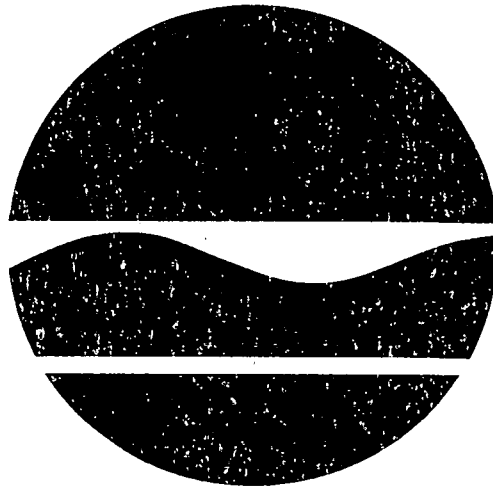


OSWEGO CASTINGS SITE
Operable Unit No. 2 - Yard/Buildings
Oswego (T), Oswego County, New York
Site No. 7-38-033

PROPOSED REMEDIAL ACTION PLAN

February 2000



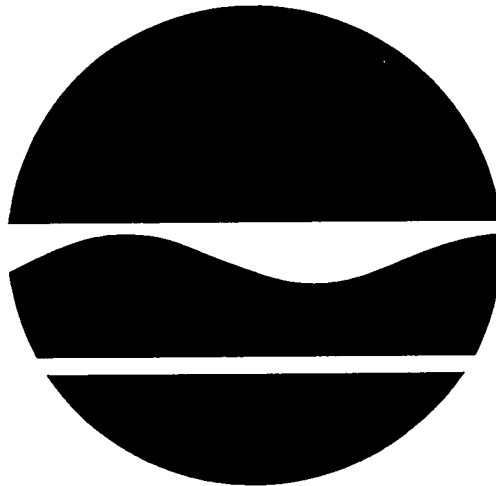
Prepared by:

Division of Environmental Remediation
New York State Department of Environmental Conservation

OSWEGO CASTINGS SITE
Operable Unit No. 2 - Yard/Buildings
Oswego (C), Oswego County, New York
Site No. 7-38-033

PROPOSED REMEDIAL ACTION PLAN

February 2000



Prepared by:

Division of Environmental Remediation
New York State Department of Environmental Conservation

PROPOSED REMEDIAL ACTION PLAN

Oswego Castings Inactive Hazardous Waste Site Operable Unit No. 2 - Yard/Buildings Oswego (C), Oswego County, New York Site No. 7-38-033 February 2000

SECTION 1: PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health is proposing capping contaminated soil at the Oswego Castings Site ("Site"). This remedy is proposed to address the significant threat to human health and the environment created by the presence of hazardous waste at Oswego Castings, a class 2 inactive hazardous waste disposal site. As more fully described in Sections 3 and 4 of this document, operations at the foundry that previously occupied this site have resulted in the soil in this area becoming contaminated with polychlorinated biphenyls (PCBs) at a level greater than 50 ppm, resulting in the following significant threats to the public health and the environment:

- a significant threat to human health associated with potential human contact with soils containing levels of PCBs in excess of standards or guidelines; and
- a significant environmental threat associated with the potential impact of

PCBs on the groundwater, surface water, and sediments in the pond.

In order to eliminate or mitigate the significant threats to the public health and the environment that the hazardous wastes disposed at Oswego Castings have caused, the following remedy is proposed:

- The contaminated soil would be isolated from stormwater infiltration and human contact by constructing a concrete pad over the impacted soil and maintaining the existing floor slab of the sawmill building; and
- The pond would be dewatered as necessary, and a geotextile membrane will be installed and covered with a 12 inch layer of gravel to prevent contaminated sediments from becoming re-suspended.

The proposed remedy, discussed in detail in Section 7 of this document, is intended to attain the remediation goals selected for this site in Section 6 of this Proposed Remedial Action Plan (PRAP), in conformity with

applicable standards, criteria, and guidance (SCGs).

This PRAP identifies the preferred remedy, summarizes the other alternatives considered, and discusses the reasons for this preference. The NYSDEC will select a final remedy for the site only after careful consideration of all comments received during the public comment period.

The NYSDEC has issued this PRAP as a component of the citizen participation plan developed pursuant to the New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in greater detail in the Remedial Investigation (RI), Feasibility Study (FS) and other relevant reports and documents, available at the document repositories.

To better understand the site and the investigations conducted, the public is encouraged to review the project documents at the following repositories:

Oswego City Library
120 East Second Street
Oswego, New York 13126
Phone: (315) 341-5867

NYSDEC Regional Headquarters
615 Erie Boulevard west
Syracuse, New York 13204-2400
Contact: Mr. Charles Branagh
Phone: (315) 426-7400

NYSDEC Central Office
50 Wold Road
Albany, New York 12233-1070
Contact: Mr. William Ottaway
Phone: (518) 457-4343

The NYSDEC seeks input from the community on all PRAPs. A public comment period has been set from February 17, 2000 to March 20, 2000 to provide an opportunity for public participation in the remedy selection process for this site. A public meeting is scheduled for **Thursday, March 9, 2000** at the Oswego City Hall beginning at 7:00p.m..

At the meeting, the results of the RI/FS will be presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period will be held, during which you can submit verbal or written comments on the PRAP.

The NYSDEC may modify the preferred alternative or select another of the alternatives presented in this PRAP, based on new information or public comments. Therefore, the public is encouraged to review and comment on all of the alternatives identified here.

Comments will be summarized and responses provided in the Responsiveness Summary section of the Record of Decision (ROD). The ROD is the NYSDEC's final selection of the remedy for this site. Written comments on the PRAP can be submitted to Mr. Ottaway at the above address through March 20, 2000.

SECTION 2: SITE LOCATION AND DESCRIPTION

The Oswego Castings Site, Site No. 7-38-033, is located on Mitchell Street in the City of Oswego, Oswego County, New York as shown on Figure 1. The Site occupies approximately 1.5 acres of the 23 acres formerly owned by B&K Metals, Inc. The Site includes three former manufacturing buildings: a 29,110 square foot main foundry

building, and two smaller outbuildings. In addition, a new saw mill has recently been constructed in a portion of the main building. The area that remains contaminated is directly behind (north of) the foundry building, including the yard area between the outbuildings and the area beneath the newly constructed sawmill in the main building. Also requiring remediation is the facility's former cooling water pond, located west of the buildings. Beyond the areas described above, approximately 13 acres of the Site are wooded, and have no history of manufacturing or disposal activity. The remaining lands, approximately 8.5 acres of the former landfill area were addressed during earlier remediation activities as Operable Unit No. 1 of the Site and by the voluntary cleanup agreement. These areas are identified on Figure 1.

