

**DECLARATION FOR THE EXPLANATION OF  
SIGNIFICANT DIFFERENCES  
FOR CONTINUED STORAGE OF HOT SPOT SEDIMENTS**

SITE NAME AND LOCATION

New Bedford Harbor Superfund Site (Hot Spot Operable Unit)  
Bristol County, Massachusetts

STATEMENT OF PURPOSE

This decision document sets forth the basis for issuing the attached Explanation of Significant Differences (ESD) for the New Bedford Harbor Superfund Site, Hot Spot Operable Unit.

STATUTORY BASIS FOR ISSUANCE OF ESD

§117(c) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) requires that if any remedial action is taken under §106 of CERCLA which differs significantly from the remedy selected in the Record of Decision (the ROD), the U.S. Environmental Protection Agency (the EPA) shall publish an explanation of those significant differences and the reasons such changes were made. This ESD changes the use of the Site's confined storage facility from a unit process in a sequence of incinerator-related sediment treatment processes to an interim storage facility for untreated dredged sediments while other treatment technologies are evaluated. This is a significant change to a component of the remedy presented in the April 1990 Record of Decision for this site; however, it is not a fundamental change to that remedy. Once an alternative treatment technology for the dredged sediment is selected, a subsequent decision document will be issued.

As part of the EPA's public outreach efforts for this site, a public meeting was held on March 28, 1995 to explain the need for this ESD. Public comments on the ESD were accepted during the March 29, 1995 through May 30, 1995 public comment period. The majority of the comments received supported the proposed interim storage of hot spot sediments while alternative treatment technologies are pursued (see Attachments 2 and 3 of the ESD for further reading). The Massachusetts Department of Environmental Protection (DEP) also supports the issuance of this ESD (see Attachment 1 of the ESD). The EPA and DEP have kept the local communities involved in this and all other site related issues through frequent meetings of the New Bedford Harbor Superfund Site Community Forum.

In accordance with Section 117(d) of CERCLA, this ESD will become part of the Site's Administrative Record. This Administrative Record is available for public review at both the EPA Region I Record Center at 90 Canal Street in Boston, MA and the New Bedford Wilkes Branch Library (Reference Department) at 1911 Acushnet Avenue, New Bedford, MA.

DECLARATION

For the foregoing reasons, by my signature below, I approve the issuance of an Explanation of Significant Differences for the New Bedford Harbor Site, Hot Spot Operable Unit, and the changes stated therein.

Oct. 30, 1995  
Date

Linda M. Murphy  
Linda M. Murphy, Director  
Office of Site Remediation & Restoration  
EPA-New England

New Bedford Harbor Superfund Site

Hot Spot Operable Unit

Final

Explanation of Significant Differences  
for Continued Storage of Hot Spot Sediments

October 1995

Prepared by EPA-New England

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Attachment 1 - MA DEP Concurrence on the Draft ESD

Attachment 2 - Response to Comments Received on the Draft ESD

Attachment 3 - Comments Received on the Draft ESD

## **I. Introduction**

### **A. Site Name and Location**

Site Name: New Bedford Harbor Site/Hot Spot Operable Unit

Site Location: Bristol County, Massachusetts

### **B. Lead and Support Agencies**

Lead Agency: U.S. Environmental Protection Agency (EPA)

Support Agency: Massachusetts Department of Environmental Protection (DEP)

### **C. Summary of Significant Difference**

The April 6, 1990 Record of Decision (ROD) for the hot spot operable unit called for the dredging of sediments from the Acushnet River with polychlorinated biphenyl (PCB) concentrations greater than 4,000 parts per million (ppm), and treatment of the dredged sediments using on-site incineration. These highly contaminated sediments, approximately 10,000 cubic yards in volume, are currently being dredged and stored in a lined and covered holding pond (i.e., a confined disposal facility, or CDF) located at 103 Sawyer Street in New Bedford (see Figures 1 and 2). However, at the request of community groups and elected officials at the local, state, and federal levels, rather than proceeding with the incineration component of the selected remedy, EPA has decided to identify and test alternative methods of treating the sediments. Thus, during this treatability testing, and until the sediments are ultimately treated, the dredged sediments will continue to be stored in the CDF. The total time period required for treatability studies and design and implementation of a final treatment method could be four to five years.

The use of the CDF to store these sediments over this long a period was not envisioned in the 1990 ROD. In that ROD, the sediments would remain in the CDF for a short period of time before being incinerated. This document explains this significant difference, including the site-related modifications which have been and will continue to be made at the CDF to accommodate this new development. This document also identifies, describes compliance with and in some cases waives the "applicable or relevant and appropriate environmental requirements" (i.e., ARARs) concerning storage of hazardous PCB wastes.

This lengthened storage in the CDF is an interim measure until a final treatment method for the dredged sediment is

selected. EPA will issue a subsequent decision document when that final treatment method is selected.

EPA believes that the use of the CDF for storage of these sediments does not present an unacceptable risk to human health or the environment, and furthermore, that this use significantly advances the clean-up of New Bedford Harbor by allowing the removal of the most highly PCB-contaminated sediments to take place. The selected remedy, as revised by this ESD, remains protective and cost-effective.

#### **D. Request for Public Comment**

The EPA is soliciting public comment on this draft ESD. A thirty (30) day comment period for submittal of written comments to EPA will be held from March 29, 1995 to May 1, 1995. Comments should be submitted in writing to:

David J. Dickerson, Remedial Project Manager  
U.S. EPA - New England  
J.F.K. Federal Building (HRS)  
Boston, MA 02203-2211

As part of this public comment process, EPA will hold a public informational meeting on Tuesday March 28, 1995 at 7:00 pm at the Greater New Bedford Vocational Technical High School cafeteria (this meeting is being merged with the Community Forum meeting of the same date, which starts at 6:00 pm). The purpose of the public informational meeting is to provide a presentation to the general public on the issues involved with this ESD, and to answer any questions the public may have. Also, a summary of this draft ESD is being published in The Standard Times to announce both the public meeting and the 30 day comment period.

#### **E. Legal Authority**

Section 117(c) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) requires that, if any remedial or enforcement action is taken under Section 106 of CERCLA after adoption of a final remedial action plan, and if such action differs in any significant respects from the final plan, the EPA shall publish an explanation of the significant differences and the reasons such changes were made.

On April 6, 1990 EPA issued an interim remedial action plan in the form of a Record of Decision (ROD) for the hot spot operable unit of the New Bedford Harbor site. On April 27, 1992 EPA issued the first ESD for this ROD which set out the Agency's decision to permanently dispose of incinerator ash in the on-site CDF. Since that time, EPA has reconsidered the community acceptance of the incineration portion of the 1990 ROD, and has decided to suspend the implementation of the incineration

component of the remedy described in that ROD. Since this suspension requires that contaminated sediment be stored for an extended period of time which was not anticipated in the ROD, EPA is issuing this second ESD.

A draft of this ESD is being published in accordance with Section 117(c) of CERCLA. In addition, in accordance with Section 117(d) of CERCLA, the ESD will become part of the Administrative Record which is available for public review at both the EPA Region I Record Center in Boston, Massachusetts and the New Bedford Wilkes Branch Library in New Bedford, Massachusetts (see section VI for addresses and phone numbers).

## **II. Summary of Site History, Contamination, and Selected Remedy**

### **A. Site History and Contamination**

In 1976, EPA conducted a New England-wide survey for PCBs. During this survey, high levels of PCB contamination were discovered in the marine sediment over a widespread area of New Bedford Harbor. In addition to PCBs, contamination by heavy metals (notably cadmium, chromium, copper, and lead) was found in the sediment. This survey and subsequent field studies also determined that marine biota from the area was contaminated with PCBs and that harvested seafood had PCB levels in edible tissue greater than the Food and Drug Administration tolerance limit.

As a result of the accumulation of PCBs in seafood, the Massachusetts Department of Public Health established three fishing closure areas in New Bedford Harbor in September, 1979 (see Figure 3). These closures remain in effect. The sediment and foodchain contamination and subsequent fishing closures have resulted in the loss of approximately 17,000 acres of productive lobstering ground.

As a result of these initial investigations, the site was proposed for the National Priorities List (NPL) by the Commonwealth of Massachusetts. The site was added to the NPL in 1983. In the course of developing its remedial strategy, EPA decided to address the most highly PCB-contaminated sediments (i.e., the hot spots) first. EPA has defined these hot spots as those areas where the sediment PCB concentration is 4,000 ppm or greater. These areas total approximately five acres, and are located in the Acushnet River near the Aerovox manufacturing facility (see Figure 1).

PCB concentrations in the hot spot areas average approximately 20,000 - 30,000 ppm, with some locations exceeding 200,000 ppm. Levels of 4,000 ppm and greater are found at sediment depths of up to four feet, but generally are within the top two feet or less. The hot spot sediments are also contaminated with heavy metals (notably cadmium, chromium,

copper, and lead). The volume of sediment in the hot spots is approximately 10,000 cubic yards, and the PCBs contained therein account for approximately 45 percent of the total mass of PCBs in the site sediment.

#### **B. Summary of the Selected Hot Spot Remedy**

The main objectives of the April 1990 hot spot ROD were to a) significantly reduce PCB migration from the hot spot sediments to the rest of the harbor ecosystem, b) significantly reduce the amount of remaining PCB mass requiring clean-up, and c) protect human health and marine life by preventing direct contact with the sediments. To accomplish these objectives, the major components of the hot spot remedy, as described in the April 1990 ROD, included:

Dredging - approximately 10,000 cubic yards of highly contaminated sediments to be removed from the Acushnet River using a cutterhead dredge;

Transportation and Dewatering - the dredged sediments were to be pumped from the dredge through a floating pipeline to the CDF for dewatering. Effluent produced by the dewatering process was required to be treated by best available control technology to reduce PCBs and heavy metals before discharge back to the Acushnet River.

Incineration - the dewatered sediments were selected to be incinerated in a transportable incinerator that was to be sited at 103 Sawyer Street.

Stabilization - the Toxicity Characteristic Leaching Procedure (TCLP) test was to be performed on the residual ash from the incineration process to determine if the ash would be considered a hazardous waste. If the TCLP test revealed that the ash was a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA), the ash was to be solidified. That ash was to be stored temporarily on-site, with the ultimate disposition of the ash to be addressed in the estuary, lower harbor and bay operable unit for the Site.

#### **C. Summary of the 1992 ESD**

As mentioned above, EPA issued the first ESD for the 1990 ROD in April 1992. That ESD determined that the ash from the incinerator would be permanently disposed in the CDF at 103 Sawyer Street. To ensure protectiveness, the 1992 ESD required the CDF to be closed in accordance with the RCRA Hazardous Waste Regulations for landfills (in this case, 310 CMR 30.620 and 310 CMR 30.633). The closure was to consist of a bottom liner, a

multi-layer cover including an impermeable membrane, and a leachate monitoring/collection system.

