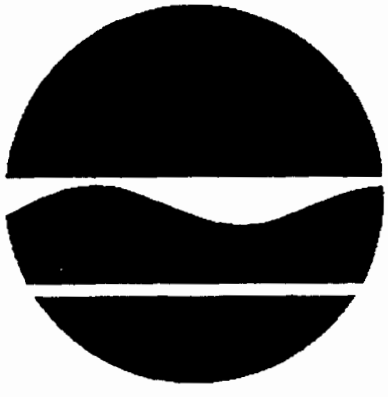
Booth Oil
Inactive Hazardous Waste Site
Operable Unit No. 2

North Tonawanda, Niagara County, New York
Site No. 9-32-100

RECORD OF DECISION

March 1993



Prepared by:

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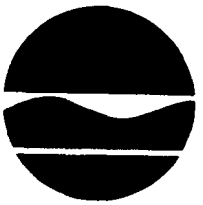


Thomas C. Jorling
Commissioner

DECLARATION STATEMENT - RECORD OF DECISION (ROD)

Booth Oil Inactive Hazardous Waste Site
Operable Unit No. 2
North Tonawanda, Niagara County
Site No. 09-32-100

Statement of Purpose

The Record of Decision (ROD) sets forth the selected Remedial Action Plan for the Booth Oil Inactive Hazardous Waste Site - Operable Unit No. 2, Sediment Contamination in the Little Niagara River. This Remedial Action Plan was developed in accordance with the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986, and the New York State Environmental Conservation Law (ECL). The selected remedial plan complies to the maximum extent practicable with the National Oil and Hazardous Substance Pollution Contingency Plan, 40 CFR Part 300, of 1985.

Statement of Basis

This decision is based upon the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Booth Oil Inactive Hazardous Waste Site and upon public input to the Proposed Remedial Action Plan (PRAP) for Operable Unit No. 2 presented by the NYSDEC. A bibliography of the documents included as a part of the Administrative Record is included in Appendix A of the ROD.

Description of Selected Remedy

The selected remedy for Operable Unit No. 2 includes the excavation of contaminated river sediments followed by on-site treatment along with the on-site soils and wastes. The remedy was selected as it is permanent, utilizing the on-site treatment technologies, it is most effective in the long-term, and the negative short-term impacts can be minimized with proper engineering controls. Treatment will be as designated in the March 1992 ROD for Operable Unit No. 1 which will be either solvent extraction, thermal separation or incineration.

New York State Department of Health Acceptance

The New York State Department of Health concurs with the remedy selected for this site as being protective of human health.

Declaration

The selected Remedial Action Plan is protective of human health and the environment. The remedy selected will meet the substantive requirements of the Federal and State laws, regulations and standards that are applicable or relevant and appropriate to the remedial action. The remedy will satisfy, to the maximum extent practicable, the statutory preference for remedies that employ treatment that reduce toxicity, mobility or volume as a principal element. Contaminants will be removed from the river reducing the mobility and treated on site which will reduce the toxicity and volume of the contaminated sediments.

March 31, 1992
DATE

Ann Hill DeBarbieri
Deputy Commissioner

TABLE OF CONTENTS

SECTION 1: SITE DESCRIPTION

The Booth Oil Inactive Hazardous Waste site is located at 76 Robinson Street in the City of North Tonawanda, New York. A site vicinity map is provided as Figure 1. Residential areas border the site to the east and north, while commercial/light-industrial areas are located to the west and south.

A storm sewer runs adjacent to the site along Robinson Street and discharges into the Little Niagara River, located approximately 500 feet west of the site. Operable Unit No. 2, which is the subject of this ROD, is designated as an area of contaminated sediments in the river in the vicinity of the Robinson Street sewer outfall as shown on Figure 1.

SECTION 2: SITE HISTORY

General Background: Waste oils were refined at the Booth Oil site for more than 50 years, until the phased plant closure in the early 1980's. During operation, waste oils were transported to the plant either by tanker truck or rail car. The oil was off-loaded into numerous aboveground and underground tanks throughout the facility until processing of the oil was completed. In addition to the tank facilities, two surface impoundments (man-made ponds) with a total surface area of about a half acre were used to store and treat waste oils on the eastern parcel.

Initial processing of the waste oils consisted of oil/water separation by centrifugation with the resulting sludge being sold for use as road oil. After centrifugation, the concentrate was refined by high temperature distillation, cooling, sulfuric acid cracking, and clay contacting. The acid tar residues were transported off site for landfilling. During plant operation, frequent spills occurred and numerous complaints were made regarding objectionable odors at the site. Oil was also periodically discharged to the Little Niagara River via surface water run-off through the Robinson Street storm sewer.

Processing of waste oils ceased in the early 1980's when the phased site closure was initiated. Removal of oil sludges and tanks commenced during 1987 and was terminated by the end of 1987 with the removal of the last aboveground storage tank. Other closure activities included the installation of two groundwater drawdown wells by Booth Oil to remove oil from a layer floating on the groundwater. Drains were also installed along the railroad tracks to collect surface run-off. The surface impoundments were drained, filled, and the entire eastern parcel covered with clean soil in 1988.

Summary of the Previous Site Investigation:

In early 1990, to address contamination remaining at the site the NYSDEC initiated a Remedial Investigation/Feasibility Study (RI/FS) under the State Superfund Program. The RI was designed to define the nature and extent of any contamination resulting from the previous activities at the site. The details of the results of this investigation are contained in the report entitled ***"Phase I/Phase II Remedial Investigation Report", August 1991.*** The RI identified volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs) and lead at significant concentrations in the on-site soils and groundwater and in the adjacent storm sewer sediments. These contaminants were also identified in two samples taken in the Little River sediments, adjacent to the Robinson Street storm sewer outfall, which indicated that the storm sewer is a pathway for site contaminants to migrate into the Little River. The Little River sediments adjacent to the outfall were oily in nature and PCBs were the

primary contaminant identified, with PCB detections at 4,400 ppb and 6,300 ppb in the two samples collected.

The FS was performed to evaluate the most feasible remedy to address the site problems. Based on the findings of the RI/FS a Record of Decision (ROD) was issued in March of 1992, which presents the selected remedial action plan for addressing the on-site problems. The Little River sediment contamination, however, was designated as a second operable unit and separated from the on-site remedy so that the development of the on-site remedy could proceed, while allowing for the collection of more sediment data.

Summary of the ROD for On-Site Contamination (Operable Unit No. 1):

The selected remedy for remediation of the on-site contamination consists of (1) on-site treatment of contaminated soils by separation technologies or incineration, (2) extraction and treatment of contaminated groundwater, and (3) cleaning of the Robinson Street storm sewer with sediment treatment to be performed on site along with the on-site soils. In the treatment process, the contaminated oil separated from the wastes will be incinerated off site. Solid residuals will be stabilized if necessary to immobilize heavy metals such as lead and backfilled on site. A protective cover would be placed over the back filled soils if necessary to prevent contact with elevated heavy metal concentrations. The on-site treatment will be accomplished by one of the following technologies: solvent extraction, thermal separation, or incineration.

