walls at highly erodible areas, capping the site with a RCRA cap, installing a gas vent system that prevents landfill gas accumulation, collecting surface runoff and discharging it directly into the creek, installing a leachate collection and removal system, collecting leachate and discharging it to the publicly owned treatment works, and continuing to monitor groundwater and surface waters. The Site achieved construction completion with the signing of the Preliminary Close-Out Report (PCOR) on September 17, 2002. The trigger for the second five-year review is the date of the first five-year review which was completed on September 26, 2007.

This second Five-Year Review for Moyer's Landfill finds that the remedy has been constructed in accordance with the requirements of the ROD and is functioning as designed. The immediate threats have been addressed though capping the landfill and collecting and properly disposing of the leachate. Since the Remedial Actions at both Operable Units are protective, the Site is protective of human health and the environment. Long-term protectiveness of the remedy will be maintained by continuing to perform operation and maintenance of the landfill cap and leachate collection system; monitoring the groundwater and ambient air; and enforcing the institutional controls.

Government Performance and Results Act (GPRA) Measure Review

As part of this Five-Year Review, the GPRA Measures have been reviewed. The GPRA measures and their status are provided as follows:

Environmental Indicators:
Human Health: Human Exposure Under Control (HEUC).
Groundwater Migration: Does not apply.

Site-wide Ready for Anticipated Use (SWRAU):
The Site achieved the SWRAU measure on December 20, 2011.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name: Moyer's Landfill Superfund Site		
EPA ID: PAD980508766		
Region: 3	**State:** PA	**City/County:** Lower Providence Township, Montgomery County
SITE STATUS		
NPL Status: Final		
Multiple OUs? Yes	**Has the site achieved construction completion?** Yes	
REVIEW STATUS		
Lead agency: EPA		
Author name (Federal or State Project Manager): Sharon Fang		
Author affiliation: USEPA		
Review period: October 2011 – August 2012		
Date of site inspection: January 19, 2012		
Type of review: Policy		
Review number: 2		
Triggering action date: 9/26/2007		
Due date *(five years after triggering action date)*: 9/26/2012		

Five-Year Review Summary Form (continued)

Issues/Recommendations

OU(s) without Issues/Recommendations Identified in the Five-Year Review:
02 – Leachate Collection System

Issues and Recommendations Identified in the Five-Year Review:

OU(s): 01- Landfill Cap	Issue Category: Site Access/Security			
	Issue: Frequent trespassing and damage to the fence			
	Recommendation: Enforcement of Township Ordinance should deter trespassing and fence cutting			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Implementing Party**	**Oversight Party**	**Milestone Date**
No	No	Township	EPA/PADEP	Ongoing

Issues and Recommendations Identified in the Five-Year Review:

OU(s): 01	Issue Category: Operations and Maintenance			
	Issue: Erosion along the drainage bench-downslope drain transitions occurs more often than preferable			
	Recommendation: Replace soil and plant grass at optimal time to establish the transition area along the grout bag channels			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Implementing Party**	**Oversight Party**	**Milestone Date**
No	No	PADEP	EPA	October 2012

Sitewide Protectiveness Statement

Protectiveness Determination:	*Addendum Due Date (if applicable):*
Protective	n/a

Protectiveness Statement:

This second Five-Year Review for Moyer's Landfill finds that the remedy has been constructed in accordance with the requirements of the ROD and is functioning as designed. The immediate threats have been addressed though capping the landfill and collecting and properly disposing of the leachate. Since the Remedial Actions at both Operable Units are protective, the Site is protective of human health and the environment. Long-term protectiveness of the remedy will be maintained by continuing to perform operation and maintenance of the landfill cap and leachate collection system; monitoring the groundwater and ambient air; and enforcing the institutional controls.

Second Five-Year Review Report
for
Moyer's Landfill Superfund Site
Lower Providence Township, Montgomery County, Pennsylvania

I. Introduction

The purpose of the Five-Year Review is to determine whether the remedy at a Site is protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in Five-Year Review reports. In addition, Five-Year Review reports identify issues found during the review, if any, and recommendations to address them.

EPA guidance on conducting the five-year review is provided by OSWER Directive 9355.7-03B-P, *Comprehensive Five-Year Review Guidance* (EPA, 2001). EPA personnel followed the guidance provided in this OSWER directive in conducting the five-year review performed for the Site.

Five-year reviews are conducted either to meet the statutory mandate under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) § 121, or as a matter of EPA policy. The statutory requirement to conduct a five-year review was added to CERCLA as part of the Superfund Amendments and Reauthorization Act of 1986 (SARA). CERCLA §121states:

> *If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.*

The Agency interpreted this requirement further in the NCP; 40 CFR §300.430(f)(4)(ii) states:

> *If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.*

The statutory requirement to conduct a five-year review applies to CERCLA §121 remedial actions selected after the effective date of SARA, October 17, 1986. The Moyer's Landfill Record of Decision (ROD) was signed on September 30, 1985, which predates the SARA. For sites where a statutory review is not specifically required, reviews may be conducted as a matter of policy for any of the following type actions:

I. A pre-SARA remedial action that leaves hazardous substances, pollutants, or contaminants, above levels that allow for unlimited use or unrestricted exposure.

II. A pre- or post-SARA remedial action that, upon completion, will not leave hazardous substances, pollutants, or contaminants above levels that allow for unlimited use or unrestricted exposure, but will take longer that five years to complete, i.e., achieve the cleanup levels that allow for unlimited use and unrestricted exposure.

III. A removal action for a site on the NPL that leaves hazardous substances, pollutants, or contaminants above levels that allow for unlimited use or unrestricted exposure, and where no remedial action has or will take place.

The pre-SARA remedial action described above (item I) corresponds to the remedy specified for the Moyer's Landfill Superfund Site; therefore, EPA Region III has conducted this five-year review of the remedy as a matter of policy due to the fact that hazardous substances, pollutants, or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure.

EPA Region III conducted the five-year review of the remedy implemented at the Moyer's Landfill Superfund Site in Collegeville, Montgomery County, Pennsylvania. This review was conducted for the entire Site by the Remedial Project Manager (RPM) from October 2011 through August 2012. This report documents the results of the review.

This is the second five-year review of the Moyer's Landfill Superfund Site. The triggering action for this policy review is the previous five-year review dated September 26, 2007. The five-year review is required due to the fact that hazardous substances, pollutants, or contaminants remain at the Moyer's Landfill Superfund Site above levels that allow for unlimited use and unrestricted exposure.

II. Site Chronology

Table 1 Chronology of Site Events

Event	Date
Disposal in landfills	Early 1940s to April 1981
State ordered closure of landfill	Early 1981
NPL listing	December 30, 1982 (proposed) September 8, 1983 (final)
Remedial Investigation/Feasibility Study completed	September 30, 1985
Record of Decision	September 30, 1985
Remedial design complete	April 20, 1989
Site Maintenance Plan	January 1991
Construction complete for landfill cap, OU-1	November 24, 1994
PADEP takes over O&M responsibility, EPA completes one year maintenance period including a six month extension	May 24, 1996
Explanation of Significant Differences (ESD)-design work begins for leachate storage tanks	January 2000
Construction start for leachate treatment, OU-2	May 2000
Construction complete for OU-2	August 2002
Preliminary Close-out Report	September 17, 2002
Remedial Action Construction Report	April 4, 2004
First Five-year Review Report	September 26, 2007
Second ESD- Institutional Controls (ICs)	September 18, 2009
Five-year Review Addendum	July 12, 2011
Township ordinance implemented ICs	October 20, 2011

III. Background

Physical Characteristics

The Moyer's Landfill Superfund Site is a 65-acre inactive privately owned landfill located at Moyer Road in Collegeville, Lower Providence Township, Montgomery County, Pennsylvania. The site is about twenty-seven (27) miles northwest of Philadelphia, Pennsylvania

(Figure 1, Site Location Map). According to the 2010 Census, Lower Providence Township has a population of 25,436.

