UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

DATE: SEP 2 2 2008

SUBJECT: Explanation of Significant Differences for the Richardson Hill Road Landfill Superfund Site

FROM: Doug Garbarini, Chief
New York Remediation Branch

TO: George Pavlou, Acting Director
Emergency and Remedial Response Division

Attached is an Explanation of Significant Differences (ESD) for the Richardson Hill Road Landfill Superfund site (Site).

The 1997 Record of Decision (ROD) for the Site called for, among other things, the excavation and/or dredging of contaminated sediments from an on-site pond and all areas downstream for approximately 2,400 feet. The ROD also stated that the need for sediment remediation in areas further downstream would be evaluated based on an assessment of sediment, surface water, and biological receptors. In consideration of the possibility that the "further downstream" contaminated sediments would still need to be removed in the future after years of monitoring together with the cost savings associated with the elimination of the long-term monitoring related to all of the contaminated sediments once they are removed, the U.S. Environmental Protection Agency (EPA) and the New York State Department of Environmental Conservation (NYSDEC) decided to remove the additional downstream contaminated sediments concurrently with the upstream area, thereby eliminating this contingent component of the ROD remedy.

In addition, the selected remedy calls for groundwater extraction via a collection trench located immediately downgradient from the landfill, followed by treatment. Based upon the results of a supplemental hydrogeologic investigation, it has been determined that while the groundwater extraction trench that has been installed is capturing contamination emanating from the landfill, groundwater contamination located downgradient from the trench is only being marginally influenced by the trench. To address this contamination, the groundwater in this area will be extracted from a well and treated at the existing treatment facility. To prevent dewatering the nearby wetland, the groundwater will be extracted at a low rate and on an intermittent basis.

The attached ESD will authorize the noted modifications to the remedy.

A letter from NYSDEC concurring with the ESD is attached.

Please indicate your approval of the ESD by signing below.

If you have any questions related to the ESD, please call me at extension 4288.

Attachments

Approved:

George Pavlou, Acting Director
Emergency and Remedial Response Division

9/23/08
Date

500101

Explanation of Significant Differences

RICHARDSON HILL ROAD LANDFILL SITE

Towns of Sidney and Masonville
Delaware County, New York

EPA, Region 2 **September 2008**

INTRODUCTION

Section 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, and Section 300.435(c)(2)(i) of the National Oil and Hazardous Substances Pollution Contingency Plan require an explanation if, after the selection of a remedial action plan, a component of the action differs in any significant respect from the original action. Any such significant difference, and the reasons for such changes, must be published in an Explanation of Significant Differences (ESD).

The 1997 Record of Decision (ROD) for the Richardson Hill Road Landfill Site (Site) called for, among other things, the excavation and/or dredging of contaminated sediments from an on-Site pond and all areas downstream for approximately 2,400 feet (ft.). The ROD also stated that the need for sediment remediation in areas further downstream would be evaluated based on an assessment of sediment, surface water, and biological receptors.

The U.S. Environmental Protection Agency (EPA) and the New York State Department of Environmental Conservation (NYSDEC) decided to remove the "further downstream" contaminated sediments concurrently with the "upstream" contaminated sediments. This decision considered the possibility that the "further downstream" contaminated sediments would still need to be removed in the future after years of monitoring and the cost savings associated with the elimination of the long-term monitoring related to all of the contaminated sediments once they are removed.

The selected remedy also calls for groundwater extraction via a collection trench located immediately downgradient from the landfill, followed by treatment. Based upon the results of a hydrogeologic investigation, it has been determined that while the groundwater extraction trench is capturing contamination emanating from the landfill, groundwater contamination located downgradient from the trench is only being marginally influenced by the trench. To address this contamination, the groundwater in this area will be extracted from a well and treated at the existing treatment facility. To prevent dewatering the nearby wetland, the groundwater will be extracted at a low rate and on an intermittent basis.

The changes to the selected remedy are not considered by EPA or NYSDEC to be a fundamental alteration of the remedy selected in the 1997 ROD. The remedy modifications maintain the protectiveness of human health and the environment, and comply with federal and state requirements that were identified in the ROD.

This ESD will become part of the Administrative Record file for the Site. The entire Administrative Record for the Site, which includes the remedial investigation (RI) report, feasibility study (FS) report, ROD, this ESD, and other relevant documents, 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

Hours: Mon - Thurs, 9:00 A.M. - 9:00 P.M.;
Fri, 9:00 A.M. - 6:00 P.M.; Sat, 10:00 A.M. - 4:00 P.M;
and Sun, 1:00 P.M. - 4:00 P.M.
and

U.S. Environmental Protection Agency
290 Broadway, 18th Floor
New York, New York 10007
(212) 637-3263

Hours: Mon - Fri, 9:00 A.M. - 5:00 P.M.

