



Department of Environmental Conservation

Division of Environmental Remediation

Record of Decision
Cumberland Bay Sludge Bed-Wilcox Dock Site
(OU-2)
Plattsburgh, Clinton County
Site Number 5-10-017

March 1999

New York State Department of Environmental Conservation
GEORGE E. PATAKI, *Governor* JOHN P. CAHILL, *Commissioner*

DECLARATION STATEMENT - RECORD OF DECISION

"Cumberland Bay Sludge Bed-Wilcox Dock Site Operable Unit#2" Inactive Hazardous Waste Site Plattsburgh, Clinton County, New York Site No. 5-10-017

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedial action for the Cumberland Bay Sludge Bed-Wilcox Dock inactive hazardous waste disposal site Operable Unit#2 which was chosen in accordance with the New York State Environmental Conservation Law (ECL). The remedial program selected is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300).

This decision is based upon the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Cumberland Bay Sludge Bed-Wilcox Dock Inactive Hazardous Waste Site and upon public input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. A bibliography of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Assessment of the Site

The actual or threatened release of hazardous waste constituents from this site is currently being addressed by the implementation of the beach cleaning Interim Remedial Measure (IRM) included in the remedy selected in the Record of Decision dated December 1997 for Operable Unit #1. Therefore, no additional remedial activities are required.

Description of Selected Remedy

Based upon the results of the Remedial Investigation (RI) for the Cumberland Bay Sludge Bed-Wilcox Dock Site Operable Unit #2, the NYSDEC has selected No Further Action. Under this remedy, the current beach cleaning IRM will continue, however, no additional remedial activities are required.

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 remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

Date

3/25/99


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

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SECTION 1: SUMMARY OF THE RECORD OF DECISION

The New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYSDOH) has selected No Further Action as the preferred remedy for Operable Unit #2 (OU-2) of the Cumberland Bay Sludge Bed - Wilcox Dock Inactive Hazardous Waste Disposal Site. OU-2 is comprised of the Cumberland Bay beaches and the former beach debris disposal area in the Cumberland Bay State Park. Under this proposal, the current beach cleaning Interim Remedial Measure (IRM) initiated under Operable Unit #1 (OU-1) of this site will continue.

As more fully described in Sections 3 and 4 of this document, certain paper making processes formerly used by the local paper mill led to the discharge of polychlorinated biphenyl (PCB) into the lake as part of the mill's waste stream. The discharge of untreated waste into the lake led to the creation of the sludge bed adjacent to the Wilcox Dock. The sludge bed is contaminated with the PCBs that were discharged with the other process wastes. The sludge bed (which is being remediated under OU-1) is currently being eroded by wave action and contaminated material is being washed up on the beaches of Cumberland Bay.

The contaminated material washing up on the beaches of Cumberland Bay from the sludge bed poses a significant threat to human health. This threat is associated with direct contact with the PCB contaminated material.

The NYSDEC has implemented an IRM to clean this contaminated material from the beaches in response to the threats identified above. In addition to the beaches impacted by the material being eroded from the sludge bed, a former beach debris disposal area was also identified and investigated during the Remedial Investigation (RI). This area was determined not to pose a threat to human health or the environment.

Based on the success of the above beach cleaning IRM and the findings of the investigation of this operable unit of the site, No Further Action has been selected as the remedy for OU-2.

SECTION 2: SITE LOCATION AND DESCRIPTION

The Cumberland Bay Sludge Bed Wilcox Dock Site is located in the Cumberland Bay of Lake Champlain within the City of Plattsburgh, N.Y. (see Figure #1). The bed is composed of wood pulp, wood chip debris and other processing wastes from local wood processing industries. Records show that these processing waste discharges occurred for several decades and the wastes either settled or were directly discharged into this area of Cumberland Bay. Untreated waste disposal to the Bay ended in the early 1970's when the City of Plattsburgh's wastewater treatment plant began treating wastes from the local industries. The site definition includes all underwater areas within and along the northwestern portion of Cumberland Bay that contain accumulations of contaminated sludge. The sludge bed occupies an area of the bay that is approximately 34 acres in size. The average thickness of the sludge bed is between one and two feet, however, the thickness of the bed by Wilcox Dock exceeds ten feet. The volume of the

sludge bed is estimated at 130,000 cubic yards with PCB contamination detected throughout the bed. Concentrations of PCBs have been detected as great as 13,600 parts per million (ppm) in sludge samples.