The area surrounding the Site is sparsely populated. Residential properties are located to the south across Mitchell Street. NYSDEC regulated wetlands are located north and west of the Site. Lake Ontario is located approximately one half mile north of the site. In addition, the Pollution Abatement Services (PAS) site, a class 2 inactive hazardous waste disposal site (Site No. 7-38-001) and the Niagara Mohawk Fire Training School site (Site No. 7-38-030) are both located southwest of the Site on East Seneca Street.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

Oswego Castings, Inc., a subsidiary of Oberdorfer Foundries, Inc., operated an aluminum die casting facility at the Site from 1956 to 1986, after which time foundry operations were discontinued and the equipment removed. PCB contaminated core sands and

foundry waste were disposed of behind the manufacturing buildings during the operation of the foundry. In addition, PCBs were present in waste water discharged to a process line / septic tank discharge line. It is believed that the PCBs were introduced into the process from leaks in hydraulic equipment and from binders or coatings applied to core sand surfaces. PCBs also appear to have been deposited on the roof of the foundry building by roof mounted blowers. Before they were banned in 1977, PCBs were used in high-temperature hydraulic fluids and casting agents because of their desirable heat resistant properties.

3.2: Remedial History

After the facility closed, PCBs were detected on the Site during an environmental assessment conducted by a prospective purchaser. To further investigate the environmental conditions of the Site, Oberdorfer began a sampling and analysis program in June of 1988. During that time PCBs were detected in the landfill materials, surface water, sediments and surface soils. Because of the presence of PCBs above the hazardous waste classification of 50 ppm, and the significant threat to public health and the environment resulting from this disposal, the facility was designated as a Class 2 Inactive Hazardous Waste Site in June of 1989.

In July of 1993, B&K Metals (formerly known as Oberdorfer Foundries) entered into an Order on Consent with the NYSDEC for implementation of an RI/FS. The RI was performed on behalf of B&K Metals by Stearns and Wheler from July 1993 to February 1996.

Subsequent to completion of the RI, B&K Metals presented financial evidence that it was

a non-operating corporation with limited and diminishing assets, which prevented it from completing its full obligations under the RI/FS order. At the same time, B&K presented to the NYSDEC a potential Site purchaser with interest in a purchase of the Site under the State's Voluntary Cleanup Program. B&K Metals and the Potential Site Purchaser then agreed to perform certain site Interim Remedial Measures (IRMs) from B&K's sale proceeds from the sale of the Site to the Potential Purchaser.

In October of 1996, B&K Metals entered into a second Order on Consent with the NYSDEC which terminated its obligations under the RI/FS Order, allowed for the completion of the IRMs, allowed for partial recovery of the NYSDEC's response costs, and released it from further liability for this Site. IRMs completed as part of this agreement included moving 240 cubic yards of soil from the West Gate and 150 cubic yards of soil from the loading dock area to the landfill area, to be addressed during the remediation of that area. The NYSDEC then assumed responsibility for implementation of the FS pursuant to a referral to the State Superfund.

A FS Report was completed in February 1997. Based upon the results of the FS, the NYSDEC selected excavation with off-site land disposal as the preferred remediation option, as indicated in the Record of Decision (ROD) completed in March 1997. NYSDEC prepared the contract documents, publicly bid the contract, and awarded the remediation contract to the low bidder, Site Remediation Services (SRS). The notice to proceed was issued on July 15, 1998. The following work included under this contract, was completed in the Fall of 1998, and is shown on Figure 1:

- Excavation of surface and subsurface soils and foundry wastes from the core sand disposal area for off-site disposal.
- Excavation of wetland sediments for off-site disposal.
- Removal of septic tank and tank contents for off site disposal.
- Installation of a crushed stone cover over the landfill area.

During the excavation of the landfill area, testing showed more contaminated soil than anticipated. Two change orders authorized SRS to perform additional work including excavation, disposal, testing, and backfill as a result of expanding the excavation south and east, as well as increased depth of excavation. During construction, PCBs in the water in the cooling water pond were above the established discharge levels for the project. Since the contractor was not prepared to treat the entire volume of the pond water, remediation of the pond was therefore deferred to Operational Unit No. 2.

SECTION 4: SITE CONTAMINATION

To evaluate the contamination remaining at the site and to evaluate alternatives to address the significant threat to human health and the environment posed by the presence of hazardous waste, the NYSDEC has recently conducted a Supplemental RI/FS.

4.1: Summary of the Remedial Investigation

The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the Site.

The RI was conducted in May 1999. Earlier testing, conducted in September 1998 during the construction phase of the first operable unit, is also central to the investigation. A report entitled "Remedial Investigation Report for the Oswego Castings Inactive Hazardous Waste Site, Operable Unit No. 2 - Yard/Buildings January 2000" has been prepared which describes these field activities and the findings of the RI in detail.

The RI included the following activities:

- Collection of soil samples under the building and in the yard area
- Analysis of the possible influence of the foundry roof on cooling pond PCB contamination.
- Collection of water samples to determine the extent of PCB contamination in the cooling pond.

To determine which media (soil, groundwater, etc.) are contaminated at levels of concern, the RI analytical data was compared to environmental SCG values. Groundwater, drinking water and surface water SCGs identified for the Oswego Castings site are based on NYSDEC Ambient Water Quality Standards and Guidance Values and Part V of New York State Sanitary Code. For soils, NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 provides soil cleanup guidelines for the protection of groundwater, background conditions, and health-based exposure scenarios. In addition, for soils, Site specific background concentration levels can be considered for certain classes of contaminants. Guidance values for evaluating contamination in sediments are provided by the NYSDEC

"Technical Guidance for Screening Contaminated Sediments".

Based on the RI results, in comparison to the SCGs and potential public health and environmental exposure routes, certain media and areas of the Site require remediation. These are summarized below. More complete information can be found in the RI Report.

Chemical concentrations are reported in parts per billion (ppb) or parts per million (ppm). For comparison purposes, where applicable, SCGs are provided for each medium.

4.1.1: Site Geology and Hydrogeology

The PCB contamination at this site is the result of the surface disposal of PCB contaminated foundry sands and other foundry wastes. This disposal has resulted in a shallow surface fill in the area behind the main plant building. This filling has taken place since the construction of the main foundry building, as documented by aerial photographs of the site.

Below this fill lie the native overburden soils, which are primarily unconsolidated glacial sediments or till. The low permeability (6.2×10^{-6} cm/sec) of these soils restricts the infiltration from the surface, resulting in the wetland areas which surround the site, and which were likely filled by the landfill. The groundwater in the area in general is of low volume and flow, with the natural water table subject to the regional flow pattern toward Lake Ontario.