### **III. Description of Significant Differences**

#### **A. New Use of the Confined Disposal Facility**

As described above, EPA has elected to identify, test and ultimately implement alternative, non-incineration methods of treating the hot spot sediments, a process which could take four to five years. Since the sediments are currently being dredged from the river, they will need to be stored during this process until they are ultimately treated. Although the EPA believes the CDF cell #1 to be a safe option for this sediment storage, use of the CDF for storage of untreated sediment for five years instead of a much shorter period of time was not envisioned in the 1990 Hot Spot ROD. This lengthened period of storage in cell #1 is the "significant difference" requiring this ESD.

In the 1990 ROD, the CDF was to be used as part of a sediment pretreatment process - to hold and partially dewater the dredged sediments for a short period of time before they were more fully dewatered and incinerated. Per that ROD, the CDF was also to be used for temporary storage of the treated sediments (i.e., the incinerator ash) until a final disposal method was determined and implemented. Since the ROD did not foresee the CDF as being used for untreated sediment storage, the environmental regulations concerning PCB storage were not specifically addressed in it.

Similarly, the 1992 ESD did not address PCB storage regulations either, since this was not the subject of that ESD. Again, the 1992 ESD called for permanent rather than temporary disposal of incinerator ash in the CDF (see section II.C above). Thus the present ESD is required to identify and detail compliance with ARARs that now apply given the four to five year period of untreated sediment storage that will take place.

#### **B. New ARARs**

In accordance with Section 121(d) of CERCLA, Superfund remedies must comply with or waive all legally applicable or relevant and appropriate environmental standards, requirements, criteria, or limitations (ARARs). Since neither the 1990 ROD nor the 1992 ESD addressed the use of the CDF for long-term storage of untreated hot spot sediments, new ARARs for storage of this material are described in this ESD.

Three groups of ARARs have been identified for this new situation: 1) the Massachusetts hazardous waste surface impoundment regulations under 310 CMR (Code of Massachusetts Regulations) 30.610, and 2) the federal TSCA (Toxic Substance

Control Act) PCB storage regulations under 40 CFR (Code of Federal Regulations) 761.65 and federal RCRA (Resource Conservation Recovery Act) Land Disposal Restrictions, 40 CFR Part 268. These ARARs apply since the average PCB concentration of the hot spot sediments is expected to be well above the 50 ppm regulatory thresholds set in both the federal and state regulations. The sediments are considered hazardous waste under the state's regulatory criteria since concentration levels exceed the 50 ppm threshold set in 310 CMR 30.131. The sediments are also a restricted waste for the purposes of the Land Disposal Restrictions. Again, the average PCB concentration levels of the hot spot sediments is estimated to be between 20,000 and 30,000 ppm.

Table 1 of this ESD provides a summary description of these state and federal regulations, and lists whether they are applicable ("App."), relevant and appropriate ("R&A") or "to be considered" ("TBC") for this activity. Table 1 also summarizes the site specific actions that are necessary, or that have already been taken to comply with these ARARs. Finally, as will be discussed more fully in the following section, Table 1 lists whether a waiver from any of these requirements is necessary.

### **C. ARARS Waivers**

Section 121(d)(4) of CERCLA provides for six types of waivers when a remedial action does not meet ARARs. Three of those waivers are invoked for the action described in this ESD. First, §121(d)(4)(A) allows the Agency to waive an ARAR when an interim measure that does not comply with all ARARs is expected to be followed by a complete measure that will attain all ARARs. This is called the interim measure waiver. Second, §121(d)(4)(B) allows the Agency to waive an ARAR when compliance with the ARAR will result in greater risk to human health and the environment than alternative options. This is called the greater risk to health and the environment (or protectiveness) waiver. Finally, §121(d)(4)(D) allows the Agency to waive an ARAR when the action to be taken does not comply with the strict terms of the ARAR, but which achieves an equivalent standard of performance as that ARAR. This is called the equivalency waiver.

The CDF was originally designed and constructed for short-term storage of the untreated dredged sediment. However, several modifications have been made to the CDF which ensures its safety for even the long-term storage. As a result of these modifications, which are explained below in Section III.D, the CDF complies with the vast majority of the TSCA storage ARARs and the State surface impoundment ARARs. There are, however, some regulations which are being waived.

The only two State Surface Impoundment regulations affected by waivers are numbers 2 and 5 in Table 1. Number 2 requires a

leak detection, collection and removal system between the two impermeable bottom liners of the storage facility. Because there is already a large volume of dredged material in the CDF, it is not possible to install such a system without a sequence of transfers of the dredged material. Air monitoring during dredging operations has demonstrated that disturbing or transferring of the dredged material will cause increased PCB air contamination. EPA believes that the less additional handling of these sediments the better, since additional handling would bring additional PCB releases and risk of spills. The site's groundwater monitoring program provides an added measure of protection should any unexpected leakage of PCBs from the CDF occur. Given the above factors, EPA is invoking the protectiveness waiver under §121(d)(4)(B). In addition, because this storage is estimated to last only four to five years until an ultimate treatment technology is selected, EPA is also invoking the interim measure waiver under §121(d)(4)(A).

The second State Surface Impoundment regulation affected by waivers is number 5 in Table 1. This regulation requires that two feet of freeboard be maintained (freeboard refers to the distance from the top of the dredged sediments or the overlying seawater, if any, to the top of the surrounding cell wall) in order to ensure that at no time will dredged material be allowed to overtop the impoundment. Although EPA certainly will not allow the dredged material to overtop or blow over the cell walls, EPA is invoking both the protectiveness and interim action waiver because the volume of dredged material requiring storage may result in less than two feet of freeboard in portions of or throughout the cell. EPA will ensure that dredged material will not overtop the impoundment by maintaining at least a one foot freeboard, by continued use and maintenance of the cell's floating cover (see section III.D.1 below), and, if necessary, by suspending dredging activities.

To comply with this regulation, there is a possibility that at some future date EPA may be forced to end dredging activities prematurely in order to maintain two feet of freeboard above the dredged material. The protectiveness waiver is invoked because such a premature ending will result in leaving more highly PCB-contaminated sediment in the harbor than if a one foot freeboard is maintained. EPA believes that it is more protective of human health and the environment to remove the maximum volume of dredged material from the harbor than to maintain two feet of freeboard. Removing the maximum amount of sediments as part of the hot spot operable unit decreases, to the greatest extent possible, the migration of PCBs both to the marine food chain and to the atmosphere. Additionally, an overlying level of seawater above the dredged sediments should help minimize PCB volatilization from the dredged sediments, and will allow for more efficient dredging operations. The interim waiver is

invoked since, again, the storage is only expected to last four to five years.

Moving to the federal PCB storage regulations, there are six TSCA ARARs affected by waivers. The first two are numbers 21 and 33 in Table 1 which limit storage of PCBs to a certain time period. Number 21 requires that PCBs must be removed from storage and properly disposed within one year of first being placed in storage. Number 33 requires that after the facility receives the final quantity of PCBs for storage, the PCBs must be removed within 90 days and the facility closed within 180 days of that date.

EPA is invoking both the interim measure and the protectiveness waiver for both number 21 and 33. Dredging of the hot spot sediments is expected to be completed by fall 1995, and the sediment will remain in the CDF until a treatment technology is selected and implemented. The interim measure waiver is invoked because although storage is extended to five years instead of one year and will continue beyond 90 days after dredging is completed, it is still only temporary until the final treatment technology is selected. EPA cannot treat the sediment until various technologies are identified, tested and evaluated per the National Contingency Plan (40 CFR Part 300).

The protectiveness waiver is invoked since EPA believes that leaving the PCB-contaminated sediment in the river results in greater risk to human health and the environment than dredging and storing the untreated sediments in the CDF. EPA believes the CDF as designed and constructed is a safe storage facility and that both air and groundwater monitoring will ensure that safety.

Number 22 on Table 1 requires that rainwater be prevented from reaching the stored PCBs. The specific emphasis in this regulation on roofs and walls to accomplish this prevention is obviously not directly applicable to the CDF since it is not a building, but the overall intent of minimizing stormwater infiltration is applicable. The equivalency waiver is invoked for the wall construction component of this regulation. EPA believes the liner system of the CDF functions as a wall would to prevent rainwater from reaching the stored PCBs.

For the roof portion of this requirement, EPA proposes to modify existing drainage conditions at the CDF so that stormwater runoff (rainwater and snowmelt) from the area will be directed away from the stored PCBs. While the CDF cell #1 does have a floating cover (see section III.D.1 below), total compliance with this ARAR will not be attained since the rain or snow which falls directly on the floating cover of cell #1 will be assumed to have mixed with the stored PCBs. Rather than attempting to prevent this mixing, this stormwater will be periodically treated on site and discharged to the Acushnet River according to the discharge

standards currently in place. EPA believes that the redirected drainage should minimize the frequency and cost of these periodic water treatment episodes. Although the above methods achieves the ultimate goal of the regulation (to prevent the spread of PCB contamination), EPA is invoking the interim waiver because ultimately, once the sediments are treated, storage will not be required. Furthermore, a roof would not add a significant degree of protectiveness, and may not even be feasible given the size and location of cell #1.

The ARARs in numbers 23, 25, and 26 on Table 1 further describe construction and location requirements for a storage facility. The equivalency waiver is invoked for all three ARARs. The facility is required to have adequate flooring and curbing to provide volume for controlling spills; these floors and curbs must be made of smooth impervious material to prevent PCB penetration and the facility must not be located below the 100-year floodwater elevation. Again, these regulations do not directly address a surface impoundment but rather a building; however, they still remain applicable. The CDF is constructed with sufficient capacity to fully contain the dredged PCB contaminated sediment. It has two continuous, smooth, impermeable liners made of HDPE (high density polyethylene) plastic and its top-of-berm elevation is two feet higher than the 100-year flood elevation. Additionally, the New Bedford Harbor hurricane barrier is designed to prevent floodwaters from reaching this 100-year floodwater elevation. EPA believes the CDF as constructed provides the equivalent protection required by the regulations.

Finally, EPA is invoking the interim measure waiver for number 34 in Table 1, the Land Disposal Restrictions (LDR) requirement of the Resource Conservation Recovery Act (RCRA). This regulation requires that restricted hazardous waste be treated before land disposal occurs. Land disposal is defined as placement in, among other things, a surface impoundment located outside an area of contamination. In addition, the regulation specifically prohibits storage of PCBs (greater than 50 ppm) for more than 1 year without treatment.