The sludge bed within Cumberland Bay is being addressed as OU-1. (see Section 4 below) An Operable Unit represents a discrete portion of the remedy for a site which, for technical or administrative reasons, can be addressed separately to eliminate or mitigate a release, threat of release or exposure pathway resulting from the site contamination

OU-2, which is the subject of this Record of Decision (ROD), consists of the former beach cleaning disposal area at the State Park and the beaches along Cumberland Bay (see Figure #2).

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

As described above, the sludge bed within Cumberland Bay is the result of years of local wood processing industrial wastes being discharged directly into Lake Champlain. By 1960, a paper products company known as Vanity Fair was pulping secondary fiber (recycled waste paper) at their Plattsburgh facility. Reference materials reviewed during the Department's investigation indicated that certain PCB contaminated wastes were the byproduct of this process due to the high PCB content of carbonless copy paper, which was used in such manufacturing processes during that era. Carbonless copy paper containing PCBs was produced in the United States between 1957 and 1971 using PCB Aroclor 1242 exclusively as an ink carrier. Aroclor 1242 is the predominant PCB Aroclor found in the sludge bed. The paper making process which may have involved the pulping of recycled carbonless copy waste paper was continued at the Plattsburgh mill after Vanity Fair was purchased by and merged with Georgia Pacific in 1963. Georgia Pacific continued this process until 1966, when it stopped pulping secondary fibers at the Plattsburgh mill. In 1973, the untreated discharge of wastes ended when the mills were connected to the city wastewater treatment plant. The Department's data also indicate that a wood processing and manufacturing facility adjacent to the Georgia Pacific facility also used the same outfall pipe to release process wastes to the site. This facility has had various operators since the 1950's and is currently owned and operated by the Tenneco Packaging Corporation. In addition, other parties may have released various wastes to the site over the years. Therefore, the Department's investigation regarding the complete origins of the wastes and materials released to the site remains open.

3.2: Remedial History

The NYSDEC has conducted a monitoring program of contaminant levels in the fish of Lake Champlain since the 1970's. The results of this monitoring have shown that certain species of fish within Cumberland Bay have the highest PCB levels of any fish found in the lake. Environmental sampling performed between 1992 and 1994 confirmed the presence of high levels of PCBs in the sludge bed at the Wilcox Dock area. This sampling also detected PCBs in the woodchip debris washing ashore in the Bay. The site was added to the Registry of Inactive Hazardous Waste Disposal Sites in November, 1994.

The characterization of the sludge bed was initiated in July, 1995 and completed in September, 1995. The major objectives of the site characterization were to determine the extent of the sludge bed, the contaminant distribution within the bed, and a volume estimate of the sludge bed. This included the collection of data to evaluate the physical, chemical and geotechnical properties of the sludge bed and underlying sediments.

In addition, the NYSDEC has initiated a beach cleaning IRM to remove the PCB-contaminated debris washing up on the Cumberland Bay beaches. The purpose of this IRM is to reduce the potential for human exposure to this waste material.

SECTION 4: SITE CONTAMINATION

In response to a determination that the presence of hazardous waste at the Site presents a significant threat to human health and the environment, the NYSDEC completed a Site Characterization and Feasibility Study (SC and FS). The Record of Decision for OU-1 was signed on December 30, 1997. The remedial action selected for OU-1 is the removal and off-site disposal of the sludge bed and the continuation of the beach cleaning IRM currently underway to reduce the public's exposure to the waste material washing on shore in Cumberland Bay. The design of the OU-1 remedy is complete, with the next step being the construction/implementation of the remedy.

4.1: Summary of the Off-Site Remedial Investigation

The purpose of the off-site Remedial Investigation was to define the nature and extent of off-site contamination at the beach debris disposal area at the State Park, to determine if any additional remedial work is required for the public and private beaches of Cumberland Bay and to gather the data necessary to support the evaluation and selection of remedial alternatives for these off-site areas.

The Remedial Investigation for OU-2 was conducted to supplement the off-site data collected in the Site Characterization Study during 1995. A report entitled Remedial Investigation Report Cumberland Bay Sludge Bed-Wilcox Dock Operable Unit No.2 August 1998 has been prepared describing the field activities and findings of the RI in detail.

The RI included the following activities:

Major Investigative Tasks

- Soil borings and chemical analyses to determine the horizontal and vertical extent of sludge contained in the beach debris disposal area at the State Park.
- Coring and sample analyses of beach areas to determine the horizontal and vertical extent of contamination.