SECTION 3: CURRENT STATUS

To determine the extent of PCB contamination in the Little River sediments a second RI focussing on those sediments was performed by the NYSDEC in July of 1992. In this investigation, sediment samples were collected further downgradient from the outfall than the previous samples to determine how far contaminants were migrating. Several upgradient samples were also collected to establish a sediment background level. A map showing sample results is included as Figure 2.

In the Little River RI, lower levels of PCBs were identified in the sediments located further downgradient of the outfall. The maximum PCB detection downgradient of the outfall is 650 ppb. However, the background samples, collected upgradient of the outfall, identified PCBs at higher levels than the sediments located downgradient, which makes it unlikely that the downgradient contamination resulted from the Booth Oil site. Upgradient levels range from 620 ppb to 3,500 ppb. In addition, the specific PCB Aroclor detected in upgradient and downgradient sediments during the second round of sampling (consistently Aroclor 1242) does not match the Aroclors detected during the original RI sampling of the oily sediments adjacent to the outfall (Aroclor 1248 and 1260). These results indicate that the sediment contamination resulting from the Robinson Street storm sewer outfall is limited to a relatively small area of sediments in close proximity to the outfall.

The area requiring remediation is estimated to be a 10 foot by 25 foot area adjacent to the outfall. Since sediment depths are shallow in this area the volume of sediments requiring remediation is calculated to be approximately 5-10 cubic yards.

SECTION 4: ENFORCEMENT STATUS

The Potential Responsible Parties (PRP) for the site include the site owner/operator, George T. Booth and Son, Inc; the other site owner, Consolidated Rail Corporation; and, numerous generators who shipped waste to the site including FN Burt, General Motors, General Electric, Allied Signal (Bendix), GTE, and Union Carbide.

The PRPs failed to implement the initial RI/FS at the site when requested by the NYSDEC, and therefore, did not perform the RI/FS for Operable Unit No. 2. The PRPs will again be contacted to assume responsibility for the site remedial program of which this second Operable Unit will become part of. If an agreement cannot be reached with the PRPs, the NYSDEC will evaluate the site for further action under the Superfund. The PRPs are subject to legal actions by the State for recovery of all response costs the State has incurred.

SECTION 5: GOALS FOR THE REMEDIAL ACTIONS

Goals for the remedial program have been established through the remedy selection process stated in 6NYCRR 375-1.10. These goals are established under the guideline of meeting all standard, criteria, and guidance (SCGs) and protecting human health and the environment.

The media of concern identified for Operable Unit No. 2 at the Booth Oil site is an area of contaminated sediments in the Little River. The remedial action objective is to reduce further migration of contaminants and fish and wildlife contact with contaminated sediments.

SECTION 6: DESCRIPTION AND EVALUATION OF ALTERNATIVES CONSIDERED

Potential remedial alternatives for the Little River sediments were identified, screened and evaluated in a Feasibility Study. This study is described in the report entitled ***"Feasibility Study for Operable Unit No. 2 - Sediment Contamination in the Little River", January 1993.*** Below is a summary of the detailed analysis.

6.1 Description of Remedial Alternatives:

Four potential remedies are identified in the FS and are discussed below. These generally involve either capping sediments in place or removing sediments followed by off-site disposal or treatment on-site with the other site soils as provided for by the March 1992 ROD. For each of these alternatives it is assumed that the area will have to be dewatered to gain access to contaminated sediments. The no action alternative is also included as is required by the National Contingency Plan as a basis of comparison.

1. **NO ACTION:** The no action alternative, which involves only continued monitoring, was evaluated in the FS as a regulatory requirement. This alternatives is unacceptable as the contaminated sediments would remain in their present condition and the environment would not be adequately protected.

2. **CAPPING IN PLACE:** The area of sediments to be remediated would be temporarily isolated from the river by installing a cofferdam. A stone cover would then be placed over the sediments and grouted in place. This alternative would reduce further migration of contaminants and environmental and human contact with the sediments. Periodic inspection and monitoring would be required to evaluate the integrity and effectiveness of the cap. The present worth of this alternative is estimated at $125,000.

3. **EXCAVATION / OFF-SITE DISPOSAL:** Sediments would be excavated then transported and disposed of off site into a permitted landfill. A temporary cofferdam would be placed around the area to expose sediments during excavation. An equally feasible option for sediment removal could be dredging without using a cofferdam, and this option would be evaluated during design. The estimated cost of this alternative is $90,000.

4. **EXCAVATION / ON-SITE TREATMENT:** For this alternative sediments would be excavated and then transported to the Booth Oil site for treatment along with the other Booth Oil on-site soils. On-site treatment would be by solvent extraction, thermal separation, or incineration as prescribed by the full scale site remedy which would be determined during design. Treated sediments would be backfilled on site. Any residual wastes would be transported and disposed of off site. As with the other alternatives cofferdaming or dredging would be utilized for sediment excavation. The estimated cost of this alternative is $90,000.

6.2 Evaluation of Remedial Alternatives:

The remedial alternatives have been compared against the criteria identified in the NYSDEC's Technical and Administraive guidance Memorandum (TAGM) 4030, *"Selection of Remedial Actions at Inactive Hazardous Waste Sites"*. A summary of the results of the detailed analysis scoring is included as Table 1. The full discussion of the comparative analysis is contained in the FS report. The following is a brief summary of that analysis.

The first two evaluation criteria are termed threshold criteria, indicating that each alternative at this stage must satisfy the criteria.

1. Protection of Human Health and the Environment:

This criterion is an overall assessment of protection based on a composite of all the other evaluation criteria. Each of the alternatives, except the no-action, would be protective of human health and the environment.

2. Compliance with Applicable Standards, Criteria, and Guidance (SCGs):

Compliance with SCGs addresses whether or not a remedy will meet applicable environmental laws, regulations, standards or guidance. Each of the alternatives, except no-action, would meet SCGs.

3. **Short Term Impacts and Effectiveness:**

The adverse impacts to the community, remedial workers, and the environment resulting from the implementation of each remedy are compared.

The no action alternative is more effective than the action alternatives over the short term since sediments will not be handled or exposed. Some worker exposure or environmental release is possible with the other alternatives, however, any short term risks during the construction of the other remedies are considered to be easily controllable.

