SUPERFUND SITE CLOSE-OUT REPORT
WIDE BEACH DEVELOPMENT
TOWN OF BRANT
ERIE COUNTY
NEW YORK

I. SUMMARY OF SITE CONDITIONS

Site Background

The Wide Beach Development, incorporated in 1920, is a small lake-side community with 60 residential homes situated on about 55 acres. The site is located in the Town of Brant, Erie County, New York.

Between 1964 and 1978, about 41,000 gallons of waste oil, some of which was contaminated with polychlorinated biphenyls (PCBs), were applied to local roadways for dust control. In 1980, the installation of a sanitary sewer line in the community resulted in the excavation of highly contaminated soils from the roadways. Surplus excavated soil was used as fill in several residential yards.

An investigation of an odor complaint in 1981 by the Erie County Department of Environment and Planning led to the discovery of 19 drums in a wooded area at the Wide Beach Development community. Two of these drums contained PCB-contaminated waste oil. Subsequent sampling indicated the presence of PCBs in the air, roadway and yard soils, vacuum cleaner dust from the homes, and in water samples from private wells.

The site was included on the *National Priorities List* in September 1983, primarily because of the potential for exposure of the community to PCBs in air-carried dust, surface water and groundwater.

In June-July 1985, in response to the levels of PCB contamination found in the homes during the remedial investigation (RI) at the site, EPA performed an immediate removal action including: 1) paving of the roadways, drainage ditches, and driveways to prevent further exposure of the public via the dust and runoff routes; 2) decontamination of the homes by rug shampooing, vacuuming, and replacement of air conditioner and furnace filters; and 3) protection of individual private wells by the installation of particulate filters. The immediate removal action addressed the immediate threat to public health.

Remedial Investigation and Feasibility Study Results

An RI and feasibility study (FS) were conducted by the New York State Department of Environmental Conservation's (NYSDEC's) contractor, EA Engineering, Science, and Technology, Inc., during 1984 and 1985 to determine the nature and extent of the contamination at and emanating from the site, to assess the threat the site poses to

public health and the environment, and to develop and evaluate various alternatives to remediate the site. The RI concluded that: 1) PCBs, specifically Aroclor 1254, were the primary contaminants at the site; 2) surficial soils in the roadways, drainage ditches, driveways and front yards of lots bordering the roadways were highly contaminated with PCBs; 3) contamination of drinking water wells was sporadic and, when detected, was in the parts per billion range; 4) observation wells screened in the sanitary sewer trench were the most contaminated; 5) surface water transport was the most important route of migration; 6) on-site soils would act as a long-term source of PCBs; and 7) routes of human exposure to PCBs include ingestion of contaminated vegetables, ingestion of soil, inhalation and dermal absorption.

A number of remedial alternatives were identified and evaluated for their capability to reduce the PCB concentration in the soil to the lowest possible level consistent with engineering feasibility, environmental effects and protection, public safety, costs and regulatory restraints. The results of the analysis showed the "No-Action" alternative to be considerably less protective than the action remedial alternatives, and that there were no significant differences among the remedial alternatives. However, since EPA considers the treatment of contaminants to be more favorable than land disposal, chemical treatment of the PCB-contaminated soils above 10 parts per million (ppm) was identified as the preferred alternative.

Record of Decision Findings

A Record of Decision (ROD) was signed on September 30, 1985, selecting excavation and chemical treatment (utilizing potassium polyethylene glycol (KPEG)) of about 37,600 cubic yards of PCB-contaminated soils from the site's roadways, drainage ditches, driveways, yards, and wetlands; backfilling of the excavated areas with the treated soil; treatment of the perched water in the sewer trench; and construction of a hydraulic barrier at the end of the sewer trench, as the long-term remedial measure for the site.

Remedial Design and Remedial Action

The remedial design (RD) was initiated by EPA's contractor, Ebasco Services, Inc. (Ebasco), in May 1986. Sampling, to better define the extent of contamination at the site, was performed by Ebasco in November 1986. To determine the suitability of KPEG to remediate the site's soils, bench-scale treatability studies were performed. Based upon favorable results of the bench-scale studies, EPA's contractor proceeded with on-site pilot-scale treatability studies. Based upon the pilot-scale test results the PCB concentration of the treated soil was lowered to 2 ppm or less. Using the results of the pilot-scale tests, a commercial-size unit was designed. The RD, including the preparation of bidding documents to implement the remedy, was completed in February 1989.