To determine which media (soil, surface water, etc.) contain contamination at levels of concern, the RI analytical data were compared to environmental Standards, Criteria, and Guidance (SCGs). Drinking

water and surface water SCGs identified for the Cumberland Bay Sludge Bed - Wilcox Dock Site were based on NYSDEC Ambient Water Quality Standards and Guidance Values and Part V of the NYS Sanitary Code.

4.1.1: Nature of Contamination:

As described in the RI Report, two areas of concern were investigated during the study.

The first area of concern was the public and private beaches in Cumberland Bay. The analytical results from the sampling performed during the RI, Site Characterization and the previous investigations have shown that the woodchip debris which washes up on the beaches are contaminated with PCBs. These materials are the focus of the beach cleaning IRM.

The data also show that the beach sand itself is not contaminated with PCBs above NYSDEC action levels. The beach areas that did contain low levels of PCBs also contained wood debris. Analytical tests indicate that the PCBs are adsorbed on and contained within the wood debris. The areas of beach with the most debris were generally those closest to the sludge bed.

In the second area of concern, the former beach debris disposal area, the investigation determined that the area did receive debris from the State Park beach maintenance activities and that the debris were contaminated with low concentrations of PCBs.

4.1.2: Extent of Contamination

The purpose of the OU-2 investigation was to:

1. determine the extent of shoreline contamination of the beaches caused by the erosion of contaminated material from the sludge bed as defined in the Site Characterization Report;
2. determine if additional remedial action was required for the beaches in addition to the present beach cleaning IRM; and,
3. to investigate the known former beach debris disposal area in the State Park and determine if any remedial action was necessary.

Beaches

Thirteen cores of the beaches were taken to supplement the 10 beach cores taken during the 1995 study (see Figure #2). The beach investigation conducted during the Site Characterization Study was limited to the beaches between the sludge bed and Scotion Creek. The investigation area was expanded for the OU-2 RI to include the beaches that are being addressed by the beach cleaning IRM. These additional cores were taken to characterize the subsurface conditions that exist at the beaches. 57 chemical analyzes were performed on samples from these cores. These samples were collected to characterize the vertical extent of contamination (see Table 1).

The results of this investigation determined that the beach sands themselves were not contaminated above NYSDEC action levels (one ppm PCB at the surface). The debris that is washing ashore, eroding from the sludge bed, contains PCB contamination. This material often coats the beaches after storm events. The contaminated wood chips on the beach surface are presently being addressed through the beach cleaning IRM.

This debris is occasionally interlayered with the beach sands in some locations after storm events. Generally, the amount of interlayering within the beach sands increases with closer proximity to the sludge bed, is dependent upon storm events and is variable in both extent and duration. An area of beach displaying interlayering prior to a storm event may not display interlayering after the event and vice versa. This was observed at sample location SL-7. A layer of sludge bed material was observed during one sampling event but absent during the next event. This phenomenon is expected to continue until the sludge bed is removed. The project to remove the sludge bed is scheduled to begin in the spring of 1999.

Cumberland Bay State Park

A sampling grid was established across the former beach debris disposal site. Twenty-three borings were taken within the disposal area (see Figure #3). These borings were advanced to a depth greater than the thickness of the fill material in this area. The investigation determined that the area did receive debris from the State Park beach maintenance activities that was contaminated with PCBs. However, the investigation did not detect PCB concentrations above NYSDEC action levels (see Table 1).

The sampling of surface waters at the State Park beach debris disposal area did not detect PCBs. In addition, surface water samples collected off the State Park beach within Cumberland Bay did not detect PCBs.

4.2: Interim Remedial Measures:

Interim Remedial Measures (IRMs) are conducted at sites when a source of contamination or exposure pathway can be effectively addressed before completion of the RI/FS.

In the case of the Cumberland Bay Sludge Bed -Wilcox Dock Site, a beach cleaning IRM has been initiated to mitigate the human health risks associated with the sludge bed material which washes ashore on the beaches of Cumberland Bay. This IRM was initiated in May 1995. The IRM includes an initial beach cleanup each spring with subsequent cleanups done on an "as needed" basis. Over 400 tons of contaminated material were removed from the Cumberland Bay beaches as a result of this IRM during 1995, 1996, 1997 and 1998. This IRM will continue during the 1999 season and will be continued until it is determined by the NYSDOH that the beach cleanup is no longer required.

4.3: Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the area of OU-2. (A more detailed discussion of the health risks can be found in the fact sheet dated December 15, 1994 that was released by the NYSDOH and NYSDEC and in the Site

Characterization Report Addendum No. 1 Baseline Health Risk Assessment and Baseline Environmental Risk Assessment May, 1997.)