4. **Long Term Effectiveness and Permanence:**

This criterion addresses the results of a remedial action in terms of its permanence and quantity/nature of waste or residual remaining at the site after response objectives are met. 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 on-site treatment alternative is the most effective in meeting these criteria. Since the PCBs would be destroyed long term risks will be eliminated. The off-site disposal option is slightly less effective than treatment since off-site disposal is not classified as a permanent remedy.

The capping in place alternative is not as effective in the long term since contaminants would remain in place and periodic maintenance and inspection would be required to insure the remedies effectiveness. No-action is the least effective since no controls are provided.

5. **Reduction of Toxicity, Mobility, and Volume:**

In the remedy selection process, preference is given to alternatives that permanently reduce the toxicity, mobility or volume of the waste at the site.

All alternatives, except no-action, will reduce the mobility of the contaminants. However, on-site treatment is the only alternative which will permanently reduce the toxicity and volume of the contamination.

6. **Implementability:**

This criterion compares the technical and administrative difficulties in implementing each alternative.

Each alternative is implementable, however, there are uncertainties in construction because work must be performed in a river bed and sediment dewatering may be necessary. Since a cofferdam will likely be used for the sewer cleaning, this cofferdam

could be expanded and utilized for isolating the river sediments. Dredging, however, is also a viable technology for the treatment or disposal options and will be further evaluated during the design phase. The cofferdam option is utilized in this ROD since a reliable cost can be established for comparison purposes. Capping in place is considered to be slightly more difficult to implement than the other action alternatives since more uncertainties exist in placing the cap.

7. Cost:

The total cost for each alternative are compared on a present worth basis. The present worth costs include capital costs and operational and maintenance (O&M) costs. O&M costs only apply to no-action and capping in place.

The no-action alternative is the least expensive estimated at about $15,000 which involves only O&M . The on-site treatment and off-site disposal were more expensive, both estimated to cost approximately $90,000. Capping in place is highest in cost at $125,000. Table 2 lists a summary of the major costs for each alternative.

SECTION 7: SUMMARY OF THE SELECTED ALTERNATIVE

The NYSDEC's selected alternative for remediation of the Little River sediment contamination is excavation followed by treatment on site, along with the on-site soils and sewer sediments. The treatment method will be solvent extraction, thermal separation, or incineration as prescribed by the overall site remediation.

This remedy will meet SCGs and be protective of human health and the environment. It is the most effective in the long term and is the only alternative that will permanently reduce the toxicity, mobility, and volume of contaminants. Capping in place and off-site disposal are not as effective as this remedy since they are not classified as permanent remedies and do not reduce the toxicity or volume of contaminants.

The cost of this remediation is estimated at $90,000. This cost is based on utilization of a cofferdam to dewater the area prior to excavation. A cofferdam will likely be necessary for the sewer cleaning and could be expanded to provide for this remedy. A more cost effective method of excavation, such as dredging will be evaluated during design. In order for dredging to be a viable option, any necessary controls to prevent sediments from migrating during dredging would have to be implemented.

This remedy will be performed in conjunction with the on-site remediation and storm sewer cleaning. The remedy will be sequenced such that all known sources of contamination at the Booth Oil site will be addressed prior to the sediment remediation. Additional investigation may be necessary during the design to better delineate the area requiring remediation, but it is anticipated that the remedial boundary will be based predominately on visual observation of oily contaminated sediments with samples to be taken at the remedial boundary to insure all impacted sediments will be addressed. The cleanup guidelines established for this operable unit are to remove all sediments contaminated by Aroclors 1248 and 1260 to below analytical detection limits, if feasible, provided background levels of Aroclor 1242 are not present in those areas at higher levels.

SECTION 8: STATUTORY DETERMINATIONS

The following discussion describes how the remedy complies with the decision criteria in the Law and regulations.

1. **Protection of Human Health and the Environment:**

   The selected remedy will eliminate potential threats to human health and the environment by significantly and permanently reducing the toxicity, mobility and volume of hazardous wastes. Excavation will eliminate human and environmental contact with the contaminated sediments and eliminate any further migration of the contaminants. The on-site treatment process will permanently reduce the toxicity and volume of the contamination.

2. **Compliance with Standards, Criteria, and Guidelines (SCGs):**

   The implementation of the remedy will result in the attainment of the SCGs. The compliance of the treatment process is addressed in the March 1992 ROD for Operable Unit No. 1.

3. **Cost Effectiveness:**

   The selected remedy is considered cost effective being among the lowest cost alternatives and utilizes the on-site treatment process which will result in an insignificant treatment cost.

4. **Utilization of Permanent Solutions and Alternative Treatment Technologies or Resource Recovery Technologies to the Maximum Extent Practical:**

   The selected alternative represents the maximum extent to which permanent, on-site treatment technologies can be used in a cost-effective manner.

5. **Preference for Treatment as a Principle Element:**

   The preference for treatment is met by the selected remedy as the sediments will be treated primarily on site with some off-site treatment possible. Alternatives involving containment in place of off-site disposal were rejected as non-permanent solutions.