The treatment required by this regulation for the hot spot PCB-contaminated sediment is incineration or an equivalent method approved by the Regional Administrator. Because EPA has agreed to suspend incineration of the dredged sediments and evaluate alternative treatment technologies as equivalent methods of destruction, the untreated dredged sediments will be stored in the CDF for the four to five year time period anticipated for this evaluation. The interim measure waiver is invoked since the dredged sediment will not be treated as required by LDR while it remains in the CDF for the next four to five year period. Once an equivalent method of treatment is selected, the dredged sediment will be treated and LDR will be met.

EPA believes that the use of the CDF for interim storage of the hot spot sediments is safe, and is protective of human health and the environment. More importantly, the removal of the sediments from the estuary and their secure storage in the CDF will benefit human health and the environment by substantially reducing the mass of sediment PCBs available for uncontrolled migration (both to the marine food chain and to the atmosphere).

**D. Significant Site Specific Actions to Comply With New, Unwaived ARARS**

**1. Site Actions Made to Date**

During the design, construction and operation of the CDF, a number of changes have been made which significantly increase the safety of the CDF cell #1 for interim storage of the hot spot sediment. These changes demonstrate compliance with the unwaived ARARS listed in Table 1.

First, the construction of cell #1 was modified to include two, rather than one, impermeable liners. Both liners are constructed of high-density polyethylene (HDPE), a standard material used for long-term control of hazardous wastes. The bottom-most liner is 80 mils thick, and the upper liner is 60 mils thick (a mil is one-thousandth of an inch). All liner seams were extensively tested during installation. HDPE liners are typically expected to last for 30 years or more, so they are expected to retain their integrity over the estimated five year period of interim untreated sediment storage. Figure 4 contains two "cross-section" drawings of cell #1 which illustrate the as-built construction of all cell #1 components, including the two bottom HDPE liners. The location of these two cross-sections within cell #1 is shown on Figure 2.

Second, the CDF has been improved by the addition of a floating impermeable cover (also constructed from HDPE) which minimizes the volatilization (i.e., evaporation) of PCBs to the atmosphere from the dredged sediment in the CDF. Air monitoring performed to date has documented that the floating cover does contain and minimize volatilization of PCBs. Monitoring results during times when the cover has been lifted or moved have been notably higher than when the cover has been left alone.

Third, the air monitoring program around the CDF and surrounding neighborhoods has been expanded during dredging operations to ensure that airborne PCB levels from site activities do not pose a risk to site workers or to the nearby community. A summary of this air monitoring data base is provided in Table 2, and the locations of the various air monitoring sampling locations are shown in Figure 5. This body of air monitoring data supports the use of the covered cell #1 for interim sediment storage, in that it demonstrates that

airborne PCB levels in the CDF area are typically at very low levels. Finally, overall site security is provided by two separate eight foot high, barbed-wire chain-link fences (one around the CDF itself and one around the the entire Sawyer Street property).

## **2. Significant Upcoming Actions**

In addition to the site drainage modifications discussed above in section III.C, this section briefly describes significant initiatives that will be implemented at the CDF in order to comply with the new PCB storage ARARS. These actions are also summarized in Table 1, as are other requirements that will be met to comply with these new storage ARARS.

Per 310 CMR 30.615(3) (#15 in Table 1), a contingency plan will be developed to prepare for unexpected failures, leakages, emergencies, etc. The U.S. Army Corps of Engineers (USACE), in conjunction with the EPA and the DEP, will implement the contingency plan if ever necessary, through the use of a remedial contractor familiar with the site. Potential leakage from the CDF will be identified by a groundwater monitoring program around the site, and by tracking the liquid level in cell #1 (i.e., to watch for unaccountable drops in the liquid level). The EPA, DEP and USACE will work with the local community in developing this contingency plan.

Per 310 CFR 30.617(4B) (#20 in Table 1), a post-closure plan will be developed to specify the requirements for maintenance and monitoring of the final cover, inspections, and air, surface water and groundwater monitoring after closure. The local community will also be invited to provide input on the development of this plan. Per 40 CFR 761.65(c)(3) (#27 in Table 1), signs will be erected around the CDF to provide warning that PCB storage is taking place.

Finally, per 40 CFR 761.65(d)(2)(vi) (#31 in Table 1), the existing floating cover in cell #1 will be extended to completely overlap the cell walls in order to restrict any trespassers from contacting the untreated contaminated sediments in the unlikely event that they access the cell #1 area. The existing outdoor lights at the CDF will also remain in use to discourage any trespassing.

## **IV. Support Agency Comments**

The DEP supports this proposal because it removes highly contaminated sediment from the Acushnet River-New Bedford Harbor ecosystem, maintains the potential for later use of an innovative treatment technology, and provides for overall risk reduction. See Attachment 1 for the DEP's concurrence letter regarding the draft ESD.

## V. Statutory Determinations

This ESD documents the EPA's decision to suspend the incineration component of the hot spot operable unit remedy, and the concurrent need to store the untreated PCB-contaminated sediment in a manner protective of human health and the environment while alternative treatment technologies are explored. Although storage of untreated PCB-contaminated sediment will be extended, this is an interim action. Final treatment and disposal of the dredged material will be documented in a subsequent decision document.

EPA believes that the remedy as modified herein remains protective of human health and the environment, complies with or waives all Federal and State requirements that are applicable or relevant and appropriate to this remedial action, and is cost effective. In addition, the revised remedy utilizes permanent solutions and allows for alternative treatment technologies to the maximum extent practicable for this site.

## VI. Public Record

In accordance with Section 117(d) of CERCLA, this ESD will become part of the site's Administrative Record which is available for public review at both the EPA Region I Record Center at 90 Canal Street in Boston, Massachusetts (617/573-9656) and at the New Bedford Wilkes Branch Library (Reference Department) at 1911 Acushnet Avenue, New Bedford, Massachusetts (508/991-6214).

New Bedford Harbor Superfund Site  
PCB Storage ARARs Summary

ARAR	Applicable or Relevant & Appropriate	Summary Description	Site Specific Action	Compliance with ARAR
***** MA DEP Surface Impoundment Regulations, 310 CMR 30.:				
1. 612(1)	R&A	Facility must be underlain by two properly designed and constructed impermeable liners.	Two impermeable bottom liners are already in place in cell #1.	Yes
2. 612(3)	R&A	Leak detection, collection and removal system required between the two liners.	Since over 6000 cubic yards of dredged sediments have been dredged and stored to date, to install such a leak detection system would entail temporary removal of the sediments and disassembly of the bottom liner system. This would involve more short-term risk than keeping the sediments and liner system intact.	Interim measure/protectiveness waiver
3. 612(4)	R&A	Energy dissipation required for direct discharge onto liner.	Energy dissipation already in use.	Yes
4. 612(5)	R&A	Overtopping not allowed.	Operations will be controlled to prevent overtopping.	Yes
5. 612(6)	R&A	2 feet of freeboard required.	Efforts to maintain 2 feet of freeboard will continue, however in some areas of cell #1 the freeboard will need to be <2 feet to maximize the volume of stored sediments, and to allow for protective overall dredging and water treatment operations (e.g., to maintain a layer of seawater above the dredged sediments). At least 1 foot of freeboard will be maintained, and at no time will sediments be allowed to overtop or blow over the CDF walls.	Interim measure/protectiveness waiver
6. 612(7)	R&A	Provisions for immediate flow shut-off required.	Dredge can be immediately shut off.	Yes
7. 612(9)	R&A	Dikes must be structurally sound.	Dikes are constructed to meet all requirements. Minor erosion repair will be periodically performed.	Yes
8. 614(1)	R&A	Liners must be inspected and tested during and immediately after installation.	Testing of liners was performed as required.	Yes
9. 614(3)	R&A	Inspections required weekly and immediately after storms.	Weekly inspections will continue until the sediments are treated. Less frequent	Yes

New Bedford Harbor Superfund Site  
PCB Storage ARARs Summary

ARAR	Applicable or Relevant & Appropriate	Summary Description	Site Specific Action	Compliance with ARAR
*****				
			inspections will continue after treatment.	
10. 614(5)	R&A	Cerification must be provided that the impoundment's dikes will withstand the stress of the pressure exerted by the types and amounts of waste to be stored, and that they will not fail due to scouring or piping.	The required certification will be provided.	Yes
11. 614(6)	R&A	Demonstration of liner/waste compatibility required.	Compatibility issues were resolved during design.	Yes
12. 614(8)	R&A	DEP may specify that liner samples be periodically tested.	Liners will be tested to the extent possible upon request.	Yes
13. 615(1)	R&A	Impoundment must be removed from service if liquid level unaccountably drops or if the dike leaks.	Cell #1 will be removed from service as defined in 310 CMR 30.615(2) if such conditions exist.	Yes
14. 615(2)	R&A	When removed from service, flow must be stopped, leakage must be stopped and contained, and impoundment emptied if necessary.	Requirements will be complied with if cell #1 is removed from service.	Yes
15. 615(3)	R&A	Contingency plan required describing procedures for complying with 310 CMR 30.615(2). This plan must also describe methods for repairing leaks without removing unit from service.	Contingency plan will be prepared.	Yes
16. 615(4)(b)(1)	R&A	Provides requirements for restoring an impoundment that has been removed from service back to service.	If for some reason cell#1 is removed from service, this section will be complied with before reuse of the cell.	Yes
17. 615(5)	R&A	If an impoundment has been removed from service and is not being repaired, it must be closed pursuant to 310 CMR 30.617.	Cell #1 will be so closed if this situation arises.	Yes
18. 616(5)	R&A	Approved management plan required for placement of polyhalogenated aromatic hydrocarbons.	The management and placement of the PCB sediments is detailed in the existing engineering plans and specifications for the hot spot operable unit and in associated	Yes

New Bedford Harbor Superfund Site  
PCB Storage ARARs Summary

ARAR	Applicable or Relevant & Appropriate	Summary Description	Site Specific Action	Compliance with ARAR
*****				
			contract documents. The DEP is involved with and approves of these practices.	
19. 617(1)	R&A	At closure of new surface impoundments, all containment system components which have been contaminated with waste or leachate must be managed as hazardous waste, unless 310 CMR 30.141 ("When a Hazardous Waste Ceases to be a Hazardous Waste") applies.	Once the hot spot sediments are treated, this section will be complied with.	Yes
20. 617(4B)	R&A	Post-closure requirements detailed at 310 CMR 30.590 must be complied with, including maintenance of cover, monitoring, etc., if waste residuals or contaminated material is left in place.	A post-closure plan will be developed which complies with (a)-(d) of this section. Air and groundwater monitoring around the site, both before and after treatment of the sediments, will continue.	Yes
SCA PCB Storage Regulations, 40 CFR 761.65:				
21. (a)	App.	PCBs stored for disposal must be properly disposed within one year of being placed in storage.	Longer term storage required since treatability studies, redesign and implementation of the ultimate treatment technology should take 4 - 5 years to complete.	Interim measure/protectiveness waiver
22. (b)(1)(i)	App.	Storage facilities must have adequate roof and walls to prevent rain water from reaching the stored PCBs.	Site drainage will be modified to prevent stormwater runoff from draining to the CDF. Rainwater that falls directly on cell #1 will be treated on site along with decanted seawater.	Equivalent std waiver (walls); interim measure waiver (roof)
23. (b)(1)(ii)	App.	Storage facilities must have adequate flooring and curbing to provide volume for controlling spills from storage containers.	The purpose of this regulation is to contain spills occurring inside a building. The PCBs in this case will be fully contained in cell #1.	Equivalent standard waiver
24. (b)(1)(iii)	App.	Storage facilities can not have floor drains or openings that would allow liquids to flow from the storage area.	Cell #1 has two continuous, impermeable bottom liners.	Yes