The contaminant of concern at the Cumberland Bay Sludge Bed - Wilcox Dock Site is polychlorinated biphenyl (PCB). PCBs cause cancer and non-carcinogenic adverse effects in laboratory animals exposed to high levels over their lifetimes. Whether PCBs cause cancer in humans is unknown. However, chemicals that cause cancer in laboratory animals may also increase the risk of cancer in humans exposed to lower levels over long periods of time. Chemicals that cause adverse health effects in humans and/or animals following high exposure may also increase the risk of adverse effects in humans exposed to lower levels over long periods of time.

Human health effects reported after exposure to PCBs include skin, eye, and respiratory tract irritation and less frequently effects on the liver, nervous and digestive systems. Maternal exposure to PCBs may produce developmental effects on the unborn child.

An exposure pathway is the process by which an individual comes into contact with a contaminant. The five elements of an exposure pathway are: 1) the source of contamination; 2) the environmental media and transport mechanisms; 3) the point of exposure; 4) the route of exposure; and 5) the receptor population. These elements of an exposure pathway may be based on past, present, or future events.

Completed pathways which are known to or may exist at the area of OU-2 include:

- **Ingestion**

This exposure pathway includes the incidental ingestion of the contaminated woodchips washing ashore in Cumberland Bay. The contaminated woodchips washing ashore are being addressed via the beach cleaning IRM.

- **Direct contact**

This includes direct contact with the woodchips washing ashore and contact with the waste bed itself. As noted before, these contaminated woodchips are being addressed via the beach cleaning IRM.

4.4: Summary of Environmental Exposure Pathways

This section summarizes the types of environmental exposures which may be presented by the site.

The woodchip debris in suspension in the water and washing ashore along the beaches of Cumberland Bay contain PCBs. The studies of the sludge bed by the Department confirm that the PCB contaminated material that is washing up on the beaches is from the sludge bed at Wilcox Dock.

The investigation performed for OU-2 has determined that the most likely exposure pathway to wildlife was via incidental ingestion of contaminated wood chips by waterfowl while feeding. However, the baseline risk assessment also determined that there was not a significant impact from this pathway.

The baseline assessment determined that the former beach debris disposal area does not represent a significant wildlife habitat and that there are no significant wildlife exposure pathways in this area.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination due to the release of hazardous waste as defined under 6 NYCRR Part 371 at a site. This may include past or present owners and operators, waste generators, and haulers.

The Potential Responsible Party (PRP) for the release of PCB to the site, documented to date, is Georgia Pacific Corporation on the basis of the firm being a generator and successor of former generators that discharged waste containing PCB into the bay.

In January 1995, Georgia Pacific denied any responsibility for the release of PCB to the site during a meeting with New York State. However, Georgia Pacific did present a large amount of information in response to the Department's information request. This information alleged that numerous other parties either contiguous to the site or along the Saranac River were site related PRPs for the release of PCB to the site.

To resolve this conflict, the Department retained a PRP search contractor who reviewed this information and gathered new information related to historic waste releases to the site. Based on the information gathered in this process, in September 1996 the Department has again concluded that Georgia Pacific is a PRP for the release of PCB as a hazardous waste to the site although other PRPs may exist for the site and the Department's inquiry in this matter remains open. Georgia Pacific continues to maintain that it is not the source of PCBs at the site.

In December 1994, the NYSDEC and NYSDOH released a fact sheet for the site which described the need to perform the beach cleaning IRM.

On July 6 1995, a referral to conduct an RI/FS using state monies was issued.

In July 1997 the NYSDEC and Georgia Pacific Corporation reached an agreement regarding a settlement of that company's liability for the remediation of the sludge bed.

Upon issuance of the Record of Decision the NYSDEC will approach the PRPs identified up to that time to implement the selected remedy under an Order on Consent. If an agreement cannot be reached with the PRPs then identified, the NYSDEC will remediate the site under the State Superfund. The identified PRPs may be subject to legal actions by the State for recovery of all response costs the State has incurred.

SECTION 6: SUMMARY OF THE REMEDIAL GOALS AND SELECTED ACTION

The selected remedy for any site should, at a minimum, eliminate or mitigate all significant threats to the public health or the environment presented by the hazardous waste present at the site. The State believes

that the remedial plan now in place, which is described in the Record of Decision for OU-1 and the ongoing IRM described in Section 4.2, will accomplish this objective.