During the original site investigation, groundwater in the native soil and the landfill area was observed to vary from ground surface to 4 feet. During the construction phase of Operational Unit No. 1, evidence that

water had been in contact with the soil (mottling) was noted in the landfill at depths of 1 to 4 feet, but no groundwater was observed to a depth of 8 feet. It appears that the originally noted shallow groundwater in the fill material was the result of stormwater soaking the soil in the poorly drained landfill area during the wet season. This should not be a concern in the yard area since storm water from the surrounding area is currently diverted away from the impacted area. The yard area and buildings are elevated above the lands to the north, east and west. Runoff from the land to the south is diverted away from the site to the west. Only the stormwater which falls in the yard area would be able to flow into the impacted soil. While a seasonal perched water table was documented in the fill material, no significant groundwater flow from the water table within the till, upward, into or through the impacted soil is expected.

4.1.2: Nature of Contamination

As described in the RI report, levels of PCBs exceed their SCGs in soil, surface water and sediment sampling.

4.1.3: Extent of Contamination

Table 1 summarizes the extent of PCB contamination in soil, surface water, and sediment, and compares the data with the SCGs for the site. The following are the media which were investigated and a summary of the findings of the investigation.

Soil

All soil samples collected can be considered subsurface. The surface of the yard area is covered with a thick layer of gravel, bark and other wood scraps; none of the soil in this area is exposed. All buildings have concrete floors, so, again, none of the soil is exposed.

As part of the construction phase of Operational Unit No. 1, a total of 52 samples were collected in the yard area and under buildings in September 1998. These samples were analyzed using immunoassay tests, and some were also analyzed by a certified laboratory. Seventeen of these samples exceeded 10 ppm. Of these, ten exceeded 50 ppm, with PCB levels as high as 3,900 ppm. The highest levels were noted under the sawmill building and in the western portion of the yard area (See Figure 2).

PCBs were detected at greater than 10 ppm throughout most of the yard area at a depth of two feet. The contamination tended to be higher and deeper in the northwest and southeast quadrants. PCB levels under the sawmill appeared to be higher in the western half of the building. The north end was also the only area under the sawmill where contamination was noted at any depth lower than 2 feet. There did not appear to be any significant contamination under the storage buildings.

On May 21-22, 1999, a total of 31 samples were collected by geoprobe under the sawmill building. These samples were analyzed by ChemTech, Edgewood NJ. The PCB levels in these samples ranged from undetected to 140 ppm, with an average level of 22.5 ppm. Fifteen of these samples exceeded 10 ppm, and of these, three exceeded 50 ppm. The location and results of these tests can be found on Figure 3. When taken along with the sampling described in Section 3.1, these tests show the PCB levels under the sawmill to be extremely varied and unpredictable.

The drainage ditch to the east of the saw mill was also sampled during this phase of the investigation. The PCB level of this ditch was 0.07 ppm, well below action levels.

Soils in the yard area and below the sawmill exceed established SCGs and must be addressed.

Sediments

Samples of cooling pond sediments collected during 1988 and 1990 showed PCB levels of 2.5 to 24 ppm. Samples collected during the original RI (1994 and 1995) showed levels that were significantly lower, (0.21-0.61 ppm), but still over the SCG of 0.14 ppm. Since all samples exceed the SCG, this sediment must be appropriately addressed. See figure 1 for the location of the pond.

Groundwater

Groundwater samples collected from the landfill area during the original RI showed that PCBs in soils may be migrating to the groundwater. Groundwater samples ranging from <0.5 to 11 ppb were collected, a substantial percentage of which were above the action level of 0.1 ppb. These well locations were in the areas excavated and it is believed that this contamination was addressed with the earlier removal of the core sands. The monitoring program associated with the first operable unit will confirm the present situation.

Surface Water

Water samples collected from the cooling pond during the execution of the previous remedy showed PCB levels in excess of SCGs. It is believed that removal of PCB contaminated material from the foundry roof (to be completed as an IRM) will address this problem. This will have to be confirmed by testing completed as part of this operable unit.

4.2: Interim Remedial Measures

An Interim Remedial Measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be

effectively addressed before completion of the RI/FS.

It was brought to the attention of the NYSDEC that a drain pipe directly connects the roof drains of the foundry building to the cooling pond. Large roof mounted blowers were noted which could have transferred materials from inside the foundry to the roof. The roof of the building was inspected in May 1999. A very fine particulate matter was observed, and tests showed this material to contain PCBs at levels between 0.110 and 0.200 ppm. While these levels would not be a health threat, they are high enough to be the most likely source of contamination of the water and sediment in the cooling pond. The roof is being cleaned as an IRM.

4.3: Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the Site. An exposure pathway is the manner by which an individual may come in contact with a contaminant. The five elements of an exposure pathway are 1) the source of contamination; 2) the environmental media and transport mechanisms; 3) the point of exposure; 4) the route of exposure; and 5) the receptor population. These elements of an exposure pathway may be based on past, present, or future events.

Pathways which are known to or may exist at the Site include: 1) dermal contact, 2) inhalation, or 3) ingestion of contaminated soils, wastes, and sediments by on-site workers or as well as other individuals on site.

4.4: Summary of Environmental Exposure Pathways

This section summarizes the types of environmental exposures and ecological risks which may be presented by the Site. The Fish and Wildlife Impact Assessment included in the RI presents a more detailed discussion of the potential impacts from the Site to fish and wildlife resources. A potential environmental exposure pathway exists for exposure of aquatic biota and wildlife to PCBs associated with the cooling pond water and sediments and with surface soils in the vicinity of the yard area.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include but is not limited to past or present owners and operators, waste generators, and haulers.

In July of 1993, B&K Metals (formerly known as Oberdorfer Foundries) entered into an Order on Consent with the NYSDEC for implementation of an RI/FS. In October of 1996, B&K Metals entered into a second Order on Consent with the NYSDEC which terminated its obligations under the RI/FS Order, allowed for the completion of the IRMs, allowed for partial recovery of the NYSDEC's response costs, and released it from further liability for this Site. The NYSDEC then assumed responsibility for implementation of the remedial program at the Site.

SECTION 6: SUMMARY OF THE REMEDIATION GOALS

Goals for the remedial program have been established through the remedy selection

process stated in 6 NYCRR Part 375-1.10. The overall remedial goal is to meet all SCGs and be protective of human health and the environment. At a minimum, the remedy selected must eliminate or mitigate all significant threats to public health and/or the environment presented by the hazardous waste disposed at the Site through the proper application of scientific and engineering principles.