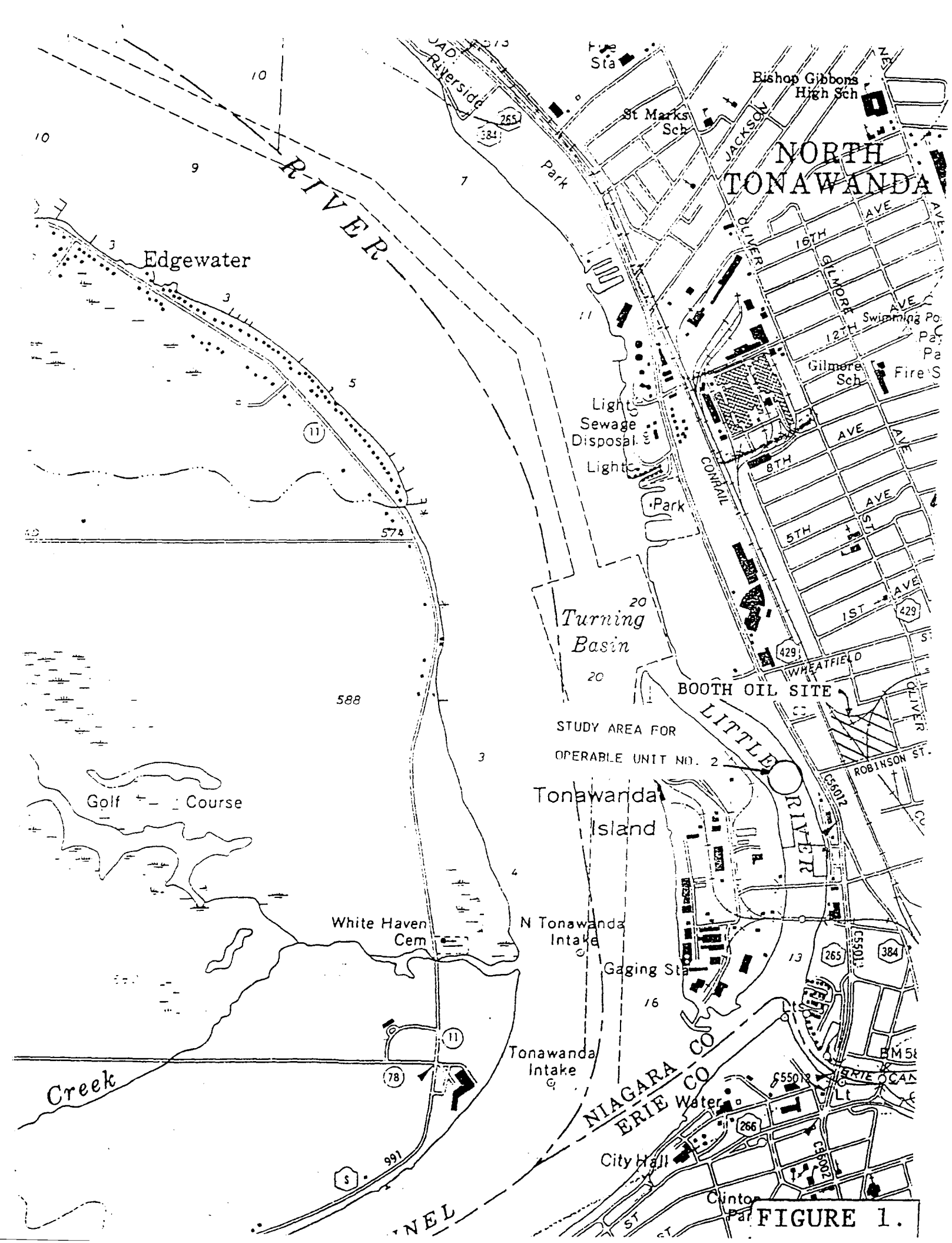

NORTH TONAWANDA
Edgewater
RIVER
Bishop Gibbons High Sch
St Marks Sch
Riverside
Park
JACKSON
OLIVER
GILMORE
16TH AVE
12TH AVE
8TH AVE
5TH AVE
1ST AVE
Swimming Po
Gilmore Sch
Fire S
Light
Sewage Disposal
Light
Park
CONRAIL
Turning Basin
WHEATFIELD
BOOTH OIL SITE
STUDY AREA FOR
OPERABLE UNIT NO. 2
LITTLE RIVER
ROBINSON ST.
Tonawanda Island
Golf Course
White Haven Cem
N Tonawanda Intake
Gaging Sta
Tonawanda Intake
Creek
NIAGARA CO
ERIE CO
ERIE Water
City Hall
Clinton Par
429
384
265
266
991
78
11

FIGURE 1.

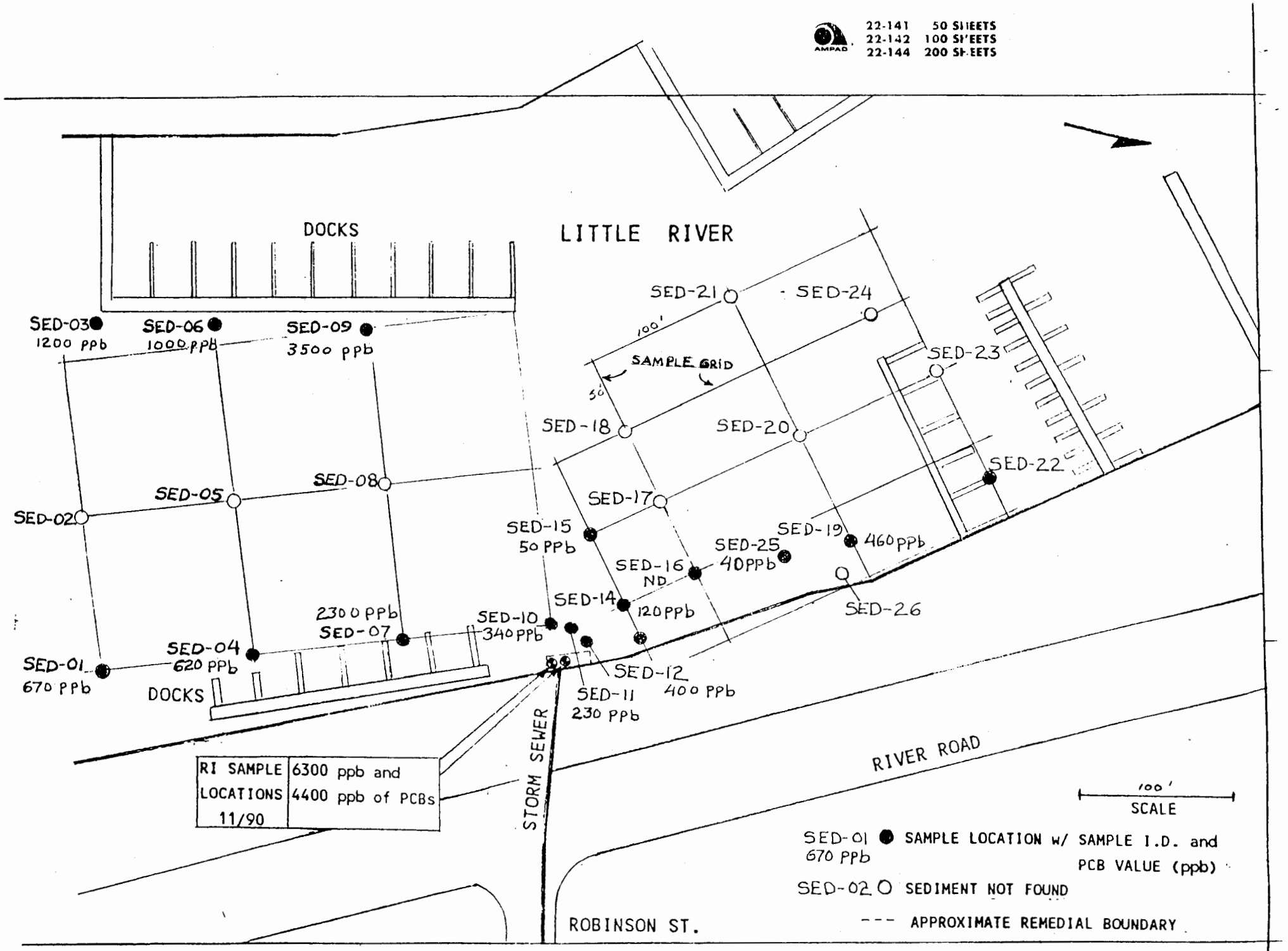


FIGURE 2: JULY OF '92 SEDIMENT SAMPLING LOCATIONS

Table 1

Summary of Results of the Detailed Analysis of Alternatives

Alternative	Compliance w/SCGs Max = 10	Protection of Human Health and Environment Max = 20	Short Term Effectiveness Max = 10	Long Term Effective -ness Max = 15	Reduction in Toxicity Mobility Volume Max = 15	Implement - ability Max = 15	Cost Max =15	TOTAL
1. No Action	6	11	10	4	0	14	15	60
2. Cap In Place	10	20	8	7	4	11	1	61
3. Excavation/ Off-Site Disposal	10	20	8	12	9	13	5	77
4. Excavation/ Treatment	10	20	8	15	15	12	5	85

TABLE 2.

