United States
Environmental Protection
Agency

Office of
Emergency and
Remedial Response

EPA/ROD/R05-85/019
August 1985

EPA

Superfund Record of Decision:

Schmalz Dump, WI

TECHNICAL REPORT DATA
(Please read Instructions on the reverse before completing)

1. REPORT NO.	2.	3. RECIPIENT'S ACCESSION NO.
EPA/ROD/R05-85/019		

4. TITLE AND SUBTITLE	5. REPORT DATE
SUPERFUND RECORD OF DECISION Schmalz Dump, WI	August 13, 1985
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15. SUPPLEMENTARY NOTES

16. ABSTRACT

The Schmalz Dump site is located in the town of Harrison, Wisconsin, on the north shore of Lake Winnebago. The site occupies approximately five acres of wetland in the federally designated Waverly Beach Wetlands area. According to the Wisconsin Department of Natural Resources and court documents, industries dumped wastes at various locations along the north shore of Lake Winnebago for several years. Mr. Gerald Schmalz, site owner, began filling his property in 1968. Records show that the wastes hauled there consisted of car bodies, stone, water tanks, trees, pulp chips and mash. Between 1972 and 1973, the site accepted fly ash and bottom ash from a local utility, and in 1978 and 1979 Mr. Schmalz accepted the demolition debris from a building owned by Allis-Chalmers Corporation.

The selected remedial action includes excavation and offsite disposal of 3,500 cubic yards of contaminated building debris. Total capital cost for the selected remedial alternative is estimated to be $2,088,300.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Record of Decision Schmalz Dump, WI Contaminated Media: soil, wetlands Key contaminants: PCBs, chromium, heavy metals		

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RECORD OF DECISION
OPERABLE UNIT REMEDIAL ALTERNATIVE SELECTION

Site: Schmalz Dump, Harrison, Wisconsin

Documents Reviewed

- Phased Feasibility Study, Schmalz Dump
- Summary of Remedial Alternative Selection
- Responsiveness Summary

Description of Selected Remedy

- Excavation of 3500 cubic yards of Polychlorinated biphenyl (PCB) contaminated building debris and off-site disposal in an approved landfill facility.

Declarations

Consistent with the Comprehensive Environmental Response Compensation and Liability Act of 1980, and the National Contingency Plan (40 CFR Part 300), I have determined that removing the PCB contaminated building debris at Schmalz Dump as a source control operable unit is cost-effective, is consistent with the final goals for the site, and provides adequate protection of public health, welfare and the environment. The State of Wisconsin has been consulted and agrees with the approved remedy.

I have also determined that the action being taken is appropriate when balanced against the availability of Trust Fund monies for use at other sites. In addition, the off-site transport and secure disposition is more cost-effective than other remedial action, and is necessary to protect public health, welfare, and the environment.

The U.S. Environmental Protection Agency (USEPA) will undertake a remedial investigation/feasibility study (RI/FS) of the Schmalz Dump to evaluate potential contamination of pathways and potential contaminants remaining on-site. If additional remedial actions are determined to be necessary, a Record of Decision will be prepared for approval of the future remedial action.

August 13, 1985
Date

Valdas V. Adamkus
Regional Administrator

Summary of Operable Unit Remedial Alternative Selection
Schmalz Dump Site, Harrison, Wisconsin

Site Location and Description

The town of Harrison is located on the north shore of Lake Winnebago in the east central section of Wisconsin, about 2 miles east of Menasha, in Calumet County (see Figure 1).

The Schmalz Dump, which occupies approximately 5 acres of wetland in the federally designated Waverly Beach Wetlands area, has undergone unauthorized dumping. The property north and west of the site has also been used for waste disposal. To the south, between the site and the lake, is a moderately populated, residential area. Residents have recently been hooked-up to the Menasha water system, although some have retained wells for auxiliary uses. The neighboring city of Appleton, with a population of 59,040, has its drinking water intake 500 feet from the shore of Lake Winnebago, in close proximity to the site.

