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RECORD OF DECISION

Pollution Abatement Services

City of Oswego, Oswego County, New York

United States Environmental Protection Agency
Region II
New York, New York
September 1997

DECLARATION FOR THE RECORD OF DECISION

SITE NAME AND LOCATION

Pollution Abatement Services

City of Oswego, Oswego County, New York

STATEMENT OF BASIS AND PURPOSE

This Record of Decision (ROD) documents the U.S. Environmental Protection Agency's (EPA's) selection of a remedial action to address the polychlorinated biphenyl (PCB)-contaminated sediments in the wetlands and creeks in the vicinity of the Pollution Abatement Services (PAS) Superfund site, in accordance with the requirements of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (CERCLA), 42 U.S.C. §9601 et seq. and to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300. This decision document explains the factual and legal basis for selecting the remedy for the site. The attached index (Appendix III) identifies the items that comprise the Administrative Record upon which the selection of the remedial action is based.

The New York State Department of Environmental Conservation (NYSDEC) has been consulted on the planned remedial action in accordance with CERCLA §121(f), 42 U.S.C. §9621(f), and it concurs with the selected remedy (see Appendix IV).

ASSESSMENT OF THE SITE

The levels of PCBs that are present in the sediments in the depositional areas of White and Wine Creeks adjacent to the site do not pose a significant human health risk. The levels of PCBs that are present in the sediments in the depositional areas of White Creek in the vicinity of the site may pose an unacceptable risk to ecological receptors that may use the creek and adjacent wetlands as foraging areas.

DESCRIPTION OF THE SELECTED REMEDY

The selected remedial action represents the fourth remedial phase or operable unit at the PAS site. The first operable unit dealt with removal

actions taken from 1973 to 1982 by EPA and NYSDEC. The remedy for the second operable unit, which involved the containment of the landfill, was described in a ROD issued in 1984. A ROD for the third operable unit, issued in 1993, defined a remedy for contamination found in the groundwater outside of the containment system.

The selected remedy for the fourth operable unit will involve no further action with long-term monitoring. While the other remedial alternatives that were evaluated, namely, in-place containment and excavation, would actively address the PCB-contaminated sediments, they would significantly disturb productive and diverse wetland habitats located in the vicinity of the site. Therefore, as the risk levels are relatively low and PCB sediment concentrations appear to be declining over time, the no further action with long-term monitoring alternative appears to be the most appropriate remedial option at this time.

Because the selected alternative may result in sediment contamination concentrations remaining above ecologically protective levels, long-term monitoring (including biota sampling) results will be used to assess this threat on a periodic basis. If justified by this assessment, remedial actions may be implemented to address the sediment contamination.

DECLARATION OF STATUTORY DETERMINATIONS

The selected remedy meets the requirements for remedial actions set forth in CERCLA §121, 42 U.S.C. §9621.

EPA has determined that no further physical construction is necessary at this site; therefore, the site now qualifies for inclusion on the *Construction Completion List.*

Because hazardous substances will remain on-site, the site is subject to five-year reviews. Long-term monitoring results will be assessed for this remedy during the five-year reviews related to the other operable units at the site.

Jeanne M. Fox
Regional Administrator

9/30/97
Date

RECORD OF DECISION FACT SHEET
EPA REGION II

Site:

Site name: Pollution Abatement Services

Site location: Oswego, Oswego County, New York

HRS score: 70.80

Listed on the NPL: September 1983

Record of Decision:

Date signed: September 30, 1997

Selected remedy: No Further Action with Long-Term Monitoring

Capital Cost: $0

Construction Completion: N/A

Annual O & M Cost: $20,500

Present-Worth Cost: $254,400 (7% discount rate for 30 years)

Lead:

Site is enforcement lead - EPA is the lead agency

Primary Contact: Patricia Simmons, Project Manager, Central New York Remediation Section (212) 637-3865

Secondary Contact: Joel Singerman, Chief, Central New York Remediation Section

Main PRPs: General Motors Corporation, Niagara Mohawk Power Corporation, and Alcan Aluminum Corporation

Waste:

Waste type: PCBs

Waste origin: Hazardous waste

Contaminated medium: Sediments

RECORD OF DECISION

DECISION SUMMARY

Pollution Abatement Services

City of Oswego, Oswego County, New York

United States Environmental Protection Agency
Region II
New York, New York
September 1997

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ATTACHMENTS

SITE NAME, LOCATION AND DESCRIPTION

The Pollution Abatement Services (PAS) site, located on 15 acres near the eastern edge of the City of Oswego, New York, is bounded on the south by East Seneca Street, and on the east, north, and west by wetlands formed along the stream channels of White and Wine Creeks (see Figure 1). Just to the north (downstream) of the PAS site is the confluence of White and Wine Creeks. Wine Creek flows approximately 1,800 feet beyond the confluence (northward) to a wetland adjacent to the community of Smith's Beach, and then into Lake Ontario. Prior to passing through the PAS site, White and Wine Creeks originate in and flow through farmland to the south. Both White and Wine Creeks are proximate to the East Seneca Street Dump (also referred to and operated as the Oswego County Landfill), and White Creek is proximate to the Niagara Mohawk Fire Training School. The Oswego Castings site is upstream of the wetland adjacent to Smith's Beach (see Figure 2).

The area between the PAS site and Lake Ontario (to the north) is mostly undeveloped and currently includes three land uses. These uses (from west to east) include a cemetery, a wetland, and a residential community. The residential community, Smith's Beach, consists of approximately 25 dwellings and is located on the shore of Lake Ontario, about 1/2 mile north of the PAS site. A public water supply is available in Smith's Beach.

SITE HISTORY AND ENFORCEMENT ACTIVITIES

The PAS facility, a high-temperature, liquid chemical waste, incineration facility, operated from 1970 through 1977. Beginning in 1973, a series of incidents, including liquid waste spills and the overflow of liquid wastes from lagoons into White Creek, led to the involvement of the Environmental Protection Agency (EPA) and New York State Department of Environmental Conservation (NYSDEC) at the site. Response actions taken from 1973 to 1982 by EPA, NYSDEC, and the Coast Guard resulted in an oil spill cleanup, the removal of the incineration facilities, drummed wastes, bulk liquid wastes, and contaminated soils and the closure of two on-site lagoons. In 1981, the PAS site, which was ranked number seven on the original National Priorities List (NPL), was selected as one of the first sites in the nation to receive the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. §9601 *et seq.* (CERCLA) Trust Fund monies for cleanup actions.

From 1982 to 1984, NYSDEC performed a *Site Investigation and Remedial Alternatives Evaluation* of the PAS site which was the initial Remedial Investigation/Feasibility Study (RI/FS)conducted at the site. Based on the results of this study, EPA signed a Record of Decision (ROD) in 1984, which specified the following remedial actions: limited excavation and off-site disposal of contaminated materials, installation of a perimeter slurry wall, site grading and capping in accordance with Resource Conservation and Recovery Act (RCRA) requirements, installation of a leachate collection and treatment system, and groundwater monitoring. NYSDEC implemented the remedial actions identified in the ROD, with the exception of the on-site treatment system. Rather than installing an on-site treatment system, the leachate was collected by NYSDEC from 1986 through 1991 and transported off site to an approved RCRA treatment and disposal facility.

In October 1991, EPA and a group of potentially responsible parties (PRPs) entered into a groundwater (leachate) removal Administrative Order on Consent (AOC). This AOC required routine removal of leachate from within the containment system. This AOC was extended by a second AOC entered into in 1994. The extracted leachate (approximately 20,000 gallons every two weeks) is currently transported to an approved RCRA treatment, storage, and disposal facility.

From 1984 to 1986, NYSDEC performed an environmental assessment of the area in the vicinity of the PAS site, which included White and Wine Creeks. Based on the results of the environmental assessment, NYSDEC determined that no remediation of the creeks was required. The long-term monitoring program, which was commenced in 1989 by NYSDEC, includes routine monitoring of the groundwater, and sediments in the vicinity of the PAS site.

The results of soil gas, groundwater sampling, and down-hole camera investigations of the existing monitoring wells at the site, conducted between 1987 and 1990, indicated the presence of VOC contamination in the groundwater outside the slurry wall containment system.

In September 1990, an AOC was entered into between EPA and a group of PRPs to conduct a supplemental RI/FS to evaluate the integrity of the existing containment system at the site, to determine the nature, extent, and source of contamination and any threat to the public health or the environment caused by the release of hazardous substances outside the containment system, and to identify and evaluate remedial alternatives. The supplemental RI concluded that the contamination that was detected

in the groundwater outside the containment system was attributable to insufficient leachate removal from within the containment system (i.e., there had been an outward hydraulic gradient through the slurry wall).

Based upon the results of the supplemental RI/FS, EPA signed a ROD on December 29, 1993. The 1993 ROD incorporated all of the existing components of the 1984 ROD, as well as, several additional components. The selected remedy, as modified by a 1996 Explanation of Significant Differences (ESD) (described further below) includes: 1) enhancing the present source control system by optimizing the leachate extraction rate and other operating parameters in order to achieve, to the degree practicable, inward horizontal gradients in the overburden and upward vertical gradients from the bedrock toward the containment system; 2) off-site treatment of the extracted leachate; 3) connecting downgradient residents in the Smith's Beach area, who were using residential wells, to the public water supply to ensure that potential future exposure to contaminants in the bedrock groundwater does not occur; and 4) institutional controls on groundwater usage through deed restrictions at the PAS site and downgradient from the site to and including the Smith's Beach area.

