Explanation of Significant Differences

RICHARDSON HILL ROAD LANDFILL SUPERFUND SITE

Towns of Sidney and Masonville
Delaware County, New York

EPA Region 2 December 2016

INTRODUCTION

The purpose of this Explanation of Significant Differences (ESD) is to explain a change made by the U.S. Environmental Protection Agency (EPA) to the remedy selected for the Richardson Hill Road Landfill site (Site), located in the Towns of Sidney and Masonville, Delaware County, New York.

Under Section 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. Section 9617(c) (CERCLA or Superfund), and Section 300.435(c)(2)(i) of the National Oil and Hazardous Substances Contingency Plan (NCP), EPA is required to issue an ESD when, after issuance of a Record of Decision (ROD),[1] a significant, but not fundamental, change is made in either scope, performance or cost of a selected site remedy.

This ESD describes a significant change to the remedy selected in the 1997 ROD for the Site, as modified by a 2008 ESD.

Volatile organic compounds (VOCs) in groundwater, even at low levels, can migrate as vapors through the soil and into buildings. This process, which is called vapor intrusion, can result in unacceptable human exposures to VOCs inside occupied buildings. Although this pathway is currently incomplete at the Site because there are no occupied buildings on the landfill at the Site and subslab soil gas and indoor air vapor intrusion studies at nearby residences indicated that no actions are currently needed at these locations, it was concluded by EPA that vapor intrusion may be a concern for new construction in the vicinity of the landfill. Accordingly, EPA has determined that to ensure the protectiveness of the remedy, institutional controls (ICs)[2] are required to restrict new construction in this area unless there is an evaluation of the vapor intrusion pathway and appropriate mitigation, if necessary, is implemented. EPA will periodically communicate with local government offices, such as planning and zoning officials, notifying them of the ICs on the Site and requesting that EPA be contacted if a new structure is to be constructed on or in the vicinity of the landfill. The initial notification and the subsequent reminders constitute informational ICs.

If vapor intrusion is determined to be a concern, pre-construction mitigation (*i.e.,* vapor barrier) or post-construction sampling and the installation of a mitigation system, if necessary, may be required.

The modified remedy remains protective of human health and the environment.

SITE HISTORY, CONTAMINATION PROBLEMS AND SELECTED REMEDY

The Site includes an eight-acre landfill (which contains a former waste oil disposal pit approximately 25 feet (ft.) wide by 105 ft. long by 14 ft. deep), two disposal trenches (approximately 70 ft. by 70 ft.), a man-made surface water body called North Pond, a natural pond called South Pond and a portion of Herrick Hollow Creek. Groundwater underlying the landfill flows into South Pond. Surface water from the landfill drains into a marsh and South Pond through a drainage ditch. Water from North Pond drains through a series of beaver dams into Carr's Creek, a tributary to the Susquehanna River. Water from South Pond drains into Herrick Hollow Creek, which eventually flows into the Cannonsville Reservoir on the west branch of the Delaware River. The Cannonsville Reservoir is part

[1] A ROD documents EPA's remedy decision.

[2] ICs are non-engineered controls, such as property or groundwater use restrictions imposed by a property owner by recorded instrument or by a governmental body by law or regulatory activity for the purpose of reducing or eliminating the potential for human exposure to contamination and/or protect the integrity of a remedy.

of the Delaware watershed system, supplying drinking water to the New York City metropolitan area. There are numerous springs around the Site, some of which eventually discharge into wetlands.

The land on which the Richardson Hill Road Landfill is located was purchased by Devere Rosa, Jr. in 1964 for the purpose of operating a refuse disposal area. The owner was issued a permit from the New York State Department of Health (NYSDOH) to operate the landfill. In addition to municipal waste from the Town of Sidney, spent oil from the Scintilla Division of Bendix Corporation was disposed of at the landfill. While operating the Richardson Hill Road Landfill, the owner also disposed of wastes in the Sidney Landfill site,[3] located on the east side of Richardson Hill Road. According to the New York State Department of Environmental Conservation (NYSDEC) and NYSDOH, the Richardson Hill Road Landfill was poorly operated, with the improper compaction of waste, poor daily covering, no supervision, and uncontrolled access to the Site. Based on continuing violations at the landfill, NYSDOH sought to close it and waste disposal ceased in 1969.