ESTIMATED COSTS FOR REMEDIAL ALTERNATIVES

ITEM/DESCRIPTION	UNIT	COST/ UNIT ($)	ALTERNATIVE							
			NO ACTION	CAP IN PLACE		EXCAVATE/OFF SITE DISPOSAL		EXCAVATE/ ON SITE TREATMENT	
			COST ($)	QTY	COST ($)	QTY	COST ($)	QTY	COST ($)
COFFERDAM: MATERIALS	SQ.FT.	19.10	0	1800	34380	1800	34380	1800	34380
LABOR & EQUIP.	DAY	4354	0	3	13062	3	13062	3	13062
WATER TREATMENT	GAL	0.20	0	3366	673	3366	673	3366	673
DROP STONE: MATERIALS	SQ.YD.	23.00	0	50	1150	0	0	0	0
LABOR & EQUIP.	DAY	5735.00	0	2	11470	0	0	0	0
GROUT STONE	CU.FT.	27.85	0	225	6266	0	0	0	0
EXCAVATION/TRANS.	DAY	2440.00	0	0	0	2	4880	2	4880
DEWATERING SEDIMENTS	SQ.YD.	11.90	0	0	0	27	321	27	321
SEDIMENT TREATMENT	CU.YD.	225.00	0	0	0	0	0	10	2250
OFF SITE DISPOSAL	CU.YD.	250.00	0	0	0	10	2500	0	0
TOTAL DIRECT COSTS			0		67001		55817		55567
25% PREMIUM FOR HAZ. WASTE			0		16750		13954		13892
CONTINGENCY (20%)			0		13400		11163		11113
ENGINEERING (15%)			0		10050		8372		8335
O&M PER YEAR			1500		1500		0		0
PRESENT WORTH OF O&M (10% OVER 30 YEARS)			14140		14140		0		0
TOTAL COST $			14140		121343		89306		88906

NOTE: COST DATA BASED ON 1993 MEANS

APPENDIX A

Administrative Record

Administrative Record

The following documents, which have been available at the document repositories, constitute the Administrative Record for the Booth Oil site Remedial Investigation/ Feasibility Study for Operable Unit No. 2.

February 1991:	Phase I, Remedial Investigation Report
February 1991:	Phase I/II Feasibility Study Report
March 1991:	Phase II Remedial Investigation Field Record Report
March 1991:	Preliminary Baseline Health Risk Assessment
August 1991:	Phase I/II Remedial Investigation Report
February 1992:	Phase III Feasibility Study Report
March 1992:	Record of Decision (Operable Unit No.1)
March 1993:	Remedial Investigation for Operable Unit No. 2
March 1993:	Feasibility Study for Operable Unit No. 2
February 1993:	Proposed Remedial Action Plan for Operable Unit No. 2
February 1993:	Transcript of Public Meeting for Operable Unit No. 2

APPENDIX B

Responsiveness Summary

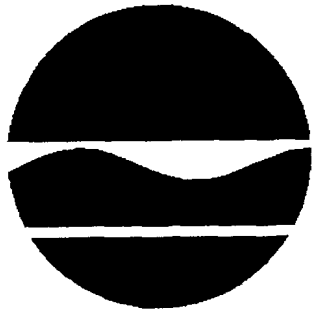
Booth Oil
Inactive Hazardous Waste Site

North Tonawanda, Niagara County, New York
Site No. 9-32-100

RESPONSIVENESS SUMMARY
for the
Operable Unit No. 2
Proposed Remedial Action Plan

Public Meeting
February 18, 1993

Issue Date
March 1993



Prepared by:

New York State Department of Environmental Conservation
Division of Hazardous Waste Remediation

RESPONSIVENESS SUMMARY
Booth Oil Inactive Hazardous Waste Site
Proposed Remedial Action Plan
North Tonawanda, Niagara County
Site No. 9-32-100

The Proposed Remedial Action Plan (PRAP) was prepared by the New York State Department of Environmental Conservation (NYSDEC) and issued to the local document repositories on February 6, 1993. The Plan outlined the preferred remedial measure proposed for remediation of the Booth Oil Site Operable Unit No. 2. The preferred remedy consisted of the excavation of contaminated river sediments followed by treatment on site along with the on-site soils and wastes.

The release of the PRAP was announced by a notice to the public mailing list, informing the public of the PRAPs availability and the opening of the public comment period.

A public meeting was held on February 18, 1993 at the North Tonawanda City Hall which included a brief presentation of the Remedial Investigation (RI) and Feasibility Study (FS) as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to present their questions and comments on the site and proposed remedy. This meeting was recorded and transcribed. A copy of the transcript is available at the document repository.

The public comment period ended on March 12, 1993. One written comment letter was received and accepted into the Administrative Record.

This Responsiveness Summary responds to all questions and comments raised at the February 18, 1993 public meeting and received during the public comment period. The following are those comments followed by the NYSDEC response.

Commentor: Unknown

1. How long will the remediation take?

   RESPONSE: The remediation of the river sediments will be phased in with the overall site remediation. It will occur after the sewer is cleaned, which will occur after the possibility of any more site contamination entering the sewer has been eliminated. The sediment excavation itself will likely be completed within a time period of about one or two weeks.

Commentor: Al Rotaris

2. Is there an estimated start-up date for the on-site remediation?

RESPONSE: At this point it is expected that the actual remediation will start late in 1994 or spring of 1995. Before remediation can begin, negotiations must proceed with the responsible parties in order for them to assume responsibility for the site remediation. This is followed by the design of the remediation, then construction. If the negotiations with the responsible parties are not successful, the State will proceed under the State Superfund Program.

3. Have the negotiations with the responsible parties begun?

RESPONSE: Notice letters have been sent to the potentially responsible parties and the State is currently awaiting a response from those parties.

4. Is Booth Oil to assume responsibility for remedial costs at this point?

RESPONSE: There are many potentially responsible parties one of which is Booth Oil. At this point no one has assumed or indicated their position on the notice.