New Bedford Harbor Superfund Site  
PCB Storage ARARs Summary

ARAR	Applicable or Relevant & Appropriate	Summary Description	Site Specific Action	Compliance with ARAR
*****				
25.	(b)(1)(iv) App.	Storage facilities must have floors and curbs made of smooth impervious material to prevent PCB penetration.	Cell #1 has two liners made of HDPE which is smooth and impermeable.	Equivalent standard waiver
26.	(b)(1)(v) App.	Storage facilities must not be located below the 100-year floodwater elevation.	The top-of-berm elevation is 2 feet higher than the 100-year flood elevation.	Equivalent standard waiver
27.	(c)(3) App.	Storage facilities must be marked with signs to identify PCBs in storage.	Signs will be erected.	Yes
28.	(c)(4) App.	Equipment that is used for handling PCBs must be decontaminated.	Equipment will be decontaminated.	Yes
29.	(c)(5) App.	PCB spills must be immediately cleaned up, and resulting PCB-contaminated materials must be properly disposed. Inspections for PCB leaks must take place every 30 days.	Spills will be immediately cleaned up, and materials will be properly disposed. Inspections will occur at least weekly per #9 above.	Yes
30.	(d)(2)(ii) R&A	The facility must possess the capacity to handle the maximum quantity of PCB waste that will be handled at any one time.	The CDF has the capacity to contain all of the dredged hot spot sediments.	Yes
31.	(d)(2)(vi) R&A	The operation of the storage facility must not pose an unreasonable risk of injury to health or the environment.	The floating cover in cell #1 will be extended to overlap the cell walls to prevent anyone from falling in. Air, groundwater and surface water monitoring in the vicinity of the CDF will be continued to verify lack of risk.	Yes
32.	(e)(1-5,7) R&A	Describes the substantive requirements of closure plans for commercial PCB storage facilities, including groundwater monitoring, run-on and run-off control and facility security. The facility must be closed so as to prevent post-closure releases of PCBs which may present unreasonable risks to human health or the environment.	After treatment of the dredged sediments, the site will be closed consistent with this section. The site closure specifications are detailed in the existing engineering plans and specifications for the hot spot operable unit. Groundwater monitoring is being reactivated and will be performed on a regular basis before and after treatment of the hot spot sediments.	Yes
33.	(e)(6) R&A	All PCBs must be removed from the facility within 90 days after receiving the final quantity of PCBs, and closure	As explained in #20 above, 4-5 years of storage will be required to pursue alternative technologies. Once the hot spot sediments	Interim measure waiver;

New Bedford Harbor Superfund Site  
PCB Storage ARARs Summary

ARAR	Applicable or Relevant & Appropriate	Summary Description	Site Specific Action	Compliance with ARAR
*****				
		must be completed within 180 days after receiving the final quantity of PCBs.	are ultimately treated, cell#1 will be closed per 310 CMR 30.617(1) (Closure of New Surface Impoundments).	protectiveness waiver

Other federal ARARs:

34. RCRA Land Disposal Restrictions (LDR) (40 CFR Part 268)	App.	Establishes treatment standards for all listed and characteristic hazardous wastes destined for land disposal.	Since incineration has been suspended, an evaluation of equivalent treatment technologies has begun. During the interim 4-5 year period until final treatment is completed, untreated dredged sediment will be stored outside of the area of contamination. Once treatment is selected and approved, sediment will be treated in accordance with LDR.	Interim measure waiver
35. PCB Spill Cleanup Policy (40 CFR Part 761, Subpart G)	TBC	Establishes criteria EPA uses to determine the adequacy of the cleanup of spills resulting from the release of materials containing PCBs greater than 50 ppm occurring after May 4, 1987.	While this policy is directed at typical, electrical equipment-type spills, it will be considered should EPA need to address any PCB leakage or spillage from the CDF.	
36. Guidance on Remedial Actions for Superfund Sites with PCB Contamination (OSWER Directive)	TBC	Describes the recommended approach for evaluating and remediating Superfund sites with PCB contamination.	This guidance will be considered when identifying, testing and implementing treatment technologies for the dredged sediment.	

Table 2

## SUMMARY OF PCB SAMPLING RESULTS AT THE NEW BEDFORD HARBOR SUPERFUND SITE

SAMPLE LOCATION	TOTAL # OF SAMPLES COLLECTED	AVERAGE CONC. (ng/m3)	ACTION LEVEL EXCEEDENCES		
			>50 ng/m3	>500 ng/m3	>1000ng/m3

### ON - SITE

1	148	25.06	15	0	0
2	147	32.02	26	0	0
3	144	157.72	64	8	4
3D	14	24.79	2	0	0
4	101	13.48	3	0	0
5	102	14.20	5	0	0
6	147	42.16	37	0	0

### NEAR SITE

7	63	9.18	0	0	0
8	61	6.65	0	0	0
9	62	27.12	11	0	0

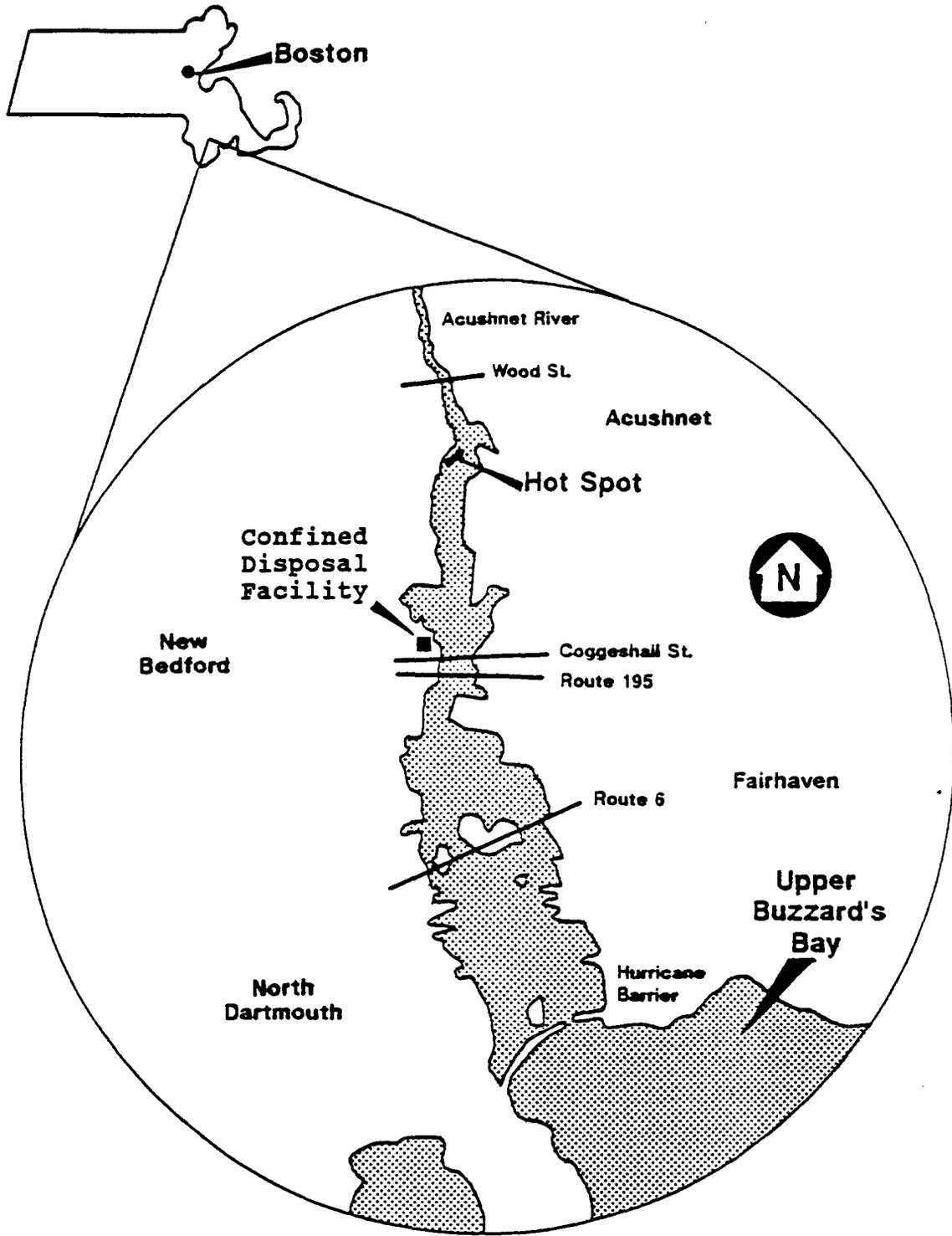
### DREDGE

10	165	28.88	24	0	0
11	166	141.59	116	4	0
12	166	26.50	25	0	0
13	167	70.29	70	3	0
13D	41	24.38	6	0	0
14	167	9.98	5	0	0
15	167	21.81	14	0	0
16	167	9.48	2	0	0