The goals selected for this site are:

- Eliminate, to the extent practicable, the potential for direct human contact with PCB contaminated soil and dust.
- Eliminate, to the extent practicable, the exposure of fish and wildlife to levels of PCBs above standards/guidance values

SECTION 7: SUMMARY OF THE EVALUATION OF ALTERNATIVES

The selected remedy must be protective of human health and the environment, be cost effective, comply with other statutory laws and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. Potential remedial alternatives for the Site were identified, screened and evaluated in the report entitled Feasibility Study Report For the Oswego Castings Inactive Hazardous Waste Disposal Site, January, 2000.

A summary of the detailed analysis follows. As presented below, the time to implement the remedy does not include the time required to design the remedy, procure contracts for design and construction or to negotiate with

responsible parties for implementation of the remedy.

7.1: Description of Remedial Alternatives

The potential remedies are intended to address the contaminated soil, sediment, groundwater and surface water at the Site.

Alternative 1: No Action

<i>Present Worth:</i>	<i>\$ 0</i>
<i>Capital Cost:</i>	<i>\$ 0</i>
<i>Annual O&M:</i>	<i>\$ 0</i>
<i>Time to Implement</i>	<i>0 months</i>

The No Action alternative is evaluated as a procedural requirement and as a basis for comparison. It requires continued monitoring only, allowing the site to remain in an unremediated state. This alternative would leave the site in its present condition and would not provide any additional protection to human health or the environment.

Alternative 2: Excavation with Off-Site Landfill Disposal

<i>Present Worth:</i>	<i>\$ 896,599</i>
<i>Capital Cost:</i>	<i>\$ 893,919</i>
<i>Annual O&M:</i>	<i>\$ 2,680</i>
<i>Time to Implement</i>	<i>3-6 months</i>

This alternative would consist of excavating the impacted soils in the yard area and the impacted soils under the saw mill building. Material with PCB concentrations greater than 10 ppm would then be transported off-site to appropriately permitted landfills. The excavated materials would be loaded into dump trailers or roll-offs. Prior to being transported off site the excavated materials would be sampled and analyzed for PCBs. Materials containing PCBs at levels greater than or equal to 50 ppm would be

disposed of at a permitted hazardous waste landfill, with the volume of this material estimated to be 1600 cubic yards. Materials containing PCBs at levels less than 50 ppm would be disposed of at an off-site solid waste landfill. This portion of material is estimated to be 2100 cubic yards.

The saw mill equipment would be dismantled and moved from the building. Then the concrete floor of the saw mill would be removed and disposed of on-site. The underlying impacted material would then be removed and disposed off-site as described above. Confirmatory sampling would be performed to verify the remedial boundary. The excavation would be refilled with clean fill from off-site, and a 4 inch thick reinforced concrete floor with crushed stone subbase would be constructed to replace the original floor.

In the yard area, the impacted material would be removed and disposed of off-site as described above. Confirmatory sampling would be performed at the sides bottom of the excavations to verify remedial boundaries. Following removal of impacted material, the yard area would be backfilled with unclassified clean material.

The contamination of the cooling pond water is believed to be a result of PCB contaminated dust particles being flushed from the foundry roof. The source of this contamination is currently being eliminated as an IRM. With the source of contamination eliminated, the PCB levels in the pond are expected to settle out of the water and decline to below discharge limits. The sides and bottom of the pond would then be covered with 12 inches of gravel placed over an appropriate geotextile to isolate the sediment. To allow this work to take place, the water in the cooling pond may

have to be pumped out, treated, and discharged. Alternately, the pond may be completely drained and filled, and the roof drain rerouted.

Alternative 3: Off-Site Disposal of Hazardous Waste/On-site Containment of Non-hazardous Waste.

<i>Present Worth:</i>	<i>\$ 668,760</i>
<i>Capital Cost:</i>	<i>\$ 634,697</i>
<i>Annual O&M:</i>	<i>\$ 2,077</i>
<i>Time to Implement</i>	<i>3-6 months</i>

This alternative would consist of excavating only soil/waste containing PCBs at a level greater than 50 ppm from the yard area and the north west corner of the saw mill building. Material in the center of the saw mill building, which is known to contain greater than 50 ppm of PCBs, would not be excavated. Material containing PCBs at a level between 10 ppm and 50 ppm would be consolidated in the yard area. The material to be disposed of off-site would be loaded into dump trailers or roll-offs and disposed of at a permitted hazardous waste landfill. The volume of this material is estimated to be 1550 cubic yards (1,600 c.y. total hazardous waste, less 50 c.y. to remain beneath the sawmill floor).

In the yard area, the soil/waste containing PCBs at hazardous levels would be removed and disposed of off-site as described above. Confirmatory sampling would be performed at the sides of the excavations to verify remedial boundaries. Since soil containing PCBs at levels between 1 and 50 ppm would remain in the yard area, they would have to be isolated from individuals on site (primarily workers) and from the environment. The heavy traffic in the yard area precludes the use of an asphalt pad or other, less durable options. Instead, it is proposed to provide an 8 inches crushed stone subbase and a 6 inches thick reinforced concrete

pad. Unclassified material from off site would be used as backfill prior to the construction of the concrete pad.

The material in the northwest corner of the saw mill which contains PCBs at a level greater than 50 ppm would be removed and disposed of as described above. The remainder of the impacted material under the saw mill would be left in place with the concrete floor serving as a cap to isolate the impacted material from people and the environment. This would not require the dismantling of the sawmill.

In order for this alternative to remain protective of the environment and of human health, it would be necessary for the concrete slab and sawmill floor to remain intact and in good repair. Annual inspection of the slab and floor would be required, and deed restrictions would be put in place. Deed restrictions would require the current and all future occupants of this property to properly maintain and repair the slab and floor to prevent disturbance of the underlying material. If the slab or floor is breached, appropriate procedures would be specified.

Since material would remain on-site that contains PCBs at levels above 10 ppm, it would be necessary to monitor the groundwater. Five monitoring wells would be provided on-site, and would be sampled annually.

The cooling pond would be treated as described in alternative 2.

Alternative 4: Excavation and Disposal in Yard Area / Containment Under Building

<i>Present Worth:</i>	<i>\$ 700,900</i>
<i>Capital Cost:</i>	<i>\$ 666,838</i>

<i>Annual O&M:</i>	\$ 2,077
<i>Time to Implement</i>	3-6 months

This alternative would consist of excavating all soil in the yard area with a PCB concentration greater than 10 ppm (approximately 3,000 cubic yards), and disposing of this material off-site at appropriately permitted landfills. Confirmatory sampling would be performed at the sides of the excavations to verify remedial boundaries. All material located under the existing saw mill building floor slab would remain contained on-site.