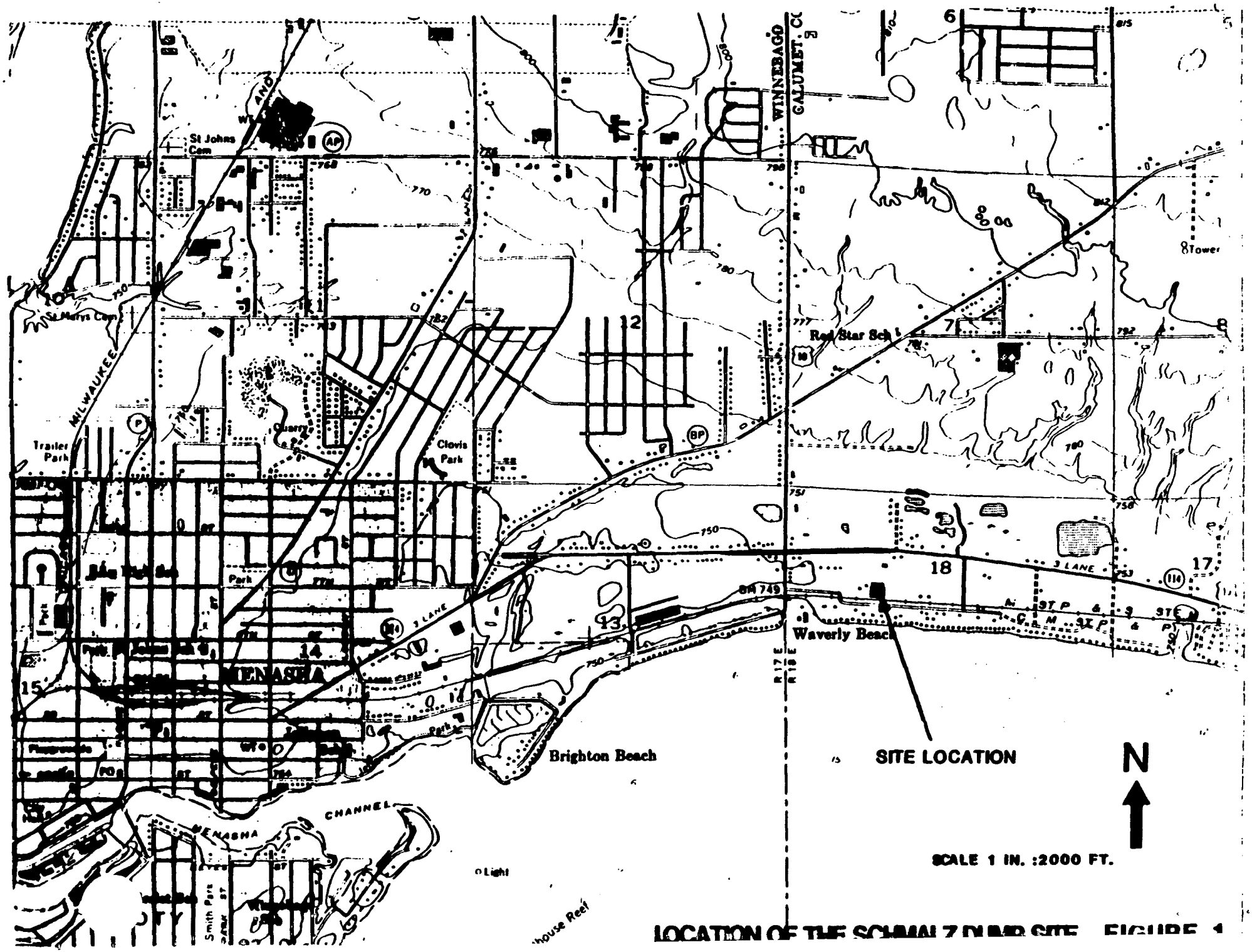
Site History

According to the Wisconsin Department of Natural Resources (WDNR) and court documents, industries dumped wastes at various locations along the north shore of Lake Winnebago for several years. Mr. Gerald Schmalz, site owner, began filling his property in 1968. Records show that the wastes hauled there consisted of car bodies, stone, water tanks, trees, pulp chips and mash. Between 1972 and 1973 the site accepted fly ash and bottom ash from a local utility, and in 1978 and 1979 Schmalz accepted the demolition debris of a building owned by the Allis-Chalmers Corporation.

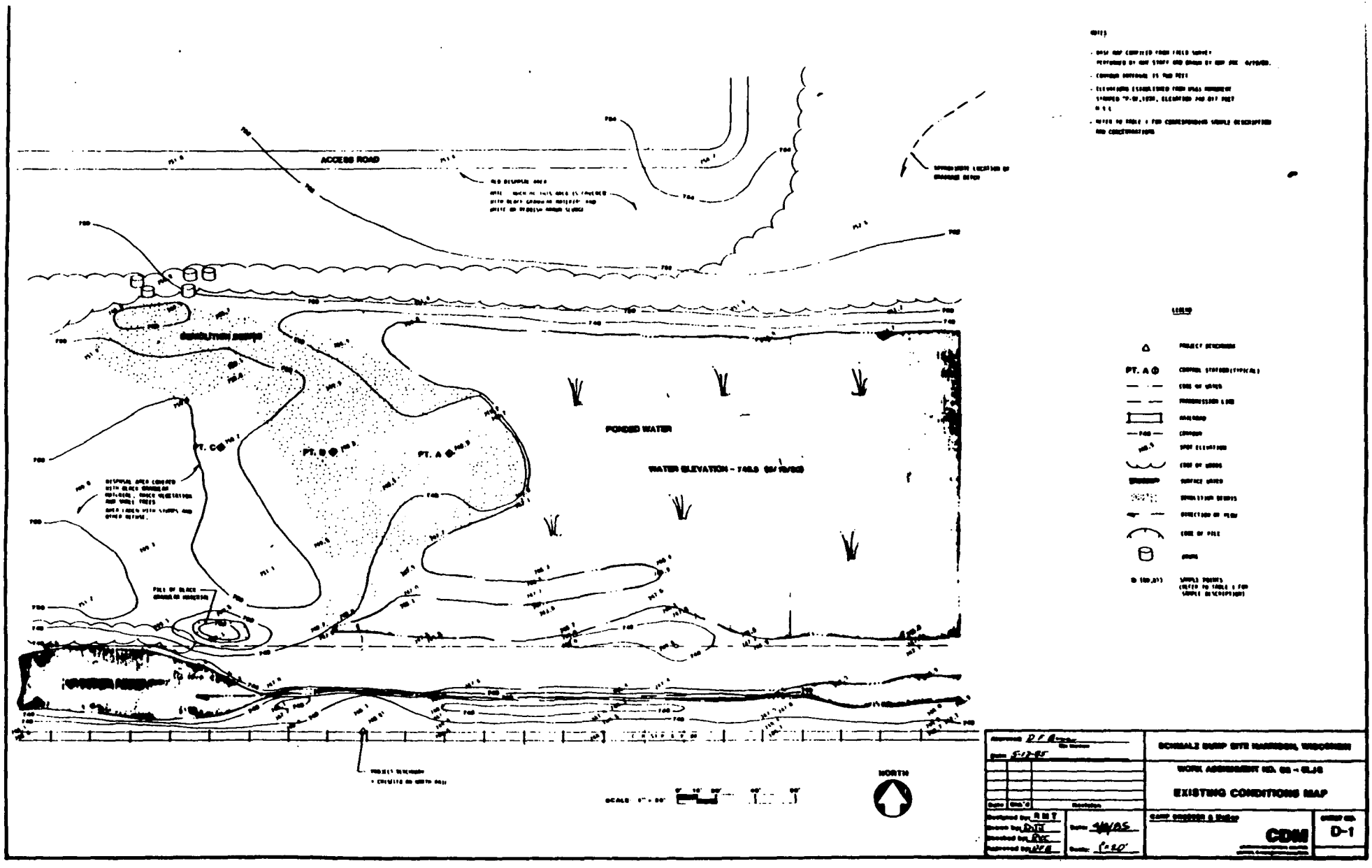
Initial sampling on-site by the State of Wisconsin and the U.S. Army Corps of Engineers (COE) in early 1979 determined that the area where the Allis-Chalmers debris was located was contaminated with concentrations of PCBs as high as 3100 ppm.

In the summer of 1979, the Wisconsin Attorney General filed suit against Mr. Schmalz, the waste hauler - Weiseler Construction, and Allis Chalmers Corporation, alleging illegal disposal of PCBs. However, due to lack of direct evidence, the court ruled against the State. In 1983, Gerald Schmalz sold the property to his son Gregory.

In September 1984, the site was listed on the National Priorities List. USEPA completed a report identifying potentially responsible parties, including waste generators and transporters in October 1984. RI/FS work was initiated during April 1985. Since a threat to public health has been identified due to the PCB contaminated demolition debris, USEPA and WDNR decided to prepare a Phased Feasibility Study (PFS) to evaluate potential source control remedies.



LOCATION OF THE SCHMALZ DUMP SITE FIGURE 1



NOTES

LEGEND

PT. A	CONTROL STATIONS (TYPICAL)
	EDGE OF WATER
	PROPERTY LINE
	BUILDING
	CONTOUR
	SPOT ELEVATION
	EDGE OF WOODS
	SURFACE WATER
	VEGETATION DENSITY
	DIRECTION OF FLOW
	EDGE OF POND
	DRUMS

SCALE 1" = 80'

Approved by: D.T.A.	SCHMALZ DUMP SITE HARRISON, WISCONSIN
Date: 5-12-88	WORK ASSIGNMENT NO. 05-1L48
	EXISTING CONDITIONS MAP
Developed by: R.B.T.	CDM
Drawn by: D.T.W.	Date: 5/4/88
Checked by: R.D.C.	Scale: 1"=80'
Approved by: D.T.A.	D-1

Current Site Status

The PCB contaminated demolition debris covers an area of about one half acre; approximately 3500 cubic yards in volume. The material consists of primarily wood, masonry, shingle, black granular material and concrete, and is generally three to five feet deep, of which one to two feet are under water. Drawing D-1 outlines the area covered by debris.