Commentor: Sonia Dusza

5. Commentor has concerns that dredging might cause release of contaminants?

RESPONSE: This is also a major concern of the DEC which is one of the reasons the use of a cofferdam was assumed when estimating remedial costs, since it will eliminate the possibility of stirring up contaminants, allowing them to migrate down river during the excavation. Cofferdamming vs. dredging will be further evaluated during the design phase and if dredging can be implemented in a manner that will not stir up sediments, and if it is cheaper, dredging may be a more viable option. At this point it is important to keep the method of excavation open so as to allow for the implementation of the most effective technique. In addition, another consideration is the sewer cleaning which may require the placement of a cofferdam in the river to capture the sediments flushed through the sewer. Such a cofferdam could be expanded to accommodate the river sediment remediation, so this will be another consideration during the design phase.

6. Commentor requested more description on the cofferdam and definition of dewatering.

RESPONSE: A cofferdam is a watertight enclosure formed by driving sheet metal piles into the river bottom. In this case it would be placed around the area of the contaminated sediments so that the area could be dewatered to allow for sediment excavation. At the Gill Creek site in Niagara Falls a similar arrangement involving cofferdam placement and sediment excavation was performed, as well as other sites including Creekside Golf Course and Love Canal. A cofferdam is a common construction technique for excavating in or adjacent to surface water bodies. Dewatering simply means to pump the water out of the area contained by the cofferdam, to allow access to the sediments.

7. Commentor requested better explanation or an analogy of what the PCB values mean.

RESPONSE: The unit of measurement of the values listed is a part per billion (ppb), which means one part PCB per billion parts of sediment, measured by weight. Therefore, one ppb of PCBs in sediment means that there is one billionth of a gram of PCBs in a gram of soil, or the equivalent. In this case, the values are compared to the maximum levels that can be tolerated by fish and wildlife species without noticeable effects, which vary depending on site specific conditions, but which generally fall around 50-100 ppb for PCBs. Values detected in the river sediments adjacent to the sewer outfall are higher ranging from 4,400 ppb to 6,300 ppb and, therefore, are considered to pose some threat to fish and wildlife species which come in contact with the sediments.

8. How were the sediment sample locations determined?

RESPONSE: In general, samples were taken along a grid to obtain an organized distribution of samples both downstream and upstream of the outfall. More samples were also focused in the downstream area closer to the shore where the current is most likely to deposit sediments from the outfall. An understanding of the river currents and the dynamics of the water discharged from the sewer into the river were the primary factors in determining the grid size and sample locations. Sediments were not present at some of the grid locations so a sample could not be obtained.

Related comments made by Sonia Dusza and Al Rotaris combined as one comment below:

9. Do the sediments pose a threat to human health, through swimming or if the sediments are disturbed? What threats do these sediments pose to fish and wildlife? How does it relate to human health?

RESPONSE: The human health risks of any chemical exposure are dependent, in part, on the amount of exposure. PCBs were not found in the water at this site, thus direct exposure to PCBs could occur during swimming only if PCB-containing sediments come in contact with the skin or are swallowed. Indirect exposure could occur if fish containing PCBs were eaten. The PCBs in the sediments at the outfall do not pose a direct threat to humans because the likelihood of exposure is small, given the depth of the sediments, about 8 feet, and the use of the area. If the sediments were disturbed, the PCBs would remain attached to the sediments and would soon settle out on the bottom or be carried away from the site. However, fish that live in the Niagara River may contain potentially harmful levels of PCBs. The NYSDOH has issued an advisory on eating fish from the Niagara River to minimize potential harmful health effects from PCBs. The Department has found that carp in the Niagara River (above the falls) have elevated contaminant levels and recommends that most people should eat no more than one carp meal per month. The Department also recommends that women of childbearing age, infants and children under the age of 15 should not eat carp at all. Moreover, it is likely that other fish species taken from the Niagara River also have elevated contaminant levels and should not be consumed by sensitive populations. There is also a general advisory recommending that no more than one meal per week of the state's freshwater sportfish be consumed.

Sediments in the area of the Niagara River next to the Robinson Street outfall pose a greater threat to fish and wildlife than to humans because the amount of exposure to fish is much larger.

Thus, sediment cleanup levels are based on the protection of fish and wildlife for this site are lower than those based on the protection of human health. Although this area is related to the Booth Oil site, the widespread occurrence of PCBs in the river, unrelated to the Booth Oil site, poses a greater risk to fish and wildlife. This is because the outfall area is only a small part of the river bottom.

Commentor: Bob Cook

10. What is the remedial boundary?

RESPONSE: The remedial boundary at this point is estimated to be a 10 ft. by 25 ft. area in the immediate vicinity of the outfall, which is estimated from the area known to contain significant contamination. The boundary will be confirmed during the design, based on visual observation and samples. Exit samples will also be collected just after sediments are excavated to insure the excavation went out far enough to remediate all significant contamination related to the Booth Oil site. If contamination is still present in the exit samples, more sediments will be excavated.

11. What PCB level will sediments be remediated to?

RESPONSE: The cleanup guidelines established for this operable unit are to remove all sediments contaminated with aroclors 1248 and 1260 to below analytical detection limits, if feasible, provided background levels of Aroclor 1242 are not present in those areas at higher levels. Visual observation and sampling will be used to insure complete excavation, as discussed in the response to question 10.

12. Are the upstream samples that were detected at levels greater than 1 ppm all the Aroclor 1242?

RESPONSE: Yes, the only PCB detected in the upstream samples was Aroclor 1242 which is a different PCB than those detected adjacent to the outfall. Aroclor-1260 and 1248 where detected at the outfall and are associated with the Booth Oil site contamination identified in the storm sewer system.

13. What is the hazard of Aroclor 1242 relative to Aroclor 1260 and 1248?

RESPONSE: There are 209 different PCB compounds and Aroclors are commercial mixtures of many PCB compounds. The last two digits of the Aroclor number indicate the percentage, by weight, of the mixture that is chlorine. Limited information on the toxic effects of different Aroclors suggest that toxicity generally increases with the amount of chlorine in the mixture. Thus, Aroclor 1260 may be considered more toxic than Aroclor 1242. For remedial purposes, however, the toxicities of all Aroclors are assumed to be equal and they are cleaned up to the same level.

14. Does the NYSDEC have a procedure for addressing the situation where upstream samples, not related to the site, are nonetheless above levels that are typically considered corrective?

RESPONSE: The Division of Hazardous Waste Remediation can only conduct remediations at listed inactive hazardous waste sites. Since the upstream PCB contamination is not related to the Booth Oil site, and the source(s) is (are) unknown, the Division cannot remediate these sediments. Therefore, the information on background PCB levels will be provided to the NYSDEC's Division of Water, which is responsible for evaluating the condition of surface waters in New York State. There is a group within that Division that is accumulating data on the chemical loadings to the Niagara River. Also, the NYSDEC's Division of Fish and Wildlife has worked with us on developing this sampling and interpreting the sampling results, and also have this information for their use. This information will be shared with any other interested parties. This is a relatively small snapshot of the overall river, however it does indicate that there is some still unidentified, continuing or past source of PCBs to the river upstream of this area.