SUMMARY OF SITE HISTORY, CONTAMINATION PROBLEMS, AND SELECTED REMEDY

The Site includes an 8-acre landfill (which contains a former waste oil disposal pit approximately 25 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 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 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 oils 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[1], located on the east side of Richardson Hill Road. According to 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 and AlliedSignal, Inc.[2] (formerly Bendix Corporation), requiring them to perform an 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 attributable to the seep of contaminants from the oil disposal pit, EPA entered into an AOC with Amphenol Corporation and AlliedSignal, Inc. and issued them a Unilateral Administrative Order. The work performed pursuant to these orders included the excavation of approximately 2,200 cubic yards (cu. yds.) of contaminated sediments from South Pond, the installation of seep interceptor collection basins upgradient of South Pond, installation of a sediment trap weir system at the outlet of South Pond to prevent the downstream migration of contaminated sediments, and the installation and maintenance of two whole-house supply water treatment systems for two affected properties.

Upon completion of the RI/FS, EPA signed a ROD on September 30, 1997, selecting a remedy for the Site. The selected remedy includes the excavation of contaminated on-Site soil, the excavation/dredging of contaminated sediment from South Pond and Herrick Hollow Creek downstream for approximately 2,400 ft, (Segments 21 to 14 on Figure below), restoration of wetlands, consolidation on- and/or off-Site disposal, on-Site disposal cell construction, installation of a landfill cap, and 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 stated that the need for remediation in areas further downstream (*i.e.*, 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 in Segments 13 to 9 if it was determined through monitoring that the remedial activities conducted upstream were not effective in addressing the ecological risk.

In 1998, Amphenol Corporation and Allied Signal, Inc. (Settling Defendants) agreed to perform the design and implementation of the remedy called for in the ROD. The remedial design commenced in February 1999 pursuant to a judicial Consent Decree. The Consent Decree was approved in June 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 down to Segment 9 were excavated. The

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

2 Predecessor to Honeywell International, Inc.

highly-contaminated soils were disposed of off-site, the moderately contaminated soils were disposed of in a Toxic Substances Control Act 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.

During the construction of the landfill cap, in late November 2004, as a result of significant rainfall, the sand drainage layer of the cap eroded onto Richardson Hill Road. A follow-up inspection raised concerns about increased turbidity levels and the appropriateness of the South Pond and Herrick Hollow Creek wetland restoration effort. Specifically, because vegetation had not yet been reestablished after the completion of the excavation of contaminated sediments from South Pond and Herrick Hollow Creek several weeks earlier, increased turbidity attributable to the storm water runoff flowing over the freshly-laid fine-particle soil was observed. Corrective actions were taken to stabilize the Site that winter. In addition, temporary restoration activities were performed in Herrick Hollow Creek[3].

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 dated September 2004.

A redesigned multilayered cap that conforms to the requirements of the 6 NYCRR Part 360 was installed over the landfill in 2006.

DESCRIPTION OF SIGNIFICANT DIFFERENCES AND THE BASIS FOR THOSE DIFFERENCES

The ROD calls for the excavation and/or dredging of sediments exceeding 1 milligram/kilogram of PCBs from South Pond and Herrick Hollow Creek downstream for approximately 2,400 ft. (Segments 21 to 14 on Figure below). The ROD also stated that the need for remediation in areas further downstream (i.e., Segments 13 to 9) would be evaluated based on an assessment of sediment, surface water, and biological receptors over the 5-year time period subsequent to the completion of upstream remediation activities. Further remediation would be required in Segments 13 to 9 if it was determined through monitoring that the remedial activities conducted upstream were not effective in addressing the ecological risk.

During the design investigation in 2002, in consideration of the possibility that the PCB-contaminated sediments in Segments 13 to 9 would still need to be removed in the future after years of 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.

Approximately 8,200 cu. yds. of PCB-contaminated sediment were removed from Segments 13 - 9. The estimated cost associated with this effort was $1 million. It is estimated that the annual cost saving associated with the elimination of the long-term monitoring related to all of the contaminated sediments once they are removed is $60,000 (the present value is approximately $850,000 for an estimated period of 30 years).