The 1993 ROD also called for several investigations related to the enhancement of the source control system. In addition, since there was some uncertainty related to the source of the polychlorinated biphenyl (PCB) contamination detected in the sediments in the adjacent wetlands and White and Wine Creeks, and the source of pesticides detected in the surface water of Wine Creek[1], the ROD called for a study to determine the sources of PCB and pesticide contamination.

In July 1994, an AOC was entered into by EPA and a group of PRPs to conduct a supplemental pre-remedial design study (SPRDS) (which was completed in 1996) related to the investigations called for in the 1993 ROD. In September 1994, an AOC was entered into between EPA and a group of PRPs to extend the routine groundwater (leachate) removal called for in the 1991 AOC, and, among other things, to connect down-gradient residents in the Smith's Beach area, who were using residential wells, to the public water supply.

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[1] PCBs were not detected in the surface water located adjacent to the site and pesticides were not detected in the sediments located adjacent to the site.

In September 1996, an ESD was issued. The ESD explained the results of the additional investigations called for in the 1993 ROD, and modified the contingent remedy for the treatment of the groundwater (leachate) to provide for continued off-site treatment and disposal.

On September 26, 1997, EPA and the PRPs executed a Consent Decree for the performance of the remaining components of the 1993 ROD.

Based upon the results of the 1996 SPRDS, a Focused Feasibility Study (FFS) was completed in June 1996 to identify and evaluate remedial alternatives for the PCB-impacted sediments in the vicinity of the PAS site.

HIGHLIGHTS OF COMMUNITY PARTICIPATION

The FFS report and the Proposed Plan for the site were released to the public for comment on August 22, 1997. These documents were made available to the public in the administrative record file at the EPA Docket Room in Region II, New York and the information repository at the Oswego City Hall. The notice of availability for the above-referenced documents was published in the *Oswego Palladium Times* on August 22, 1997. The public comment period related to these documents was held from August 22, 1997 to September 21, 1997.

On September 11, 1997, EPA and NYSDEC conducted a public meeting at Oswego City Hall to inform local officials and interested citizens about the Superfund process, to review current and planned remedial activities at the site, to discuss the Proposed Plan, to receive comments on the Proposed Plan, and to respond to questions from area residents and other interested parties. Public interest related to the fourth operable unit for the site is low. No written comments were submitted during the public comment period and only two people attended the public meeting. Responses to questions asked at the public meeting are included in the Responsiveness Summary (see Appendix V).

SCOPE AND ROLE OF OPERABLE UNIT

The primary objective of this action is to minimize any potential human health and ecological impacts related to the exposure to contamination in the creeks and wetlands adjacent to the site.

SUMMARY OF SITE CHARACTERISTICS

The supplemental RI and the SPRDS investigated the PCB contamination in the sediments in the adjacent wetlands and White and Wine Creeks, and the pesticide contamination in the surface water of Wine Creek (see Figure 1).

The results of supplemental RI and the SPRDS indicate that PCBs are present in the sediments in both creeks, upstream, adjacent to, and downstream of the PAS site. Total PCB concentrations detected range from 0.014 to 190 milligrams per kilogram (mg/kg), with the highest concentration being detected upstream of the PAS site. Only four of the 36 sediment samples collected in the vicinity of the site showed PCB concentrations exceeding 1 mg/kg[2] (the maximum concentration was 11.4 mg/kg; all five of these samples were from White Creek. The only other sample which exceeded 1 mg/kg was White 1A, which is located upstream of the PAS site and adjacent to the East Seneca Street Dump. (See Table 1.)

An analysis of the long-term monitoring sediment data, collected between 1991 and 1996, revealed that there has been an overall decline in PCB concentrations in the creeks. The decline in the PCB levels over time is believed to be due to natural processes, which may include the deposition of clean sediments over contaminated sediments and/or the downstream migration and subsequent dilution of contaminated sediments. A summary of the sediment sampling results is provided in Table 2.

Trace levels of pesticides, including methoxychlor, endrin, ketone, 4,4'-DDE, and 4,4'-DDT were detected in upstream White Creek sediment samples, but not in sediment samples collected adjacent to the site[3]. During the Phase II SPRDS, trace levels of dieldrin, beta-BHC, 4,4'-DDE, and 4,4'-DDT were detected in Wine Creek sediment samples collected upstream and adjacent to the site. Dieldrin and 4,4'-DDE were detected (at trace levels) in three of the six surface water samples collected from Wine Creek upstream and adjacent to the site, and it was found that pesticides were generally absent from the surface water in White Creek adjacent to the site.

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[2] NYSDEC's *Technical Guidance for Screening Contaminated Sediments.*

[3] See the 1993 Supplemental Remedial Investigation Report.

Based upon the above results, the SPRDS concluded that, while it was a source of PCB contamination before the construction of the containment facility in 1986, the PAS site is not a present source of PCB contamination in the sediments in the adjacent wetlands and Wine and White Creeks[4]. The SPRDS also concluded that the PAS site is not the source of the pesticides in the surface water of Wine Creek. This conclusion is supported by the historical presence of pesticides, in the surface water and sediment in Wine Creek upstream of the PAS site, at greater concentrations than those found adjacent or downstream of the site.

SUMMARY OF SITE RISKS

Based upon the results of the Supplemental RI and SPRDS, a baseline risk assessment was conducted to estimate the risks associated with current and future site conditions. The baseline risk assessment estimates the human health and ecological risk which could result from the contamination at the site, if no remedial action were taken.

Human Health Risk Assessment

A four-step process is utilized for assessing site-related human health risks for a reasonable maximum exposure scenario: *Hazard Identification*--identifies the contaminants of concern at the site based on several factors such as toxicity, frequency of occurrence, and concentration. *Exposure Assessment*--estimates the magnitude of actual and/or potential human exposures, the frequency and duration of these exposures, and the pathways (e.g., ingesting contaminated well-water) by which humans are potentially exposed. *Toxicity Assessment*--determines the types of adverse health effects associated with chemical exposures, and the relationship between magnitude of exposure (dose) and severity of adverse effects (response). *Risk Characterization*--summarizes and combines outputs of the exposure and toxicity assessments to provide a quantitative assessment of site-related risks.

PCBs, the contaminant of concern in the sediments, are known to cause cancer in laboratory animals and are suspected to be human

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[4] The SPRDS also identified two additional potential sources of PCBs in the sediments in the wetlands and creeks in the vicinity of the PAS site—the East Seneca Street Dump and the Niagara Mohawk Fire Training School (see Figure 2). The State of New York is responsible for overseeing activities at these non-NPL sites.

carcinogens. The baseline risk assessment evaluated the health effects which could result from exposure to PCBs as a result of ingestion of fish and sediments and dermal contact with the sediments. The receptor population evaluated included resident children and adults.

Current federal guidelines for acceptable exposures are an individual lifetime excess carcinogenic risk in the range of 10^{-4} to 10^{-6} (e.g., a one-in-ten-thousand to a one-in-one-million excess cancer risk) and a maximum health Hazard Index (which reflects noncarcinogenic effects for a human receptor) equal to 1.0. (A Hazard Index greater than 1.0 indicates a potential for noncarcinogenic health effects.)

All of the carcinogenic risks calculated were within the acceptable cancer risk range. The results of the baseline risk assessment indicate that sediment ingestion and dermal contact represent a total cancer risk of 1.4×10^{-6} for adults and 8.8×10^{-6} for children.

Concerning the noncarcinogenic risks, the results of the baseline risk assessment indicate that the total Hazard Index for exposure to PCB-contaminated sediments is 0.23 and 1.08 for adults and children, respectively. A Hazard Index less than 1.0 indicates that adverse, noncarcinogenic health effects from such exposures are unlikely. The greater the Hazard Index above 1.0, the greater the level of concern. Since the Hazard Index value of 1.08 for children is only minimally above the target Hazard Index value of 1.0, adverse health effects are not likely to occur. (A summary of the results of the baseline human health risk assessment is provided in Tables 3 and 4.)

Ecological Risk Assessment

A four-step process is utilized for assessing site-related ecological risks for a reasonable maximum exposure scenario: *Problem Formulation*--a qualitative evaluation of contaminant release, migration, and fate; identification of contaminants of concern, receptors, exposure pathways, and known ecological effects of the contaminants; and selection of endpoints for further study. *Exposure Assessment*--a quantitative evaluation of contaminant release, migration, and fate; characterization of exposure pathways and receptors; and measurement or estimation of exposure point concentrations. *Ecological Effects Assessment*--literature reviews, field studies, and toxicity tests, linking contaminant concentrations to effects on ecological receptors. *Risk Characterization*--measurement or estimation of both current and future adverse effects.

The ecological risk assessment began with evaluating the PCB contamination present in the vicinity of the site in conjunction with the site-specific biological species/habitat information. A qualitative field survey and habitat characterization of the PAS site identified potential on-site habitats of concern—a grassy field overlying the capped area of the landfill and two wetland habitats (White Creek stream run and the White Creek ponded marsh).

Following a biological characterization of the resident species associated with the site, a list was developed for the purpose of assessing actual or potential risks that may accrue to these receptors (and other similar species) when exposed to site-related contaminants. Consideration was given to the economic and/or cultural value of species, statutory concerns (e.g., threatened or endangered status), and representation of different species feeding levels, habitats, and foraging areas. The selected receptor list consisted of the short tail shrew and mink (as terrestrial fauna), and the mink, green-backed heron, and spring peeper (as organisms dependent upon the aquatic environment, i.e., surface water and sediment). In the qualitative ecological assessment, literature-based values, indicative of contaminant concentrations that are known to produce adverse effects to the receptors, were used to screen the affected site media. Individual toxicity endpoints, such as survival, reproductive effects, and growth impacts were considered.