Excavated wastes containing less than 50 ppm of PCBs (approximately 1,600 cubic yards) would be transported off-site and disposed of at an appropriately permitted landfill. The excavated wastes containing PCBs greater than 50 ppm (approximately 1,400 cubic yards) would be transported off-site and disposed of at a permitted hazardous waste landfill. The yard area would then be regraded, utilizing approximately 2,500 cubic yards of clean fill material

Groundwater would be monitored annually and the deed restrictions would also be required, as described in alternative 3. The cooling pond would be treated as described in alternative 2. For this alternative it is expected that the yard area would be able to be removed from the description of the listed site.

Alternative 5: Containment of Impacted Soil With Limited Non-Hazardous Waste Excavation

<i>Present Worth:</i>	\$ 350,023
<i>Capital Cost:</i>	\$ 315,960
<i>Annual O&M:</i>	\$ 2,077
<i>Time to Implement</i>	3-6 months

This alternative would consist of installing a concrete pad over the yard area to isolate the impacted soil from humans and the environment. A limited amount of material would have to be removed to allow for the construction of the slab. Approximately 1,200 cubic yards of material would be excavated. Clean or non-hazardous material would be selectively removed from the yard area, and the remaining material would be redistributed to prepare the area for the installation of an 8" crushed stone subbase and 6" reinforced concrete pad. As discussed in Alternative 3, a concrete pad would be required because of the heavy industrial traffic seen in the yard. If the excavated soil is clean (less than 1 ppm PCBs), then it can be left on-site. If it is non-hazardous (between 1 and 50 ppm PCBs), it would be transported off-site and disposed of at a solid waste landfill.

The concrete slab and sawmill floor would have to be inspected annually, as described in alternative 3. Groundwater would be monitored annually, and deed restrictions would also be required, as described in alternative 3. The cooling pond would be treated as described in alternative 2.

7.2 Evaluation of Remedial Alternatives

The criteria used to compare the potential remedial alternatives are defined in the regulation that directs the remediation of inactive hazardous waste sites in New York State (6 NYCRR Part 375). For each of the criteria, a brief description is provided, followed by an evaluation of the alternatives against that criterion. A detailed discussion of the evaluation criteria and comparative analysis is included in the Feasibility Study.

The first two evaluation criteria are termed threshold criteria and must be satisfied in

order for an alternative to be considered for selection.

1. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether or not a remedy will meet applicable environmental laws, regulations, standards, and guidance. The most significant SCGs on the Site are Chemical-specific SCGs pertaining to PCBs:

- PCB levels in surface soils are to be less than 1 ppm.
- PCB levels in subsurface soils are to be less than 10 ppm to be protective of groundwater resources and human health.

The no action alternative would leave PCBs in soils and sediments above cleanup levels and the site would continue to be in compliance with SCGs. The other alternatives would be designed to meet Toxic Substance Control Act requirements for handling and management of PCB contaminated materials, and other action specific SCGs.

2. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

All of the alternatives except the no action alternative would be protective of human health and the environment. No action would not be considered to be effective since PCBs would remain on-site in their present condition in excess of SCGs.

Alternative 2 would be the most protective since all PCBs would be removed from the Site. Each of the remaining alternatives (3, 4, and 5) would entail wastes remaining on-site. Continued monitoring, inspections and maintenance would

be required to insure the cap and floor remain effective barriers. Of these 3, alternative 3 would be the most effective since the most heavily contaminated wastes would be eliminated from the site. Alternatives 4 and 5 are equally protective on and off-site since contaminated materials would be isolated from the environment and from human contact by a combination of removal and containment.

The next five "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Short-term Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

The no action alternative would not involve any construction activities and, therefore, there would be no increased short-term risks. All of the other alternatives would have potential short-term risks to human health and the environment during the construction phase.

Each of the action alternatives would involve some excavation, handling and transportation of contaminated soils and sediments. This would present potential short-term risks to workers from contact with the contaminated media, and to the community due to the potential for dust generation and the potential for spillage during transportation.

These risks could be reduced with the use of engineering controls such as dust control measures. Risk during transportation could be minimized by properly covering the materials

during hauling and by establishing emergency spill response measures. These risks would be lower for alternative 5 since that alternative involves the least handling of heavily contaminated materials.

An additional short term concern is the impact to the business. Alternative 2 would require the saw mill to be shut down for an extended period at a substantial cost. Alternative 3 would also interrupt operation of the sawmill, but the occupants of the Site have indicated that they may be able to "work around" a limited intrusion into this building. Even though alternative 4 would not involve any work in the sawmill, the disruption of the yard area, including excavation and extensive testing would still be a significant disruption of business. Alternative 5 would be the least disruptive to business, since operations could take place throughout the activities, including the modular installation of the pad.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the controls intended to limit the risk, and 3) the reliability of these controls.

The no action alternative would not be effective in the long-term because PCBs would remain on-site above SCGs. All of the other alternatives would be reliable and effective in the long-term to varying degrees.

Alternative 2 would be more effective than the other alternatives because all wastes containing PCBs above 10 ppm would be removed from the Site and isolated from the environment by an appropriately designed landfill.

Alternatives 3 - 5 would leave on-site material contaminated by PCBs, which would mean that the entire Site could not be delisted, and use would be restricted. Among these alternatives, Alternative 3 would have the advantage of eliminating the most hazardous waste from the Site. Alternative 4 would have the advantage of allowing the yard area to be removed from the description of the listed site, eliminating monitoring and maintenance of that portion of the site and allowing unrestricted use of that area, while alternative 5 would contain the majority of the PCB contaminated material on the Site.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the Site.

The no action alternative would not reduce the toxicity, mobility or volume of contaminants. Alternative 5 would only reduce the mobility of the contamination as contaminants would remain on-site, but be contained. Alternative 2, 3 and 4 would reduce the toxicity, mobility and volume of the contamination on-site through disposal of varying amounts of materials off-site. Alternative 2 would be the most effective of these alternatives in reducing mobility, toxicity and volume.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction and the ability to monitor the effectiveness of the remedy. For administrative feasibility, the availability of the necessary personnel and material is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc.

All of the action alternatives would be technically implementable since they involve common construction procedures and the equipment and materials required are readily available. However, the alternatives would have varying degrees of implementability relative to the ongoing industrial activity at the site. The no action alternative would be the easiest alternative to implement since no construction activities would take place. Alternatives 4 and 5 would be the next easiest to implement since they do not involve any work in the saw mill. The limited excavation in the saw mill would make Alternative 3 somewhat more difficult to implement, and the extensive work in the saw mill would virtually eliminate Alternative 2 from consideration, due to the economic impact to the existing business.