The ROD also calls for groundwater extraction via a collection trench located immediately upgradient of South Pond and recovery extraction wells in the North Area, followed by treatment. Beginning in 2006, the fate and transport of the groundwater contaminants found to the east and south of South Pond was investigated. The study (*Supplemental Hydrogeologic Investigation Report,* O'Brien & Gere, September 2008) concluded that although the extraction trench shows some influence in this area, the trench alone will not result in contaminant levels in this area reaching groundwater standards in a reasonable time frame. To address this contamination, the groundwater in this area will be extracted from a new well located southeast of the trench and treated at the existing treatment facility. To protect the nearby wetland from dewatering, the groundwater will be extracted at a low rate and on an intermittent basis.

SUPPORT AGENCY COMMENTS

NYSDEC supports the changes to the remedy.

[3] The restoration of Herrick Hollow Creek was completed in summer 2008.

AFFIRMATION OF STATUTORY DETERMINATIONS

Considering the new information that has been developed and the changes that have been made to the selected remedy, EPA and NYSDEC believe that the remedy, as modified, remains protective of human health and the environment, complies with federal and state requirements that are applicable or relevant and appropriate to this remedial action, and is cost-effective. In addition, the modified remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable for this Site.

FIVE-YEAR REVIEW

Since 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 September 2012.

PUBLIC PARTICIPATION ACTIVITIES

EPA and NYSDEC rely on public input to ensure that the concerns of the community are considered in selecting an effective remedy for each Superfund site. Should there be any questions regarding this ESD or the Site, please contact:

Young S. Chang
Project Manager
U.S. Environmental Protection Agency
290 Broadway, 20th Floor
New York, New York 10007-1866
Telephone: (212) 637-4253
Telefax: (212) 637-3966
e-mail: chang.young@epa.gov