Based upon the results of EPA- and NYSDEC-performed site investigations, the Site was listed on the Superfund National Priorities List on July 1, 1987.

On July 22, 1987, EPA entered into an Administrative Order on Consent (AOC) with Amphenol Corporation (Amphenol) and AlliedSignal, Inc. (Allied)[4] (formerly Bendix Corporation), requiring them to perform a remedial investigation and feasibility study (RI/FS) to determine the nature and extent of the contamination at and emanating from the Site and to identify and evaluate remedial alternatives.

In 1993, in response to a fish kill in South Pond attributed to the discharge of contaminants from a seep at the oil disposal pit, EPA entered into an AOC with Amphenol and Allied. The work performed included the excavation of approximately 2,200 cubic yards of contaminated sediments from South Pond, the installation of seep interceptor collection basins upgradient of South Pond, and the installation of a sediment trap weir system at the outlet of South Pond to prevent the downstream migration of contaminated sediments. In 1993, EPA also issued a Unilateral Administrative Order (UAO) to Amphenol and Allied. Pursuant to the UAO, they installed two whole-house supply water treatment systems for two affected properties.

Upon completion of the RI/FS, which also included an evaluation of the risk to human health and the environment, EPA signed a ROD on September 30, 1997, selecting a remedy for the Site. The selected remedy included the excavation of contaminated on-Site soil, excavation/dredging of contaminated sediment from South Pond and Herrick Hollow Creek downstream for approximately 2,400 ft., restoration of the wetlands, consolidation of the excavated/dredged waste materials, soil, and sediments, on- and/or off-Site disposal, on-Site disposal cell construction, installation of a landfill cap, as well as groundwater extraction (via a collection trench located immediately upgradient of South Pond and recovery extraction wells in the North Area near the North Pond) and treatment.

The ROD also states that the need for remediation in areas further downstream (Segments 13 to 9) would be evaluated based on an assessment of sediment, surface water and biological receptors over a 5-year time period subsequent to the completion of upstream remediation activities. Further remediation would be required if it was determined through monitoring that the remedial activities conducted upstream were not effective in addressing the ecological risk.

In 1998, Amphenol and Allied agreed to perform the design and implementation of the ROD remedy in a Consent Decree that was approved in 1999.

Between 2003 and 2004, contaminated soils located outside of the landfill footprint, polychlorinated biphenyls (PCB)-contaminated soils from the former waste oil pit, and PCB-contaminated sediments from South Pond, Herrick Hollow Creek, and the beaver ponds and areas downstream were excavated. The highly-contaminated soils were disposed of off-Site, the moderately contaminated soils were disposed of in a Toxic Substances Control Act-compliant cell that was constructed on-Site and the lesser contaminated soils and sediments were consolidated on top of the landfill prior to capping. In addition, a groundwater extraction trench located downgradient of the landfill and extraction wells located in the North Area were installed.

In 2004, it was determined that groundwater contamination located to the east and south of South Pond, which was originally believed to be attributable to the Sidney Landfill site, was more likely associated with the Site. This finding was documented in an ESD for the Sidney Landfill site dated September 2004.

A multilayered cap conforming to New York State requirements (6 NYCRR Part 360) was installed over the landfill in 2006.

During the design, in consideration of the possibility that the PCB-contaminated sediments in downstream areas would still need to be removed in the future after years of

[3] The Sidney Landfill site, also a National Priorities List site, has been remediated separately, and the construction is complete.