Based upon the results of the RI, previous investigations and the ongoing IRMs that have been performed at the site, the NYSDEC is proposing No Further Action as the preferred remedial alternative for Operable Unit #2 of the site.

No Further Action for OU-2 is supported by the analytical results from the State Park and the beaches. The analytical results indicate there is no PCB contamination in excess of NYSDEC action levels (one ppm PCB at the surface) at the State Park disposal area, nor in the sands of the beach areas. The contaminated woodchips that are impacting these beaches will continue to be addressed through the beach cleaning IRM until the NYSDOH determines that the debris no longer pose a health risk.

SECTION 7: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the remedial investigation process, a number of Citizen Participation (CP) activities were undertaken in an effort to inform and educate the public about conditions at the site. The following public participation activities were conducted at the site.

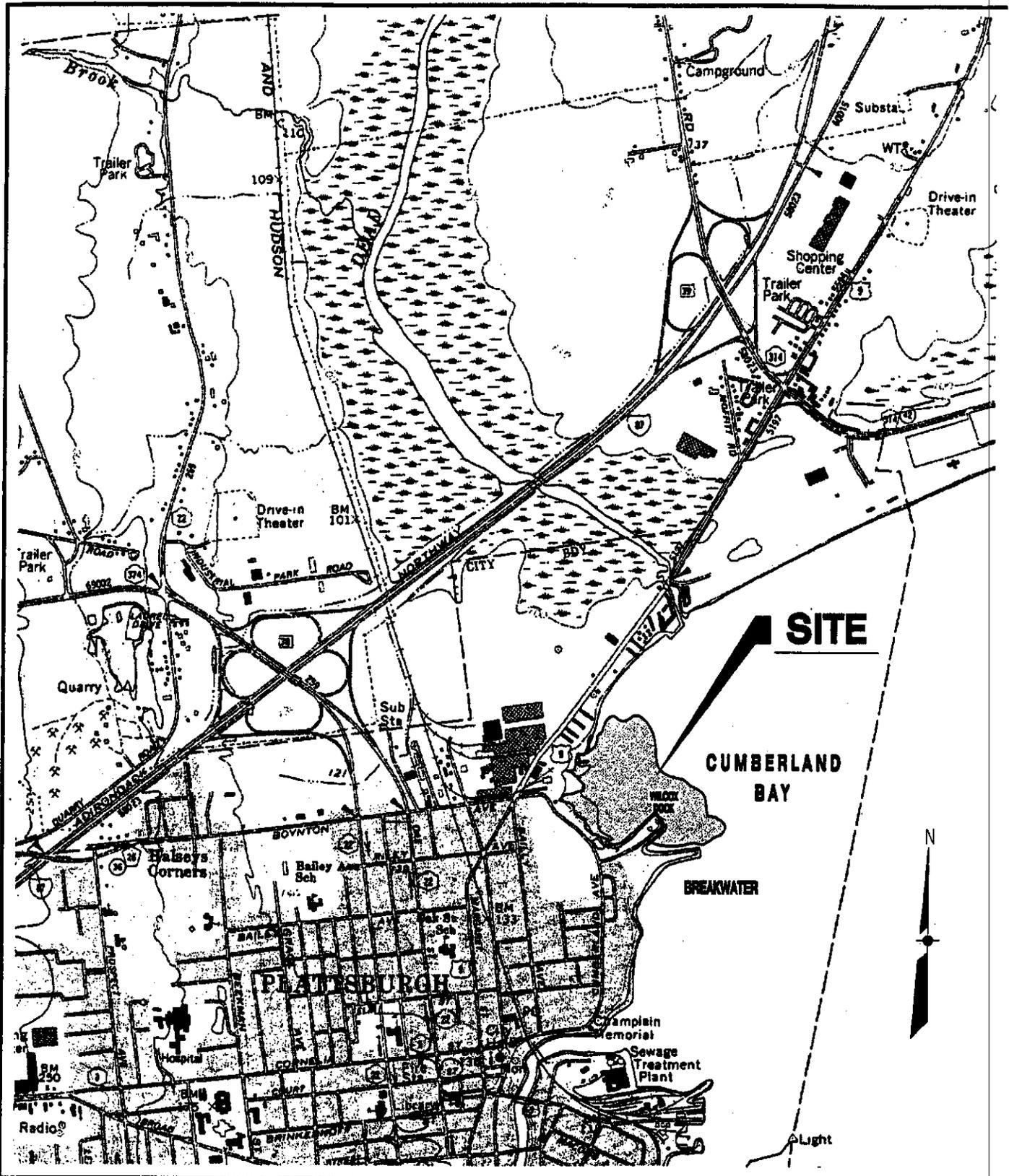
A repository for documents pertaining to the site was established.