Commentor: Sonia Dusza

15. What is currently present in the storm sewer?

RESPONSE: Three catch basins and three manholes within the sewer adjacent to the site were sampled during the on-site investigation. All six locations contained sediments which contained elevated levels of PCBs and other contaminants characteristic of the Booth Oil site. Sediment volumes within the sewer do not appear to be large. The sewer will be cleaned as part of overall site remediation.

16. What about recontamination of the river sediments from the site after remediation?

RESPONSE: The remediation will proceed in a sequence such that all the known and potential source areas of the sewer contamination related to the Booth Oil site are remediated before the sewer is cleaned, then the sewer will be cleaned and finally once these source areas have been addressed remediation of the river sediments will begin.

Commentor: Francine Whiton

17. Will there be any monitoring on a yearly basis after remediation takes place?

RESPONSE: At this point it is anticipated that long term monitoring associated with the Booth Oil site will not be necessary, since all significant sediment contamination associated with the site will be removed by the remediation.

18. Is recontamination of the remedial area from the other sites in the river a concern?

RESPONSE: It is recognized that some recontamination of the remedial area with the Aroclor 1242 PCBs from upstream locations may occur. There is not much that can be done to prevent this. However, by remediation of the Booth Oil contaminants, a portion of the PCB loading on the river will be eliminated.

19. The remedial option proposed for the Little River involves excavation for treatment on site, is this the same for the on-site contamination?

RESPONSE: Yes. The river sediments will be treated with the on-site material. Everything on the site will be treated in the same way. The treatment method will be by separation technology or incineration.

20. Is there going to be any off-site disposal of wastes?

RESPONSE: This depends on the actual treatment system used. If on-site incineration is used all contamination will be destroyed on site and the treated soil backfilled on site. If either of the two on-site separation processes are used, the concentrated contaminants separated out will be incinerated off site, and then disposed of in an off-site landfill.

21. What precautions are going to be taken during the on-site remediation?

RESPONSE: It is anticipated that most of the on-site excavation will have to be performed under some kind of structure to control material releases into the surrounding area. Such structures can be moved around and can have controls placed on the air circulated through them so the air released is treated. A nuisance odor problem is expected more than anything else because of the oily nature of the material. There will also be air monitoring at perimeter locations surrounding the working area.

Commentor: Sonia Dusza

22. What provisions will be taken for smells or any blowing material from the sediment excavation?

RESPONSE: The river sediments will be wet so blowing will not be a problem. Since the area is small, any odors are expected to be easily controllable. The small amount of standing water over the sediments should also help to mitigate odor problems.

Commentor: Bob Cook

23. Are the overheads used at the meeting printed up anywhere?

RESPONSE: Yes. These diagrams are in the Proposed Remedial Action Plan (PRAP) and also in the Feasibility Study (FS) Report for Operable Unit No. 2, both are available at the document repositories (N. Tonawanda Library, Mayor's Office, and DEC Offices).

Commentor: Sonia Dusza

24. Has the specific treatment process been decided yet?

RESPONSE: No. The on-site Record of Decision (ROD) issued last year specifies that one of three treatment processes will be used: Incineration, Thermal Desorption, or Solvent Extraction. The specific process to be used will be decided based on the availability and costs proposed after

additional evaluation and testing is performed during design. The design phase is expected to begin by the end of 1993 and is dependent on negotiation with the responsible parties to perform the remediation. Since all three treatment processes will effectively remediate the wastes, but have different implementability issues to be addressed, the specific treatment process was left open.

Commentor: Francine Whiton

25. How accurate is the method of visual observation for purposes of defining the remedial boundary?

RESPONSE: In this case it is expected to largely identify the boundary of material requiring remediation. However, after wastes are no longer observable, samples will be collected and if those sediments are contaminated they will be included in the area to be excavated and samples will be collected further out until contamination is no longer identified. Material visually contaminated will not be sampled, but assumed to be contaminated and will be remediated.

Commentor: Paul Dicky

26. Did any other samples exhibit any visual oily contamination beside the two at the outfall?

RESPONSE: No. Oily contamination was only observed in the two samples at the outfall. The other samples appeared as natural material such as gravel, sands and some vegetation.

Commentor: Francine Whiton

27. How completely will the problem be eliminated?

RESPONSE: For the river sediments, the contamination will be eliminated close to levels where it can no longer be detected. For the on-site soils any PCBs above 1 ppm in the surface soil and 10 ppm in subsurface soil will be treated to a level that is below the 2 ppm that the treatment can achieve. This is a level at which risks to people and the environment can be minimized to an extent that it is practical.

Commentor: Bob Cook

28. What is the basis for treatment of on-site surface soils containing 1 ppm PCBs or greater.

RESPONSE: The choice of a treatment level of 1 ppm for PCBs in surface soil was based on consideration of several factors, including information on the level of cancer risk associated with ingesting and breathing soil particles containing 1 ppm of PCBs. This risk is dependent on how much on-site PCB exposure will be expected in the future. The USEPA has developed general models of such on-site exposures and they show that the estimates of the excess lifetime risk of getting cancer from a lifetime exposure to soil containing 1 ppm is about 1 in 100,000 if four conditions are met: (1) the surface soil containing 1 ppm is not covered with clean soil; (2) children have access to the site; (3) individuals visit the site and are exposed every other day and

(4) individuals have the potential for no-site exposure over a lifetime. However, these conditions will not occur at this site because portions of the site will be covered with clean soil, and deed restrictions will prevent the site from being developed as a residential property. Thus, the overall remedial program will reduce exposure and risk from site-related PCB contamination to below 1 in 1,000,000.

Commentor: Sonia Dusza

29. When the remediation is completed, will the public have any problem swimming in the water or eating fish that were caught?

RESPONSE: This remediation does not address the greater problems of the Niagara River, but only eliminates the contaminant contribution from the Booth Oil site. New York State's advisories on consuming fish caught in the upper Niagara River due to PCB contamination will remain in effect. The advisory for upper Niagara River recommends that less than one meal a month of carp should be eaten and that no carp should be eaten by women of child bearing age, infants, and children under the age of 15. A general advisory suggests that no more than one meal of freshwater sportfish be eaten per week.

30. Will this remediation have any impact on the North Tonawanda treatment plant located on the river?

RESPONSE: No. The North Tonawanda treatment plant is designed to treat industrial wastes. During the general site remediation some waste water from the site may be sent to this plant, but it would have to be pretreated to remove substances, such as oil, that the plant cannot accept.