The site area consists of open land surrounded by wooded areas on steep slopes. Located on the site are leachate collection tanks and a wooden storage shed in the south valley. Runoff from the landfill slopes flowed westerly into Skippack Creek, until the remedy was built. Now runoff is directed towards stormwater basins around the perimeter of the landfill and routed off the landfill cap. The Skippack Creek is located about 350 feet north-west of the landfill. The Skippack Creek then discharges into the Perkiomen Creek which eventually discharges into the Schuylkill River (Figure 2, Site Layout Map).

Land and Resource Use

The landfill is bounded on the north and west by Evansburg State Park, on the east by a single original home and a new housing development (Valley High Estates) and on the south by the new housing development and undeveloped land (Figure 2, Site Layout Map). The area immediately surrounding the landfill is residential. The nearby Skippack Creek flows through Evansburg State Park and has, in the past, been stocked with trout.

Ground water in the site area occurs in an aquifer which has poor water yields. The average depth of the wells in the area is 151 feet. Wells drilled into the deeper system are often artesian due to the dense, relatively impermeable layer of bedrock overlying the deep system. Most of the residents in the vicinity of the landfill are on public water. There are approximately ten residential wells along Moyer Road and Visitation Road, which are east of the site. Groundwater flows to the west and south west, towards the Skippack Creek. There are no residential wells between the landfill and the Skippack Creek.

History of Contamination

The Moyer's Landfill property operated as a municipal landfill from the early 1940s until April 1981, during which time it received municipal waste, sewage and industrial sludges. The landfill accepted a variety of solid and liquid hazardous wastes, including polychlorinated biphenyls (PCBs), dioxins, solvents, paints, low-level radioactive wastes, and incinerated materials in bulk form and/or containerized drums.

The original unlined landfill area was approximately 39 acres in size. In the late 1970s, the landfill owners submitted a request to expand the landfill boundaries to the northwest. Site preparation work began on a new area in 1977, and included installation of an asphalt liner prior to filling. Landfilling was reportedly limited to this new, lined area from the late 1970s to early 1981, at which time an order from the Pennsylvania Department of Environmental Resources (PADER), now Pennsylvania Department of Environmental Protection (PADEP), closed the facility.

Originally, there was no management of leachate from the landfill and the discharge either seeped into groundwater or discharged directly to the Skippack Creek. In the early 1970's PADER developed and implemented more comprehensive landfill regulations. As a result, a leachate collection system was constructed and began operating in 1972. However, leachate still overflowed continuously from several collection pits located on the property.

Initial Response

In 1981, PADEP closed the facility. The Moyer's Landfill became a Superfund Site when it was listed on the National Priorities List (NPL) on September 8, 1983. The Remedial Investigation and Feasibility Study were fund lead.

Basis for Taking Action

In the early 1980s, on-site leachate and seep samples were collected and analyzed. The samples were contaminated with eighty-six (86) priority pollutants and sixteen (16) metals, nearly all contaminants of concern. The landfill surface showed a number of leachate and seep locations which served as a continuous source of pollution to ground and surface waters. Numerous seeps at the site were seeping lightly or leaching heavily contaminated water from the landfill.

There was no evidence of any detectable level of air pollution.

Surface water samples were taken from Skippack Creek and the Perkiomen Creek, and fish samples were taken from Skippack Creek. Contaminants were detected in low concentrations in both surface water and fish. The contaminants were attributable to the landfill.

Off-site residential wells bordering the landfill were sampled for priority pollutants, metals, organics, PCBs, dioxins, and beta radiation. These wells did not show any detectable levels of organic or inorganic pollution. The residential groundwater met all EPA Drinking Water Standards at the time. Shallow monitoring wells installed around the periphery of the landfill showed concentrations of contaminants above risk based numbers.

The groundwater contamination was mostly due to surface water percolation through the landfill and into the groundwater. The groundwater level is lower than the bottom of the landfill. Site contaminants were transported directly to the surface water bodies via surface water runoff and indirectly through contaminated groundwater (upper aquifer) discharged to the creeks. The deeper aquifer was not contaminated.

The ROD identified the following contaminants which were above acceptable levels: arsenic, barium, lead, manganese, nickel, zinc, beta radiation, trichloroethylene (TCE), toluene, xylene, di-n-octylphthalate, 2-hexanone, 2-butanone, bis (2-ethylhexyl) phthalate, acetic acid and methylester.

IV. Remedial Actions

Remedy Selection

The ROD for the Moyer's Landfill Site is a pre-SARA ROD and thus does not contain the same information or level of detail as a more current ROD. The ROD stated the Remedial Action Objectives in the following manner: "The overall strategy is to mitigate and minimize harm to the public health and the environment. This should include minimizing further upper aquifer contamination and the possibility of direct contact with the waste. Leachate control is an integral part of the overall scheme in order to eliminate the continuing migration of contaminants across the site and off the site to the Skippack Creek." Because EPA is responsible for protecting the human health and environment, EPA conducted remedial actions such as capping the landfill and collecting landfill leachate and routing it for treatment. These actions prevented direct contact with the waste and contaminated leachate and prevent off-site migration of contamination via surface runoff and groundwater movement.

The 1985 ROD identified a primary and a contingent remedy. The major components of the primary remedy were as follows:

- Soil cover with permeability of $10^{-4}/10^{-5}$ cm/sec;
- Erosion and sedimentation control measures;
- Surface water diversion;
- Leachate collection, on-site treatment and discharge to surface water;
- Methane gas recovery and sale;
- Security/fencing measures;
- Groundwater monitoring; and
- All closure activities in compliance with Resource Conservation and Recovery Act (RCRA) at conclusion of gas generation phase (10 to 20 years)

The implementation of this remedy depended on the success of the gas generation/recovery program. The gas recovery system was not feasible due to diminishing gas generation, thus the contingency alternative was implemented. The major components of the contingency remedy include:

- Miscellaneous work preparatory to installation of RCRA cap: grading, flattening of steep slopes, retaining walls and installation of rip-rap at areas that are most likely to be eroded;
- Construction of RCRA cap;
- Gas venting and gas monitoring;
- Surface water collection and discharge to Skippack Creek;
- Security/fencing measures;

- Leachate collection and on-site treatment that will meet the 10^{-6} risk level in the groundwater and discharge requirements in the stream; and
- Operation and Maintenance: ground and surface water monitoring, maintenance of the cap and treatment of leachate on-site.

In January 2000, EPA issued an Explanation of Significant Differences (ESD) which modified the leachate treatment portion of the remedy. The ESD changed the leachate treatment portion of the remedial action from on-site leachate treatment to leachate collection with treatment at an existing Publicly Owned Treatment Works (POTW). This change better protected the surface waters and the environment from the potential failure of an undersized treatment plant. In addition, routing the leachate to the POTW was shown to be more cost effective than building and operating a leachate treatment facility.