A site mailing list was established which included nearby property owners, local political officials, local media and other interested parties.

Parties on the mailing list were notified of the public meeting that was held on January 27, 1999 to present the PRAP and receive comments on the Department's plans.

Concerns of the community regarding the RI report and the Proposed Remedial Action Plan have been evaluated. The "Responsiveness Summary" included as Appendix A presents the public comments received and the Department's response to the concerns raised.

In March 1999, a Responsiveness Summary was prepared and made available to the public, to address the comments received during the public comment period for the PRAP.



RUST

Rust Environment & Infrastructure Inc.

JULY 1998

202352

0' 500' 1000' 2000' 4000'



SCALE

FIGURE 1

SITE LOCATION MAP

DESIGN ANALYSIS REPORT
 CUMBERLAND BAY SLUDGE BED SITE
 PLATTSBURGH - CLINTON COUNTY, N.Y.
 NYSDEC SITE No. 510017

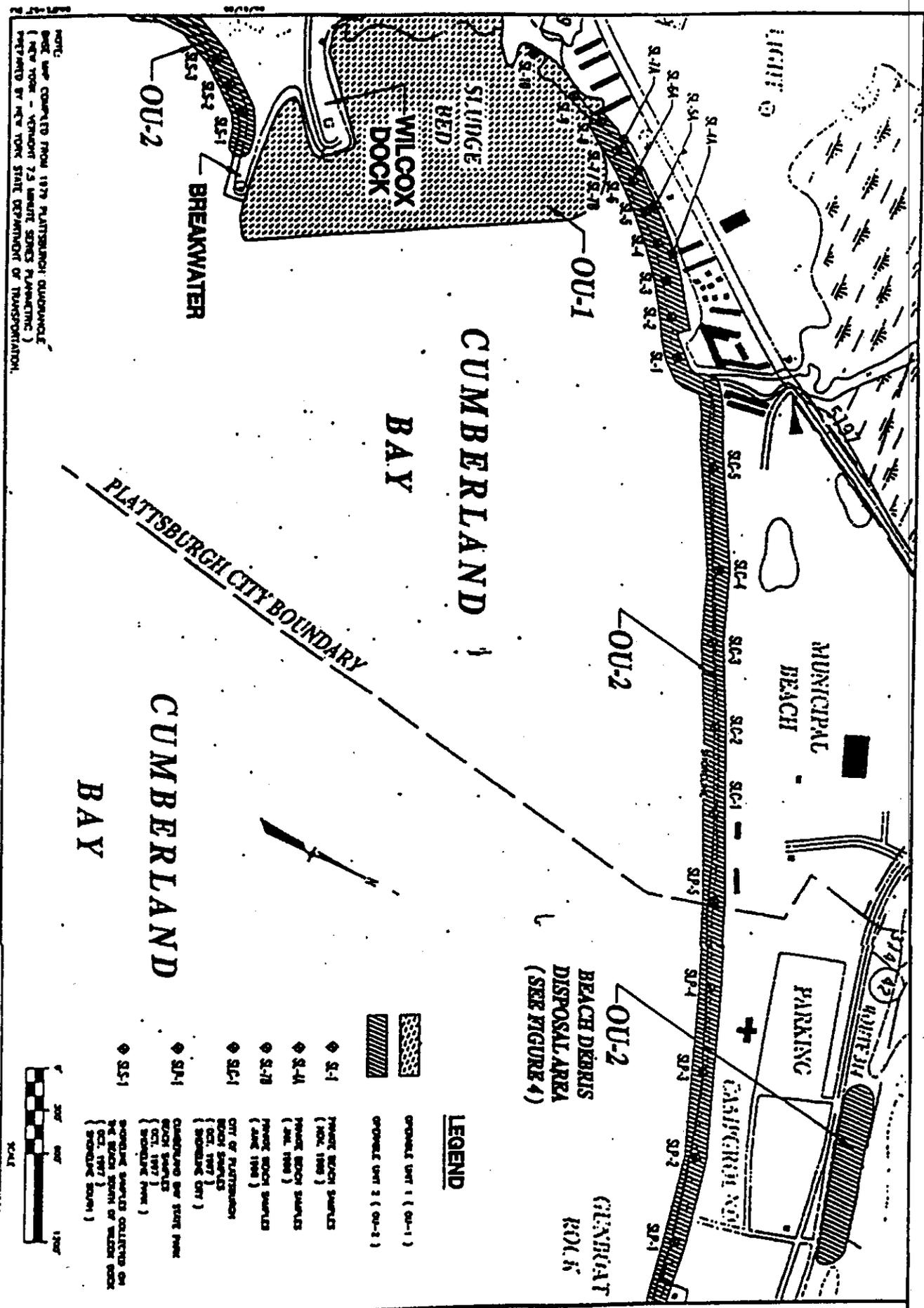
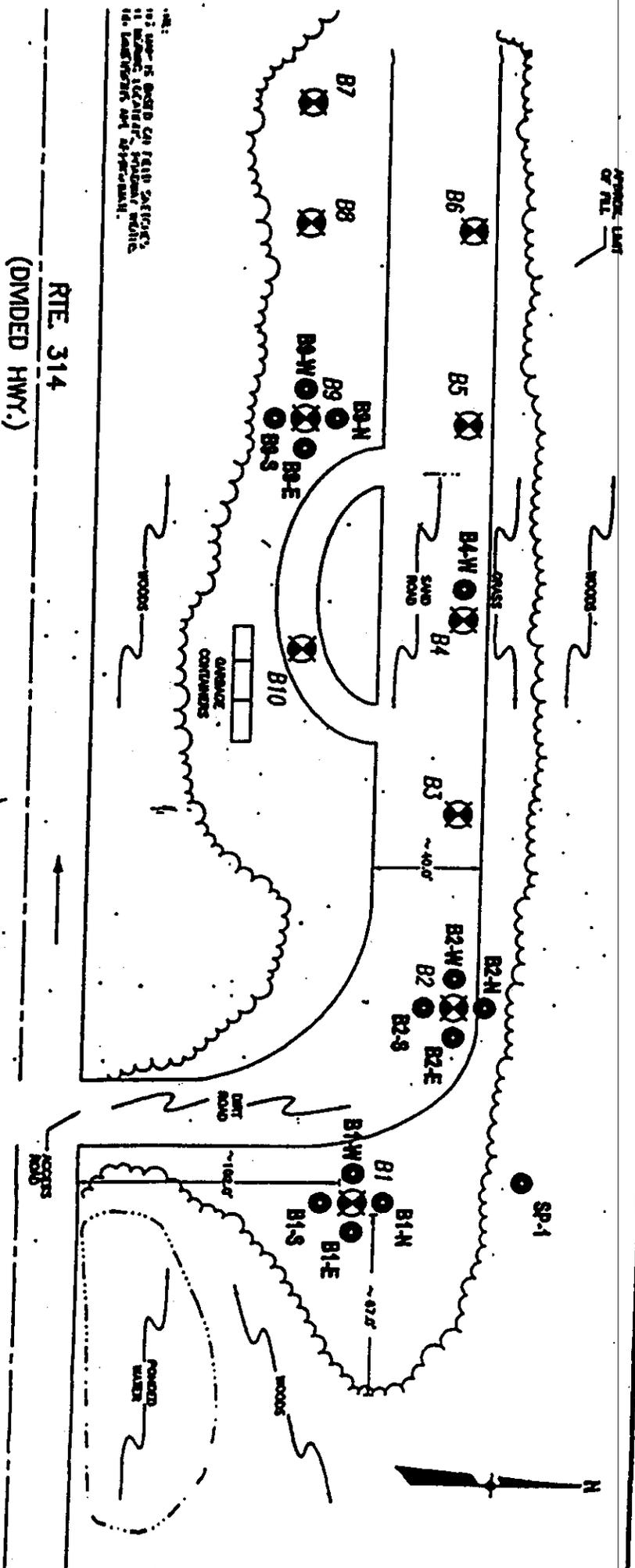


FIGURE 2

CUMBERLAND BAY SLUDGE BED SITE
 PLATTSBURGH - CLINTON COUNTY, N.Y.



PROPOSED LANE OF TRAIL



NOTE: 10' DEEP 16" DIAMETER CONE TIP SAMPLERS TO BE USED TO LOCATE, IDENTIFY AND SAMPLE THE UNDERLIES AND DEBRIS.

RTE. 314
(DIVIDED HWY.)