### TOTAL

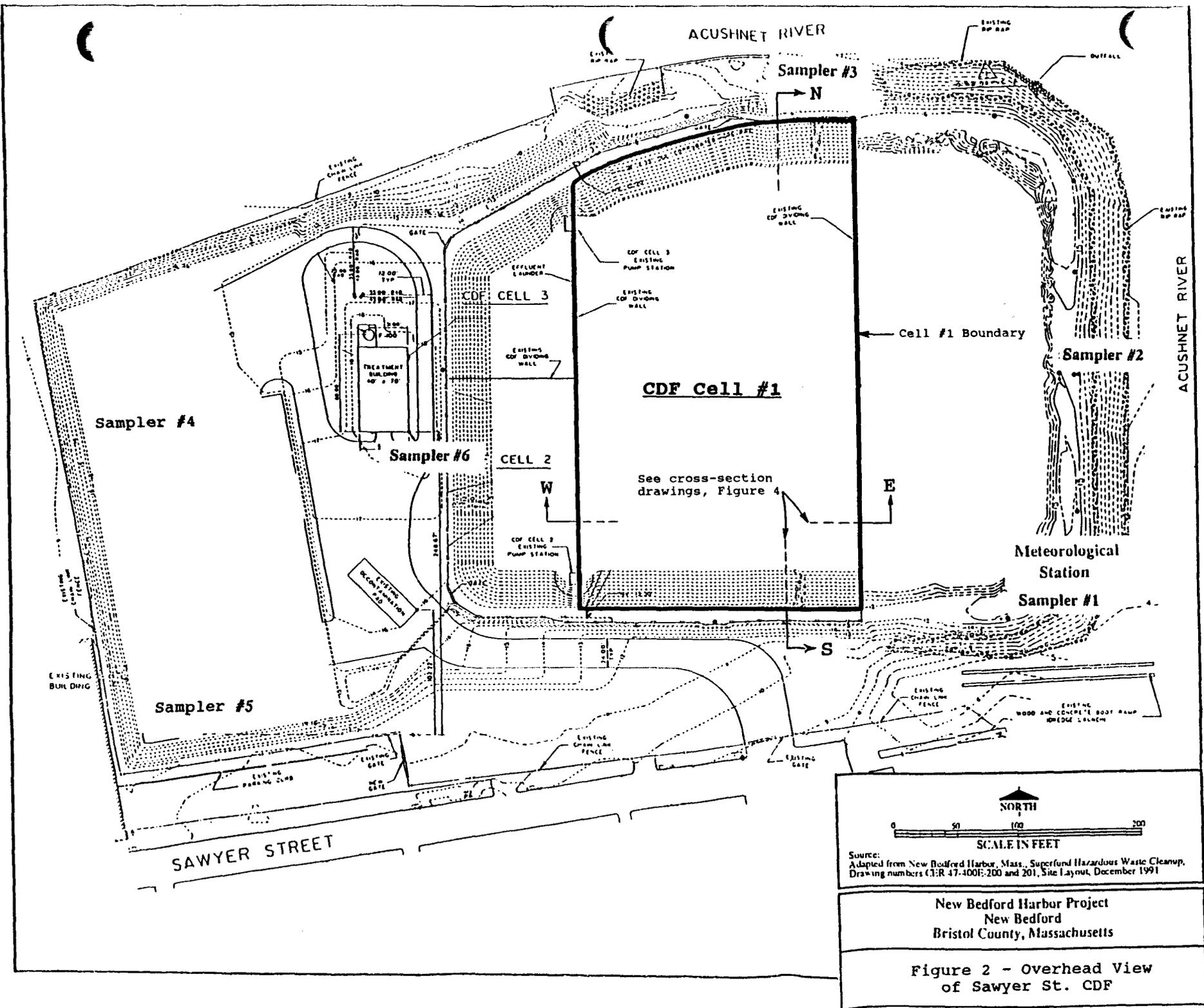
	2195		425	15	4
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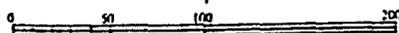
NOTE: SUMMARY OF DATA TO 2/23/95



Not To Scale

Figure 1 - New Bedford Harbor and Location of Hot Spots and CDF



  
 NORTH  
  
 0 50 100 200  
 SCALE IN FEET

Source:  
 Adapted from New Bedford Harbor, Mass., Superfund Hazardous Waste Cleanup,  
 Drawing numbers C1:R 47-400F:200 and 201, Site Layout, December 1991

New Bedford Harbor Project  
 New Bedford  
 Bristol County, Massachusetts

**Figure 2 - Overhead View  
 of Sawyer St. CDF**



<u>AREAS</u>	<u>DESCRIPTION</u>
AREA I	WATERS CLOSED TO ALL FISHING
AREA II	WATERS CLOSED TO THE TAKING OF LOBSTER, EEL, FLOUNDER, SCUP, AND TAUTOG
AREA III	WATERS CLOSED TO LOBSTERING

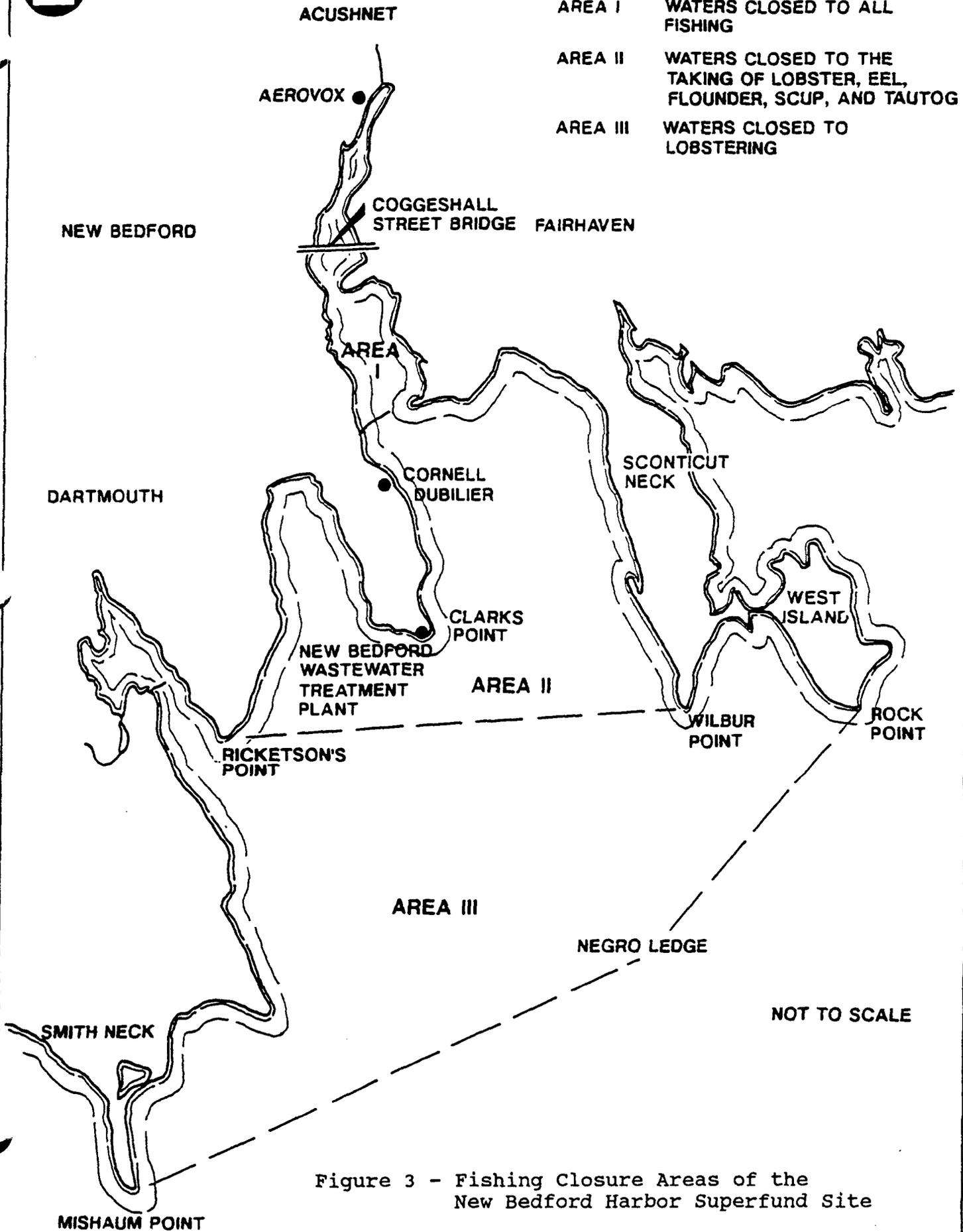
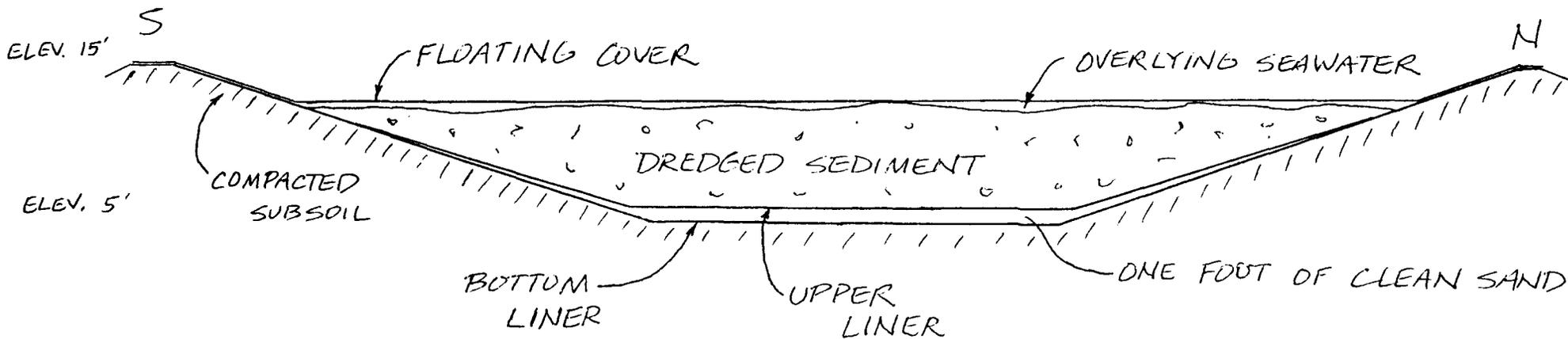
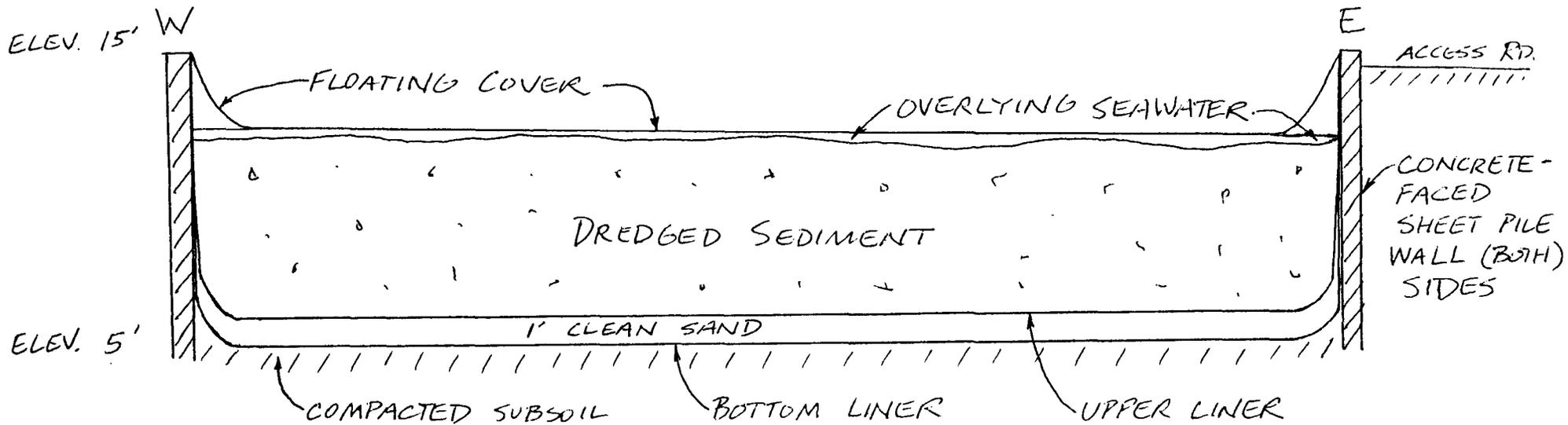
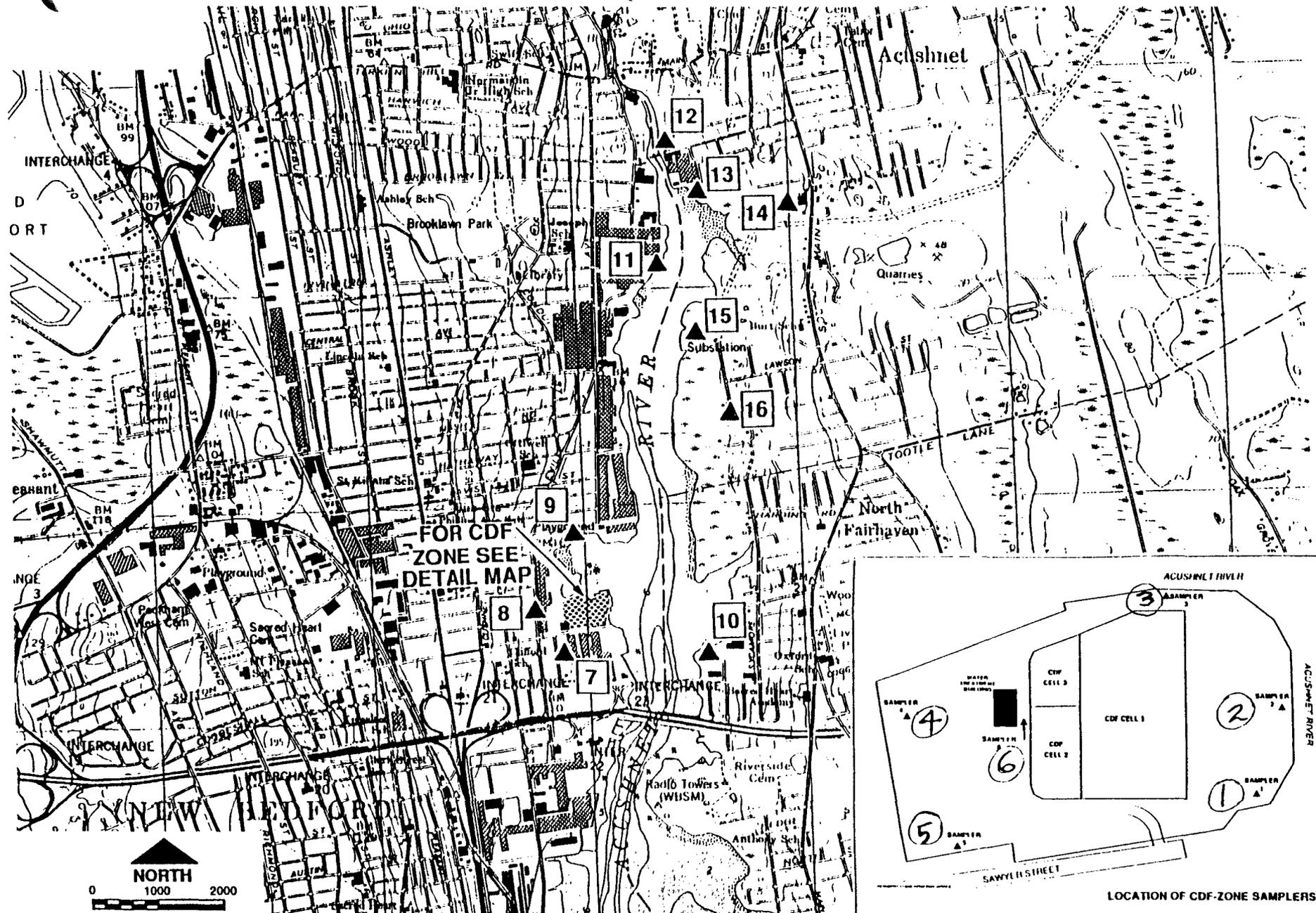