In September 2009, EPA issued a second Explanation of Significant Differences (ESD) to require Institutional Controls (ICs) as part of the remedy. ICs are non-engineered instruments, such as administrative and legal controls, that are necessary for the protection of the integrity of the remedial measures on-site to ensure long-term protection of human health and the environment. ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site.

Remedy Implementation

Implementation of the Remedial Action

EPA executed an Interagency Agreement with the U.S. Army Corps of Engineers (USACE) for the design of the remedial action, which was completed on April 20, 1989. EPA executed another Interagency Agreement with the USACE for the construction of the Remedial Action. After beginning construction, local residents expressed concerns regarding truck traffic. In response, EPA then directed USACE to redesign a partial cap (instead of a full cap) with a perimeter leachate collection trench. A partial cap meant that less fill was needed for construction, thus reducing the truck traffic. Less cover, however, also led to steeper slopes for the redesigned landfill cap. The redesign was completed in November 1992 and construction of the redesigned landfill cap was completed in November 1994. The Remedial Action Report for the landfill cap, Operable Unit 1 (OU1) was completed in December 1996.

EPA identified the leachate collection and treatment portion of the remedial action as Operable Unit 2 (OU2). In January 2000, EPA issued an Explanation of Significant Differences (ESD) which changed the leachate treatment portion of the Remedial Action from on-site leachate treatment to leachate collection with treatment at an existing POTW. The modified Remedial Action was originally described in the ROD, but was infeasible because the sewer line was not available near the site when the ROD was issued. The construction of the OU2 remedial action was initiated in 2000 and completed in August 2002. OU2 responsibility was divided as

follows: 1) Montgomery County constructed the municipal interceptor, 2) EPA via USACE constructed the necessary leachate equalization tanks, and 3) PADEP was responsible for collecting and transferring the leachate to the equalization tanks and from the tanks to the municipal interceptor. The Remedial Action Report for the leachate collection and treatment system (OU2) was completed in April 2004.

Below is a table listing the key dates for construction activities at Moyer's Landfill Superfund Site.

Table 2 Moyer's Landfill Superfund Site Construction Dates

Construction Event	Date
Remedial Design Analysis Report	April 20, 1989
Selected construction contractor	October 13, 1989
Construction start, landfill cap OU1	January 4, 1990
Partially terminate contract	About October 1, 1990
EPA directed USACE to redesign cap	October 8, 1990
Non-terminated portion of construction completed	July 13, 1992
Redesign Analysis Report completed	November 13, 1992
Final inspection	January 22, 1993
Selected redesign construction contractor	April 23, 1993
Redesign construction start	May 23, 1993
Pre-final inspection	November 14, 1994
Redesign construction completed	November 24, 1994
Post Maintenance period inspection	May 15, 1996
Maintenance period ends	May 24, 1996
Remedial Action Report, OU1	December 19, 1996
EPA issues an Explanation of Significant Difference (ESD)	January 2000
EPA begins constructing leachate storage tanks OU2	May 2000
Construction of leachate storage tanks complete	August 2000
Completion Report, OU-1	September 29, 2000
Sewer line interceptor complete	March 2002
Leachate flowing from Pump Stations 1 & 2	May 2002
New flowmeters installed	June 2002
Pump Station #3 on-line- OU2 construction complete	August 2002
Preliminary Close-out Report	September 17, 2002
Remedial Action Report, OU2	April 4, 2004

Final Inspection

For the original construction contract, a punch list inspection was conducted at the Site by EPA, PADER, the USACE, and the contractor, Chemical Waste Management (CWM), Inc., on June 30, 1992. Punch lists of tasks to be accomplished before the final inspection were generated and the punch list tasks were executed. The final inspection was performed on January 22, 1993 by the USACE and CWM.

For the redesigned portion of the landfill cap, a pre-final inspection was conducted by EPA, PADER, the USACE, and the contractor, Conti Environmental Inc., on November 14, 1994. A post-maintenance period inspection was conducted between USACE and Conti in May 1996 and a follow-up post-maintenance period inspection was conducted by USEPA, USACE, and PADEP in August 1996.

Inspection of the leachate storage system (OU2) was conducted in August 2000. A punch list was established at that time and all the issues were addressed by November 2000. Between August 2000 and August 2002, the sewer line was constructed and the leachate transfer system was updated. An additional inspection and training session was held in May 2002.

EPA and PADEP conducted a final inspection of the entire site on August 30, 2002 and determined that the remedy had been constructed in accordance with the Remedial Design plans and specifications and that no further response is anticipated for this site. The Moyer's Landfill Superfund Site achieved construction completion when the Preliminary Close-out Report was signed on September 17, 2002.

The performance standards attained during the remediation were documented in the Remedial Action Completion Reports dated December 19, 1996 and April 4, 2004.

Implementation of Institutional Controls

The September 2009 ESD required ICs as part of the remedy. ICs are legal controls, such as title restrictions, restrictive covenants, etc., to protect the integrity of the remedial measures on-site in such a way as to prevent or reduce exposure to hazardous substances. In October 2011, the Lower Providence Township approved an ordinance which serves as the IC for the Moyer's Landfill Site, which states:

It shall be unlawful for any Owner, lessor, lessee or occupier of the Property, or any other Person to engage in any activities on the Property that would in any manner disturb or interfere with the environmental remedial systems at the Property, including, without limitation, the landfill cap, gas vents, monitoring wells, leachate collection and conveyance system, and security measures, such as fencing, that prevent access to the Property. The prohibited activities include, but are not limited to the following:

A. Digging in or disturbance of the landfill cap, tampering with hardware or equipment associated with the gas vents, monitoring wells, leachate collection and conveyance systems or the security fencing.

B. Any use of leachate generated at the Property including, without limitation, any activities that could cause exposure to contaminants in the leachate via ingestion, vapor inhalation or dermal contact.

C. Digging in or disturbance of the landfill cap including, without limitation, any activities that could result in contact with contaminants in the soils at the Property through ingestion, inhalation or dermal contact.

System Operation/Operation and Maintenance

The USACE was responsible for maintenance of the landfill for the first eighteen months. A Site Maintenance Plan, dated January 1991, documented the expected activities to maintain and monitor the integrity of the Site, i.e. monitor the leachate, the groundwater in both the shallow and deep zones, and the gas vents on a quarterly basis, visual inspections of the cap area and associated drainage/collection systems with corrective actions for identified problems. However, the plan states that "the number of monitoring locations, analytical parameters, and sampling frequencies may be modified during the maintenance period by PADER..." PADEP took responsibility for the landfill cap maintenance in May 1996.

The responsibility for operations and maintenance (O&M) of the leachate storage and transfer system has always been with PADEP. EPA provided training on the system for PADEP and PADEP has been operating the system since start-up. The leachate currently is permitted by the Oaks POTW to meet their pretreatment program standards.

PADEP currently reports O&M status and issues to EPA. PADEP O&M consists of the following activities and annual O&M costs are shown in Table 3:

1) Site Inspections: Routine site inspections include observations of the fence line, road, soil cap and functioning of the leachate collection system at least once per month. The leachate collection system is inspected specifically for integrity of the leachate holding tanks, the leachate level in the manholes, the flow meter reading, and the state of the discharge pipe. Typically, inspections are performed twice a month (once by DEP, once by DEP's contractor).

2) Leachate Monitoring: Monitoring leachate involves taking a monthly reading of the leachate volume discharged to the POTW, and reporting information on total gallons per month and average daily flow rate to the POTW on a monthly basis, by the 15th of the month.