In December 1988, an interagency agreement was signed with the United States Army Corps of Engineers (USACE) for the procurement of a remedial action (RA) contractor

and to provide for USACE management and administration of the RA contract. In May 1989, the USACE solicited requests for proposals. Proposals were received in July 1989 and, after their evaluation in October 1989, an RA contract was awarded to Kimmins Thermal Corporation (Kimmins).

A Value Engineering Change Proposal, offering a different dechlorination technology (SoilTech Anaerobic Thermal/Dechlorination Process) than that in the contract documents, which offered cost savings and a more rapid cleanup, was submitted by Kimmins in February 1990. A demonstration test of the proposed technology was performed in September 1990. The test demonstrated that the technology could reduce the PCB concentration in the treated soil to 2 ppm or less, as required by the bid documents. The technology was accepted, and processing of PCB-contaminated soil commenced in October 1990. Processing was completed on September 26, 1991 and the USACE issued a *Remedial Action Report* for this operable unit on September 30, 1991.

A wetland delineation study performed during the RD determined that the only suitable area on-site for the set-up of the chemical treatment unit and for the storage of the contaminated and treated soil piles was located on a nine-acre portion of a wetland. Consequently, it became necessary that, following the completion of the processing of the PCB-contaminated soils in September 1991, this area be restored to its original wetland condition. The restoration plan consisted of regrading the area back to its original elevations and the planting of trees, shrubs, and grasses of the same or similar species that were present originally. The restoration of the wetland was completed on September 11, 1992, and the USACE issued a *Remedial Action Report* on September 24, 1992.

During the implementation of the RD/RA, a number of significant differences from the ROD became necessary, although these differences were not considered to have fundamentally altered the remedy set forth in the ROD. An *Explanation of Significant Differences* was issued in August 1992, describing the differences and the explanation for them. In summary, the differences are: 1) using virgin asphalt, instead of recycling "clean" asphalt for repaving, since this approach was less expensive; 2) restoring the area used on-site for installing the chemical treatment unit and for the storage of the contaminated and treated soil piles to its original wetland condition; 3) disposing of quantities of treated soil off-site (the ROD called for all of the treated soil to be used as backfill on-site) since a) borrow soil that was brought in to match production rates of the treatment unit with excavation rates resulted in excess treated soil, b) the high processing temperature altered the physical properties of the soil leaving it unsuitable for road sub-base material, c) the road's grade was lowered to improve stormwater drainage (resulting in surplus soil), and d) excess soil that was to be spoiled on-site was disposed of off-site since the spoiling area was determined to be a wetland; and 4) not treating the PCB-contaminated perched water in the sewer trench and not constructing a hydraulic barrier at the end of the sewer trench to prevent off-site migration of PCB-contaminated

groundwater, since the results of a perched water study undertaken during the design determined that the PCB-contamination of the perched water was due principally to the PCB-contaminated soil particles suspended in the water (the source of which was removed when the contaminated soils were excavated). In addition, the *Explanation of Significant Differences* noted that the RA cost increased from the ROD estimate of $8.8 million to approximately $27.7 million. Of the $18.9 million increase, about $12.7 million is attributable to the increased cost for the chemical treatment of the PCB-contaminated soils that were processed (even though only 22,600 cubic yards of soil was treated compared to the 37,600 cubic yards estimated in the ROD). The increase in the treatment cost reflects the difficulty of estimating the cost of an innovative technology. The remaining cost increase of $6.2 million was due to a number of construction activities not accounted for in the ROD (*i.e.*, the on-site mobilization and demobilization of the processing unit and the use of an on-site laboratory), unforeseen construction activities and associated costs that became evident during the construction phase itself (*i.e.*, the off-site disposal of treated soil), and additional construction activities necessary to comply with wetland-related requirements (*i.e.*, the restoration of the wetland).

A pre-final inspection conducted on September 26, 1992 determined that the contractor had constructed the remedy in accordance with RD plans and specifications. A *Preliminary Close-Out Report* (instead of a *Close-Out Report*) was approved on September 30, 1992, since several punch list items necessary to achieve site completion were identified, including replacing soil in two residential yards and planting additional trees in the restored wetland to better match the original state of the wetland. In addition, collecting a confirmational perched water sample for PCBs from the sewer trench was required. The punch list items were addressed, and a final inspection of those items was performed on June 3, 1993. The USACE issued a *Completion of Construction Activities* notification to EPA on September 10, 1993. The perched water was sampled on June 29, 1993, and a report was issued on July 15, 1993, stating that no PCBs were detected in the perched water.

