Explanation of Significant Differences

RICHARDSON HILL ROAD LANDFILL SITE

Towns of Sidney and Masonville
Delaware County, New York

EPA, Region 2 **June 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. 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 "further downstream" contaminated sediments concurrently with the "upstream" contaminated sediments.

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 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 with respect to 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 consists of 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 the 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 July 1964, the Town of Sidney entered into a contract for the disposal of town wastes at the landfill, including spent oils from the Scintilla Division of Bendix Corporation. 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] (formally 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 and issued a Unilateral Administrative Order to Amphenol Corporation and AlliedSignal, Inc. The work performed pursuant to these orders 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 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.

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 feet (Segments 21 to 14 on the figure), 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) 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 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.

In 1998, Amphenol Corporation and Allied Signal, Inc. (the "Settling Defendants") agreed to perform the design and implementation of the remedy called for in the ROD. The remedial design commenced in February 1999 in connection with EPA's request for approval of this agreement, a judicial Consent Decree, by U.S. District Court. The Consent Decree was approved in June 1999.

From 2003-4, contaminated soils located outside of the landfill footprint, PCB-contaminated soils from the former waste oil pit, and PCB-contaminated sediments from South Pond, Herrick Hollow Creek, and the

[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.

beaver ponds down to Segment 9 were excavated. The highly-contaminated soils were disposed of off-site, the moderately contaminated soils were disposed of in an on-site TSCA cell that was constructed, 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]. A redesigned multilayered 6 NYCRR Part 360 cap was installed over the landfill in 2006.

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.

DESCRIPTION OF SIGNIFICANT DIFFERENCES AND THE BASIS FOR THOSE DIFFERENCES

The ROD called for the excavation and/or dredging of sediments exceeding 1 milligram/kilogram PCB from South Pond and Herrick Hollow Creek downstream for approximately 2,400 feet (Segments 21 to 14 on the figure). 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 and the cost savings associated with the elimination of the long-term monitoring related to all of the contaminated sediments once they are removed, as well as the willingness of the Settling Defendants to undertake the additional sediment removal work at this time, 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 cubic yards 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 ROD 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,* OB&G, June 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 timeframe. To address this contamination, the groundwater in this area will be extracted from a well 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 change to the remedy.

AFFIRMATION OF STATUTORY DETERMINATIONS

Considering the new information that has been developed and the change that has 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-

[3] It is anticipated that the restoration of Herrick Hollow Creek will be conducted in summer 2008.

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:

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This page saved for inserting a figure of Herrick Hollow Creek with Segment numbers.
Figure in file:
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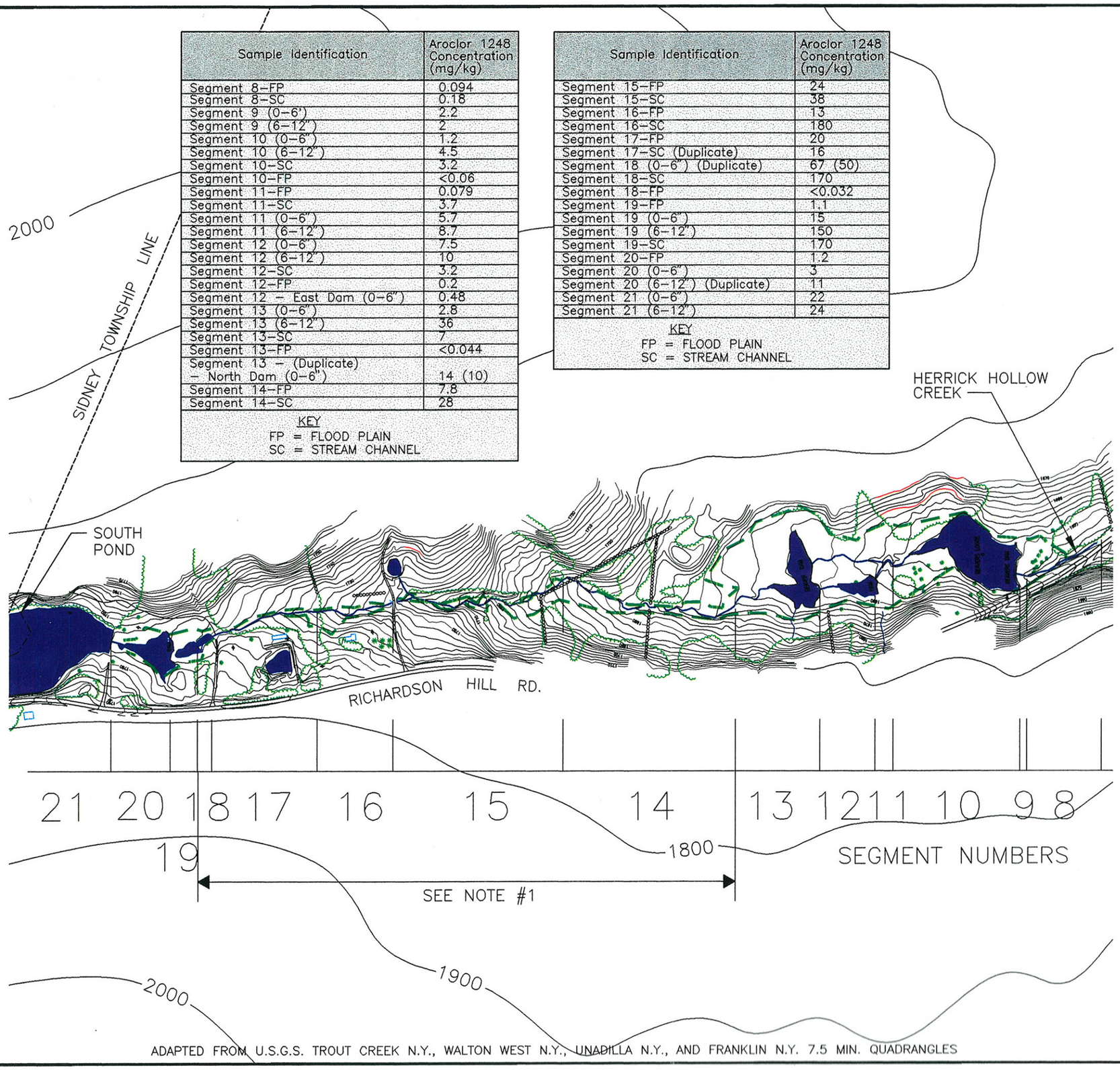
FIGURE 9B