Figure 3 - Fishing Closure Areas of the New Bedford Harbor Superfund Site

FIGURE 4 - CDF CELL #1 CROSS-SECTIONS



(NOT TO SCALE HORIZONTALLY)



SOURCE: Base map adapted from USGS 7.5 min series maps (1:25,000), New Bedford North, MA. quad, dated 1979

Figure 5 - Location of Air Monitoring Sites, New Bedford Harbor Superfund Site



Commonwealth of Massachusetts  
Executive Office of Environmental Affairs

## Department of Environmental Protection

William F. Weld  
Governor

Trudy Coxe  
Secretary, EOE

Thomas B. Powers  
Acting Commissioner

March 28, 1995

David Dickerson  
U.S. EPA - Region I  
J.F. Kennedy Federal Building  
Boston, MA 02203-2211

Re: DEP concurrence with proposed second ESD dated March 28, 1995 - New Bedford Harbor Superfund Site/Hot Spot Operable Unit

Dear Mr. Dickerson:

The Department of Environmental Protection ("DEP") has reviewed the proposed Explanation of Significant Differences ("ESD") dated March 28, 1995 for the New Bedford Harbor Superfund Site - Hot Spot Operable Unit. This is the second ESD for the New Bedford Hot Spot Record of Decision ("ROD") dated April 6, 1990, the first ESD being issued in April 1992.

The ROD originally called for the dredging and short term storage of the contaminated Hot Spot sediments in a confined disposal facility ("CDF") prior to on-site incineration. EPA's subsequent decision to suspend the incineration component of the remedy, therefore, requires that the dredged sediments be stored in the CDF for a longer period of time, while alternative treatment methods are evaluated. The ROD originally anticipated storage under one year. It is now estimated that the sediments will be stored up to five years. This ESD documents that requirement.

DEP concurs with this second ESD because it continues the removal of the highly contaminated sediment from the Acushnet River Estuary ecosystem, maintains the potential for the later use of an innovative treatment technology, and provides for overall risk reduction.

DEP's concurrence applies to the ESD as proposed by EPA in its draft dated March 28, 1995, which will then be subject to a public comment period. Because public input is an integral component of DEP's evaluation of ESDs, DEP reserves the right to reevaluate its concurrence based on its appraisal of any public comments on the ESD, or in the event that EPA modifies the ESD in response to public comments.

Page 2  
DEP Concurrence Letter  
March 28, 1995

DEP appreciates the opportunity to provide input on this ESD. If you have any comments on DEP's concurrence, please contact Paul Craffey at (617) 292-5591.

Very truly yours,



Madeline Snow, Director  
Division of Response and Remediation

cc: Paul Craffey, BWSC, DEP  
Richard Lehan, OGC, DEP  
Andrea Papadopoulos, SERO, DEP

**ATTACHMENT 2**

**Response to Comments Received Pursuant to the  
Draft Explanation of Significant Differences  
for Continued Storage of Hot Spot Sediments**

**New Bedford Harbor Superfund Site  
New Bedford, Massachusetts**

**October 1995**

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## **I. Introduction**

On March 28, 1995 EPA issued for public comment a draft Explanation of Significant Differences (ESD) proposing a change to the April 1990 Hot Spot Record of Decision (ROD) for the New Bedford Harbor Superfund Site. The change consisted of suspending the incineration portion of the remedy and instead storing the dredged sediment in the confined disposal facility (CDF) for three to five years while an alternate treatment technology is evaluated and implemented. EPA received comments on the draft ESD that both supported and opposed the temporary storage of sediments in the CDF. In addition to comments received on the draft ESD, however, comments were also received regarding the proposed remedy for ROD II which will address the estuary, lower harbor and portions of Buzzard's bay. Apparently the discussion of the proposed remedy for ROD II at the April 25, 1995 Community Forum meeting, which occurred in the middle of the comment period for the draft ESD, caused some confusion as to the purpose of this comment period. Only comments on the use of the existing CDF for temporary storage of contaminated hot spot sediment will be addressed in this responsiveness summary. Comments on the proposed remedy for ROD II will be responded to at a later date as part of the public participation process for ROD II.

Seven sets of comments were received that address the issues discussed in the draft ESD. These comment letters are included as Attachment 3 of this ESD, and will be referenced herein, respectively, as 1) Gidley, 2) Rusinoski, 3) Kalisz, 4) Tierney, 5) Perland, 6) Kirk/Peppin and 7) AVX. Three sets of comments were received that do not address the ESD issues - one from State Representative Robert Koczera of New Bedford, one from Susan Marges of North Dartmouth, as well as a portion of the comments received from AVX. Again, these will be responded to as part of the separate public comment process for ROD II.

## **II. Specific Comments And Responses**

### **A. Confined Disposal Facility**

1. *The contaminated sediment in Cell #1 should be containerized (e.g., in metal barrels) and treated in an off-site, upland location. (Rusinoski)*

Consistent with the April 1990 Record of Decision for the hot spots, the EPA believes that on-site treatment of the sediments is more appropriate than off-site treatment. The interim storage of the sediments, as discussed herein, can be accomplished safely, and additional handling and trucking of the highly contaminated sediments is avoided.

2. *The ESD proposal for interim storage of the Hot Spot*

*sediments in a CDF is sufficient and will have no negative environmental impacts. The storage should become permanent, and treatment need not be implemented thereafter since it is too expensive and too risky. (Gidley)*

The EPA agrees with this commentor to the extent that use of the hot spot CDF for interim storage of hot spot sediments is a safe and appropriate option. The commentor's belief that treatment is unnecessary is an additional stamp of approval for the CDF. However, as explained in the April 1990 Hot Spot ROD, and as specifically stated in the Superfund statute (i.e., CERCLA §121(b)(1)), cleanups which involve treatment to permanently and significantly reduce the volume, toxicity or mobility of site contaminants are to be preferred over cleanups that do not involve such treatment. Given the extremely high levels of PCBs (polychlorinated biphenyls) in the hot spot sediments, EPA continues to maintain that sediment treatment is necessary.