Test results from 1980 indicate that PCBs are not uniformly dispersed throughout the debris. Some locations sampled were below 1 ppm PCB while others showed concentrations as high as 3100 ppm PCB. Samples collected outside of the debris area had concentrations less than 1 ppm PCB, indicating that the migration of PCBs had initially been confined to the debris and the sediment below it. PCB concentrations for samples analyzed from various substrate types and their depths are presented in Table 1. Sample locations are shown on Drawing D-2.

PCB is a documented animal carcinogen and is known to bioaccumulate in the fat tissues of humans and animals. Studies have shown that exposure to PCBs causes a variety of adverse effects in humans such as impared liver function; neurobehavorial and immunological impairment; and chloracne (a severe skin disorder). Also associated with PCB exposure are premature births, decreased birth weight, birth defects, menstrual disorders and impaired reproduction. Animals experimentally exposed to PCBs have shown pathological changes in the liver, stomach, and skin and increased incidences of cancer in those organs as well. There is some evidence that PCBs have also caused increased cancer incidence in workers who have been exposed to PCBs over prolonged periods.

Based on available sample data and given the current recommended health advisories for PCBs, the Schmalz site poses a significant risk to public health and the environment. There are several pathways for exposure of PCBs, however, direct contact and ingestion of contaminated soil are the most significant pathways at present. The site is frequented by various wildlife, including many types of nesting birds and domestic animals. Local residents use the site for hunting and as a short cut, and could possibly scavenge the debris. Also, children have been known to play in the area.

Other pathways include contaminated surface water, groundwater, and soils, and consumption of contaminated wildlife. At present there is no record of off-site contamination, however, future risks may be created from PCBs being transported by sediment, surface water or groundwater. Although PCBs have greater affinity to sediment, they can become soluble in water. PCB concentrations at the site are high enough to cause this to occur. In addition, solid particles moving in the groundwater and surface waters transport significant amounts of PCBs. These pathways could lead to increased levels of PCBs in Lake Winnebago and consequently to increased concentrations of PCBs in fish inhabiting the lake. In addition, the City of Appleton's drinking water intake, located 500 feet off-shore, as well as private wells in the area, could become contaminated.

Sample results from 1979 and 1980 also showed high levels of lead, chromium, and copper associated with the building debris. These contaminants could also pose a threat to groundwater and surface water pathways through migration in solution or as solid particles. The remedial investigatio

TABLE 1
SUMMARY OF PCB ANALYSIS CONDUCTED AT THE SCHMALZ DUMP SITE, HARRISON, WISCONSIN

Sample No.	Description	Depth (ft)	Analyst	PCB (mg/kg)
1	Granular	2.0	1	585.0
2	Wood	2.0	1	73.4
3	Black Sandy Peat	2.5	1	4.6
4	Granular	2.0	1	72.0
5	Black Sandy Peat	3.0	1	6.0
6	Granular	2.0	1	366.0
7	Wood	2.0	1	124.0
8	Roofing Paper	2.0	1	2.7
9	Black Sandy Peat	3.0	1	4.0
10	Granular	2.0	1	466.0
11	Wood	2.0	1	16.9
12	Black Sandy Peat	3.0	1	4.7
13	Granular	1.0	1	11.7
14	Wood	1.0	1	22.0
15	Black Sandy Peat	1.5	1	4.4
16	Granular	2.0	1	134.0
17	Wood	2.0	1	37.2
18	Granular	2.0	1	71.4
19	Wood	2.0	1	3.1
20	Black Sand	4.0	1	3.2
21	Granular	2.0	1	323.0
22	Wood	2.0	1	37.7
23	Granular	2.0	1	150.0
24	Wood	2.0	1	44.4
25	Black Sandy Peat	4.0	1	2.3
26	Granular	2.0	1	39.0
27	Wood	2.0	1	5.8
28	White Material	1.0	1	37.6
29	Black Sandy Peat	3.5	1	10.0
30	Granular	2.0	1	774.0
31	Wood	2.0	1	127.0
32	Black Sandy Peat	3.0	1	5.6
33	Granular	2.0	1	54.0
34	Wood	2.0	1	1.7
35	Granular	2.0	1	84.0
36	Wood	2.0	1	20.1
37	White Sticky Solids	1.0	1	6.9
38	Granular	2.0	1	166.0
39	Wood	2.0	1	31.1
40	Black Sandy Peat	3.0	1	1.5
41	Granular	1.5	1	149.0
42	Wood	1.5	1	1.6
43	White Solids	1.0	1	3.9
44	Granular	1.5	1	28.6
45	Wood	1.5	1	7.0
46	Black Peaty Sand	3.0	1	1.1
47	Granular	1.5	1	541.0
48	Wood	1.5	1	9.7
49	Red Solids	1.5	1	60.4
50	Granular	2.0	1	1602.0
51	Wood	2.0	1	1396.0

TABLE 1
(continued)

Sample No.	Description	Depth (ft)	Analyst	PCB (mg/kg)
52	Black Peaty Sand	3.5	1	8.5
53	Granular	2.0	1	101.0
54	Wood	2.0	1	11.8
55	Black Peaty Sand	3.5	1	1.1
56	Granular	0.5	1	16.7
57	Wood	0.5	1	0.1
58	Granular	2.0	1	88.3
59	Wood	2.0	1	3.4
60	Gray Sand	3.5	1	4.1
61	Granular	2.0	1	46.0
62	Wood	2.0	1	5.1
63	Gray Sand	3.5	1	8.3
64	Granular	2.0	1	41.6
65	Wood	2.0	1	4.9
66	Gray Sand	4.5	1	4.1
67	Granular	2.0	1	420.0
68	Wood	2.0	1	3.2
69	Gray Sand	3.5	1	<1.0
70	Granular	2.0	1	7.8
71	Wood	2.0	1	<1.0
72	Gray Sand	4.0	1	1.4
73	Wood	2.0	1	<1.0
74	Black Peaty Sand	3.0	1	1.3
75	Gray Sand	4.0	1	<1.0
76	Black Granular Solids	Surface	1	<1.0
77	White Solids	Surface	1	<1.0
78	White Solids	Surface	1	<1.0
79	White Solids	Surface	1	<1.0
80	Black Solids	3.5	1	<1.0
81	White Solids	4.0	1	<1.0
82	White Solids	1.0	1	<1.0
83	Black Solids	2.0	1	<1.0
84	White Solids	Surface	1	<1.0
85	White Solids	Surface	1	<1.0
86	Sediment	1.0	2	0.04
87	Sediment	3.0	2	0.04
88	Sediment	1.0	2	0.02
89	Sediment	3.0	2	0.01
90	Sediment	1.0	2	0.11
91	Sediment	3.0	2	0.02
92	Sediment	1.0	2	0.04
93	Sediment	3.0	2	0.02
94	Sediment	1.0	2	0.06
95	Sediment	3.0	2	0.14
96	Sediment	5.0	2	0.27
97	Sediment	1.0	2	0.11
98	Sediment	5.0	2	0.04
99	Sediment	9.0	2	0.06
100	Sediment	1.0	2	0.04
101	Sediment	5.0	2	0.02
102	Sediment	1.0	2	0.85
103	Sediment	3.0	2	0.02
104	Sediment	5.0	2	0.02