3) Grass cutting: The grass at the site needs to be cut no less than twice a year in order to discourage the growth of small trees and shrubs, and also to aid in the identification of soil erosion. The landfill cap and surface water management features are inspected prior to each mowing.

4) Cap Repairs: Ideally, this task is performed during the growing season as needed to ensure integrity of the HDPE cap, as it is vitally important to reestablish vegetation on any soil repairs to limit additional erosion.

5) Perimeter Road Repairs: Areas to be repaired are noted during site inspections and repaired accordingly. This task includes the "bridge crossings" over surface drainage features.

6) Fence Repairs: Holes in the fence or damage from fallen trees are noted during site inspections and repaired as needed. Holes in the fence or damage from trespassers shall be enforced per local ordinance. Local law enforcement will identify trespassers in order to prosecute or receive compensation to perform the repair.

7) Tree removal: This task is limited to trees that have damaged the perimeter fence or have the potential to damage the cap. Trees to be removed are identified during the site inspections.

8) Sampling: Groundwater and air monitoring/gas vent sampling will be collected by Department personnel and analyzed by the PADEP's Bureau of Laboratories at least every other year. Information on the environmental monitoring is included in the Data Review section of this five-year review. The two sampling events in this five-year review period occurred in December 2010 and February 2012.

   a) Groundwater monitoring – Five monitoring wells, and the leachate sump in the South Valley are analyzed for volatile organics, TAL metals, and cyanide. The leachate may also be analyzed for other parameters requested by the POTW.

   b) Air monitoring – Eight Summa canisters are deployed around the landfill (upwind and downwind) in order to identify concentrations of volatile organic compounds. In addition, the Department also deploys

up to six smaller, silica-lined Summa canisters to sample directly from active gas vents on the site.

Table 3 Operation and Maintenance Costs (in $)

	2007	2008	2009	2010	2011*
O&M	96,371	15,704	157,999	27,634	44,809
Sewer	22,342	18,194	29,531	21,899	21,533
Electricity	1,326	2,120	3,779	1,839	2,187
Telephone	354	392	437	418	421
Total Annual Cost	**120,393**	**36,410**	**191,747**	**51,790**	**68,951**

* - Only Jan -April 2011 data available for Sewer, Electric, and Telephone; 2011 costs are Jan-Apr costs multiplied by three.

V. Progress Since Last Five-Year Review

This is the second five-year review for the Moyer's Landfill Superfund Site. The first five-year review's protectiveness statement is as follows:

> This first Five-Year Review for Moyer's Landfill finds that the remedy has been constructed in accordance with the requirements of the ROD and is functioning as designed. The immediate threats have been addressed though capping the landfill and collecting and properly disposing of the leachate.
>
> However, a short-term protectiveness determination of the remedy cannot be made until further information is obtained. This information will be obtained by taking appropriate ambient air samples to ensure landfill gas migration is not an issue to the adjacent residents. It is expected that these actions will take approximately 6 months to complete, at which time a protectiveness determination will be made.
>
> In order for the remedy to be protective in the long-term, institutional controls will need to be implemented as part of the remedy and ambient air monitoring will need to be performed. Continued operation and maintenance of the landfill cap and leachate collection system; and monitoring the groundwater and ambient air will ensure the remedy's long-term protectiveness.

The first five five-year review cited the following recommendations:

1. An O&M Plan should be developed to document the activities to be performed for the Site and frequency expected. An annual report should be submitted each year in order to document what O&M activities were performed.

2. The remedy should be modified to include ICs. A plan should be developed to identify how the institutional controls for the Site will be implemented in accordance with the modified remedy.

3. To further stabilize the drainage bench-downslope drain transition, low-growing prairie grass should be planted to establish the transition area along the grout bag channels.

4. Ambient air monitoring should be performed in order to determine if landfill gas migration is an issue for adjacent residents. Also, continued groundwater monitoring and data evaluation is essential to ensure vapor migration is not an issue.

The recommendations have been resolved as follows:

1. In February 2012, EPA approved PADEP's O&M Plan which documents the activities and frequency of tasks performed for the Site. An annual report will be submitted each year in order to document what O&M activities were performed.

2. An ESD was issued in September 2009 to include ICs in the remedy. The township implemented the ICs via local ordinance in October 2011.

3. To further stabilize the drainage bench-downslope drain transition, PADEP decided to continue using standard contractor vegetation mixes that were heavy on perennial rye and red fescues. Finding suppliers for prairie grass plugs proved more difficult than expected, and the pricing proved prohibitively high. PADEP found that properly timing the construction and reseeding was more important to establishing new vegetation than the type of vegetation used.

4. Ambient air monitoring was performed in December 2010. A five-year review addendum was issued in July 2011 which stated that landfill gas migration is not an issue for adjacent residents.

VI. Five-Year Review Process

Administrative Components

The five-year review team included Sharon Fang, EPA Remedial Project Manager (RPM), Bruce Rundell, EPA hydrogeologist, Dawn Ioven, EPA toxicologist, Betsy Lukens, EPA counsel, Tim Cherry, PADEP HSCA supervisor, Colin Wade, PADEP project manager, Dennis Kutz, PADEP project manager, Tim Gallagher, EPA RPM, and Patricia Flores, EPA air specialist. The review began in October 2011.

Community Involvement

To inform the community of the five-year review EPA placed an advertisement in the Times Herald on January 23, 2012 notifying area residents of the five-year review (Attachment 1). The advertisement explained what a five-year review consists of, why EPA was conducting a five-year review and provided both the RPM and Community Involvement Coordinator (CIC) as contact people for questions or comments. Neither the RPM nor the CIC received any questions or comments as a result of the advertisement.

Document Review

The five-year review consisted of a review of relevant documents including the RI/FS; the ROD; two ESDs; the Consent Decree; Site Maintenance Plan; the Preliminary Closeout Report (PCOR); the Remedial Action Completion Reports; and data provided by PADEP.

Data Review

Environmental data provides information to assess and demonstrate that the remedy is achieving the performance standards described in the ROD, and provides information for the five-year review. Listed below is a summary of the monitoring events performed at the Site.

Groundwater Monitoring

Groundwater monitoring is performed in order to confirm that there is no migration of contamination from the landfill. The following locations were sampled in December 2010 and February 2012:

LS – 1	Manhole in the south valley, pumps to leachate tanks
MW 4	4" Well @ South Valley Outside Fence
MW 5	4" Well @ Roadside Between Sedimentation Basins #2 & #3
MW - R1	6" Well @ Visitation Road and Grange Ave
MW - R2	4" Well @ Visitation Road and Grange Ave

Figure 3 is a map showing the on-site groundwater well locations, site features, and monitoring points. Groundwater flows towards the Skippack such that wells MW-4 and MW-5 are on the downgradient edge of the plume, and wells MW-R1 and MW-R2 are upgradient. Samples taken at LS-1 are samples of the leachate that is then collected in the tanks and treated at the POTW.

The groundwater monitoring wells were analyzed for volatile organic compounds (VOCs). The leachate discharge and South Valley manhole (LS-1) were analyzed for volatile organic compounds, metals, cyanide, oil & grease and general chemistry. The groundwater and leachate were not analyzed for radiation because subsequent to the ROD, EPA determined that

the levels of radiation found during the remedial investigation are within acceptable range. Table 4 summarizes the volatile organic contaminants that were detected during groundwater sampling and list the EPA drinking water standards, Maximum Contaminant Level (MCL). For example, nothing is listed for MW-4 in 2010 because no contaminants were detected.