The qualitative ecological assessment found that the higher level aquatic and terrestrial species may be at risk due to the potential for PCBs to bioaccumulate. Adverse effects related to contaminant toxicity may be occurring at the site. As PCBs bioaccumulate, affected aquatic invertebrates may be posing a risk to higher trophic level species who use them as a food source. The potential for transmitting PCB contamination through the food chain is present at the site, as PCBs have been detected in fish (i.e., the fathead minnow, a resident species). Detected sediment levels are within the range of values reported to cause the green-backed heron reproductive impairment and mortality, via their diet. The shrew, typifying small mammals at the site, is expected to have relatively low exposures to sediments. While the low exposure may not present a significant adverse health risk to the shrew, those animals that feed on the shrew (e.g., mink), would be expected to accumulate PCBs in their tissue. Reproduction or survival of these higher forms could be impacted via this PCB transfer. Based upon the results of the qualitative ecological assessment, a potentially

significant impact may occur to mink if present at the site because of their sensitivity to PCBs.

In summary, 1) the levels of PCBs that are present in sediments in the depositional areas of Wine Creek in the vicinity of the site do not pose a significant human health or ecological risk; 2) the levels of PCBs that are present in the sediments in the depositional areas of White Creek in the vicinity of the site do not pose a significant human health risk; 3) the levels of PCBs that are present in the sediments in the depositional areas of White Creek in the vicinity of the site may pose an unacceptable risk to ecological receptors, as represented by the green-backed heron and mink, that might use the creek and adjacent wetlands as foraging areas; and 4) while the PAS site was a source of PCB contamination before the construction of the containment facility, at present, there are several potential current sources of PCB contamination located upstream of the site.

REMEDIAL ACTION OBJECTIVES

Remedial action objectives are specific goals to protect human health and the environment. These objectives are based on available information and standards such as applicable or relevant and appropriate requirements (ARARs) and risk-based levels established in the risk assessment.

In order to address the PCB contamination that is present in the sediments in White Creek and adjacent wetlands, the following remedial action objective has been established:

- minimize exposure of fish and wildlife to PCB-contaminated sediments in White Creek and adjacent wetlands.

DESCRIPTION OF REMEDIAL ACTION ALTERNATIVES

CERCLA §121(b)(1), 42 U.S.C. §9621(b)(1), mandates that a remedial action must be protective of human health and the environment, cost-effective, and utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. Section 121(b)(1) also establishes a preference for remedial actions which employ, as a principal element, treatment to permanently and significantly reduce the volume, toxicity, or mobility of

the hazardous substances, pollutants and contaminants at a site. CERCLA §121(d), 42 U.S.C. §9621(d), further specifies that a remedial action must attain a level or standard of control of the hazardous substances, pollutants, and contaminants, which at least attains ARARs under federal and state laws, unless a waiver can be justified pursuant to CERCLA §121(d)(4), 42 U.S.C. §9621(d)(4).

Since residual PCBs from the PAS site may remain in the sediments in the vicinity of the site and, therefore, may act as a continuing source of contamination, an FFS was conducted to identify and evaluate remedial alternatives to address the PCB-contaminated sediments. This ROD evaluates, in detail, three remedial alternatives for addressing the PCB-contaminated sediments associated with the PAS site.

The present-worth costs are calculated using a discount rate of 7 percent and a 30-year time interval. The time to implement reflects only the time required to construct or implement the remedy and does not include the time required to design the remedy, negotiate the performance of the remedy with the responsible parties, or procure contracts for design and construction.

The remedial alternatives are:

Alternative 1 - No Further Action with Long-Term Monitoring

Capital Cost:	$0
Annual Operation & Maintenance Cost:	$20,500
Present Worth Cost:	$254,400
Estimated Construction Time:	0 months

The Superfund program requires that the "no-action" alternative be considered as a baseline for comparison with the other alternatives. The no-action remedial alternative does not include any physical remedial measures that address the problem of PCB-contaminated sediments. This alternative would, however, include annual, long-term monitoring of PCB levels in the sediments and biota in White and Wine Creeks and the adjacent wetlands in the vicinity of the site.

In light of the fact that this alternative may result in sediment contamination concentrations remaining at levels that may not be

ecologically protective, long-term monitoring results would be used to assess this threat on a periodic basis. If justified by this assessment, remedial actions may be implemented to address these sediments.

Alternative 2 - Stream Channel Relocation and In-Place Containment

Capital Cost:	$677,200
Annual Operation & Maintenance Cost:	$30,000
Present Worth Cost:	$1,121,600
Estimated Construction Time:	1 year

This alternative involves the construction of a one-foot vegetated, soil cover over depositional areas where sediments in White Creek in the vicinity of the site exceed 1 mg/kg PCBs. Also included is the relocation of a portion of White Creek where periodic flooding and scouring would make constructing a soil cover infeasible. The new channel would be rip-rapped to prevent erosion.

Implementation of this alternative would require clearing and grubbing activities, construction of temporary access roads and staging areas, and implementation of soil erosion and sediment controls.

Once the construction activities are completed, maintenance of the soil cover and new stream channel would be necessary on a routine basis. Maintenance of the soil cover would include long-term routine inspection and repair, and re-vegetation, as necessary. Similarly, long-term routine inspection of the stream channel would be conducted; any severe stream bank erosion would have to be addressed.

The implementation of these activities would result in adverse impacts to the existing wetland, upland habitats and biota. Long-term alteration of vegetated habitats may decrease the value of a particular area by reducing wetland functions. Disturbances in wetland habitats may also allow invasive plant species with relatively low wildlife value to colonize affected wetlands and establish monocultures, thereby reducing plant species diversity and eliminating plant species with higher wildlife value. Capping may alter the water depth and hydrology of the wetland which may result in changes to the plant and animal communities in the wetland. Thus, wetland mitigation for this alternative would likely require some combination of off-site locations or on-site locations

outside of the remediated area to replace the lost wetland functions. Further, the restoration of the forested wetland and scrub-shrub wetland (dominated by willow and alder) may require a time frame of 35-50 years, if at all, as the complete success of any restoration process is uncertain. Mitigation would be conducted for any wetlands impacted by remedial activities. The mitigated wetlands would require routine inspection for several years to ensure adequate survival of the planted vegetation. Replanting would be performed, if necessary.

Long-term monitoring would be conducted to make sure that there are no releases from the contained PCB-contaminated sediments.

Alternative 3 - Sediment Excavation

Capital Cost:	$1,022,800
Annual Operation & Maintenance Cost:	$15,000
Present Worth Cost:	$1,410,000
Estimated Construction Time:	1 year

This alternative involves the excavation of sediments exceeding 1 mg/kg PCBs in White Creek in the depositional areas in the vicinity of the site. It is estimated that 6,500 cubic yards of PCB-contaminated sediments would be removed. Clean material would be used as backfill in the excavated areas. The excavated sediments would be dewatered, as necessary, prior to being sent off-site for treatment/disposal.

Implementation of this alternative would require clearing and grubbing activities, construction of temporary access roads and staging areas, and implementation of soil erosion and sediment controls.

The implementation of these activities would result in adverse impacts to the existing wetland, upland habitats and biota. Long-term alteration of vegetated habitats may decrease the value of a particular area by reducing wetland functions. Disturbances in wetland habitats may also allow invasive plant species with relatively low wildlife value to colonize affected wetlands and establish monocultures, thereby reducing plant species diversity and eliminating plant species with higher wildlife value.

SUMMARY OF COMPARATIVE ANALYSIS OF ALTERNATIVES

In selecting a remedy, EPA considered the factors set out in CERCLA §121, 42 U.S.C. §9621, by conducting a detailed analysis of the viable remedial alternatives pursuant to the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300 (NCP), 40 CFR §300.430(e)(9) and OSWER Directive 9355.3-01. The detailed analysis consisted of an assessment of the individual alternatives against each of nine evaluation criteria and a comparative analysis focusing upon the relative performance of each alternative against those criteria.

The following "threshold" criteria are the most important and must be satisfied by any alternative in order to be eligible for selection:

1. *Overall protection of human health and the environment* addresses whether or not a remedy provides adequate protection and describes how risks posed through each exposure pathway (based on a reasonable maximum exposure scenario) are eliminated, reduced, or controlled through treatment, engineering controls, or institutional controls.

2. *Compliance with ARARs* addresses whether or not a remedy would meet all of the applicable (legally enforceable), or relevant and appropriate (pertaining to situations sufficiently similar to those encountered at a Superfund site such that their use is well suited to the site) requirements of federal and state environmental statutes and requirements or provide grounds for invoking a waiver.

The following "primary balancing" criteria are used to make comparisons and to identify the major tradeoffs between alternatives:

3. *Long-term effectiveness and permanence* refer to the ability of a remedy to maintain reliable protection of human health and the environment over time, once cleanup goals have been met. It also addresses the magnitude and effectiveness of the measures that may be required to manage the risk posed by treatment residuals and/or untreated wastes.

4. *Reduction of toxicity, mobility, or volume via treatment* refers to a remedial technology's expected ability to reduce the toxicity, mobility, or volume of hazardous substances, pollutants or contaminants at the site.

5. *Short-term effectiveness* addresses the period of time needed to achieve protection and any adverse impacts on human health and the environment that may be posed during the construction and implementation periods until cleanup goals are achieved.

6. *Implementability* refers to the technical and administrative feasibility of a remedy, including the availability of materials and services needed.