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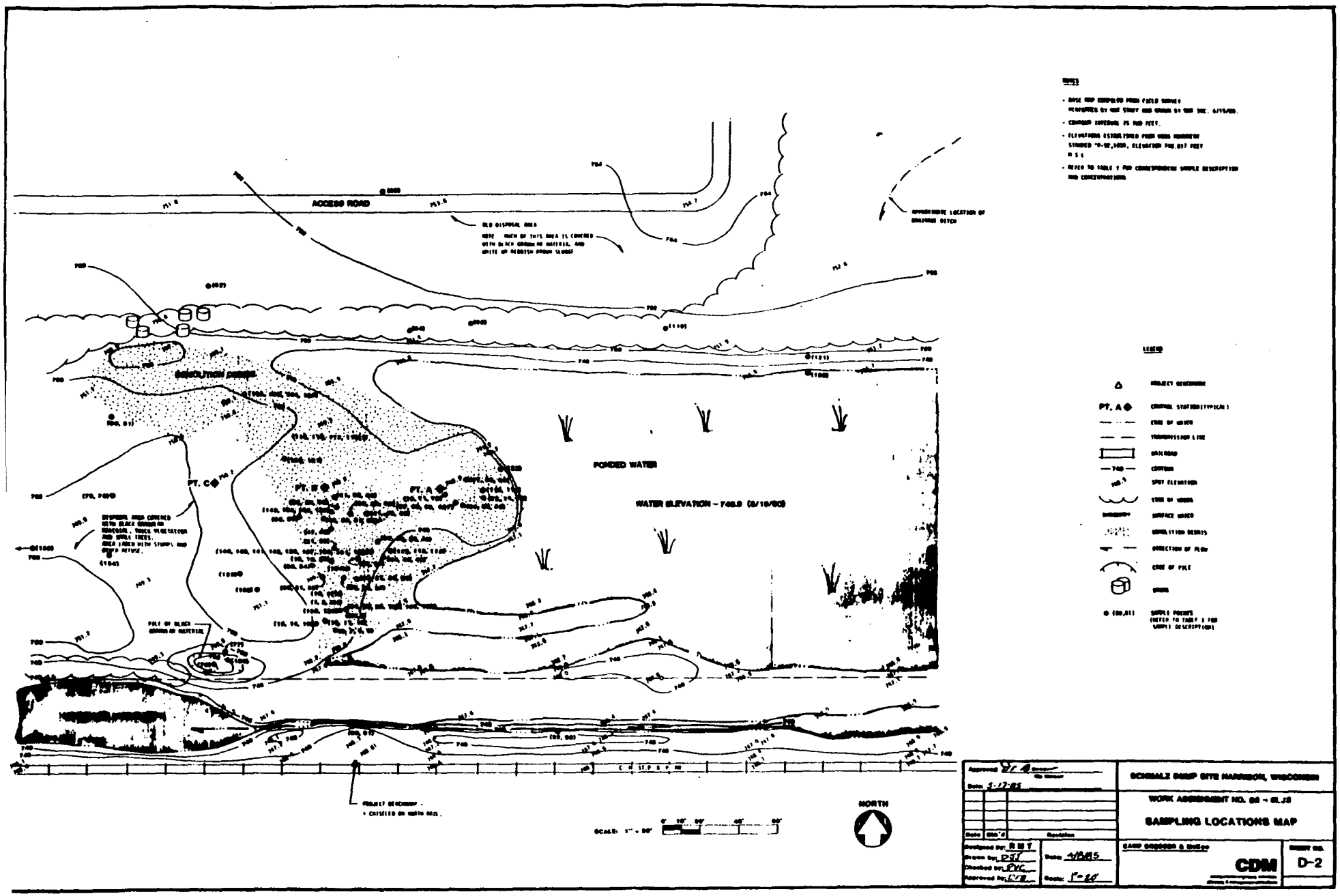
TABLE 1
(continued)

Sample No.	Description	Depth (ft)	Analyst	PCB (mg/kg)
105	Waste	1.0	2	2.3
106	Waste	1.0	2	5.9
107	Waste	1.0	2	2.9
108	Waste	Surface	2	5.6
109	Wood	Surface	2	6.7
110	Wood	Surface	2	2.1
111	Wood	Surface	2	3.4
112	Wood	Surface	2	2.4
113	Wood	Surface	2	2.1
114	Wood	1.0	2	2.8
115	Wood	Surface	2	1.1
116	Wood	Surface	2	2.5
117	Wood	Surface	2	5.3
118	Wood	Surface	2	4.1
119	Soil/Sludge	Surface	2	0.06
120	Sediment	1.0	2	0.04
121	Soil	Surface	2	0.12
122	Sediment	1.0	2	0.03
123	Soil	Surface	2	0.52
124	Black Granular Material	1.0	3	15.0
125	Black Granular Material	3.0	3	210.0
126	Oil Soaked Wood	1.0	3	9.8
127	Black Granular Material	1.0	3	220.0
128	Black Granular Material/ Wood	3.0	3	36.0
129	Wet Granular Material	5.0	3	88.0
130	Black Granular Material/ Wood	1.5	3	2200.0
131	Oil Soaked Wood	1.5	3	110.0
132	Cinder Pile	0.5	3	19.0
133	White Sand/Black Granular Material	1.0	3	0.58
134	White Sand	0.5	3	0.45
135	Clay Material	Surface	3	<0.05
136	Black Granular Material	-	3	<0.2
137	Black Granular Material	Not Located	3	<0.2
138	Black Granular Material	Not Located	3	0.77
139	Black Granular Material	Not Located	3	<0.2
140	Black Granular Material	Not Located	4	185.0
141	Wood	Not Located	4	31.5
142	Other Material	1.0	4	195.0
143	Black Granular Material/ Wood	1.5	4	2400.0
144	Wood	1.5	4	128.0
145	Other	1.5	4	3100.0
146	Oil Soaked Wood	1.5	4	8.94

Analyst:

1 RMT, Inc. May, 1980, July 1980
2 CDM, Inc. November, 1979
3 MDNR November, 1979, March 1980
4 Raltech, Inc. March, 1980

Results are expressed in mg/kg on a dry weight basis.