Table 4 Summary of Groundwater Sampling Results-
Volatile Organics (ug/l)

	Location (year)					
Analyte name	MW-R1 (2010)	MW-5 (2010)	MW-R1 (2012)	MW-R2 (2012)	MW-5 (2012)	**MCL**
t-Butyl Alcohol	--	--	--	--	5.4	*
Chlorobenzene	--	0.55	--	--	--	100
cis-1,2-Dichloroethene	--	4.7	--	--	2.9	70
1,1-Dichloroethane	--	--	--	--	0.51	*
Ethylbenzene	0.66	--	--	--	--	700
m/p-Xylene	1.9	--	--	--	--	+
o-Xylenes	0.6	--	--	--	--	+
Tetrahydrofuran	--	3.7	--	--	4.1	*
Toluene	3.6	1.6	--	--	--	1,000
Trichloroethene	0.61	2.7	--	--	4.8	5
Vinyl Chloride	--	1.9	--	--	1.9	2
Acetone	--	--	3	4.3	--	*

* = MCL does not exist for these constituents
-- = Not detected
+ = Total Xylenes MCL is 10,000

Residential Groundwater

Most residents in the area receive water from the local public water supply. No residential wells exist between the landfill and the downgradient monitoring wells.

In January 2001, PADEP sampled ten home wells along Moyer Road and Visitation Road for volatile organics and bacteria. At the time, there was a problem with runoff from the then-active pig farm. All but two home wells were non-detect for volatiles; of these, one was below the MCL, the other was higher than results from the landfill monitoring wells. This particular home on Visitation Road is occupied by an older couple who operate a welding/metal working business out of their home. At the time, they reported that they did not drink the water without treating it first. Extending a public water line was not an option at the time. Of eight homes tested for coliform bacteria, five showed detections that were above Montgomery County Health Department criteria. These results were reported to the Health Department. One resident used a filter and UV light to treat his water. These residents are side-gradient from the direction of groundwater flow and are not expected to be impacted by the landfill. No residential well sampling was conducted as part of this five-year review.

Stream Sampling

Upon review of the current leachate and groundwater sampling, there is no data that indicates that contaminants are migrating from the Site at concentrations that may be negatively impacting Skippack Creek.

Even after PADEP connected the leachate collection system to the POTW in 1999, some leachate continued to discharge to the Skippack Creek from the NW Valley outfall. From 2000 to 2006, PADEP sampled the Skippack Creek as part of O&M. Stream water was collected at two locations, upstream (SW4) and downstream (SW5) of the observed leachate outfall and was analyzed for volatile organics, semi-volatile organics, inorganics, pesticides, total PCBs, coliform and other chemical parameters. Since DEP did not note any discernible difference between the upstream and downstream samples during sampling, they concluded there was no ongoing impact from the leachate outfall. PADEP discontinued sampling in 2006. No sediment samples from the creek were taken.

Landfill Gas Monitoring

In December 2010 and February 2012, PADEP performed sampling of ambient air, gas vents and groundwater monitoring wells. All the samples were analyzed by PADEP's Bureau of Laboratories in Harrisburg, PA.

In 2010 and 2012, ambient air sampling was performed at seven locations around the perimeter of the landfill (Summa 1 - Summa 3, Summa 5 - Summa 8) and one location at the apex of the landfill (Summa 4). See Figure 4 for 2012 locations. All ambient air samples were taken with standard Summa canisters fitted with 8- hour regulators.

In March 2011 and March 2012, PADEP forwarded the data from the sampling events to EPA in units of ppbv. To enable comparison to the June 2011 Regional Screening Levels (RSLs), EPA converted detected data to units of ug/m^3. The Regional Screening Levels (RSLs) are risk-based concentrations derived from standardized equations combining exposure information assumptions with EPA toxicity data. EPA considers RSLs to be protective for humans over a lifetime. They are calculated for a Carcinogenic Target Risk of lE-06, and/or a Noncancer Hazard Index (HI) of 1. Tables 5 and 6 summarize the data from the two sampling events and compares them to the Regional Screening Levels.

Table 5 Summary of Landfill Gas Monitoring, 2010 (mg/m^3)

			Summa		Summa		Summa		Summa		Summa		Summa		Summa		Summa	
	RSL		#001		#002		#003		#004		#005		#006		#007		#008	
Analyte	ug/m3		ug/m3		ug/m3		ug/m3		ug/m3		ug/m3		ug/m3		ug/m3		ug/m3	
benzene	0.31	c	0.35		0.35		0.32	J	0.32		0.30	J	0.35		0.35		0.35	
toluene	5200	n	0.29	J	0.30	J	0.30	J	0.26	J	0.24	J	0.28	J	0.28	J	0.26	J
trichlorofluoromethane	730	n	1.57		1.57		1.52		1.46		1.57		1.57		1.57		1.52	
dichlorodifluoromethane	100	n	2.97		2.97		2.43		1.58		2.62		3.02		3.07		2.97	
chloromethane	94	n	1.30		1.37				0.91		1.18		1.43		1.24		1.35	
carbon tetrachloride	0.41	c	0.63	J	0.62	J	0.59	J	0.62	J	0.62	J	0.62	J	0.63	J	0.60	J
1,1,2-trichloro-1,2,2-trifluoroethane	31000	n	0.69	J	0.70	J	0.64	J	0.68	J	0.69	J	0.71	J	0.72	J	0.70	J
propene	3100	n			0.91		0.50		0.16				0.83		0.86			

Regional Screening Levels (RSLs) are from the June 2011 table.
RSL cancer values (c) are listed at 1E-06 and non-cancer values (n) are listed at a HI = 1.
Analyte concentrations flagged with a "J" are estimated values below the laboratory's reporting limit.

Very few VOCs were detected in the ambient air. Most of the VOCs that were detected were below the RSLs, however, some of the samples had ambient air concentrations of acrolein, benzene and carbon tetrachloride over their respective RSLs. All of the carbon tetrachloride sample results were flagged with a 'J' because the contaminant was detected at a value below the laboratory reporting limit and is considered to be estimated.

Table 6 Summary of Landfill Gas Monitoring, 2012 (mg/m^3)

	RSL		S-01		S-02		S-03		S-04		S-05		S-06		S-07		S-08	
Analyte	ug/m3		ug/m3		ug/m3		ug/m3		ug/m3		ug/m3		ug/m3		ug/m3		ug/m3	
Benzene	0.31	c	0.43		0.41		0.40		0.39		0.49	J	0.44		0.41		0.42	
Toluene	5200	n	0.22	J	0.23	J	0.21	J	0.23	J	0.29	J	0.24	J	0.22	J	0.23	J
Acrolein	0.021	n	0.92		0.43		0.57		0.45		0.61	U	0.78		0.50		0.64	
Acetone	32000	n	15.46	Q	6.76	QB	10.17	Q	7.04	QB	7.13	B	11.76	Q	8.14	Q	13.00	Q
TRICHLOROFLUOROMETHANE	730	n	1.23		1.19		1.19		1.20		1.51		1.32		1.26		1.29	
DICHLORODIFLUOROMETHANE	100	n	2.34		2.36		2.34		2.34		2.77		2.38		2.45		2.36	
2-Butanone (MEK)	5200	n	2.20	QB	0.89	B	1.46	B	0.78	B	0.77	JB	1.10	B	0.88	B	2.03	B
Chloromethane	94	n	1.14		1.23	Q	1.25	Q	1.25	Q	1.24		1.11		1.12		1.10	
CARBON TETRACHLORIDE	0.41	c	0.48	J	0.48	J	0.47	J	0.48	J	0.58	J	0.50	J	0.52	J	0.52	J
1,1,2-TRICHLOROTRIFLUOROETHANE	31000	n	0.60	J	0.57	J	0.58	J	0.61	J	2.04	U	0.61	J	0.59	J	0.61	J
Propene	3100	n	1.09	Q	0.83		1.01	Q	0.84		1.00		1.02	Q	0.85		0.99	