7. *Cost* includes estimated capital and operation and maintenance costs, and the present-worth costs.

The following "modifying" criteria are considered fully after the formal public comment period on the Proposed Plan is complete:

8. *State acceptance* indicates whether, based on its review of the FFS report and the Proposed Plan, the State supports, opposes, and/or has identified any reservations with the selected alternative.

9. *Community acceptance* refers to the public's general response to the alternatives described in the Proposed Plan and the FFS report. Factors of community acceptance to be discussed include support, reservation, and opposition by the community.

The following is comparative analysis of the remedial alternatives based upon the evaluation criteria noted above.

- Overall Protection of Human Health and the Environment

While Alternative 1 (no further action) would not actively address the potential ecological risks posed by the contaminated sediments in White Creek, these risks appear to be relatively low. In addition, the PCB-contaminated sediments do not pose a significant human health risk. PCB levels in the sediments in White Creek appear to be declining over time, this decline is believed to be caused by the deposition of clean sediments, and/or the downstream migration and subsequent dilution of contaminated sediments. Despite the deposition of clean sediments, and/or the downstream migration, and subsequent dilution of contaminated sediments, there is the potential for this area to become recontaminated by the transport of PCB-contaminated sediments from known upstream sources.

Although Alternatives 2 and 3 would provide lower residual risks to the environment relative to the no further action alternative, they would involve significant disturbance of 1.5 to 2 acres of productive and diverse wetland habitats, as well as, additional areas of upland habitats for staging areas, access roads, and other support facilities. In addition, it would take a considerable amount of time before a diverse and fully functioning plant community would be reestablished[5]. Furthermore, although exposure to PCB-contaminated sediments would be reduced initially, there is the potential for this area to become recontaminated by the transport of PCB-contaminated sediments from known upstream sources.

• Compliance with ARARs

Since Alternative 3 (excavation) would involve the excavation of PCB-contaminated sediments, their disposition would be governed by the requirements of the Toxic Substances Control Act.

Alternatives 2 (in-place containment) and 3 (excavation) would result in significant short-term and long-term impacts to existing wetland habitats located within the floodplain and the coastal zone from PCB contamination. Therefore, mitigation of the impacts to the wetlands, floodplains, and the coastal zone in compliance with the respective ARARs would be required. No further action, on the other hand, would not impact the wetlands, floodplains, and the coastal zone.

• Long-Term Effectiveness and Permanence

Since the PCB-contaminated sediments do not pose a significant human health risk, Alternative 1 (no further action) would provide reliable protection of human health over time. Sediment sample data from 1991 to 1996 show a decrease in PCB sediment concentrations over time. This decrease is presumably due to the deposition of clean sediments and/or the downstream migration and subsequent dilution of contaminated sediments.

---

[5] The restoration of the forested wetland and scrub-shrub wetland (dominated by willow and alder) may require a time frame of 35-50 years, if at all, as the complete restoration process is uncertain.

The excavation alternative (Alternative 3) would be much more effective and permanent than the in-place containment alternative (Alternative 2) in terms of reducing ecological exposure to PCB-contaminated sediments, because the sediments would be removed.

Although both intrusive alternatives would provide lower residual risks to the environment than the no-action alternative, the implementation of these activities would result in adverse impacts to the existing wetland and upland habitats and biota. In addition, it would take a considerable time before a diverse and fully functioning plant community would be established. Furthermore, although exposure to PCB-contaminated sediments would be reduced initially under these alternatives, the potential exists for this area to become recontaminated by the transport of PCB-contaminated sediments from known upstream sources.

•Reduction in Toxicity, Mobility, or Volume Through Treatment

Alternative 1 (no further action) would not actively reduce the toxicity, mobility, or volume of contaminants through treatment. This alternative would rely on the deposition of clean sediments to reduce the levels of contaminants.

While in-place containment (Alternative 2) or excavation (Alternative 3) of the contaminated sediments would prevent further migration of and potential exposure to these materials, the reduction in mobility would not be accomplished through treatment.

•Short-Term Effectiveness

Alternative 1 (no further action) does not include any physical construction measures in any areas of contamination. Therefore, the implementation of this alternative would not present any short-term, adverse ecological or human health risks. Alternative 2 involves relocation of the stream channel and covering contaminated sediments and Alternative 3 involves excavating and transporting contaminated sediments off-site.

While Alternative 2 presents some risk to on-site workers through dermal contact, and Alternative 3 presents some risk to on-site workers through dermal contact and inhalation, these exposures can be minimized by utilizing the proper protective equipment. The traffic

associated with transporting cover materials (Alternative 2) and the off-site transport of contaminated sediments (Alternative 3) could impact the local roadway system and nearby residents through increased noise levels. Although silt curtains could be used to contain suspended solids during excavation activities, there could be some releases of PCB-contaminated sediments, which might increase ecological exposures in the short term. Disturbance of the land during construction could affect surface water flow at the site. In addition, there would be a potential for increased stormwater runoff and erosion during construction activities that must be properly managed.

Although both intrusive alternatives would provide lower residual risks to the environment than the no further action alternative, they would involve significant disturbance of 1.5 to 2 acres of productive and diverse wetland habitats, as well as, additional areas of upland habitats for staging areas, access roads, and other support facilities.

In-place containment, relocation of the stream channel, and excavation would seriously damage the productive and diverse ecological community that currently exists in the vicinity of the site, resulting in a loss of habitats. While Alternatives 2 and 3 would both seriously impact the wetlands, the potential impacts would be much greater for the in-place containment alternative than for the excavation alternative, due to the permanent changes to the wetland hydrology and the resulting higher elevations associated with placing a one-foot vegetated soil cover over the depositional areas.

Although exposure to PCB-contaminated sediments would be reduced initially under Alternatives 2 and 3, there is the potential for this area to become recontaminated by the transport of PCB-contaminated sediments from known upstream sources.

• Implementability

In-place containment, creation of a new stream channel, excavation of the contaminated sediments, and off-site transportation of the sediments, although implementable, would be more difficult to implement than the no further action alternative. Alternatives 2 (in-place containment) and 3 (excavation) can be accomplished using technologies known to be reliable, and equipment, services and materials for this work would be readily available. These actions would also be administratively feasible.

- Cost

The estimated capital, annual operation and maintenance (O&M), and present-worth costs for each of the alternatives are presented below.

Alternative	Capital	Annual O&M	Present Worth
No Further Action	$0	$20,500	$254,400
In-Place Containment	$677,200	$30,000	$ 1,121,600
Excavation	$ 1,022,800	$15,000	$ 1,410,000

Under the no further action alternative, no remedial activities would be conducted; thus, no capital costs would be expected to be incurred. Annual monitoring of PCB levels in sediments would be conducted to ensure that concentrations are not increasing; PCB levels in biota would also be monitored. The cost of the monitoring is expected to be approximately $24,000 per year; the present-worth cost of this alternative is estimated to be approximately $370,000[6], significantly below the $1,164,700 and $1,414,000 present-worth cost estimates for the in-place containment and excavation alternatives, respectively.

- State Acceptance

NYSDEC concurs with the selected alternative.

- Community Acceptance

Public interest related to the fourth operable unit for the site is low. No written comments were submitted during the public comment period and the public meeting was sparsely attended. No comments related to the preferred remedy were provided by the public. Responses to questions asked at the public meeting are included in the Responsiveness Summary, which can be found in Appendix V of this document.

[6] For cost-estimating purposes, a 30-year time frame for monitoring was used.

SELECTED REMEDY

Based upon consideration of the requirements of CERCLA, the detailed analysis of the alternatives, and public comments, EPA and NYSDEC have determined that no further action with long-term monitoring is the most appropriate remedy for this operable unit, because it best satisfies the requirements of CERCLA §121, 42 U.S.C. §9621 and the NCP's nine evaluation criteria for remedial alternatives, 40 CFR §300.430(e)(9). The selected remedy involves no further remedial action, with long-term monitoring of the sediments and biota in the creeks and wetlands adjacent to the site.

Because this alternative may result in sediment contamination concentrations remaining at levels that may not be ecologically protective, long-term monitoring (including biota sampling) results will be used to assess this threat on a periodic basis. If justified by this assessment, remedial actions may be implemented to address these sediments.

While the no further action alternative does not actively address the contaminated sediments, data collected between 1991 and 1996 suggest that PCB sediment concentrations are decreasing, presumably due to the deposition of clean sediments, and/or the downstream migration and subsequent dilution of contaminated sediments.

While the other remedial alternatives that were evaluated, namely, in-place containment and excavation, would actively address the PCB-contaminated sediments, they would involve significant disturbance of 1.5 to 2 acres of productive and diverse wetland habitats, as well as, additional areas of upland habitats for staging areas, access roads, and other support facilities. This would outweigh the benefits of remediating the low-level contamination. In addition, it would take considerable time before a diverse and fully functioning plant community would be established. Furthermore, although exposure to PCB-contaminated sediments would be reduced initially under these alternatives, there is the potential for this area to become recontaminated by the transport of PCB-contaminated sediments from known upstream sources. Therefore, as the risk levels are relatively low and the PCB sediment concentrations appear to be declining over time, the no further action with long-term monitoring alternative appears to be the most appropriate remedial option at this time. Long-term monitoring will be conducted to ensure that contaminant concentrations in the sediments and biota

continue to be reduced over time and that further contamination of the area from upstream sources is not occurring.

The selected remedy will provide the best balance of tradeoffs among alternatives with respect to the evaluating criteria. EPA believes that the selected alternative will be protective of human health and the environment, comply with ARARs, and be cost-effective.