Approved:	SCHMALZ DUMP SITE HARRISON, WISCONSIN
Date: 5-17-85	WORK ASSIGNMENT NO. 88 - 6L.J2
Revision	SAMPLING LOCATIONS MAP
Designed by: RST	
Drawn by: DJL	Date: 4/1985
Checked by: EMC	Scale: 1" = 80'
Approved by: CCB	CDM
	D-2

to be performed at the site, following the source control remedial action, will study the various pathways to determine if migration of PCBs and heavy metals has occurred.

The PFS prepared by USEPA in June 1985 concluded that continued exposure of the public and the environment to PCBs presents an unacceptable public health risk. As a result, a removal action to construct a fence around the debris has been completed and a source control operable unit for remedial action is needed to protect public health and the environment from future exposure to PCBs. This action will also control future release of heavy metals associated with the debris.

Enforcement

CERCLA related enforcement activities began at the site in 1984. A responsible party search was conducted to identify potentially responsible waste generators and transporters. Eight parties were named for their involvement in the site, including parties who were named in the State's unsuccessful 1979 law suit. Notice letters were sent to each party and a negotiating meeting was held to discuss the cleanup. At the end of the negotiating period, none of the parties had committed to do the work.

Alternatives Evaluation

The phased feasibility study was initiated to evaluate alternative remedial actions for remediation of PCBs at the Schmalz site. Controlling the release of PCBs, by removing the contaminated debris, would eliminate the threat of direct contact and would stop future releases to the surrounding environment and receptor pathways. Five remedial action alternatives were looked at for the site. They are listed in Table 2.

TABLE 2
REMEDIAL ACTION ALTERNATIVES

Alternative 1 - PCB Removal to less than 50 ppm

Removal of building debris contaminated with 50 ppm PCB or greater and off-site disposal by landfilling or incineration.

Alternative 2 - On-Site Disposal

Construction of an on-site disposal facility which meets all applicable State and Federal environmental regulations and laws.

Alternative 3 - Source Control - Source Removal

Removal of all PCB contaminated building debris and off-site disposal by landfilling or incineration.

Alternative 4 - On-Site Management

Actions to minimize direct contact and migration of PCBs by capping, grading, and revegetation of the site and by limiting access.

Alternative 5 - No Action

An alternative that involves no remediation of the site during this operable unit remedial action phase.

Alternative 1

Alternative 1 involves excavation of 1389 cubic yards of material from the site. Sample results from 1980 showed two areas within the debris contain the highest levels of PCBs. Excavation will include approximately four feet of debris and one foot of sediment beneath it. This material will be dewatered on-site and rendered to a form acceptable for the proposed disposal option. A temporary berm will be necessary to prevent contaminated water from reentering the wetland during dewatering and a wash pad will be required for decontamination of trucks and equipment. A wastewater treatment unit will be installed to treat contaminated water generated during dewatering and decontamination. Water treatment will remove PCBs to below the detection limit of .5 ppb. The treated water will then be discharged to the adjacent pond. Any metals in the water will also be removed in this process.

The landfill option for Alternative 1 calls for disposal of material in an off-site TSCA (Toxic Substance Control Act) approved RCRA (Resource Conservation and Recovery Act) landfill facility. Table 3 summarizes the costs for this option.

TABLE 3

Cost for Alternative 1 - Landfill Option

Capital Cost	1,176,050
Annual Operation and Maintenance (O & M)	N/A
Present Worth	1,176,050

The incineration option for this alternative calls for incineration of excavated material at a TSCA and RCRA approved off-site facility. This requires rendering the material to a form acceptable for disposal. This is accomplished by shredding and pulverizing the material on-site and placing it into 30 gallon plastidrums for transport to an approved incinerator. Bulk scrap, that is too large to pass through the shredder, will require cutting with a laser prior to grinding. A fine spray of water over the shredder will be necessary to minimize dust emissions during operations. The costs for this option are summarized in Table 4.

TABLE 4

Cost for Alternative 1 - Incineration Option

Capital Cost	3,346,978
Annual O & M	N/A
Present Worth	3,346,978

Alternative 2

Alternative 2 involves construction of an on-site disposal facility for the PCB contaminated debris. The facility would have to meet all RCRA and TSCA regulations for constructing a disposal facility, as well as all State laws and regulations involved in locating and constructing a disposal facility. In addition, the alternative must comply with site management and control techniques, installation of contaminant monitoring facilities, and contaminant migration protection strategies. This alternative would include excavation of demolition debris and placement in the constructed, on-site land disposal facility. The facility would require a double liner and double leachate collection system. A berm would also be constructed around the facility in compliance with regulations. Table 5 summarizes the cost for this alternative.

TABLE 5

Cost for Alternative 2

Capital Cost	4,582,000
Annual O & M	N/A
Present Worth	
2 year	4,638,000
30 year	4,886,000

Alternative 3

Alternative 3 involves excavation of 3500 cubic yards of material from the wetland. This includes three to five feet of demolition debris and one foot of sediment below it. The material will be dredged from the wetland, dewatered on-site, rendered to a form acceptable for the proposed disposal option and transported to a TSCA approved RCRA facility for disposal. A temporary berm will be constructed to prevent contaminated water from reentering the wetland during dewatering and a wasn pad will be installed for decontamination of trucks and equipment. A wastewater treatment unit will also be required to treat contaminated water generated during dewatering and decontamination. Water treatment will remove PCBs to below the detection limit of .5 ppb. The treatment will remove heavy metals as well. Once treated, the water will be discharged to the adjacent pond.

The disposal options for Alternative 3 are the same as for Alternative 1; landfilling or incineration of waste. The difference in cost is due to the increased amount of material for this alternative. Table 6 summarizes the cost for landfilling the waste.

TABLE 6

Cost for Alternative 3 - Landfill Option

Capital Cost	2,088,300
Annual O & M	N/A
Present Worth	2,088,300

The cost of the incineration option for this alternative is summarized in Table 7 below.

TABLE 7

Cost for Alternative 3 - Incineration Option

Capital Cost	7,180,240
Annual O & M	N/A
Present Worth	7,180,240

Alternative 4

Alternative 4 involves on-site management of the contaminant source in an effort to minimize the threat of direct contact, and reduce the migration of contaminants off-site. This alternative would include site cover and site control features. Site cover would consist of an impermeable cover of clays and soils with supporting vegetation. It would be graded to provide drainage away from the site, in order to prevent vertical migration of rain water, surface runoff and surface water ponding.