LEGEND

- PHASE 1 BORINGS (SPLIT SPOON SAMPLES)
- PHASE 2 BORINGS (HARD AUGER SAMPLES)
- SP-1 (SURFACE WATER SAMPLE)

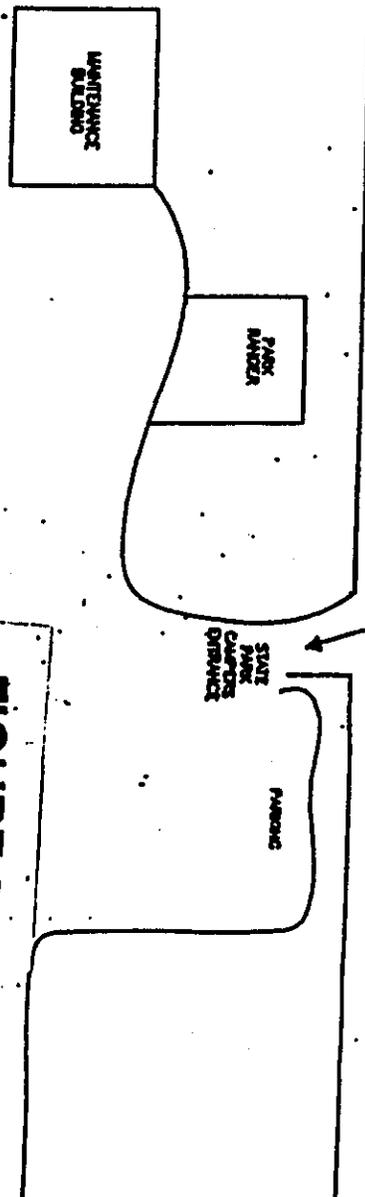


FIGURE 3

RUST

Rust Environment & Infrastructure Inc.

CUMBERLAND BAY SLUDGE BED SITE
PLATTSBURGH - CLINTON COUNTY, N.Y.
NY8DEC SITE NO. 610017

JAN. 1998

39304

BORING LOCATION PLAN
CUMBERLAND BAY STATE PARK
BEACH DEBRIS DISPOSAL AREA

TABLE 1**Nature and Extent of Contamination**

Location	CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppm)	FREQUENCY of EXCEEDING SCG:	SCG (ppm)
beaches	PCB	ND to 20	3 of 100	1 (surface) 10(subsurface)
State Park Former disposal area	PCB	ND to 1.6	0 of 56	1 (surface) 10(subsurface)

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

**Cumberland Bay Sludge Bed-Wilcox Dock Site Operable Unit #2
Proposed Remedial Action Plan
Plattsburgh, Clinton County
Site No. 5-10-017**

The Proposed Remedial Action Plan (PRAP) for the Cumberland Bay Sludge Bed-Wilcox Dock Site Operable Unit #2, was prepared by the New York State Department of Environmental Conservation (NYSDEC) and issued to the local document repository on January 15, 1999. This Plan outlined the preferred remedial measure proposed for the remediation of the contaminated beaches and soils at the Cumberland Bay Sludge Bed-Wilcox Dock Site Operable Unit #2. The preferred remedy was No Further Action; the current Beach Cleaning IRM will continue.

The release of the PRAP was announced via a notice to the mailing list, informing the public of the PRAP's availability.

A public meeting was held on January 27, 1999 which included a presentation of the Remedial Investigation as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. No written comments were received during the public comment period. The public comment period for the PRAP ended on February 16, 1999.

This Responsiveness Summary responds to all questions and comments raised at the January 27, 1999 public meeting. As stated above, no written comments were received.

The following are the comments received at the public meeting, along with the NYSDEC's responses:

COMMENT 1:

Will the beach cleaning IRM continue on the schedule that it has in the past?

RESPONSE 1:

Yes. The only difference between future beach cleaning events and those from previous years is that the sludge bed removal contractor will perform the beach cleaning instead of the contract going out to bid each spring.

COMMENT 2:

Will the future beach cleaning events include the beach south of the breakwater (Sample Points SLS -1 thru SLS-3)?

RESPONSE 2:

Yes. It will include all areas currently being addressed by the IRM.

APPENDIX B

Administrative Record

- 1 - Proposed Remedial Action Plan Operable Unit - 2, Cumberland Bay Sludge Bed - Wilcox Dock Site, January, 1999
- 2 - Remedial Investigation Report Cumberland Bay Sludge Bed - Wilcox Dock Operable Unit No.2, August 1998, Rust Environment & Infrastructure.
- 3 - Cumberland Bay PCB Study, July, 1998, NYSDEC, Division of Water
- 4 - Record of Decision, Cumberland Bay Sludge Bed - Wilcox Dock Site Operable Unit No. 1, December, 1997