STATUTORY DETERMINATIONS

As previously noted, CERCLA §121(b)(1), 42 U.S.C. §9621(b)(1), mandates that a remedial action must be protective of human health and the environment, cost-effective, and utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. Section 121(b)(1) also establishes a preference for remedial actions which employ treatment to permanently and significantly reduce the volume, toxicity, or mobility of the hazardous substances, pollutants, or contaminants at a site. CERCLA §121(d), 42 U.S.C. §9621(d), further specifies that a remedial action must attain a degree of cleanup that satisfies ARARs under federal and state laws, unless a waiver can be justified pursuant to CERCLA §121(d)(4), 42 U.S.C. §9621(d)(4).

The selected remedy meets the requirements for remedial actions set forth in CERCLA §121, 42 U.S.C. §9621.

EPA has determined that no further physical construction is necessary at this site; therefore, the site now qualifies for inclusion on the *Construction Completion List*.

Because hazardous substances will remain on-site, the site is subject to five-year reviews. Long-term monitoring results will be assessed for this remedy during the five-year reviews related to the other operable units at the site.

DOCUMENTATION OF SIGNIFICANT CHANGES

There are no significant changes from the selected alternative presented in the Proposed Plan.

APPENDIX I

FIGURES

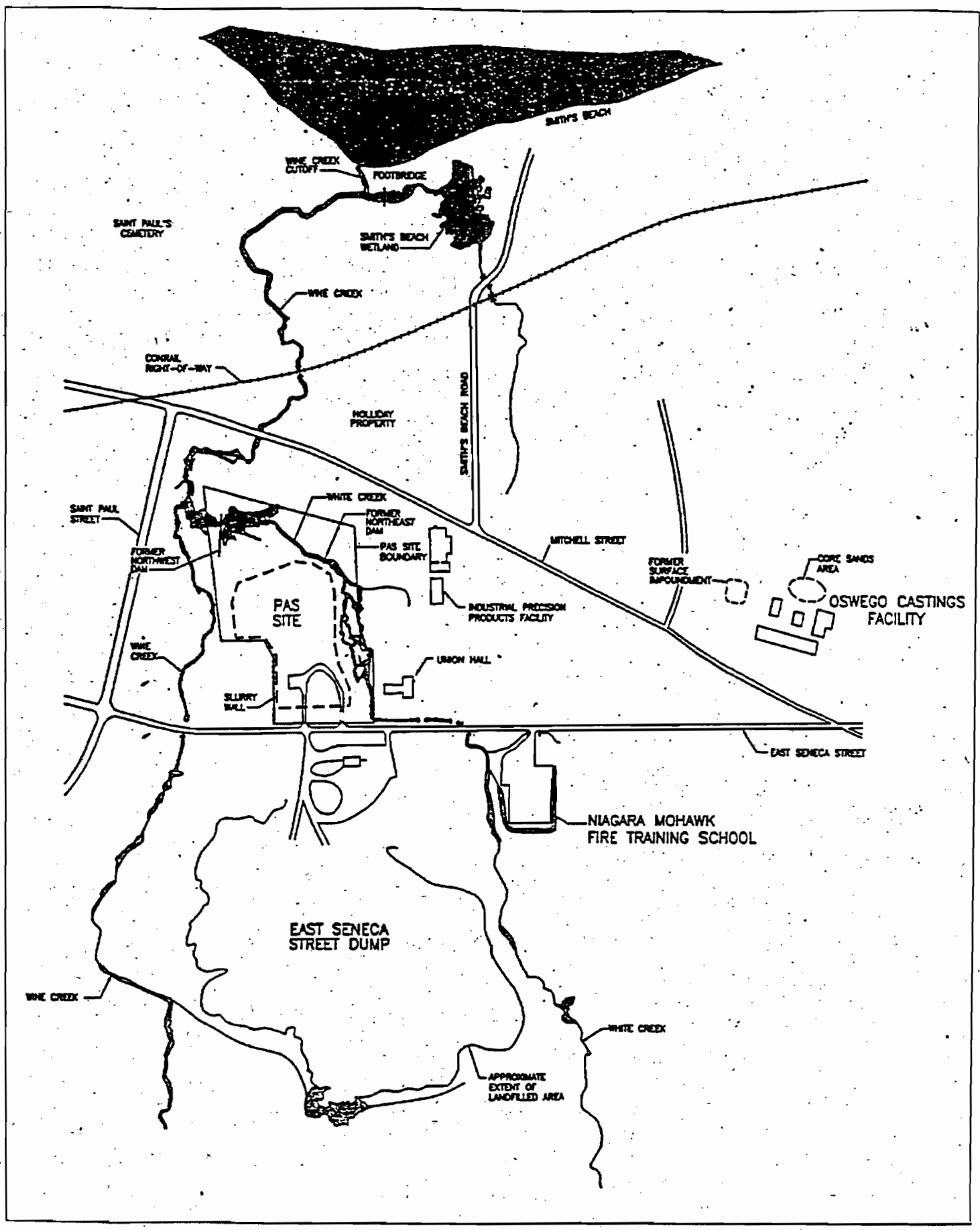
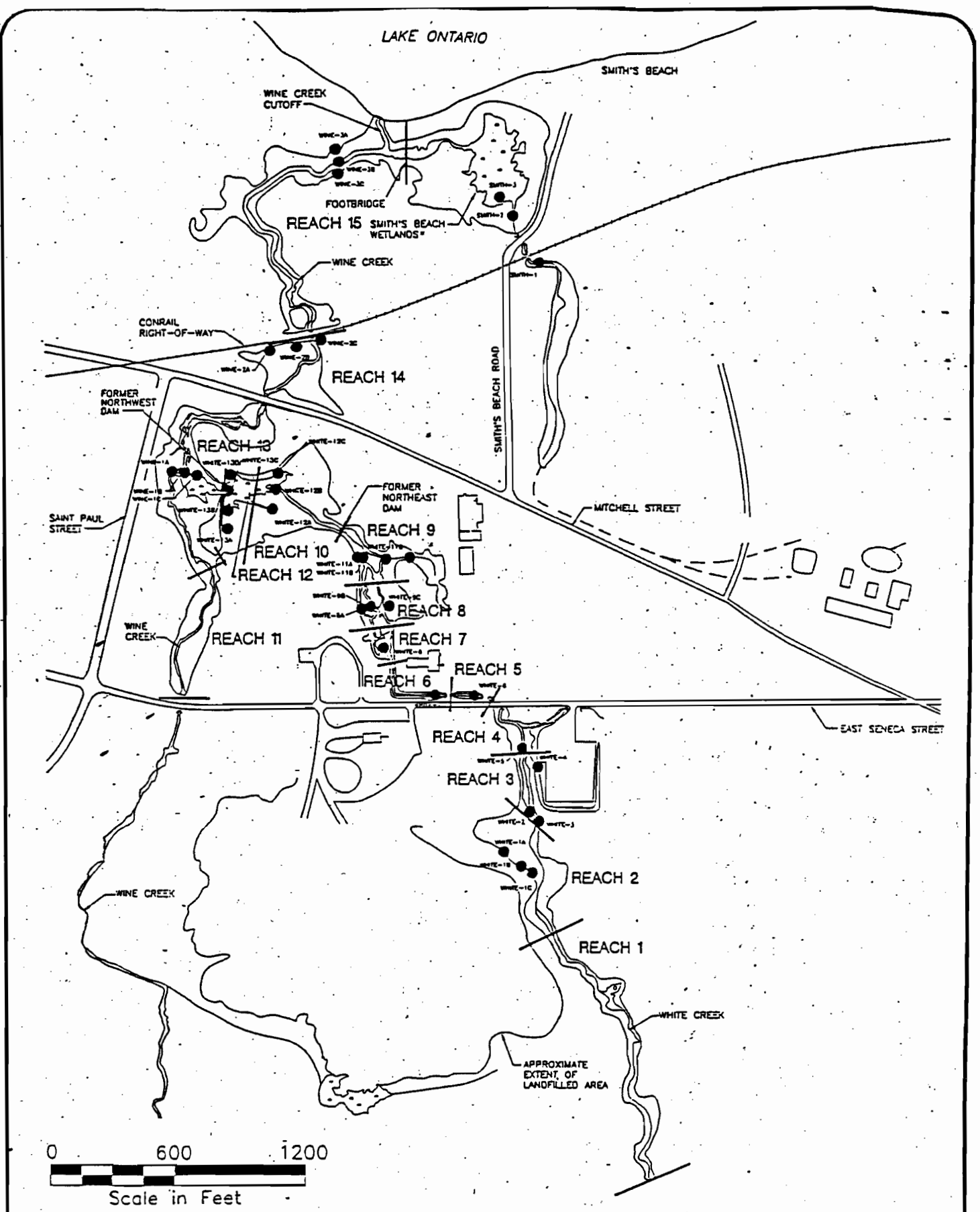


Figure 1-Area Map



*THE SMITH'S BEACH WETLANDS AND TRIBUTARIES SOUTH (UPSTREAM) OF THE PAS SITE ARE OUTSIDE THE SCOPE OF THE FFS

Figure 2- SPRDS Phase II Study Area

APPENDIX II

TABLES

TABLE 1 Total PCB Sediment Concentrations - SPRDS Phase 2		
Reach[a]	Sample ID[a]	Total PCB Concentration (mg/kg)
2	White-1A	190.0
2	White-1B	0.950
2	White-1C	0.170
3	White-2	ND (0.027)[b]
3	White-3	0.052
3	White-4	0.460
4	White-5	ND (0.024)
5	White-6	0.027
6	White-7	0.161
7	White-8	ND (0.028)
8	White-9A	0.095
8	White-9B	0.014
8	White 9C	0.043
9	White-10	0.035
9	White-11A	11.40
9	White-11B	0.052
9	White-11C	0.059
10	White-12A	1.690
10	White-12B	5.860
10	White-12C	0.052
12	White-13A	0.880
12	White-13B	0.740
12	White-13C	0.051
12	White-13D	0.260
13	Wine-1A	ND (0.029)
13	Wine-1B	0.036
13	Wine-1C	1.320
14	Wine-2A	0.046
14	Wine-2B	0.160

Note: Upstream=Reaches 1-5; On-Site=Reaches 6-13; Downstream=Reaches 13 and 14

TABLE 1
Total PCB Sediment Concentrations - SPRDS Phase 2

Reach[a]	Sample ID[a]	Total PCB Concentration (mg/kg)
14	Wine-2C	0.130
15	Wine-3A	0.031
15	Wine-3B	0.093
15	Wine-3C	0.147

[a] See Figure 1 for the locations of reaches and sampling stations.
[b] Not Detected (Detection Limit).