*3. The modifications to the CDF that have been made to date and those suggested in the ESD ensure that dredged material will not be released from the CDF. (Tierny)*

As described in the ESD, the EPA agrees with this comment that the hot spot CDF is a safe and secure facility for interim storage of the hot spot sediments while alternative treatment technologies are being pursued.

*4. Originally, a 24 inch barrier of water was proposed to cap the contaminated sediments in the CDF during the extended period of storage. Now, a minimum one foot of freeboard has been proposed with a floating cover liner without an adequate explanation of this change. (Kalisz, Tierny, Kirk/Peppin)*

There appears to be a misunderstanding regarding the term freeboard. Freeboard refers to the vertical distance from the top of the seawater in cell #1 to the top of the berm or wall surrounding cell #1. It does NOT refer to the depth of that seawater which overlies the dredged sediment. Two feet of freeboard is regulated by the MA DEP to ensure that commercial facilities do not over fill their waste impoundments.

The draft ESD proposed waiving the MA DEP two foot freeboard requirement, proposing instead a reduction to one foot of freeboard, should it be necessary to maximize the amount of sediment to be removed from the Harbor. Overtopping is not a concern at cell #1 since additional sediment storage will not occur once the hot spot dredging is completed, and rainwater from cell #1 can be easily drained into cell #2. Now that the hot spot dredging has been completed, a two foot freeboard does exist in all areas of cell #1 except a small area near the discharge pipe location.

EPA originally planned to use 2 feet of overlying water as an operational method of controlling airborne PCB emissions. That plan was subsequently changed to include a floating plastic (HDPE) cover with a reduced amount of overlying seawater. Figure 4 of the ESD illustrates how this arrangement looks from a cross-section perspective. As to the comparative effectiveness between the two different cover systems in controlling air emissions, the EPA would point to the results from the air monitoring program and reiterate that the current floating cover system has worked well in keeping PCB emissions under control.

*5. EPA first claimed that the CDF would be able hold all of the hot spot dredged material, but now the ESD suggests that the 2 foot of freeboard requirement will have to be waived to ensure the capacity for all of the hot spot material. This exacerbates the concern that the fear of the unknown is at work in this case. (Kirk/Peppin)*

The draft ESD proposed a 1 foot rather than a 2 foot freeboard to accommodate the additional volume of contaminated sediments generated by both the deeper level of dredging and more-frequent amount of redredging. These operational changes were implemented to ensure that the 4,000 ppm (parts per million) PCB project threshold was attained, and both changes resulted in additional material requiring disposal. The CDF has the capacity to safely handle all of the dredged sediments. The 1 foot of freeboard together with the floating cover will absolutely prevent any overtopping, which is the purpose of this regulation.

*6. The potential for the CDF to flood and/or experience catastrophic failure from hurricanes or storms has not been thoroughly characterized. (Kirk/Peppin, AVX)*

The potential for flooding at the CDF has been thoroughly characterized, and as long as the New Bedford Harbor hurricane barrier performs as designed, there is no risk of flooding at the CDF. Even if the hurricane barrier does fail, the top elevation of the CDF's dikes are 2 feet above the 100 year flood-water level.

Hurricane or other catastrophes have also been planned for and appropriate precautions have been taken. In the event of such an occurrence, the Corps of Engineers and their site contractors will be on hand to control the site and minimize any damage. Further, the below ground nature of the CDF appears to offer superior protection of the dredged sediments from dangerous storm events. Should an unexpected dire emergency develop, however, the Corps and their contractors are prepared to work with local emergency relief officials to implement any necessary emergency plan.

Finally, consistent with state regulations, inspections will occur immediately after storm events to ensure the security of the facility.

**7. How will the liners be tested, who will do the liner testing, and how often will this testing take place? What documentation will we have to demonstrate that the liners will not leak during the five year period of interim storage? (Kirk/Peppin)**

Since the two bottom liners in cell #1 are covered with approximately 7 feet of dredged hot spot sediment, very little if any actual physical testing of these liners is anticipated. As a more comprehensive method of assessing whether leakage has occurred, the EPA will implement a site-wide groundwater monitoring program. The results of this groundwater monitoring program will provide documentation as to the functional integrity of the CDF.

As noted in the ESD (p.10), and as required by state regulation (see Table 1, item #8 of the ESD), all liner seams were extensively tested during installation. Furthermore, the state regulations give the MA DEP authority to require additional periodic liner testing (see Table 1, item #12). Should this testing be deemed necessary, small samples of liner could be taken from the top of cell #1 for destructive-type laboratory testing.

**8. The discussion of the TSCA (Toxic Substances Control Act) ARAR waiver in the ESD does not explain why the existing CDF design is now adequate for long term storage. (Perland)**

The sections of the ESD which discuss why the hot spot CDF is adequate for interim storage are sections III.D.1 (Site Actions Made to Date) and III.D.2 (Significant Upcoming Actions). These sections discuss the redundant bottom liner system, the floating cover system, the air and groundwater monitoring program, and the site security system, all of which contribute to safe and secure sediment storage. Table 1 (item #9) of the ESD goes on to explain that weekly inspections of the CDF facility will take place.

**9. Cells #1, 2, and 3 in the CDF have not been covered, allowing evaporation of poisons which effect nearby residents and workers. (Rusinoski)**

On the contrary, a floating cover was placed over cell #1 in April 1994, and over cells #2 and #3 in April 1995. Furthermore, as clearly demonstrated by the air monitoring data from the neighborhood monitoring stations around the CDF, the PCB levels in the neighborhood areas surrounding the CDF have been well below the most stringent 1000 ng/m<sup>3</sup> work place standard.

10. *Contrary to the statement in the March 1995 ESD that PCB levels in the CDF area are typically at very low levels, airborne levels began to increase during the month of May 1995. PCB levels around the CDF will likely increase during the summer as the CDF is filled to capacity. (Kirk/Peppin)*

EPA agrees that airborne PCB levels did increase near the CDF during April and May of 1995. However, the Corps of Engineers made several modifications to the CDF, such as improving the cell covers and cooling the surface of the floating cover with water, which have significantly reduced the number of high PCB levels above the 1000 ng/m<sup>3</sup> action level. Airborne PCB levels in local residential areas have been consistently well below the 1000 ng/m<sup>3</sup> action level to date. The EPA will continue to closely monitor these levels over time to ensure that airborne PCB levels around the CDF remain safe.

#### **B. Dredging Activities**

1. *By selecting and then abandoning the incineration remedy, EPA has done nothing to achieve the permanent destruction of PCBs, but has also effectively foreclosed or impeded what could be much more cost-effective, less environmentally disruptive solutions such as in-situ capping or in-situ bioremediation. (AVX)*

EPA recognizes that its decision to suspend incineration has delayed permanent destruction of PCBs; however, the Agency stands by its remedy to remove the most highly contaminated sediment from the Harbor by dredging and to ultimately destroy the PCBs. Now that hot spot dredging has been completed, the EPA will begin to focus on evaluating treatment technologies to achieve the permanent destruction of PCBs. From an implementation standpoint, the fact that all of the hot spot sediments are now consolidated within the Sawyer Street CDF will make both the treatability testing and the ultimate treatment more effective and manageable. Solidification and chemical destruction technologies for treatability testing of the hot spot sediment is scheduled to begin by fall 1995. Permanent destruction of the PCBs will be accomplished once a treatment technology has been evaluated, selected, designed and implemented.

Both in-situ capping and in-situ biodegradation were evaluated in the Feasibility Study to address contamination in the Harbor. EPA selected dredging as the remedy over capping and biodegradation for the reasons explained in the Proposed Plan and the ROD for the Hot Spot. This ESD has not changed EPA's selected remedy; we continue to believe that our remedy remains protective and cost-effective. It should be emphasized, however, that the hot spot dredging was not necessarily environmentally disruptive, as the comment assumes. The project's water quality and toxicity monitoring data, which have been made available to the Forum's

subcommittee, clearly demonstrate the minimal-impact nature of this dredging project.

**2. *Dredging can be harmful to the environment, especially to the water column, and other less disruptful remedial options should have been pursued. (Rusinoski, Kirk/Peppin, Kalisz, AVX)***

EPA evaluated nine remedial options to address the contamination in the harbor. By evaluating these options against the nine criteria set out in the National Contingency Plan, 40 CFR Part 300, EPA selected dredging as its selected remedy. EPA issued a Proposed Plan for public comment prior to its final selection. All comments received and EPA's response to those comments are contained in the Administrative Record for the Hot Spot ROD. Those interested in reviewing the Agency's decision to select dredging as its remedy for the Hot Spot are referred to the Administrative Record.

With regard to the comment that dredging can be harmful to the environment, a sizeable body of monitoring data was collected during the hot spot dredging which documents that the dredging process had only very minimal impacts on the environment. This data has been shared with the community Forum's dredging subcommittee, which has always been open to anyone interested in the project. For example, the total seaward PCB flux in the water column at the Coggeshall Street bridge during dredging was less than 25% of the project's pre-established maximum criteria. This maximum criteria itself represented a flux level that would be environmentally insignificant.

### **C. Air, Ground Water and Surface Water Monitoring**

**1. *What are the future plans and goals for air, surface water and ground water monitoring around the CDF? Citizens need to be notified of any problems and be involved as part of the solution. (Kirk/Peppin)***

The planned air monitoring frequency during interim storage for the CDF is weekly for the first two months, biweekly for the next two months, and monthly thereafter. As discussed with the dredging subcommittee, the monitoring frequency would revert back to once per week come spring time to ensure that air levels remained safe. If the results were satisfactory, the monitoring frequency could again be reduced. This plan can be changed, as needed, if warranted by the monitoring results. The planned groundwater monitoring frequency for the seven wells around the CDF is quarterly. Surface water monitoring around the CDF is not planned unless elevated contaminant levels are found in the groundwater monitoring. The public will continue to be included in these monitoring efforts.

#### D. ARAR Waivers

1. *This comment noted that if EPA had invoked ARAR waivers when selecting the hot spot remedy in 1990, it might have reached an entirely different result on remedy selection. The commentor also stated that without incineration, which offered the highest degree of permanent reduction in PCB toxicity, mobility, and volume, it is hard to understand how EPA would have been justified in proceeding with any of the other alternatives. (AVX)*

This ESD addresses a change to the length of time PCB-contaminated sediment will be stored in the CDFs and identifies the regulations concerning long-term storage of PCBs. It does not change EPA's selected remedy of removing the contaminated sediment from the Harbor and ultimately destroying the PCBs. The ARARs identified and the waivers invoked apply only to the action of longer-term storage of the untreated sediment in the CDFs.