Actions taken for this alternative would reduce public exposure to some extent, but would not protect groundwater and the surrounding wetland from leachate transport of PCBs and metals. Cost estimates for Alternative 4 are summarized in Table 8.

TABLE 8

Cost for Alternative 4

Capital Cost	536,938
Annual O & M	14,000
Present Worth	
2 year	561,250
30 year	668,950

Alternative 5

Alternative 5 is the "No Action" alternative. This alternative would involve no remediation of the PCB contaminated material at this phase of the project. Rather, the RI/FS would be completed and a final remedy for the site would be evaluated.

Alternative Evaluation Criteria

The alternatives were evaluated according to the following factors:

- ° Ability to protect public health and the environment
- ° Technical feasibility
- ° Compliance with environmental standards
- ° Consistency with the final remedy
- ° Environmental impact
- ° Community impact

Table 9 summarizes the analysis of the remedial action alternatives.

Summary:

Alternatives 2 and 4 have only marginal technical feasibility due to the nature of the material and the location of the site. There would be difficulty in capping the site in its present condition, and the long term effectiveness of a cap at this site is questionable because of settling of material and seasonally high water table conditions. The high water table would require that the disposal facility be built almost entirely above ground. This would make it difficult to comply with Federal and State regulations for construction of the facility. Other institutional issues arise from the sites location, because of its proximity to Lake Winnebago and area drinking water supplies. In addition, Alternative 4 does not control migration of leachate to the various pathways and receptors. A failure of the facility in Alternative 2 could also result in leachate migration. Both alternatives would have high environmental impact because the site is in a wetland and sensitive flora and fauna are associated with it. Both alternatives have high community impact because the residents disagree with actions, that would leave the possibility of contaminant leachate as a potential problem. Implementation of either alternative would make future on-site studies difficult or impossible and could conflict with the final remedy for the site if that remedy involved further management, treatment, or excavation of the demolition debris.

Alternative 5 does not meet the objectives for the operable unit remedial action. By taking "no action" at the site, the PCB contaminated material will remain unmanaged until a final remedy for the site is implemented. This would pose a significant threat to public health and the environment and would not prevent migration of PCBs into the various pathways around the site.

Both options of Alternative 3 are technically feasible, cost-effective, do not require complex planning or design, protect public health, would not conflict with the final remedy, exceed applicable and relevant environmental standards, and have low community impact and high community acceptance.

The issue differentiating the two methods of disposal at this site is the extensive manipulating of the demolition debris required to render it acceptable for incineration. The nature of the material is such that it requires grinding and cutting to reduce the bulk. This creates significant handling and safety problems since PCB contaminated fugitive dust will likely be generated during operations, and would have a negative environmental impact due to the dust emissions. In addition, some material, such as concrete with reinforced rods, metal beams and other metal objects, are unsuitable for incineration and must be landfilled. Landfilling all of the material will greatly reduce the potential for dust emissions and significantly cut down on safety and handling problems.

TABLE 9

SUMMARY OF ALTERNATIVES ANALYSIS

ALTERNATIVES	ABILITY TO PROTECT PUBLIC HEALTH	TECHNICAL FEASIBILITY	COMPLIANCE WITH ENVIRONMENTAL STANDARDS *	ENVIRONMENTAL IMPACT	COMMUNITY IMPACT
PCB Removal to less than 50 ppm	Moderate	High	Meets Standards	Landfill: low Incineration: Moderate	Moderate
On-Site Disposal	Moderate	Low	Meets Standards	High	High
Source Control-Source Removal	Good	High	Exceeds Standards	Landfill: Low Incineration: Moderate	Low
On-Site Management	Poor	Low	Does Not Attain Standards	High	High
No Action	Poor	N/A	Does Not Attain Standards	N/A	High

*Environmental standards refer to the applicable and relevant standards as refered to in the proposed changes to the NCP dated February 12, 1985.

Both options of Alternative 1 are technically feasible, cost-effective, do not require complex design. However, this alternative could conflict with the final remedy for the site because mobilization, subcontractor procurement and berm construction will have to be repeated if the final remedy calls for excavation of the remaining material. In addition, Regional policy dictates advisory levels of 1 ppm for PCBs in soils and sediment and even lower levels for water. Health advisories currently being developed by USEPA recommend setting advisory levels for PCBs much lower that 1 ppm for sites where direct contact with PCBs is a concern.

Alternative 3 is the most cost-effective alternative because it best protects public health and the environment and is most consistent with the final remedy for the site. However, due to the health and safety concerns associated with dust emissions and handling problems, and the nature of the material, the landfill option of Alternative 3 is recommended as the alternative that cost-effectively protects public health and the environment.

Community Relations

Copies of the PFS were made available to the community on July 1, 1985. Two locations served as repositories in the area: the Fox Valley Library of the University of Wisconsin in Menasha, and the Harrison Town Hall. The USEPA issued a press release on June 25, 1985, which announced the availability of the study, the commencement of the 3-week public comment period, and the schedule for the public meeting.

The public meeting was held on July 9, 1985 at the Harrison Town Hall. Approximately 20 residents attended the meeting. Representatives of the USEPA, WDNR and local government were present. The USEPA presentation explained the purpose of the PFS, described the current situation regarding site contamination, and the alternative being recommended by USEPA. Questions regarding the project were also answered. One public comment was submitted during the meeting. The public comment period ended on July 22, 1985. Public comments are addressed in the attached responsiveness summary.

Consistency With Other Environmental Laws

The proposed action will not require on-site treatment, storage or disposal of hazardous wastes. Therefore, there are no issues involving the consistency of on-site actions with RCRA or TSCA. The removal, transport and disposal of PCBs are regulated under TSCA. Therefore, the disposal facility must be TSCA approved and meet all disposal requirements established in 40 CFR 761.60.

Generally PCBs in liquid medium, with concentrations above 50 ppm must be incinerated. In most instances, USEPA recommends incineration of PCBs whether in a liquid or solid medium, regardless of concentration levels. However, due to the nature of material at the Schmalz site, and because the PCBs are absorbed on solid medium, landfilling the material is recommended. The landfill must meet all requirements under TSCA and RCRA and pass a compliance inspection within six months of receiving the waste.

The recommended alternative will be in compliance with RCRA and TSCA as well as Act 404 of the Clean Water Act (CWA). It will also be consistent with Executive Order 11990 - Protection of Wetlands. A wetlands assessment Statement of Findings is attached to this document. The recommended alternative will require a discharge of treated water back into the wetland. Althougn will not be required to obtain a permit for this action, all discharge wil treated to less than .5 ppb PCBs and applicable metal concentration levels comply with the State of Wisconsin's discharge limits. The proposed action will also comply with Wisconsin's environmental laws NR 181 and NR 157 of the Wisconsin Administrative Code. These laws are essentially equivalent to RCRA and TSCA, respectively.