The long-term operation and maintenance required for alternatives 3-5 would be relatively minor in nature and would not present any undue hardship. There would be no significant regulatory requirements which would impact the implementability of these alternatives.

7. Cost. Capital and operation and maintenance costs are estimated for each alternative and compared on a present worth basis. Although cost is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the remaining criteria, cost effectiveness can be used as the basis for the final decision. The costs for each alternative are presented in Table 2.

Remedial alternative costs are summarized in Table 2 below. The no action alternative would be the lowest in cost since it does not involve any construction or operational costs. The estimated costs for the action alternatives range from \$350,032 to \$896,599. Alternative 5 would be the most cost effective alternative. Alternatives 2 would be the least cost effective

due to the relatively large amount of material involved.

Alternatives 2 would have the lowest operation and maintenance costs since the site would be delisted. Alternatives 3 through 5 would have equal maintenance costs involving ongoing post remedial groundwater monitoring. Alternative 4 may be slightly less expensive to maintain than Alternatives 3 and 5, since it would not involve maintaining the concrete slab.

This final criterion is considered a modifying criterion and is taken into account after evaluating those above. It is evaluated after public comments on the Proposed Remedial Action Plan have been received.

8. Community Acceptance - Concerns of the community regarding the RI/FS reports and the PRAP are evaluated. A "Responsiveness Summary" will be prepared that describes public comments received and the manner in which the Department will address the concerns raised. If the selected remedy differs significantly from the proposed remedy, notices to the public will be issued describing the differences and reasons for the changes.

SECTION 8: SUMMARY OF THE PROPOSED REMEDY

Based upon the results of the RI/FS, and the evaluation presented in Section 7, the NYSDEC is proposing Alternative 5, on-site capping with a concrete pad, as the remedy for the Site.

This selection is based on the evaluation of the five alternatives developed for the Site.

The no action alternative would not be protective of human health and the environment and would not meet SCGs and, therefore, would not be a viable alternative.

Any plan to completely remediate and delist the Site would involve treatment or removal of the material under the sawmill. The current Site occupant would suffer severe economic hardship if this building were shut down for any length of time. It is very unlikely that the occupant would voluntarily agree to such an action. Alternative 2 can therefore be discarded as an option.

In each of the 3 remaining Alternatives (3, 4 and 5), some hazardous waste would be left on-site, and the Site would remain listed on the State Registry, as a Class 4 site. Each option would also require similar levels of ongoing monitoring. If either Alternative 3 or 4 were substantially more effective, the additional cost might be justified. However, these three options would be expected to be nearly equally effective.

Of the options, Alternative 5 would be by far the least expensive. To make this distinction even stronger, we note that there is uncertainty in the determination of the extent of the contamination. Only limited testing has been completed under the two storage buildings, and experience at this site informs us that the depth and degree of contamination can vary by the foot. Any new detections of contamination (especially under the buildings) would entail additional cost for alternatives 3 and 4. By comparison, the costs associated with Alternative 5 are clearly defined and predictable. Based on the above analysis, the option that would be the most cost effective, which would have the least uncertainty, and which would have the least degree of short term

impact, Alternative number 5, has been proposed.

The estimated present worth cost to implement the remedy is \$350,023. The cost to construct the remedy is estimated to be \$315,960 and the estimated average annual operation and maintenance cost for 30 years is \$2,077.

The elements of the proposed remedy would be as follows:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance, and monitoring of the remedial program. Any uncertainties identified during the RI/FS would be resolved.
2. Excavation of clean or non-hazardous material in the yard area to allow for the construction of the slab, with excavated material transported off-site for disposal as necessary.
3. Construction of a 6 inch thick reinforced concrete pad, with an 8 inch crushed stone base.
4. De-watering of the pond to the extent necessary to install a geotextile and 12inch gravel layer. Alternately, the pond may be completely drained and filled, and the roof drain rerouted.
5. Imposition of deed restrictions including requirements for annual inspection and certification of the condition of the building floors and yard slab, to ensure that they remain intact and the remedy is protective.

Any damage which may occur would have to be promptly repaired. In addition, should it be necessary to breach the floor or yard slab in the future, the deed restriction would include requirements to notify the Department and prepare a plan which would address the safe handling and disposal of any material excavated. If the pond is not completely filled in, deed restrictions would also be required to ensure that there is no disturbance of the pond bottom. These restrictions would allow the PCB containment to be monitored and would be a component of the operation and maintenance for the Site.