TABLE 2
PCB Concentration Trends in Sediments at LTMP Locations[a] Adjacent to or Immediately Upstream of the PAS Facility

Sample Date	Total PCB Concentration (mg/kg)[b]		
	Station SS-1 (immediately upstream of the PAS Facility)	Station SS-3 (in Reach 9 near SPRDS location White 11A)	Station SS-4A[c] (at confluence of White and Wine Creeks)
11/89	Nd[d]	ND	---
11/90	ND	---	ND
5/91	ND	3.700	---
11/91	ND	1.900	1.400
11/92	ND	0.720	0.140
5/94	ND	1.400	ND
11/94	ND	0.740	0.039
11/96	0.074	0.540	0.159

[a] LTMP sampling locations are shown in Figure 2 of the URS report (1997)
[b] Data from URS (1997)
[c] Location SS-4 was replaced by location SS-4A in November 1990
[d] Not Detected

TABLE 3 Summary of Carcinogenic Risks		
Exposure Pathway	**Adult**	**Child**
Sediment Ingestion	2.0×10^{-6}	3.6×10^{-6}
Dermal Contact	1.2×10^{-5}	5.2×10^{-6}
Total Risk	1.4×10^{-5}	8.8×10^{-6}

TABLE 4 Summary of Noncarcinogenic Health Effects		
Exposure Pathway	**Adult**	**Child**
Sediment Ingestion	0.08	0.75
Dermal Contact	0.15	0.33
Total Risk	0.23	1.08

APPENDIX III

ADMINISTRATIVE RECORD INDEX

POLLUTION ABATEMENT SERVICES
OPERABLE UNIT FOUR
ADMINISTRATIVE RECORD FILE
INDEX OF DOCUMENTS

4.0 FEASIBILITY STUDY

4.3 Feasibility Study Reports

P. 400001-400134 — Report: Focused Feasibility Study for PCB-Impacted Sediments in the Vicinity of the Pollution Abatement Services Superfund Site, Oswego, New York, prepared by Environ International Corporation, prepared for Parties to the PAS Oswego Site Participation Agreement, August 20, 1997.

5.0 RECORD OF DECISION

5.1 Record of Decision

P. 500001-500035 — Record of Decision, Appendix V-a, Responsiveness Summary, Letters submitted during the public comment period, Pollution Abatement Services, City of Oswego, Oswego County, New York, December 29, 1993. (**Note**: The Record of Decision, including Appendices I-V, is in the Pollution Abatement Services Operable Unit Three Administrative Record Update, p. 500045-500169.)

Supplemental Pre-Remedial Design - Phase 2

Report: Phase 2 Supplemental Pre-Remedial Design Study Report--Surface-Water/Sediment Quality Source Investigation, Volume I of III, Pollution Abatement Services Site, Oswego, New York, prepared for Parties to the PAS Oswego Site Participation Agreement, prepared by Roux Associates, Inc., April 25, 1996. (**Note**: This document is in the Pollution Abatement Services

Operable Unit Three Administrative Record Update, p. 501911-501980.)

Report: Phase 2 Supplemental Pre-Remedial Design Study Report--Surface-Water/Sediment Quality Source Investigation, Volume II of III, Appendices A through H, Pollution Abatement Services Site, Oswego, New York, prepared for Parties to the PAS Oswego Site Participation Agreement, prepared by Roux Associates, Inc., April 25, 1996. (**Note**: This document is in the Pollution Abatement Services Operable Unit Three Administrative Record Update, p. 501981-502241.)

Report: Phase 2 Supplemental Pre-Remedial Design Study Report--Surface-Water/Sediment Quality Source Investigation, Volume III of III, Appendices I through M, Pollution Abatement Services Site, Oswego, New York, prepared for Parties to the PAS Oswego Site Participation Agreement, prepared by Roux Associates, Inc., April 25, 1996. (**Note**: This document is in the Pollution Abatement Services Operable Unit Three Administrative Record Update, p. 502242-502622.)

Explanation of Significant Differences

Explanation of Significant Differences, Pollution Abatement Services Site, City of Oswego, Oswego County, New York, prepared by U.S. EPA, Region II, September 1996. (**Note**: This document is in the Pollution Abatement Services Operable Unit Three Administrative Record Update, p. 502630-502633.)

P. 500036-500084 Technical Memorandum: Development of Remedial Action Objectives for PCB-Impacted Sediments in the Vicinity of the Pollution Abatement Services Superfund Site, Oswego, New York, prepared by Environ International Corporation, prepared for Parties to the PAS Oswego Site

Participation Agreement, March 6, 1997.

7.0 ENFORCEMENT

7.2 Endangerment Assessments

Report: Final Endangerment Assessment, PAS Oswego Site, Oswego, New York, Volume I of II, prepared by CDM Federal Programs Corporation, May 26, 1993. **Note**: This document is in the Pollution Abatement Services Operable Unit Three Administrative Record p. 700001-700421.)

Report: Final Endangerment Assessment, PAS Oswego Site, Oswego, New York, Volume II of II, prepared by CDM Federal Programs Corporation, May 26, 1993. **Note**: This document is in the Pollution Abatement Services Operable Unit Three Administrative Record p. 700422-700536.)

P. 700001-700006 Addendum to the Final Endangerment Assessment, Pollution Abatement Services Site, Oswego, New York, August 5, 1997.

APPENDIX IV

STATE LETTER OF CONCURRENCE

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233-7010

John P. Cahill
Commissioner

SEP 29 1997

Post-it® Fax Note 7671	Date 9/30	# of pages ▶ 1
To Joel Singerman	From Dave Smith	
Co./Dept.	Co. NYSDEC	
Phone # (212) 637-4258	Phone # (518) 457-5677	
Fax # (212) 637-3966	Fax # (518) 457-7925	

Mr. Richard Caspe
Director
Emergency and Remedial Response Division
United States Environmental Protection Agency
Region II Floor 19 #E38
290 Broadway
New York, NY 10007-1866

Dear Mr. Caspe:

RE: Record of Decision for the Pollution Abatement Services Site
Site ID. No. 738001

In response to the draft Record of Decision for the PAS Site ID No. 738001, submitted by your office, I wish to concur with the remedial action plan as put forth in the document.

The selected remedy as described on page 18 of the draft ROD includes the following elements:

No Action with a long-term monitoring program of surface water, sediments and including biota sampling. This monitoring will be conducted to ensure that the PCB concentrations in the wetlands are not increasing. This data will be used to assess the site conditions on a periodic basis. If justified by this assessment, remedial actions may be implemented to remove or treat the sediments.

Concurrence with this remedy recognizes the numerous remedial actions taken to date as a result of the 1984 ROD, 1993 ROD and the 1996 Explanation of Significant Differences.

Sincerely,

Michael J. O'Toole, Jr.
Director
Division of Environmental Remediation

cc: J. Singerman

APPENDIX V

RESPONSIVENESS SUMMARY

APPENDIX V

RESPONSIVENESS SUMMARY

Pollution Abatement Services Superfund Site

INTRODUCTION

A responsiveness summary is required by Superfund policy. It provides a summary of citizens' comments and concerns received during the public comment period, and the United States Environmental Protection Agency (EPA) and the New York State Department of Environmental Conservation's (NYSDEC's) responses to those comments and concerns. All comments summarized in this document have been considered in EPA and NYSDEC's final decision for selection of a remedial alternative to augment the previously implemented remedial actions and to address the contamination detected outside the containment system at the Pollution Abatement Services (PAS) site.

OVERVIEW

Public interest related to the fourth operable unit for the site is low. No written comments were submitted during the public comment period and the public meeting was sparsely attended. No comments related to the preferred remedy, no further action with long-term monitoring, were provided by the public.

SUMMARY OF COMMUNITY RELATIONS ACTIVITIES

The Supplemental Pre-Remedial Design (SPRDS) report, focused feasibility study (FFS) report, and Proposed Plan for the site were released to the public for comment on August 22, 1997. These documents were made available to the public in the administrative record file at the EPA Docket Room in Region II, New York and the information repository at the Oswego City Hall. The notice of availability for the above-referenced documents was published in the *Oswego Palladium Times* on August 22, 1997. The public comment period related to these documents was held from August 22, 1997 to September 21, 1997.