Regional Screening Levels (RSLs) are from the November 2011 table
RSL cancer values (c) are listed at 1E-06 and non-cancer values (n) are listed at HI=1
J- indicates an estimated value, below the quantification limit, but above the method detection limit
Q- This flag identifies the average of multiple results from multiple analysis, or the average of the averages of duel column analysis methods.
B-This flag is used when the analyte is found in the associated blank as well as in the sample.
U- Indicates compound was analyzed for but not detected. The sample quantitation limit is reported.

PADEP has sited four air toxic samplers in Montgomery County near the Moyer's Landfill. The samplers are located in Spring City, Trappe, Collegeville, and Evansburg. PADEP's Collegeville Area Air Monitoring Project - Third Report, November 17, 2009, lists

annual average concentrations for VOCs sampled in 2007 and 2008. The report can be found at: *http://www.dep.state.pa.us/dep/deputate/airwaste/aq/toxics/projects/collegeville/collegeville_final_111709.pdf* Table 7 contains data for benzene and carbon tetrachloride for the four air toxic monitoring sites as well as the maximum concentrations measured at the Moyer Landfill.

Table 7
Moyer's Landfill and PADEP Collegeville Area Air Monitoring Project
Sampling Results for Benzene and Carbon Tetrachloride

VOC	**RSL** (ug/m^3)	**Moyer's Landfill** 2010 (ug/m^3)	**Moyer's Landfill** 2012 (ug/m^3)	**Collegeville** (ug/m^3)	**Evansburg** (ug/m^3)	**Spring City** (ug/m^3)	**Trappe** (ug/m^3)
benzene	0.31	0.35	0.49 J	0.54	0.51	0.57	0.61
carbon tetrachloride	0.41	0.63 J	0.58 J	0.50	0.57	0.50	0.69

Concentrations of benzene and carbon tetrachloride observed in ambient air at the site were very similar to those measured at PADEP air monitoring stations in nearby towns (Collegeville, Evansburg, Spring City and Trappe). This implies that conditions around the landfill do not differ significantly from the background air quality in this area.

In 2012, acrolein was detected in 7 of 8 ambient air samples at concentrations up to 0.92 ug/m3 and the concentrations in the landfill gas were similar, implying that the acrolein in the landfill gas is not a significant contributor to the ambient air. Acrolein has not been measured in the past by PADEP, however, it is a ubiquitous chemical in the ambient air found in all areas of the country.

Although exceedances of RSLs were noted for acrolein, benzene, and carbon tetrachloride, no chemicals were detected in any ambient air samples at concentrations that would pose an unacceptable risk under a residential exposure scenario. In summary, the results of PADEP's sampling of the landfill gas vents and perimeter ambient air monitoring at the Moyer's Landfill show that the landfill gas emissions are not adversely impacting the ambient air quality.

Gas samples were collected directly from five of the passive gas vents. Several chemicals measured directly at the on-site gas vents exceeded RSLs, sometimes by two orders of magnitude or more. However, these concentrations are not indicative of exposure under current land use conditions. Dilution of the vent gases appears to be occurring rapidly, as demonstrated by ambient air samples collected at the landfill.

Site Inspection

A key component of the five-year review at the Moyer's Landfill Superfund Site is the physical inspection of the landfill cap, the leachate holding tanks, and the leachate collection system, fence, groundwater monitoring wells and landfill gas vents. The EPA and PADEP project managers met on January 19, 2012 to inspect the site. During the inspection, the weather was sunny and windy and the temperature was approximately 30° Fahrenheit. The inspection consisted of walking the landfill cap, inspecting the surface water detention structures, inspecting the leachate tanks and viewing the perimeter fence.

Inspection of Moyer's Landfill Superfund Site

For this inspection EPA used the relevant portion of the checklist in EPA's Five-Year Review Guidance. EPA relied on PADEP's institutional knowledge of the current operations and maintenance of the site. The following is a list of items identified during inspection:

Fence

- Access hole cut in fence at NE corner. Evidence of vehicular traffic at this spot.
- Approximately 1pm, we saw an all-terrain vehicle on the top of the landfill. PADEP contacted the township to notify them.
- One fence post on the west side of the cap was displaced by a fallen tree.

Landfill Cap

- Ponding (frozen) along a few landfill benches indicates minor settlement.
- Some woody growth on the cap. All seem to have trunk diameters of less than 2."
- No bulges or cracking of the cap were evident. No evidence of slope instability.
- No issues noted with gas vents.
- Vegetative cover appears satisfactory.

Access Roads

- South side access road has erosion, approximately 250' long, with variable width (maximum 10" wide) and variable depth (maximum 12" deep). The erosion doesn't appear to be interfering with the remedy.
- North access road has erosion. The erosion doesn't appear to be interfering with the remedy.

Downslope drains

- Numerous areas of undermining at transition points between bench and downslope drain, particularly on south side facing the leachate tanks. EPA and PADEP discussed the need to replace soil and attempt to vegetate during optimal growing times.
- Numerous instances of undercutting the downslope concrete mats.
- Sediment build-up in one eastern downslope drain, which interferes with design flow of stormwater. EPA and PADEP discussed the need to remove sediment and repair the

downslope drain. This appears to be the cause of the erosion of the south side access road.
- Sediment build-up in one northern downslope drain, which caused minor ponding upslope of the drainage structure.

Leachate Collection
- Minor leak in the valve of one leachate tank. Leak could potentially escape secondary containment via a floor drain near the leachate that was frozen.

On March 23, 2012, PADEP reported the following response to several of the items identified during the January 19, 2012 inspection:

- The fence was repaired on March 1, 2012; as of March 20, 2012, the perimeter fence was intact.

- The leaking valve was repaired on March 1, 2012

- The erosion issues had yet to be addressed, but discussions were underway between PADEP and their contractor.

Interviews

On January 19, 2012, EPA and PADEP met with the Lower Providence Township representatives (Interim Township Manager Geri Golas, Chairman of the Board of Supervisors Rick Brown, Township Solicitor Mike Sheridan, and Grants/Project Coordinator Casey Snyder) to discuss the five-year review process and solicit feedback on the Moyer's Landfill Site. The following topics were discussed:

- Ownership: The Lower Providence representatives voiced a concern with the ownership of the landfill. The township would like to purchase the landfill in order to protect it from inappropriate use. The township has applied for a solar panel grant with hopes of installing solar panels on the Site.

- Ordinance: The township also discussed enforcement of the local ordinance to protect the landfill and prevent trespassers. The township committed to letting the police know about the ordinance and requesting they perform periodic patrol for trespassers.

- Communication: The township appears pleased with the communication about the Site. They perceive the landfill as a non-issue as they are not receiving any complaints about the landfill.