[4] Predecessor to Honeywell International, Inc.

monitoring, the option of removing these sediments concurrent with the removal of sediments in Segments 21 to 14 was evaluated. Based upon this evaluation, it was determined that if this approach was taken, not only would the potential benefits of the remedy be realized sooner, but cost savings associated with only one mobilization of equipment and the elimination of the long-term monitoring related to all of the contaminated sediments once they are removed, would also be realized. In addition, the Settling Defendants were willing to undertake the additional sediment removal work at that time. As a result, EPA and NYSDEC decided to remove the contaminated sediments in Segments 13 to 9 concurrently with the contaminated sediments in Segments 21 to 14. This decision was documented in a September 2008 ESD.

Because the groundwater management system was not adequately addressing the contamination located to the east of South Pond, a hydrogeologic investigation was conducted to assess the situation. Based upon the results of this investigation, another extraction well was installed and the water from it is being pumped intermittently and treated at the existing treatment facility. This change to the remedy was also documented in the 2008 ESD.

BASIS FOR THE DOCUMENT AND DESCRIPTION OF SIGNIFICANT DIFFERENCES

VOCs in groundwater, even at low levels, can migrate as vapors through the soil and into buildings. This process, which is called vapor intrusion, can result in unacceptable human exposures to VOCs inside occupied buildings. Although this pathway is currently incomplete at the landfill at the Site, and subslab soil gas and indoor air vapor intrusion studies at nearby residences indicated that no actions are currently needed at these locations, it was concluded by EPA that vapor intrusion may be a concern for new construction in the vicinity of the landfill. Accordingly, EPA has determined that to ensure the protectiveness of the remedy, ICs are required to restrict new construction in this area unless there is an evaluation of the vapor intrusion pathway and appropriate mitigation, if necessary, is implemented. EPA will periodically communicate directly with local government offices, such as planning and zoning departments and boards in the Towns of Masonville and Sidney, notifying them of the ICs on the Site and requesting that EPA be contacted if a new structure is to be constructed on or in the vicinity of the landfill. EPA will periodically send such letters as reminders.

If vapor intrusion is determined to be a concern, pre-construction mitigation (*e.g.,* a vapor barrier) or post-construction sampling and the installation of a mitigation system, if necessary, may be required.

This ESD serves to document EPA's determination to incorporate into the remedy informational ICs as outlined above.

The modified remedy remains protective of human health and the environment.

SUPPORT AGENCY COMMENTS

NYSDEC supports the implementation of the additional ICs outlined in this document.

FIVE-YEAR REVIEWS

Because hazardous substances, pollutants or contaminants remain at the Site which do not allow for unlimited use or unrestricted exposure, in accordance with 40 CFR 300.430 (f)(4)(ii), the remedial action for the Site shall be reviewed no less often than every five years. EPA will conduct another five-year review on or before July 2017.

AFFIRMATION OF STATUTORY DETERMINATIONS

EPA is issuing this ESD after consultation with NYSDEC. When implemented, the remedy, as modified by this ESD, will continue to be protective of human health and the environment, and will comply with federal and state requirements that are legally applicable or relevant and appropriate to the remedial action. The modified remedy is technically feasible, cost-effective and satisfies the statutory requirements of CERCLA by providing for a remedial action that has as a component a preference for treatment as a principal element and, therefore, permanently and significantly reduces the toxicity, mobility and volume of hazardous substances.

PUBLIC PARTICIPATION ACTIVITIES

Pursuant to NCP §300.825(a)(2), this ESD will become part of the Administrative Record file for the site. The Administrative Record for the remedial decisions related to the Site is available for public review at the following locations:

Sidney Memorial Public Library
8 River Street
Sidney, New York 13838
(607) 563-8021 or 1200

The Administrative Record file and other relevant reports and documents are also available for public review at EPA Region 2's office at the following location:

U.S. Environmental Protection Agency
290 Broadway, 18th Floor

New York, New York 10007-1866
(212) 637-3263

EPA is making this ESD available to the public to inform them of the change made to the remedy. Should there be any questions regarding this ESD, please contact:

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With the publication of this ESD, the public participation requirements set out in §300.435(c)(2)(i) of the NCP have been met.