Recommended Alternative

The National Oil and Hazardous Substances Contingency Plan (NCP) [40 CFR Part 300.68(j)] states that the appropriate extent of remedy shall be determined by the lead agency's selection of the remedial measure which the agency determines is cost-effective (i.e., the lowest cost alternative that is technologically feasible and reliable) and which effectively mitigates and minimizes damage to and provides adequate protection of public health, welfare or the environment. Based on the evaluation of the cost and effectiveness of each proposed alternative, the comments received from the public and the WDNR, and State and Federal environmental requirements, Alternative 3 has been determined to be most cost-effective.

The recommended alternative is considered a source control operable unit remedial action (removal of contaminant source of PCBs), as defined in section 300.68(d) of the proposed changes to the NCP. The objective of the action is to eliminate future releases from the contaminant source to the various pathways and to remove the threat of direct contact to the surrounding community and the environment. The RI/FS will examine appropriate final response actions for the site.

The capital cost of this alternative is estimated to be $2,088,300. Since this action involves excavation and off-site disposal, there are no O&M costs for this alternative. In addition, present worth values are equal to capital costs because the recommended alternative involves a one time, short term action with no O & M costs and an estimated construction time of two months. Table 10 lists the tasks and estimated costs for the recommended alternative.

Schedule

The USEPA REM II contractor, Camp, Dresser, and McKee Inc., will manage the design and construction of the remedial action. The St. Paul, Minnesota District of the COE will offer oversite during construction. The schedule of activities is as follows:

Complete Enforcement Negotiations	08/09/85
Approve Remedial Action (sign ROD)	08/09/85
Start Design	08/12/85
Complete Design	09/30/85
Sign Superfund State Contract for Construction	10/01/85
IAG with USACOE	10/01/85
Start Construction	10/07/85
Complete Construction	12/20/85

Future Actions

A USEPA funded RI/FS is scheduled to start in January 1986. The study will include an assessment of potential pathways through which PCBs and metals could migrate, and testing for other contaminants present on-site or migrating off-site. The RI/FS is schedule for completion by Spring 1987.

Table 10

TASK LIST AND ESTIMATED COSTS OF RECOMMENDED ALTERNATIVE

Mobilization and on-site handling costs	150,000
Wash pad construction and access road	50,000
Design cost	30,760
Construction Management	129,240
Office trailer and utilities	25,000
Berm construction and material cost	120,000
Activated carbon water treatment	60,000
Transportation cost for excavated material @ $2,100 per load x 351 truck loads	737,100
Disposal cost for material (include disposal of spent activated carbon) @ $150 per cubic yard x 3,508 cubic yards	526,200
Disposal of decon water	35,000
Shut down costs (includes berm removal)	150,000
Administration/Management	75,000
Total Estimate	$2,088,300

WETLANDS ASSESSMENT - STATEMENT OF FINDINGS

This "Statement of Findings" documents the wetlands assessment performed at the Schmalz Site. The statement is in accordance with Executive Order 11990 - Protection of Wetlands, which requires Federal agencies to take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands.

The Schmalz Dump Site is located in the Waverly Beach Wetlands of the Winnebago Pool. The site has undergone unauthorized dumping of PCB contaminated building debris, which was disposed of directly into the wetlands. The recommended alternative for the operable unit remedial action proposes to remove the debris and associated contaminated sediment in an effort to eliminate the threat to public health and the environment and to restore the wetlands.

Because the site is located in a wetlands, there are no alternative actions or locations to be considered in making the decision to locate the remedial action in the wetlands. However, all proposed actions will comply with state and local wetlands protection standards.

The design for construction will include safeguards to minimize harm to the wetlands during operations. A temporary berm will be installed between the affected area and the remaining pond to prevent dispersion of PCB contaminated sediments and water. Once the debris and associated sediments are excavated, the water within the bermed area will be pumped through a water treatment unit and then discharged to the adjacent pond. The pump will also serve as a flood control device in the event of heavy rainfall. This will prevent contaminated water from overflowing onto adjacent land, and possibly contaminating more of the wetlands. All contaminated water generated from dewatering of the excavated material and decontamination of equipment will be collected and treated. Temporary concrete pads will be built for on-site truck loading and storage of material. Upon completion, the impermeable liner along the face of the berm will be removed and the remaining uncontaminated clay and sand will be used as a sediment layer for the affected area.

The proposed remedial action will have beneficial effects on the wetlands. The action wil not remove any acreage that is currently used as animal habitat and will improve the quality of the wetland. Upon completion of the excavation and removal of material, the wetland will be closer to its natural condition.

COMMUNITY RELATIONS RESPONSIVENESS SUMMARY
SCHMALZ DUMP SITE
HARRISON, WISCONSIN

INTRODUCTION

This "Community Relations Responsiveness Summary" documents citizen concerns and issues raised during the planning and preparation of the Phased Feasibility Study (PFS) for an operable unit remedial action at the Schmalz Dump Site, Harrison, Wisconsin. It also documents, for the public record, the U.S. Environmental Protection Agency's (USEPA) response to the comments presented during the public comment period on the PFS.

CONCERNS RAISED DURING THE COMMENT PERIOD

The PFS was completed on June 27, 1985. Copies of the PFS were made available to the community on July 1, 1985. A public meeting was held at the Harrison Town Hall on July 9, 1985, to present the findings of the PFS and solicit public comment. Approximately 20 residents attended the meeting. One attendee submitted a public comment regarding the proposed action. The Agency subsequently received one other public comment from a local resident and written comments from the Wisconsin Department of Natural Resources (WDNR) regarding the PFS. The public comment period ended on July 22, 19

Although none of the comments received by USEPA expressed dissatisfaction with the recommended alternative, other issues of concern were expressed during the public comment period. These issues are addressed below.

ISSUE: Testing for PCBs in Nearby Water Supplies

A number of residents are concerned about the safety of the water supplies in the area. The city of Appleton's drinking water intake is located in close proximity to the site, and there are several private wells in the areas that are used as auxiliary water supplies. Previous testing of wells near the site, and of the Appleton water supply have not shown levels of PCBs above trace amounts. However, because these tests were done in 1980, citizens have raised questions regarding the lack of current sample data.

Comment: USEPA should test the City of Appleton's water supply as well as all operating private wells in the area for PCBs.

Response: During the development of the work plan for the site, USEPA and WDNR determined that the PCB contaminated debris, which is the source of PCB contamination at the site, was the most serious threat to public health and the environment. Based on this conclusion, the decision was made to develop alternatives to control the release of PCBs, prior to other scheduled site activities. Once the source is removed, USEPA will continue the long term study to determine if migration of contaminants to ground water, surface water, or soils, has occurred.