- Discharge: The township asked if the discharge is clean enough to send to the Creek instead of the POTW. PADEP replied that while the discharge quantity and contaminant levels continue to decrease, direct discharge is unlikely at this point.

VII. Technical Assessment

Question A: Is the remedy functioning as intended by the decision documents?

The review of relevant documents and reports and the site inspection indicate that the remedy is functioning as intended by the ROD. The landfill cap and drainage structures are functioning properly with some minor deficiencies, e.g., erosion of the road on the South side of the cap, and minor water pooling on benches. The leachate collection system is being operated and maintained. The data shows that contaminant levels are generally decreasing.

Institutional controls are currently required by the ROD and implemented by township ordinance. Site inspections confirm that on-site groundwater is not being consumed; there have been no earth moving activities on-site not associated with the maintenance of the remedy; and the land use has not changed.

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and RAOs used at the time of the remedy still valid?

Applicable or relevant and appropriate Federal public health or environmental standards are identified in the ROD. Many of these standards were met during construction of the remedy and the remaining standards are being achieved during the operation and maintenance of the Site. While there have been changes in toxicity values and exposure assumptions since the ROD was issued, these changes do not affect the protectiveness of the remedy. The remedy remains protective.

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

No. The post-construction sump and groundwater sampling has confirmed that the remedy has reduced surface water and groundwater contamination. Also, EPA has confirmed that the remedy is not affecting ambient air.

Technical Assessment Summary

The remedy has been constructed in accordance with the requirements of the ROD and is functioning as designed. The immediate threats have been addressed though capping the landfill and collecting and properly disposing of the leachate. Since the Remedial Actions at both Operable Units are protective, the Site is protective of human health and the environment. Long-

term protectiveness of the remedy will be maintained by continuing to perform operation and maintenance of the landfill cap and leachate collection system; monitoring the groundwater and ambient air; and enforcing the institutional controls.

VIII. Issues

Table 8 Issues Identified

Issues	Affects Current Protectiveness (Y/N)	Affects Future Protectiveness (Y/N)
Frequent trespassing and damage to the fence.	N	N
Erosion along drainage bench-downslope drain transitions and access roads	N	N

IX. Recommendations and Follow-Up Actions

Table 9 Recommendations and Follow-up Actions

Issue	Recommendations and Follow-up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness (Y/N)	
					Current	Future
Frequent trespassing and damage to the fence	Enforcement of Township Ordinance should deter trespassing and fence cutting	Township	EPA/ PADEP	Ongoing	N	N
Erosion along drainage bench-downslope drain transitions and access roads	Replace soil and plant grass at optimum time	PADEP	EPA	October 2012	N	N

X. Protectiveness Statement

This second Five-Year Review for Moyer's Landfill finds that the remedy has been constructed in accordance with the requirements of the ROD and is functioning as designed. The immediate threats have been addressed though capping the landfill and collecting and properly disposing of the leachate. Since the Remedial Actions at both Operable Units are protective, the Site is protective of human health and the environment. Long-term protectiveness of the remedy will be maintained by continuing to perform operation and maintenance of the landfill cap and leachate collection system; monitoring the groundwater and ambient air; and enforcing the institutional controls.

XI. Next Review

The next five-year review for the Moyer's Landfill Superfund Site is required by August 2017, five years from the date of this review.

References for Moyer's Landfill Superfund Site Five-Year Review

U.S. Environmental Protection Agency, Record of Decision, Moyer's Landfill Superfund Site, Collegeville, Montgomery County, Pennsylvania, September 1985.

IMS Engineers Architects, Remedial Investigation – Feasibility Study, Moyer's Landfill Site, Collegeville, Pennsylvania, January 1986.

Paul C. Rizzo Associates, Inc., Site Maintenance Plan, Moyer's Landfill Superfund Site, Montgomery County, Pennsylvania, January 1991.

U.S. Army Corps of Engineers, Remedial Action Report, Moyer's Landfill Superfund Site, Montgomery County, Pennsylvania, December 1996.

U.S. Environmental Protection Agency, Preliminary Close Out Report, Moyer's Landfill Superfund Site, Lower Providence Township, Pennsylvania, September 2002.

U.S. Army Corps of Engineers, Remedial Action Report, Moyer's Landfill Superfund Site, Montgomery County, Pennsylvania, April 2004.