Commentor: Francine Whiton

31. During the storm sewer cleaning, is there a cleaning solution in the water used to clean the storm sewer? Will there be a follow up inspection after cleaning the sewer?

RESPONSE: The storm sewer will likely be cleaned with a high pressure water spray to blast the material loose. Cleaning solutions will not be used, just high pressure water. After cleaning the line will be inspected, with a television camera and if sediments or other contaminants are observed it would be cleaned again.

Commentor: Sonia Dusza

32. Is contamination leaking through the sewer line?

RESPONSE: Samples of the sewer bedding material were collected and analyzed during the on-site RI. The analytical results did not identify on-site contaminants. Although there is the possibility of the existence of some leaks, no oil or visual contamination was identified.

WRITTEN COMMENTS

A comment letter was received from Sonia Dusza, 123 Miller Street, North Tonawanda dated March 12, 1992. A copy of her letter is included at the end of this Responsiveness Summary. The following issues were raised in the letter and are followed by the NYSDEC response.

33. A comment regarding Table 5.8 in Appendix C of the Feasibility Study for Operable Unit No. 2 was presented, which relates to the use of the site after remediation. Commentor claims that while both alternatives 3 and 4 (off-site disposal and treatment on site, respectively) score equally in this table, the table suggests that Alternative 4 will not permit the unrestricted use of land and water while Alternative 3 would permit the unrestricted use of the land and water after remediation, therefore, Alternative 3 should be chosen rather than Alternative 4. Concerned that if the use or the land is restricted, negative economic impact would be felt by the adjacent community.

RESPONSE: On the FS scoring Table 5.3, Alternative 4, excavation followed by treatment on site, was considered to potentially restrict the use of the site because treated sediments will be backfilled on site, which then triggers the evaluation of additional criteria in the table to identify the impacts to the environment and community from the backfilled material. In this case, the River sediments which will be backfilled on site will be treated below levels which are considered to be a health concern, therefore, Alternative 4 will not add to the potential restrictions on use of the site. In addition, since sediments will be excavated from the River, the remediation will not result in any restrictions on the use of the effected areas in the River.

A restriction on the use of the site may apply to the on-site remediation since cleanup requirements for subsurface soils are higher than surface soils. Such a restriction would likely require controls on subsurface excavation to prevent subsurface soils from being deposited on the surface during future site development activities. The restrictions should not prevent future commercial development of the site.

34. Commentor requests that the potentially responsible parties (PRPs) be aggressively pursued to pay for the remediation.

RESPONSE: It is the Department's policy to fully pursue all responsible party funding sources before the use of State Superfund is considered for remedial purposes. In this case so far, notice letters have been sent to all known PRPs.

35. Commentor requests her residential property be sampled due to oily substance visible on the surface of yard.

RESPONSE: The property in question is located on Miller street which is one and a half blocks north of the northern site boundary, a considerable distance from the site. The only off-site migration pathway identified during the site study is a limited area of surface water runoff just northeast of the site boundary. It is not likely that any contamination has migrated to Miller Street. This possibility, however, will be reevaluated during the implementation of the remedy during which time the on-site subsurface soils will be excavated which will identify any subsurface oil migration routes.

ATTACHMENT 1

Sonia M. Dusza
123 Miller Street
North Tonawanda, New York 14120
(716) 692-8764

March 12, 1993

David A. Camp
New York State Department of Environmental Conservation
Division of Hazardous Waste Remediation
50 Wolf Road - Room 222
Albany, New York 12233-7010

Re: Remedial Action Plan for Booth Oil Site, Operable Unit No. 2 - Sediment Contamination of the Little River.

Dear Mr. Camp:

As a life long resident and concerned citizen residing at the above address, a residentially zoned neighborhood and within the general vicinity of the Booth Oil Site (No. 9-32-100), a manufacturing (M-1) zone; I submit the following comments on the above PRAP to you:

1. From the 1/93 FS alternatives choices to citizens, alternatives 3 & 4, I believe are the most practical. Per Appendix "A" page 26 of 32, Table 5.3/Protection of Human Health and the Environment, Analysis Factor #1. "Use of the site after remediation", Basis for Evaluation During Detailed Analysis: "Unrestricted use of the land and water". (If answer is yes, go to the end of the table)

Yes _____ SCORE
No _____ (MAX 20)

For alternative #3: Excava tion/disposal off-site: Yes 20
No _____

For alternative #4: Excavation/treatment/on-site disposal: Yes ___
No 0

While both alternatives score equally, the MAX, Alternative #4 would not permit the use of land and water while alternative #3 would permit the unrestricted use of the land and water after remedaition therefore, I request alternative #3 be chosen.

While the goal is to remediate and protect the environment the economic impact would be profoundly felt in the stigma of stated analysis for all existing owners of property(ies) in the neighborhood. Also the vacant unrestricted land adjacent to residen-

tial zoning would depreciate land and homeowners' real estate and would also effect displacement of citizens, cause further destabilizing of neighborhood character(with environmental classification), and the escalating of displacement from neigborhood and the increasing of poverty and very, very low income within census tract due to the economic, social negative impact of vacant, and restricted land and water use.

For more information regarding the effects above, please review report, Minorities and the Environment: An exploration into the environmental policies, practices and conditions on minority and low income communities, Chaired by Messrs. Hinchey, Gottfried, Eve, Griffith, Vann, and Diaz after Proceedings from the 1991 Public Hearing Series. Find enclosed NOTICE OF JOINT PUBLIC HEARINGS. So much is contained in this report applicable to my own views experience I request report be digested before a final decision on remediation be made.

The Booth Oil Site is in close proximity to our Water development area and the remediation has and will have an economic and social impact to our neighborhood, community as it impacts on the recreational use or non use of residents and tourist. If our State & Municipality are serious in becoming a tourist region and attract-business and residential investment, we need sound land use planning of our resources so we may attract interested, potential investors and not become the literal dumping ground of the eastern seaboard. We must invest in our community's/State/Country's resources if we are to compete with our competitors.

Our environment is connected and related with our economic, and social well being, if its sick and not producing, it impacts are own ability to economic and social well being.

I request that PRP's be aggressively pursued vs the taxpayers' picking up the tab for the liability of remediation. Taxpayers are already bankrupt with S & L scandals, we don't have to be subsiding social irresponsible corporate citizens who use and profit from our land/community and then plead no liability and/or bankruptcy.

Also enclosed to you and NYS/DOH is my physicians confirmation to DEC as I said I would submitt earlier. Consider confidential.

Also, I once again request sample of our residential property be taken due to oily substance visible during summer.

Sincerly,

Sonia M. Dusza

enc.

cc: M. Hinchey, NYS Assem.