Private well sampling is currently scheduled for spring 1986. The tests will be performed on three operating wells close to the site to determine if PCBs or other contaminants are present. A second sampling of additional wells will be performed, if necessary, based on the analytical results of the initial samples. If private wells in the area show contamination, a soil sampling program will be implemented. In response to citizen's concerns about Appleton's water supply, USEPA and WDNR are working with the City of Appleton to develop a PCB Sampling program. The initial sampling date has not yet been determined; however, biannual sampling for PCBs has been recommended to the city. In addition, USEPA is proposing to move up the private well sampling date to winter 1986. However, because residences are connected to the Menasha water supply, and private wells are used for outdoor purposes if the residents choose to do so, the Agency does not feel that sampling sooner is necessary.

ISSUE: Disposal of Materials Containing Less than 50 ppm in a Wisconsin Solid Waste Landfill

The WDNR has commented that the high cost of disposal of the PCB contaminated debris could be reduced by developing a plan for disposal of PCBs with less than 50 ppm in a Wisconsin landfill.

Comment: We (WDNR) believe that the disposal cost will be significantly reduced if the less than 50 ppm waste was disposed of in a Wisconsin solid waste landfill.

Response: While the USEPA agrees with the idea presented by WDNR, there are several factors that prevent this alternative from being viable. Due to the nature of the waste, and the uneven distribution of PCBs throughout the debris, it is not possible to determine if material is highly contaminated without implementing an extensive and costly sampling program. The high cost of sampling would substantially reduce any cost savings for this alternative. In addition, a Wisconsin solid waste landfill would most likely have to build a special cell for the waste. This would be expensive and would result in an increase in cost per ton for disposal. Another factor is the time involved for implementation of this alternative. Because of the high water table in the wetland, excavation must be done during the dry season, which extends through December. Extensive sampling and procurement of a disposal site could not be done in time to complete the work this year. This would result in the PCB contaminated debris remaining in place until the dry season begins next year. The prohibiting factors associated with taking part of the material to a Wisconsin solid waste facility would be the same for a RCRA subtitle C landfill.

ISSUE: WDNR's Position On Alternatives Evaluated

The WDNR has expressed concerns regarding various issues arising from the evaluation of the remedial action alternatives. Questions were raised as to whether the alternatives for on-site management and on-site disposal would meet the requirements of Wisconsin's Administrative Code, Chapters NR 181 and NR 157, and whether they would be consistent with the permanent remedy for the site.

Comment: The alternatives for on-site management and on-site disposal do not meet the requirements of NR 181 nor are they consistent with the permanent remedy for the site.

Response: Under the Superfund law, USEPA is required to address various alternatives during the development of the feasibility study. The list must include at least the following alternatives for evaluation: 1) one that meets environmental standards; 2) one that exceeds environmental standards; 3) one that does not attain environmental standards but provides protection to public health and the environment; 4) one for off-site disposal; and 5) the No Action alternative.

Although USEPA recognizes the State of Wisconsin's position on these issues, we are obligated to address certain alternatives regardless of their compliance with environmental regulations or consistency with a permanent remedy for the site.

The remaining comments, submitted by WDNR, are related to the context of the PFS. These comments are responded to as appropriate. It should be noted that although these comments will not be incorporated into the PFS, they will be a permanent part of the Record of Decision (ROD) document.

ISSUE: Permit for On-Site Berm

Comment: We (WDNR) think there should be a discussion in the report on the need for a permit from the Corps of Engineers (COE).

Response: A permit from the COE is not required during on-site construction at a Superfund site. In lieu of a permit, the COE will review and approve the proposed design for the remedial action.

ISSUE: Estimates for Operation and Maintenance Costs (O&M) of Alternatives

Comment: O&M costs for on-site management and on-site disposal should be included in cost estimates for alternatives.

Response: O&M costs for the alternatives (if applicable) have been calculated and included in the ROD document.

ISSUE: Fish in Wetlands

Comment: It should be noted that there are no fish in the wetlands except possibly during spawning.

Response: Comment noted.

ISSUE: Institutional Considerations for Management of PCBs

Comment: Institutional considerations for management of PCB contaminated material with concentrations below 50 ppm are not discussed in Section 6.1.3 of the PFS as inferred.

Response: The USEPA is committed to protect the public and the environment from toxic chemicals such as PCBs. Region V has taken a strong stance on this issue and has implemented a recommended advisory level of 1 ppm for PCBs in the environment. In addition, health advisories currently being developed USEPA include recommendations for advisory levels to be lower that 1 ppm.

ISSUE: PCB Levels for Fish in Lake Winnebago

Comment: Information on PCB levels in fish in Lake Winnebago should be included in the PFS risk assessment.

RESPONSE: During the PFS, USEPA looked at the immediate hazards associated with the site and felt justified in performing a source control operable unit based on the exposure to the surrounding population and the flora and fauna of the wetland. The RI/FS will address the various pathways through which contaminants could migrate and contaminate receptors, including fish in Lake Winnebago. In addition, USEPA has discussed this site with the U. S. Fish and Wildlife Service and will continue to get their input throughtout the course of the RI/FS.

ISSUE: Public health Considerations for Alternative 4 - Capping Material On- Site

Comment: A discussion should be included in the Public Health Considerations of Alternative 4 relating to animals burrowing through the clay cap and possible human consumption of this wildlife.

Response: This is a valid consideration and would be a concern if Alternative 4 was the recommended alternative. Studies have shown that PCBs accumulate in the fat tissues of animals and human exposure through the food chain is a definite threat to public health.

ISSUE: Comparison of Institutional Considerations of Alternatives

Comment: Section 7.3 in the PFS, which summarizes the institutional considerations for the alternatives, should be expanded to include a more detailed discussion of alternatives for on-site management and on-site disposal as well as the "no action" alternative.

Response: Institutional considerations for the on-site management, on-site disposal and the "no action" alternatives are discussed in detail in Section 6 of the PFS. A summary of institutional considerations for these alternatives follows.

On-site disposal would require compliance with several Federal and State environmental regulations and laws, including the locational criteria. This would be difficult to comply with at this site. In addition, Federal regulations would include: TSCA and RCRA requirements for construction of a disposal facility; RCRA regulations for monitoring and protection of groundwater and surface water; Executive Order 11990 - Wetlands Protection; requirements for management of PCBs under TSCA (and Chapter NR 157 of Wisconsin's laws); and regulations for dredging and filling of a wetland. The on-site management alternative involves closure requirements under RCRA and Chapter NR 181 as well as TSCA and Chapter NR 157, in addition to several of the requirements mentioned under on-site disposal above. These numerous requirements would be very difficult, if not impossible, to comply with due to the location and nature of the site.

The "no action" alternative would be in violation of several State and Federal laws. Among these are: proper disposal of PCBs under TSCA and NR 157; and filling of a wetland under section 404 of the Clean Water Act and Chapter 30 of Wisconsin's Statutes.