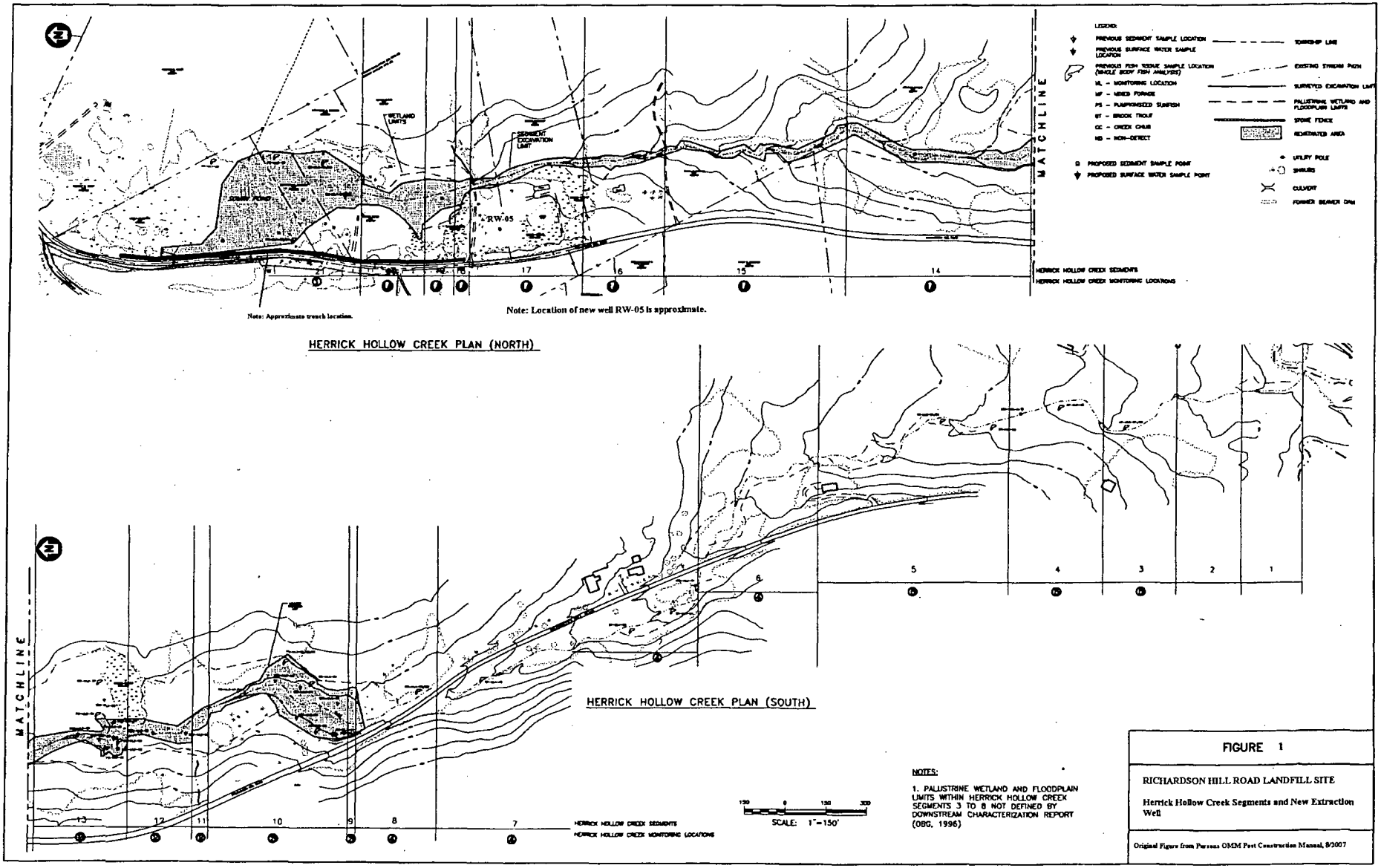

FIGURE 1

RICHARDSON HILL ROAD LANDFILL SITE

Herrick Hollow Creek Segments and New Extraction Well

Original Figure from Parsons OMM Post Construction Manual, 8/2007

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New York State Department of Environmental Conservation Division of
Environmental Remediation, 12th Floor
625 Broadway, Albany, New York 12233-7011
Phone: (518) 402-9706 • **FAX:** (518) 402-9020
Website: www.dec.ny.gov

Alexander B. Grannis
Commissioner

SEP 19 2008

Mr. George Pavlou
Acting Director
Emergency and Remedial Response Division
United States Environmental Protection Agency
Region II
290 Broadway, 19th Floor
New York, New York 10007

RE: Richardson Hill Road Landfill (RHRL)
New York State Site No. 4-13-008
Explanation of Significant Differences Concurrence

Dear Mr. Pavlou:

The New York State Department of Environmental Conservation (NYSDEC), in conjunction with the New York State Department of Health (NYSDOH), has reviewed the Explanation of Significant Differences (ESD) for the Richardson Hill Road Landfill Site No. 4-13-008, Town of Masonville, Delaware County, New York, and finds it acceptable.

If you have any questions, please contact Gerard Burke, project manager, at (518) 402-9814.

Sincerely,

Dale A. Desnoyers
Director
Division of Environmental Remediation

ec: C. Doroski, NYSDOH

500107

STATE OF NEW YORK
DEPARTMENT OF HEALTH
Flanigan Square 547 River Street Troy, New York 12180-2216

Richard F. Daines, M.D.
Commissioner

Wendy E. Saunders
Chief of Staff

August 8, 2008

Mr. Dale Desnoyers, Director
Division of Environmental Remediation
NYS Dept. of Environmental Conservation
625 Broadway, 12th Floor
Albany, New York 12233-7011

Re: **Explanation of Significant Differences**
Richardson Hill Road Landfill
Site #413008
Sidney & Masonville (T), Delaware County

Dear Mr. Desnoyers:

Staff reviewed the June 2008 Explanation of Significant Differences (ESD) from the September 1997 Record of Decision (ROD) for the Richardson Hill Road Landfill site in Sidney, Delaware County. The September 1997 ROD consisted of the excavation of contaminated soil from the existing landfill footprint and the dredging of sediments exceeding one (1) milligram/kilogram (mg/kg) from the South Pond, Beaver Pond and a 2,400 foot section of Herrick Hollow Creek channel. Additionally, a groundwater extraction trench was installed to intercept Poly Chlorinated Biphenyl (PCB) contaminated groundwater leaching from the landfill footprint and prevent the recontamination of these water bodies.

A June 2008 Supplemental Hydrogeologic Investigation Report prepared by the responsible party concluded that the extraction trench has shown some influence to the area downgradient of these water bodies but not enough to reduce the levels to NYSDEC Class GA standards in a reasonable timeframe. The June 2008 ESD consists of the installation of an extraction well connected to the existing treatment facility to increase the volume of PCB contaminated groundwater that is intercepted and prevent off-site migration. I understand the need to supplement the interceptor trench to prevent PCB contaminated groundwater from migrating off-site and therefore the need for an ESD to document it.

Based on this information, I believe this action is protective of public health and concur with the ESD. If you have any questions, please contact Mr. Joseph Crua at (518) 402-7860.

Sincerely,

Steven M. Bates, Assistant Director
Bureau of Environmental Exposure Investigation

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