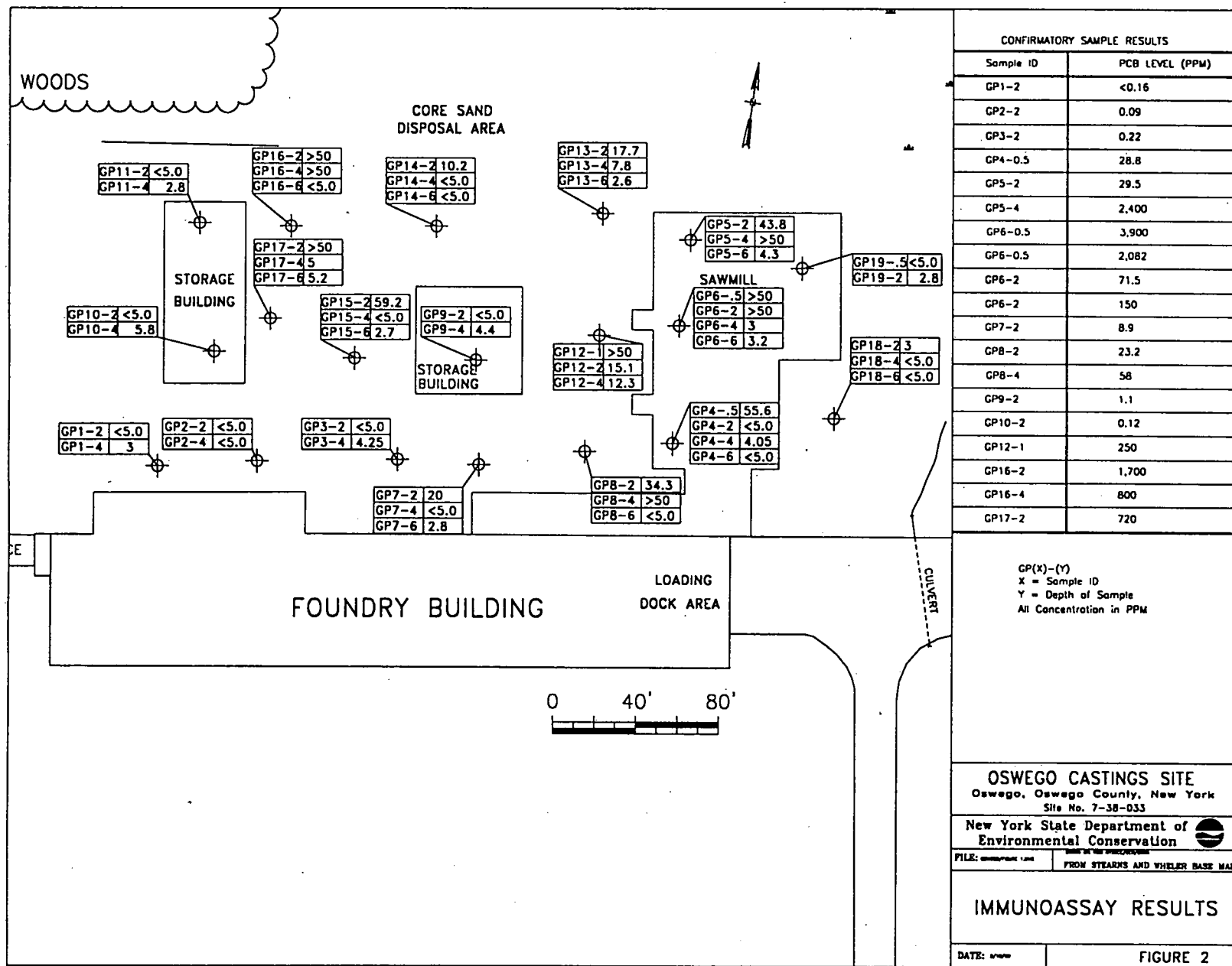
6. Since the remedy results in untreated hazardous waste remaining at the Site, a long term monitoring program would be instituted. Five ground water monitoring wells would be installed. Samples would be collected from these wells annually, and analyzed for PCBs to ensure that the remedy mitigates the migration of contaminants into the groundwater. In addition the groundwater level in these wells would be recorded to confirm that groundwater levels are not routinely encroaching on the remaining impacted material during times of expected high groundwater.

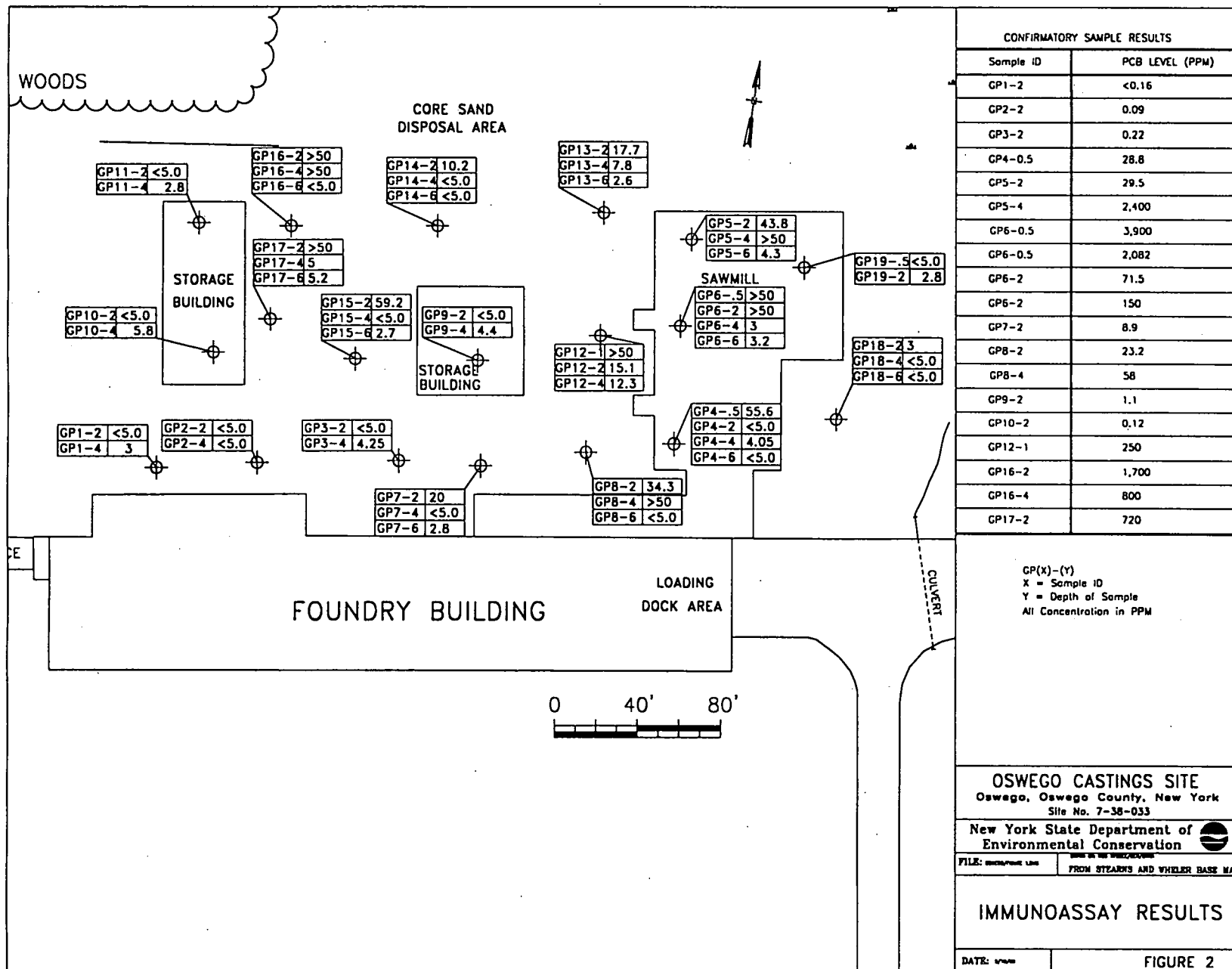
Table 1
Nature and Extent of Contamination

MEDIUM	LOCATION	CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppm)	FREQUENCY of EXCEEDING SCGs/Background	SCG/ Bkgd. (ppm)
Subsurface Soils	Yard	PCBs	ND (.002) to 1,700	12 of 36	0.010
	Sawmill	PCBs	ND(.002) to 3,900	20 of 44	0.010
Surface Water	Cooling Pond	PCBs	0.00036	1 of 1	.00012
Sediments	Cooling Pond	PCBs	.21 - 24	5 of 5	0.14
Groundwater	Landfill Area	PCBs	ND(.000 05) to 0.0046	3 of 4	.0001
	Wetland	PCBs	0.011	1 of 1	.0001