Community Relations Activities Performed

Following the discovery of PCBs in on-site drums in July 1981, the presence of PCBs in on-site soils and drinking water was identified by the Erie County Department of Environment and Planning. On May 8, 1982, a public meeting was held to discuss the extent of the PCB contamination problem at the Wide Beach Development site.

A more comprehensive sampling program was performed by EPA's Field Investigation Team in April 1983. On October 27, 1983, a public meeting was held to explain the results of this investigation.

On April 8, 1985, a public meeting was held to present the results of the RI. On August 29, 1985, a public meeting was held to present the results of the FS and to identify the remedy that EPA and NYSDEC proposed for the site.

A public meeting was held on December 15, 1988 to discuss the RD that was then being developed and to obtain the community's input.

On April 25, 1990, a public meeting was held to inform the community that a contract had been awarded by the USACE to perform the remediation, and that remedial activities were about to commence at the site.

In addition to the above meetings, there were a number of informal meetings at the site with the residents to discuss the progress of the remediation and to provide an opportunity for the residents to express their concerns and pose any questions they might have.

The Brant Town Hall is the designated repository for public documents for this site. The documents are also available at EPA's offices in New York, New York and NYSDEC's offices in Buffalo and Albany, New York.

Community turnouts were large at the public meetings during the course of the project. The public has shown a skeptical, yet keen interest in the use of the new technology (chemical treatment) to remediate the site. Although the community was initially concerned, considering that this was the first time that this technology was being used to remediate a site, there was no outright objection to its utilization at the site.

Prior to the on-site pilot plant treatability tests, the pilot plant was brought on-site. During an open house session, the residents were given a tour and a demonstration using clean soil. This served to acquaint the residents with the activities that could be expected on-site during the pilot plant tests and forestall questions that might have arisen when the pilot plant was in operation.

Residents were also given the option of temporary relocation for the period while construction activities were underway in the vicinity of their properties. This option was accepted by 10 of the 60 families located on-site. Those parties that were relocated were placed in local motels for periods averaging 2-3 weeks.

There was a 30-day public comment period starting February 8, 1993 associated with a settlements stemming from the litigation initiated by the United States under the Comprehensive Environmental Response, Compensation, and Liability Act to recover its response costs in connection with the site. There will be a public comment period associated with any subsequent settlements, as well.

II. DEMONSTRATION OF QA/QC FROM CLEANUP ACTIVITIES

All samples collected as part of the RA followed the procedures set forth in the *Site Specific Quality Control Management Plan for the Wide Beach Development Site,*

Farnham, New York manual.

Approximately 10 percent of all samples were duplicates taken for quality control purposes. The USACE's New England Division Laboratory was used as the quality assurance laboratory.

Surveys were performed by licensed surveyors and the plants placed in the wetlands were required to conform to ANSI Z60.1, American Standard for Nursery Stock. Licensed USACE engineers performed construction oversight activities. In addition, a USACE botanist performed a field inspection of the wetland plantings as part of the quality control program.

The contractor was required to submit daily quality control reports and USACE personnel were on-site to perform quality assurance reviews.

The performance standards and construction quality control were performed in accordance with the contract drawings and specifications.

III. MONITORING RESULTS

EPA's contractor collected drinking water samples in 50-60 resident's homes in August 1990. The New York State Department of Health (NYSDOH) collected samples of drinking water in 6 resident's homes in February 1991. Neither sampling event detected PCBs.

During the excavation of the PCB-contaminated soils in the roadway, ditches, driveways and resident yards, post excavation soil samples were collected to confirm that all PCB-contaminated soil with a concentration of 10 ppm and above was removed.

Daily particulate air samples were collected in the construction activity area and in the area of the processing unit to ensure that particulate limits were not exceeded.

Three perimeter monitoring stations were installed around the construction activity area. Samples were collected on a weekly basis and checked to determine that PCBs limits were not exceeded.

Surface water run-off from the contaminated soil pile and the processing unit pad was collected, treated, and tested for PCBs before being discharged on-site.