Figure 1

Moyers Landfill Superfund Site Location Map

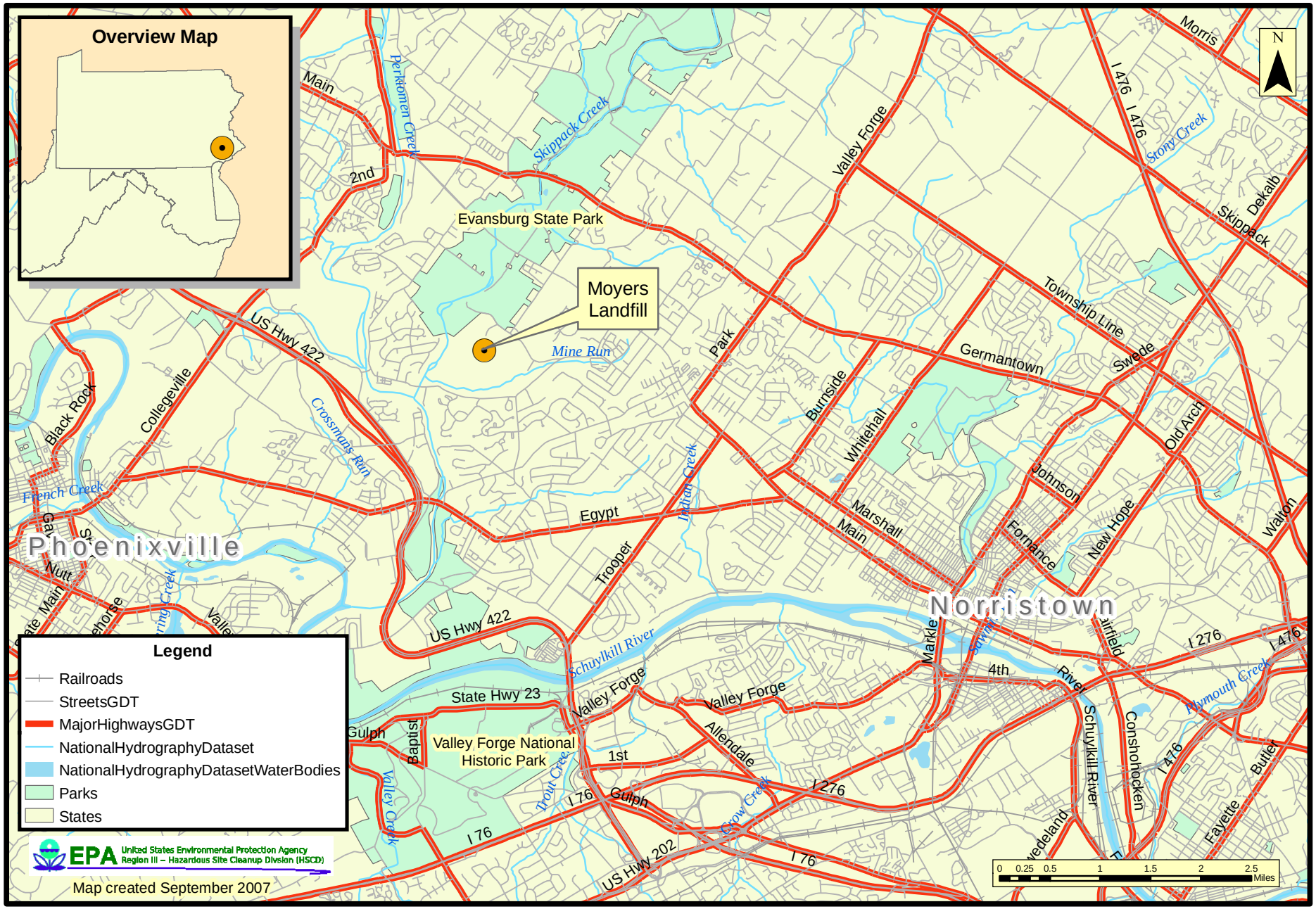

Figure 2

Moyers Landfill Superfund Site, Site Layout

Figure 3 Moyers Landfill
Groundwater Well and Gas Vent Locations

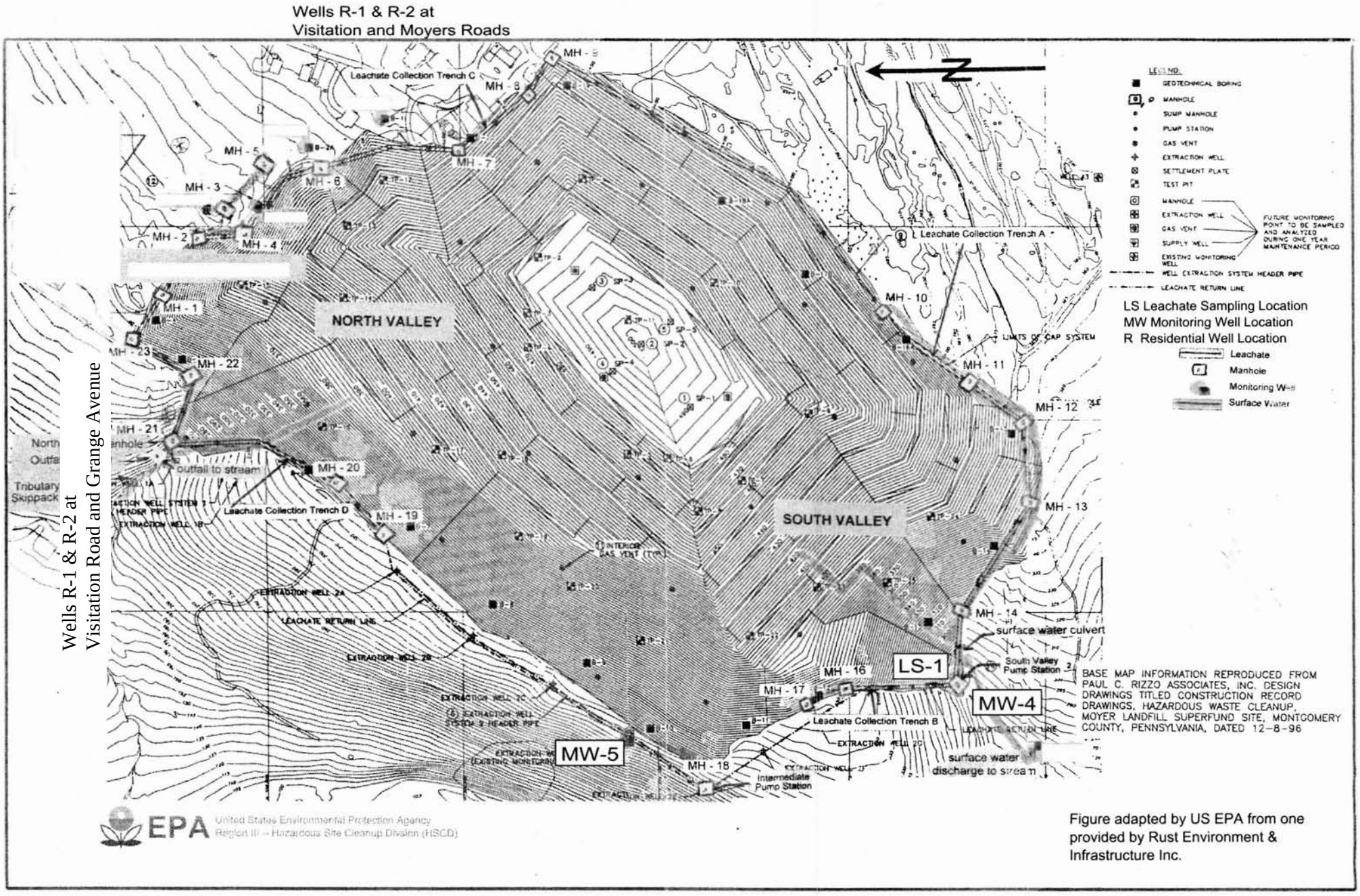

Figure 4 Moyer Landfill - Summa Canister and Well Locations

February 21, 2012 and February 28, 2012

Pennsylvania Department of Environmental Protection

Environmental Clean-Up & Brownfields

Attachment 1 Advertisement in the Times Herald

EPA PUBLIC NOTICE

U.S. Environmental Protection Agency Reviews Cleanup at Moyers Landfill Site

The U.S. Environmental Protection Agency (EPA) is conducting its second Five-Year Review of the **Moyers Landfill Superfund Site** located in Eagleville, Montgomery County. This review seeks to confirm that the cleanup conducted at the site, which included capping the landfill and collecting and properly disposing the leachate, continues to be protective of human health and the environment. A previous EPA review of the site conducted in 2007 confirmed the remedy was functioning as designed. Most recently, institutional controls (restrictions of future use) were put in place to ensure the continued, long-term protectiveness of the remedy.

What is an EPA Five-Year Review?

EPA inspects Superfund sites every five years to ensure that cleanups conducted remain fully protective of human health and the environment. These regular reviews, which are required by federal law when contaminants remain at a site, include:

- Inspection of the site and cleanup technologies;
- Review of monitoring data, operating data, and maintenance records, and
- Determination if any new regulatory requirements have been established since EPA's original cleanup decision was finalized.

When will EPA's Five-Year Review Report be available?

The Five-Year Review report will be finalized and made available online at **http://epa.gov/5yr** in June 2012.

For more information

There are several ways to review information on this site. The Administrative Record (AR), which includes EPA decision documents used for selecting the cleanup remedy, is available for public review at **www.epa.gov/arweb** and at the Lower Providence Township Building. You may also review the AR and additional site information at the following locations:

Lower Providence Township Building
100 Parkland Drive
Eagleville, PA 19403
Phone: (610) 539-8020

EPA Region 3 Public Reading Room
Attn: Paul Van Reed (3HS42)
1650 Arch Street, 6th floor
Philadelphia, PA 19103
Phone: (215) 814-3157 (Call to make an appointment)

You may also contact

David Polish
Community Involvement Coordinator
U.S. EPA Region 3 (3HS52)
1650 Arch Street
Philadelphia, PA 19103
Phone: (215) 814-3327 or (800) 553-2509
Email: polish.david@epa.gov

Sharon Fang
Remedial Project Manager
U.S. EPA Region 3 (3HS21)
1650 Arch Street
Philadelphia, PA 19103
Phone: (215) 814-3018
Email: fang.sharon@epa.gov

For comprehensive information on the site, please also visit:
www.epa.gov/reg3hwmd/super/sites/PAD980508766/index.htm