On September 11, 1997, EPA and NYSDEC conducted a public meeting at Oswego City Hall to inform local officials and interested citizens about the Superfund process, to review current and planned remedial

activities at the site, to discuss and receive comments on the Proposed Plan, and to respond to questions from area residents and other interested parties. Only two people attended the public meeting.

SUMMARY OF COMMENTS AND RESPONSES

No written comments were submitted. A summary of questions asked by the public at the public meeting, as well as EPA and NYSDEC's responses, follows.

Question #1: Who will be responsible for the costs related to the implementation of the remedy that is ultimately selected for the site?

Response #1: Under the Superfund statute, the parties that generated the hazardous wastes that were disposed of at the site, the parties that transported it to the site, and the parties that owned and/or operated the site (collectively called potentially responsible parties) are responsible for conducting or financing any necessary investigatory or remedial work at the site.

The SPRDS and FFS were conducted by a group of potentially responsible parties. EPA intends to negotiate the implementation of the selected remedy with the potentially responsible parties responsible for the PCB contamination at the site.

Question #2: No further action with long-term monitoring is the least costly alternative. What role does cost play in the identification of a preferred remedy?

Response #2: Cost was only one of the nine criteria that was considered in the evaluation of the various alternatives. Under the Superfund regulations, EPA is required to consider eight other evaluation criteria. The primary criteria are the ability of the various remedial alternatives to protect human health and the environment and compliance with applicable or relevant and appropriate requirements. Other factors that are considered include long-term effectiveness and permanence, reduction of toxicity, mobility, or volume through treatment, short-term effectiveness, implementability, state acceptance, and community acceptance.

While the other remedial alternatives that were evaluated, namely, in-place containment and excavation, would actively address the PCB-contaminated sediments, they would involve significant disturbance of productive and diverse wetland habitats. Therefore, as the risk levels are relatively low and PCB sediment concentrations appear to be declining over time, EPA determined that the "No Further Action with Long-Term Monitoring" alternative is the most appropriate remedial option at this time.

Question #3: Are the PCBs that were detected in the sediments in White and Wine Creeks and the adjacent wetland areas attributable to the PAS site? Are there other potential sources of PCBs?

Response #3: Based upon the results of the SPRDS, it was concluded that, while the PAS site was a source of PCB contamination before the construction of the containment facility in 1986, the site is not a present source of PCB contamination in the sediments in the adjacent wetlands and Wine and White Creeks.

The SPRDS also identified two additional potential upstream sources of PCBs in the sediments in the wetlands and creeks in the vicinity of the PAS site—the East Seneca Street Dump and the Niagara Mohawk Fire Training School. The State of New York is responsible for overseeing activities at these non-NPL sites.

Question #4: Will the long-term monitoring program include monitoring of the two upstream sources?

Response #4: In addition to collecting samples in the creeks and wetlands located in the vicinity of the PAS site, the long-term monitoring program will include upstream sampling locations to monitor any contamination that may be migrating from upstream sources.

Question #5: At what frequency will the PCB levels in the sediments be monitored under the "No Further Action with Long-Term Monitoring" alternative?

Response #5: The "No Further Action with Long-Term Monitoring" alternative will include annual monitoring of PCB levels in the sediments in White and Wine Creeks and the adjacent wetlands in the vicinity of the site. For planning purposes, EPA has estimated that the long-term

monitoring will be conducted for 30 years. It is anticipated that the duration of the monitoring will be adjusted, as necessary, based upon the results of the sampling.

APPENDIX V-a

RESPONSIVENESS SUMMARY

TRANSCRIPT

U.S. ENVIRONMENTAL PROTECTION AGENCY

PUBLIC MEETING

POLLUTION ABATEMENT SERVICES SUPERFUND SITE

THURSDAY, SEPTEMBER 11, 1997

7:00 P.M.

OSWEGO CITY HALL, OSWEGO, NEW YORK

APPEARANCES:

PATRICIA SIMMONS,
REMEDIAL PROJECT MANAGER
U.S. EPA

CLAY McCLARNON,
DE MAXIMIS, INC.

GINA FERREIRA
ENVIRONMENTAL SCIENTIST

MS. SIMMONS: I think we're going to start now.

Good evening everyone. I'm Patricia Simmons. I'm the Remedial Project Manager for the Pollution Abatement Services Site.

We are here to, actually, let me mention that there's a change in the agenda.

Joel Singerman, my Section Chief, couldn't come in because of weather. He couldn't get a flight, so I'll try to cover what he would have covered if he was here.

Let me introduce everyone. This is Clay McClarnon. He'll be presenting the results of the Supplemental Pre-Remedial Design Study and Focused Feasibility Study. Also here is Gina Ferreira. She is a scientist for the E.P.A. She'll be answering any questions you have.

We are here tonight to present and receive comments from the proposed remedial alternatives to the PAS Site. We address the pesticides in the surface water and the sediments of adjacent areas to the site.

The comments received at this meeting

as well as any written comments will be documented and addressed in the response summary section of the record of decision.

Can you hear me? No?

REPORTER 31: A little louder.

MS. SIMMONS: All right. The comment period on the proposed plan, -- Can you hear me now? -- began August 23rd. Everybody set? Okay. The commentary began on August 22nd, and it ended on September 21st. If you have any additional questions or comments that are not covered here tonight, you can send them to me in writing by September 21st. My address is in the proposed plan. Since there are only two of you, I have copies for you, if you need them. What I'm going to do is present a brief overview of the site here to bring you up to date on the status of the site. And then, as I said, Clay will present the results of the studies. Then, I'll give the preferred alternative.

PAS, or Pollution Abatement Services was a high temperature liquid chemical waste incineration facility that operated from 1970

through 1977. Beginning in 1977, a series of incidents, including liquid waste spills and the oveflow of liquid wastes from lagoons into White Creek, led to the involvement of EPA and NYSDEC at the site. Response actions taken from 1973 to 1982 by EPA and NYSDEC resulted in the removal of the incineration facilities, drummed wastes, bulk liquid wastes, and contaminated soils and the closure of an on-site pond. In 1981, the PAS site, which was ranked number seven on the original National Priorities List (NPL), was selected as one of the first sites in the nation to receive CERCLA Trust Fund monies for cleanup actions.

From 1982 to 1984 NYSDEC performed a Site Investigation, was the initial RI/FS conducted at the site. Based on the results of this study, EPA signed a Rod in 1984, which specified the following remedial actions: limited excavation and off-site disposal of contaminated materials, installation of a perimeter slurry wall, site grading and capping in accordance with Resource Conservation and Recovery Act (RCRA) requirements, installation of a

leachate and groundwater collection and treatment system and groundwater monitoring.

REPORTER #2: Can I ask a question, please?

MS. SIMMONS: Sure.

REPORTER #2: From the information on there, is this being given to us?

MS. SIMMONS: The proposed plan?

REPORTER #2: Yes.

MS. SIMMONS: Yes.

REPORTER #2: Okay.

MS. SIMMONS: Actually, there are, -- Thanks, Mike. There are copies of the handouts too.

The second ROD which was issued in 1993 for Operable Unit Three involved the enhancement of groundwater extraction to address contamination that was found outside the container system constructed in 1986.

The 1993 ROD also called for several investigations related to the enhancement of the source control system. In addition, since there was some uncertainty related to the source of the PCB contamination detected in the sediments in the adjacent wetlands and White and Wine

Creeks, and the source of pesticides detected in the surface water of Wine Creek, the ROD called for a study to determine the sources of PCB and pesticide contamination.

I just want to mention that EPA and the responsible party have reached agreement on a consent degree related to the real activities called for in the first two RODS.

Presently, EPA is waiting for signature pages from the responsible parties on the consent decree, so that's basically all wrapped up. And, the consent decree will address among other things the continuation of the pumping and excavation of the ground from the containment system, and the continuation of the long-term monitoring, and operation, and maintenance at the site.

The Fourth Operable Unit which we're here to discuss tonight relates to the PCRs surrounding the site.

In accordance with the 1993 Supplemental Design, study was conducted to determine the source of the PCRs P.O's, and this year, I believe it was May, a focus feasibility study

was conducted to identify real alternatives for the PCB impact sediment.

Now, Clay will come up and present the find ways of these studies.

MR. McLARNON: Thank you, Patricia.

As Patricia said, I was asked to go over the two studies, that would be the '96 Supplemental Pre-Remedial Design, and the Supplemental Remedial Investigation.

The Supplemental Remedial Design Study was proposed in '96. There is also the Supplemental Pre-Remedial Design Study. The acronym is SPRDS. I may fall into the use of acronyms in dealing with one of these for many years. You end up trying to reduce down as many words as you can, so you can get the things said quickly.

But anyway, the SPRDS was performed by ROD, and it was to, as the objectives were listed in the ROD, to determine whether the PCB's present in the sediments in both creeks, Wine Creek and White Creek, was a source of PCB contamination.

The SPRDS concluded, among other things,

that the PAS site is not the source of the pesticides in the surface water of Wine Creek and, while it was a source of PCB contamination before the construction of the containment facility in 1986, PAS is not a present source of PCB contamination in the sediments in the adjacent wetlands and Wine and White Creeks.

Unfortunately, we don't have a map, but White and Wine Creeks border the site, and second to that is to determine whether the PAS Site is the source of PCBs detected in sediment disposal both in the creeks and the wetlands. North of the wetlands is, basically borders the two creeks, and that's basically where the two creeks merge.

Anyway, the results that ROD came up within this investigation involved the research involved going back through historical reports as well as taking samples and doing a site investigation at that time period.