Table 2
Remedial Alternative Costs

REMEDIAL ALTERNATIVE	CAPITAL COST	ANNUAL O&M	TOTAL PRESENT WORTH
Alternative 1:No Action	0	0	0
Alternative 2:Full Excavation	\$893,919	\$2,680	\$896,599
Alternative 3:Hazardous Excavation	\$634,697	\$2,077	\$668,760
Alternative 4:Full Excavation of Yard	\$666,838	\$2,077	\$700,900
Alternative 5:Minimal Excavation With Concrete Slab	\$315,960	\$2,077	\$350,023





BOND,
SCHOENECK
& KING, LLP
Attorneys at Law Since 1897

130 East Second Street
Oswego, NY 13126-2600
Phone: 315-343-9116
Fax: 315-343-1231
www.bsk.com

Albany, NY
Buffalo, NY
Saratoga Springs, NY
Syracuse, NY
Overland Park, KS

Bond, Schoeneck & King, P.A.
Bonita Springs, FL
Naples, FL

March 17, 2000

**VIA UPS OVERNIGHT &
E-MAIL (WITHOUT ENCLOSURE)**

Mr. William Ottaway
N.Y.S. D.E.C.
50 Wolf Road, Room 242
Albany, New York 12233-7010

Re: Proposed Remedial Action Plan for the Oswego Castings Site

Dear Mr. Ottaway:

As you may know, this office represents Great Lakes Veneer, the owner of the former Oswego Castings Site in Oswego, New York. In that regard, we submit this letter to be included with the public comments in the referenced matter.

As a preliminary matter, we advise that we have reviewed the Proposed Remedial Action Plan dated February, 1997, together with a letter from the NYS Department of Environmental Conservation (the "Department") dated November 6, 1996 (the "November letter"), a copy of which I enclose. A review of the February, 1997 Proposed Remedial Action Plan reveals that the presently proposed "capping alternative" was not the preferred alternative because relatively high levels of PCBs will remain on site. The capping alternative is also not likely to result in a "de-listing" of the site.

We understand, however, that the proposed "capping alternative" provides a reasonable protection to the environment and to the health and safety of residents and workers. We are concerned, however, that the continued presence of PCBs and the continued listing of the site will negatively impact the marketability of the site, and the ability of the site to serve as collateral for commercial financing. Obviously, these factors may have an adverse impact on the long-term economic viability of this site.

A review of the November letter, however, provides some solace to our client in that it indicates that the Department will not bring an action or proceeding against our client and/or the then present mortgage holders, or their successors or assigns concerning the recovery of response costs, or the implementation of the remedial action program for any site related hazardous substance and/or waste contamination existing as of the date of our client's purchase of the property.

Reading the original proposed remedial action plan, the summary of the revised remedial action plan, and the November letter together, we offer the following comments:

Mr. William Ottaway

March 17, 2000

Page 2

1. The expense of proper maintenance and repair and annual inspections of the cap should be born by the Department.
2. The expense of annual well monitoring should be born by the Department.
3. If any annual monitoring detects contamination migration, the remedial action associated with that migration should be born by the Department.
4. So that future mortgage holders, not simply the successors and/or assigns of those mortgage holders which were the beneficiaries of November letter, will further accept the premises as collateral, the November letter should be clarified to include these future mortgage holders.

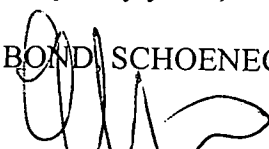
In addition, we understand that our clients have had some discussions concerning the proposed remedial action plan with members of the Department. As a result of those discussions, we understand the following to be part of the proposed remedial action plan:

1. Great Lakes Veneer Corporation will be permitted to take down its small storage building and the ground thereunder will be included in the area to be capped.
2. The cap installed will be of adequate design and sufficient materials to support heavy equipment operation thereon.
3. Great Lakes Veneer Corporation will be able to relocate fixed manufacturing equipment on top of the cap and will be able to anchor such equipment via bolts, etc. inserted into the concrete cap.
4. After the existing pond is de-watered and covered with the geotextile membrane and gravel, an additional pond will be excavated elsewhere on the property.

Should you have any questions on our comments, please feel free to contact me. Thank you very much.

Very truly yours,

BOND SCHOENECK & KING, LLP


Edward A. Mervine

EAM/ro

Enclosure

cc: Mr. Gary Canfield (*via telefax*)



STATE OF NEW YORK DEPARTMENT OF HEALTH

Flanigan Square, 547 River Street, Troy, New York 12180-2216

Antonia C. Novello, M.D., M.P.H.
Commissioner

Dennis P. Whalen
Executive Deputy Commissioner

February 16, 2000

Mr. Michael O'Toole:
Division of Environmental Remediation
NYS Dept. of Environmental Conservation
50 Wolf Road, Room 260B
Albany, New York 12233

RE: Proposed Remedial Action Plan
Oswego Castings
Oswego/Oswego County
Site ID #738033

Dear Mr. O'Toole:

My staff has reviewed the January 2000 Proposed Remedial Action Plan for the Oswego Castings site in Oswego County. Based on that review, I understand that the proposed remedial alternative provides for the maintenance of the existing concrete floor over the PCB contaminated subsurface soils under the sawmill building; the construction of a modular concrete slab with sealed joints over the PCB contaminated subsurface soils in the yard area; and the placement of a geotextile type of membrane and light rip-rap over the PCB contaminated sediments of the on-site pond. The plan also provides for the creation of deed restrictions regarding the maintenance of these caps and the future use of the site, and the long term monitoring of the quality and elevation of ground water.

With these actions, I believe the remedy is protective of public health. If you have any questions, please call Mr. Michael Rivara or me at (518) 402-7890.

Sincerely,

G. Anders Carlson, Ph.D., Director
Bureau of Environmental Exposure Investigation

Cc: N. Kim, Ph.D.
Mr. M. Rivara/FILE
Mr. G. Robinson/FILE
Mr. E. Walsh, OCHD
Mr. W. Ottaway, DEC

H:\EASTERN\CARLSON\OswCast.doc

7-38-033 OSWEGO CASTINGS - 00 #2 YARD/BUTTS

PRAP/ROD

Smead®
UPC 10300
No. 150L
HASTINGS, MN



File on eDOCs X Yes _____ No _____
Site Name Oswego
Site No. 738023
County Oswego
Town Oswego
Foliable X Yes _____ No _____
File Name 2000-02-01 - RED Ouz
Scanned & eDOC _____