IV. PROTECTIVENESS

Based upon the results of the analyses taken during the RA, the site meets the requirements set forth in the ROD pertaining to PCB-contaminated soil, in that any soil

that was found on-site that was contaminated with 10 ppm or higher of PCBs was excavated and treated to reduce the concentration of PCBs to 2 ppm or less. This level is protective of public health, welfare, and the environment.

The sewer trench perched water was sampled on June 29, 1993. Analysis of the samples showed that no PCBs were detected.

EPA's and NYSDOH's sampling of the drinking water in resident's homes have not detected PCBs.

V. SUMMARY OF OPERATION AND MAINTENANCE

There are no operational requirements since all remediation activities have been completed. A three-year maintenance plan is required for the wetland restoration component of the remedy. The contractor is required to perform an annual inspection and submit a report on the survival rates of the various plantings. Any dead trees, shrubs, herbs, or grass in excess of 15% will be replaced by the contractor.

VI. Five-Year Review

No five-year review is required for this site because no waste materials were left on-site above health-based levels.

Approved by:

William J. Muszynski, P.E.
Acting Regional Administrator

9/25/93
Date

BIBLIOGRAPHY
FOR
WIDE BEACH DEVELOPMENT SITE
CLOSE-OUT REPORT

I. SITE BACKGROUND

Hazardous Ranking Package; August 5, 1982

On-Scene Coordinator's Report; U.S. Environmental Protection Agency; June 1986

REMEDIAL INVESTIGATION AND FEASIBILITY STUDY RESULTS

Remedial Investigation Study; E.A. Engineering, Science and Technology. Inc.; August 1985

Engineering Feasibility Study; E.A. Engineering, Science and Technology, Inc.; August 1985

DECISION DOCUMENTS

Record of Decision; U.S. Environmental Protection Agency; September 30, 1985

REMEDIAL DESIGN AND REMEDIAL ACTION

Field Operations Plan; Ebasco Services, Inc.; November 1986

Final Design Report; Ebasco Services, Inc.; February 1989

Final Wetland Delineation/Floodplain Assessment Report; Ebasco Services, Inc.; September 1989

Value Engineering Change Proposal; Kimmins Thermal Corporation; February 26, 1990

Explanation of Significant Differences; U.S. Environmental Protection Agency; August 1992

U.S. ENVIRONMENTAL PROTECTION AGENCY

REQUESTS COMMENTS ON THE DELETION

OF THE

WIDE BEACH DEVELOPMENT SITE, ERIE COUNTY, NEW YORK

FROM THE NATIONAL PRIORITIES LIST

THE U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) ANNOUNCES ITS INTENT TO DELETE THE WIDE BEACH DEVELOPMENT SITE FROM THE NATIONAL PRIORITIES LIST (NPL), APPENDIX B OF THE NATIONAL OIL AND HAZARDOUS SUBSTANCES CONTINGENCY PLAN AND REQUESTS COMMENTS ON THIS DELETION. EPA HAS COMPLETED CLEANUP ACTIVITIES AT THE SITE AND IS PROPOSING THAT IT BE TAKEN OFF THE NPL. THIS DELETION DOES NOT PRECLUDE FUTURE ACTIONS UNDER SUPERFUND.

EPA, IN CONJUNCTION WITH THE STATE OF NEW YORK, HAS DETERMINED THAT ALL APPROPRIATE RESPONSE MEASURES HAVE BEEN IMPLEMENTED AND THAT NO FURTHER CLEANUP ACTION IS REQUIRED. EPA HAS DETERMINED THAT THE IMPLEMENTED REMEDY IS PROTECTIVE OF PUBLIC HEALTH, WELFARE, AND THE ENVIRONMENT.

THE PUBLIC IS INVITED TO COMMENT ON THE PROPOSED DECISION TO DELETE THIS SITE FROM THE NPL. THE PUBLIC COMMENT PERIOD WILL BEGIN ON APRIL 1, 1994, AND WILL EXTEND FOR THIRTY (30) DAYS. WRITTEN COMMENTS MUST BE RECEIVED NO LATER THAN APRIL 30, 1994, AND SHOULD BE ADDRESSED TO:

HERBERT KING, REMEDIAL PROJECT MANAGER

U.S. ENVIRONMENTAL PROTECTION AGENCY

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