And, the results on the pesticides are that the pesticides were detected in low level, at low levels. And, surface water at Wine Creek and upstream of the site adjacent and

downstream of the site.

On the PCB issue which was completed in the Phase Two of the SPRDS, the PAS Site was noted to may have been a source of PCBs, -- Excuse me. Let me talk about the slide up there first, because that's the result.

Pesticides were in low levels. The results of supplemental RI and the SPRDS indicate that PCBs are present in the sediments in both creeks, upstream, adjacent to, and downstream of the PAS site. Total PCB concentrations detected range from 0.014 to 190 milligrams per kilogram with the highest concentration being detected upstream of the PAS site. Only five of the 36 sediment samples collected in the vicinity of the site showed PCB concentrations exceeding 1 mg/kg (the maximum concentration was 11.4 mg/kg; all five of these samples were from White Creek.

The data appears to show that there was a decline of those PCB concentrations. So, that's what the results of the Phase Two study showed.

Now, the conclusions of the Phase Two

SPRDS study show that PAS is not the source of the pesticides in surface water of Wine Creek, and on the PCB issue, the PAS Site may have been the source of PCBs prior to the construction of the containment system that we talked about in 1986. The PAS Site is not presently a source of PCBs from White Creek or adjacent wetlands. And, they also identify that there with upstream sources of PCBs along White Creek.

REPORTER #1: Do any of the studies identify where the sources are?

MR. McCLARNON: There's a variety of samples, and they are upstream north of East Seneca Street, and adjacent to White Creek. That information is available in the repository and in a variety of different studies. But, the SPRDS is available. This led to the decision that a focus feasibility study needed to be completed for the site. The focus of the feasibility study was performed by Environ on behalf of the performing parties. And, that was performed and completed April-May time frame of this year. In performing a focus

feasability study Environ involved a hundred steps of reviewing the earlier studies as well as the SPRDS studies. They developd remedial action objectives, and remedial action of this site was to evaluate the impact to ecological species. And, the last step is to evaluate, develop, and evaluate remedial alternatives to meet that remedial action objective.

The findings that Environ came to evaluate those items there was a previous assessment back in 1993 that showed adverse human health effects, such as the PCB sediments were not likely, and shows that relative ecological risks were associated with the PCB impact. Based on that, three alternatives were evalauted. The three alternatives were: no further action with long-term monitoring; stream channel relocation and containment in place, an environmental term following that would mean capping, and sediment removal. So, that evaluation was to monitor to cover any impact areas, or for removal of any impacted areas.

This chart at the bottom shows the present value cost for each one of those alternatives,

and a brief discussion of what would take place. Part of that evaluation includes evaluating alternatives, and providing the information necessary to come up with appropriate final decisions, and I think Patricia will go into that.

MS. SIMMONS: Thanks. I just want to make one point before I got the preferred remedy. While the Phase Two Supplemental Remedial Design Study states that PAS may have been a source of the PCB contamination at the site prior to construction of the containment system, it's EPA's belief that PAS was definitely a source prior to the construction of the containment system.

Now, in selecting a preferred remedy we used a variety of criteria. Included in that criteria are the overall protection of human health and the environment, compliance with applicable or relevant and appropriate requirements. If you want more detail to those, look to Pages 7 and 8 of your proposal plan.

EPA and the New York State Department of Environmental Conversation have selected

no further action with long-term monitoring as the preferred alternative. The basis of this election is that its adverse human health effects are unlikely. Ecological risks are relatively low. The PCB levels appear to be low.

At this point I'd like to open it up. If you have any questions, feel free to ask.

REPORTER #1: I have a question regarding the monitoring. How f quently is i , quarterly you monitor?

MR. McCLARNON: Twice a year. It will fall along with presently, the State is doing a long-term program, and that is, and it will follow the same timetable as their stiff monitoring, which I believe is May and November.

REPORTER #1: So, basically, it's going to stay the same?

MR. McCLARNON: Yes.

REPORTER #2: When you talk about costs, to whom would that be a cost, the City of Oswego, or would it be, you know, would there be federal funding for that?

MS. SIMMONS: For the monitoring?

REPORTER #2: No, for any of these solutions.

MS. SIMMONS: No, the responsible party is being covered.

REPORTER #1: Do you know what parties that may turn out to be?

MS. McCLARNON: International. There are over one hundred. There are over two hundred, actually.

REPORTER #2: Over two hundred?

MR. McCLARNON: Over two hundred.

REPORTER #1: Basically, whoever dumps water, then?

MR. McCLARNON: Yes.

REPORTER #2: Do you have a list of who those people are, or the companies?

MS. SIMMONS: I don't have the list with me, but if you would like them, --

MR. McCLARNON: I think it's part of the public record.

MS. SIMMONS: Yes, it's part of the public record. I don't have it with me though.

REPORTER #2: Are those local companies, or companies in just the Central New York

area?

MR. McCLARNON: I believe the regional companies. It's more than regional companies. It's all over.

REPORTER #1: You talked about some advantage to cost, being the lowest cost, but is cost necessarily the biggest concern?

MS. SIMMONS: Cost is not only the reason for choosing the no further action alternative. It was based on the destruction to wetlands that would be caused with the alternatives.

REPORTER #1: Getting back to the monitoring, has anything been detected since it was a slurry wall?

MS. FERRERIA: We put a slurry wall in the cap in 1986, --

REPORTER #1: Has anything shown --

MS. FERRERIA: -- and after that, it was monitoring, which had some low level PCBs, and that is what the study was, our monitoring program. And, what we've seen is we had five hits greater than our sediment breaker. And, that's what spurred the investigation. The decision was made on the minimal and environmental

risk which exists from these sediments is less than what would happen if you removed the wetlands. That would be a greater ecological, removing our tap from the wetlands than is presented by some of the low level PCB found.

REPORTER #1: I guess my question was, is: You know PCBs that were detected, they could have been there before the slurry wall?

MS. FERRERIA: Oh, they were.

REPORTER #1: So, is this a migrating --

MS. SIMMONS: We did groundwater sampling around the slurry wall and found there were no PCBs.

REPORTER #1: How many others? It says there were other earlier studies, UTSPRDS, how many others?

MR. McCLARNON: Whereas the initial, that was 84.

MS. FERRERIA: 84 was the first record, so prior to that, --

MR. McCLARNON: So, there was one there, there was a second supplemental remedial investigation, feasability study. That was

performed by Goldberg, and that went to the '93 pond, and in the SPRDS Phase One study, and the SPRDS Phase Two study, and focus feasability study we just talked about, during this whole time, the New York State was operating the monitoring program for the site, and produced a great deal of information. There were also other studies in the area that reviewed some of the data.

MS. FERRERIA: They should be available at City Hall, here.

REPORTER #1: They couldn't even find the documents for this meeting, so I had a hard time finding, you know, the paper saying the documents were available for review. I came down a week after they were supposed to be available, and no one knew what I was talking about. I went to the Mayor's Office, the City Clerk.

MR. McCLARNON: The City Clerk should know, but they didn't.

REPORTER #2: Now, will the observation of this site also include an observation of the site that seems to be the source of the

PCBs. Will the observation over time of the PAS also involve observation of what appears to be the source?

MS. SIMMONS: The upstream sources?

REPORTER #2: Yes.

MS. SIMMONS: I believe those sites are state.

MR. McCLARNON: One was completed, I believe last year, and the other, we're working on a closure plan right now. To answer your question, no, the monitoring you're talking about would be on the PAS site is state. We would have one on the upstream, immediately upstream, and some sample locations within the wetlands. And, that's what is envisioned in monitoring the locations of concern for future impact.

I want to go back to the topic of decision, as far as the preservation of the wetlands. When we talk about removal of the impact of sediment, we are talking about all productive methods.

Going back to costs, so part of these costs are the more extensive alternatives

which would include recreation of wetlands that would be damaged. I do think that's envisioned in these costs. That is the actual effort of going in and removing. That would be an additional cost.

Just a little history on remedial focus. Over time, is basically a couple of lagoons, no controls, on the government focus at first was to control the site, and then do an investigation, seems how it was transferred to an environmental problem. Once we had the human help, and that's how things are, we dealt with the elements to the site first. That's why this has gone all these stages over years. The governments' first focus was to get the site itself under control, and magnitude of the contamination of the site, slurry wall capping was really the only logical alternative. So, as long as that system is maintained, then the site is under control and focus on additional risk.

REPORTER #2: And, she mentioned to me that actually the newspaper had made a mistake. Actually, I misspoke on that. I thought you

were talking, referring to the transfer station like a landfill. You're talking about the old City Dump that the county was using as a hardfill for construction.

MR. McCLARNON: The transfer Station.

REPORTER #1: That's actually correct.

REPORTER #2: So, this was not a transfer station. This was an actual dumping ground.

MR. McCLARNON: It was a common dumping ground. That's on the west side.

On the west side of Wine Creek? I said White. In between. It's in between the two.

Yes, it's in between the two creeks, and on the south side.

REPORTER #2: I guess the last question I have is: Do any of you have cards where you would be available later tonight, with you? I'm writing this up.

MS. SIMMONS: I have a card.

MR. McCLARNON: You will?

MS. SIMMONS: Sure.

REPORTER #2: I don't have any other questions.

MS. SIMMONS: If you have any additioanl

questions write them down and send them to me.

If there are no further questions, we'll close the hearing.

(End of hearing)

C E R T I F I C A T I O N

I certify that the foregoing is a true, accurate, and complete transcript of the proceedings held in this matter which was taken on Thursday, September 11, 1997 at 7:00 p.m.

IRA FRIEDMAN