Sample Identification	Aroclor 1248 Concentration (mg/kg)
Segment 8–FP	0.094
Segment 8–SC	0.18
Segment 9 (0–6')	2.2
Segment 9 (6–12")	2
Segment 10 (0–6")	1.2
Segment 10 (6–12")	4.5
Segment 10–SC	3.2
Segment 10–FP	<0.06
Segment 11–FP	0.079
Segment 11–SC	3.7
Segment 11 (0–6")	5.7
Segment 11 (6–12")	8.7
Segment 12 (0–6")	7.5
Segment 12 (6–12")	10
Segment 12–SC	3.2
Segment 12–FP	0.2
Segment 12 – East Dam (0–6")	0.48
Segment 13 (0–6")	2.8
Segment 13 (6–12")	36
Segment 13–SC	7
Segment 13–FP	<0.044
Segment 13 – (Duplicate) – North Dam (0–6")	14 (10)
Segment 14–FP	7.8
Segment 14–SC	28

KEY
FP = FLOOD PLAIN
SC = STREAM CHANNEL

Sample Identification	Aroclor 1248 Concentration (mg/kg)
Segment 15–FP	24
Segment 15–SC	38
Segment 16–FP	13
Segment 16–SC	180
Segment 17–FP	20
Segment 17–SC (Duplicate)	16
Segment 18 (0–6") (Duplicate)	67 (50)
Segment 18–SC	170
Segment 18–FP	<0.032
Segment 19–FP	1.1
Segment 19 (0–6")	15
Segment 19 (6–12")	150
Segment 19–SC	170
Segment 20–FP	1.2
Segment 20 (0–6")	3
Segment 20 (6–12") (Duplicate)	11
Segment 21 (0–6")	22
Segment 21 (6–12")	24

KEY
FP = FLOOD PLAIN
SC = STREAM CHANNEL



ADAPTED FROM U.S.G.S. TROUT CREEK N.Y., WALTON WEST N.Y., UNADILLA N.Y., AND FRANKLIN N.Y. 7.5 MIN. QUADRANGLES

REVISED 9/12/96

LEGEND

- TOWNSHIP LINE
- STREAM
- SEGMENT LOCATION
- PALUSTRINE WETLAND LIMITS
- FLOODPLAIN LIMITS
- STONE FENCE

NOTES:
#1 DESIGNATED AREA TO BE ADDRESSED

RICHARDSON HILL ROAD
MUNICIPAL LANDFILL SITE

PCB CONCENTRATIONS IN SEDIMENT

400 0 400
APPROXIMATE SCALE IN FEET

3729.028–001

O'BRIEN & GERE ENGINEERS, INC.