EPA is not, in any way, invoking the ARARs waivers to avoid meeting its mandate to choose remedies which offer the highest degree of permanent reduction in toxicity, mobility and volume. In fact, the opposite is true. EPA has decided to seek other means of destruction through a series of treatability studies in order to identify the most protective and cost-effective method of treatment other than incineration. The results from these studies will be presented in an addendum to the Feasibility Study and an additional decision document.

At the same time, EPA must be assured that the remedy remains protective even when ARARs waivers are invoked. This ESD presents EPA's analysis and conclusion that the CDF as constructed will be protective of human health and the environment even though some of the PCB storage regulations are being waived while EPA pursues an alternate treatment technology.

#### E. Miscellaneous

1. *Incineration is a low risk technology which would have adequately treated the hot spot wastes; any alternative technology will have unknown risks. This may make it impossible for Perland to maintain liability risk protection insurance. (Perland)*

EPA has solicited requests for proposals from various treatment technology vendors for treatability testing of the hot spot sediment. We plan to perform bench and pilot studies to determine the effectiveness, risks and cost for each of the technologies tested. Once the studies are complete, EPA will issue a Treatability Study Report to present the results of these tests.

EPA recognizes the draft ESD has caused the remedial action

contractor some inconvenience in that its insurer has voiced concern about its perception of a heightened risk associated with the proposed change. EPA worked with all parties involved and the parties reached an acceptable solution for insurance coverage.

*2. This commentor states that EPA's decision to suspend incineration should have been made six years ago based on comments and concerns originally raised in 1988 and 1989 by both local constituencies and PRPs who pointed to the unacceptable risk to the local environment that on-site incineration would create. (AVX)*

EPA still maintains, as is set out in the Hot Spot Feasibility Study and the April 1990 Hot Spot ROD, that on-site incineration is protective of human health and the environment and is cost effective. The decision to suspend incineration was based on concerns raised by elected federal, state and local officials and some community groups after the ROD was issued.

The remedy presented in the 1990 ROD was selected by EPA with substantial input from the Greater New Bedford Environmental Community Work Group that was formed in October 1987 under the auspices of the Mayor of New Bedford's office. The group represented a variety of interests and concerns in the New Bedford area. From 1987 through 1990 the group met monthly to review EPA's studies and to examine methods for treating the Hot Spot. The group also applied for and received a \$50,000 Technical Assistance Grant from EPA and hired a consultant to assist them in their review of the studies. In 1990, the core group members voted to support the Hot Spot remedy. Two of the three dissenting votes were cast by companies liable for the cleanup.

*3. This commentor felt that EPA's decision to suspend incineration and pursue alternate treatment technology for the dredged sediment resulted from a rushed approach to remediation of New Bedford Harbor. The commentor also stated that these decisions further support the commentor's belief that the approach to treat the hot spot as a separate operable unit was flawed. (AVX)*

EPA strongly disagrees with this comment. As noted in the comment, EPA has been studying the contamination in New Bedford Harbor since 1976 and it was not until 1985 that the Agency decided to remediate the hot spot as a separate operable unit. This decision was made on the basis of our studies which showed that these particular areas of contamination posed the highest threat to human health and the environment. These studies enabled EPA to determine that sediment containing PCB concentrations ranging from 4,000 parts per million (ppm) to 200,000 ppm were present in an area consisting of approximately

10,000 cubic yards in the estuary. These studies also indicated that PCB-contaminated sediment at concentrations considerably less than those in the hot spot were located throughout the estuary, lower harbor and bay. Based on a risk assessment conducted by EPA in 1989, the Agency determined that these hot spot areas posed the greatest risk to human health and the environment and amounted to approximately 48% of the total contaminated sediment at the Site.

Based on the results of the 1989 Risk Assessment and the 1989 Feasibility Study, EPA determined that by first concentrating on these hot spot areas which posed the greatest threat to human health and the environment the remediation would substantially improve the PCB flux rate to the lower harbor and bay and significantly improve the quality of the water and sediment. The effect of these actions is to reduce the threat of human contact with the most highly contaminated soil and drastically reduce the amount of PCBs that interact in the ecosystem and food chain. The key component of the remedy is not necessarily final destruction of the PCB molecules, but removal of the PCB-contaminated sediment from the river environment.

*4. Implementation of the ESD and re-evaluation of a final remedy will result in substantial increased and duplicative costs. Specific cost information, which is necessary to determine cost-effectiveness, is not provided. (AVX)*

The EPA does not deny that the decision to seek an alternative treatment technology will incur increased costs. However, given this decision, the interim storage proposal advocated in the ESD is safer, readily implementable, and, by definition, more cost-effective than other proposals involving additional handling of the untreated, highly contaminated sediments. Specific cost information will be provided in a Treatability Study Report and an addendum to the Hot Spot Feasibility Study which will be issued once the treatability studies have been completed.

*5. AVX maintains that there is a lack of any demonstrated risk to human health or the environment from PCB contamination in New Bedford Harbor. EPA does not present any evidence to support their stated belief that temporary CDF storage involves less risk than leaving the sediments in place. (AVX)*

The 1989 Baseline Public Health Risk Assessment demonstrates that there ARE significant public health risks from the Site from both dermal contact and ingestion of PCB-contaminated biota. The public health risk posed by the level of PCBs in the Harbor is unmistakably illustrated by the fishing ban on approximately 18,000 acres of New Bedford Harbor and Buzzard's Bay. In addition, the 1989 Ecological Risk Assessment shows that Site contamination results in a significant likelihood of chronic

effects to indigenous biota, and that PCB concentrations in sediment and sediment pore water were found to be highly toxic to some members of all major taxonomic groups. These two reports emphatically demonstrate that the concentrations of PCBs in New Bedford Harbor, particularly in the hot spot area, pose a substantial risk to human health, the aquatic biota in the Harbor, and the overall integrity of the Harbor as an integrated functioning unit.

The amount of PCB contamination in the entire site will be reduced by about 48% with the removal and interim storage of the hot spot sediment. Decreasing the mass of PCB contamination by almost half its original amount greatly reduces the potential for further migration of PCBs and the risks to public health and the environment. Leaving the sediments in place obviously does nothing to mitigate this risk. The air monitoring data presented in the draft ESD and that gathered subsequently demonstrate that the sediments can be safely stored on an interim basis. Therefore, the removal and interim storage of the Hot Spot sediments is a reduction of overall risk compared to leaving the sediments in place.

*6. AVX suspects that the period for interim storage will be greater than anticipated, given the apparently inconsistent statements in the ESD by the MA DEP and EPA. (AVX)*

The MA DEP and the EPA are in complete agreement over the general overall timeframes that are involved in the actual development and implementation of an alternative treatment technology. That the statements cited by AVX appear inconsistent is really a matter of semantics: some (decreasing) volume of untreated sediment storage will still be required as the sediments begin to get treated.

**ATTACHMENT 3**

**Comments Received Pursuant to the  
Draft Explanation of Significant Differences  
for Continued Storage of Hot Spot Sediments**

**New Bedford Harbor Superfund Site  
New Bedford, Massachusetts**

**Comments on EPA 5-Year Storage Plan (1995) of PCB/Metal  
Contaminated Sediments: Hot Spots at New Bedford Upper Harbor**

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**GIDLAB KC-119-A**

- A. GIDLAB approves this plan and believes it will have no negative environmental impact. GIDLAB further urges that the storage become permanent and that no costly treatment be used thereafter--too expensive and too risky.
- B. **Reasons for No Negative Impact**
1. Sediment interment "as is" is sufficient; even without added stability enhancement that could have been obtained by added chelating materials as sited in GIDLAB KC-117, 3/7/94.
  2. The existing bottoms of the CDFs would be sufficient to prevent significant leachate of PCBs and metals.
  3. External monitor wells can be easily installed to substantiate the leachate of the contaminants.
  4. The CDFs could be covered with one foot of bog soil or podzol or organic soil with one inch of bentonite (or equal clay  $10^{-7}$  cps) disced in. This would prevent any air vaporization of PCB. Final topping with soil, lime and perennial rye grass would afford a safe usable playing field.
  5. The contaminated sediment in the CDFs would no longer be subject to rainfall, tidal action or winds and therefore would no longer pollute the atmosphere, estuary, shellfish, food-chain vectors, fish or humans (skin contact).
  6. In the worst case scenario (leachate caused by catastrophes), the minimal contaminants would only trickle down into the balance of the already similarly polluted estuary. This is no real hazard, as the New Bedford Inner Harbor could never be opened for shellfishing or bottom fishing in any case because of the high bacteria and copper residues.
  7. No municipal water source, aquifer or watershed exists down-gradient of the CDFs; hence there is no water source to contaminate.

**Comments on EPA 5-Year Storage Plan (1995) of PCB/Metal  
Contaminated Sediments: Hot Spots at New Bedford Upper Harbor**

**C. Sediment-Site Leachate Factors**

1. PCB vaporization rate is very low compared to other organic materials. AROCHLOR #1254 has a vaporization rate of 0.000053 grams per cubic centimeter per hour (EPA Versar--1976).

2. Solubility of PCBs in Water

Solubility is very low--0.085 milligrams/liter to 0.175 milligrams/liter--range (EPA Versar--1976).

3. Permeability of Site Cell (Estimated)

$<10^{-7}$  cm/second (GIDLAB Report EC-1116-3, 1/3/81)

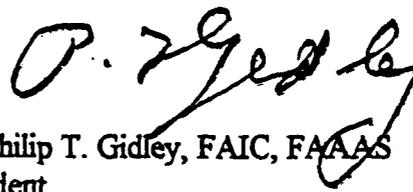
4. Seepage Loss at Cell Site

435 gallons of water per acre per day at 1 foot head of water, "Soil Laboratory Engineering Report Data 280-3, American Colloid Company, September 1, 1975."

5. Sediment Removal for Treatment After Five (5) Years

Not recommended. "PCBs in New Bedford Harbor," Dr. Philip T. Gidley, Environmental Science & Technology, Volume 10, No. 5, 1984.

February 23, 1995

  
Dr. Philip T. Gidley, FAIC, FAAAS  
President

GIDLEY LABORATORIES, INC.  
Chemical and Environmental Sciences  
Fairhaven, Massachusetts, U.S.A.

Mr. David J. Dickerson, Remedial Project Manager  
U.S. EPA---New England  
J.F.K. Federal Building (HRS)  
Boston, MA 02203-2211

March 29, 1995

Dear Sir;

At the March 28, 1995 Public Information Meeting in New Bedford, Mass., I stated that the proper way to handle the P.C.B.'s and other poisons which are stored in cell #1, should be put into metal barrels and removed from this area, to an area much higher in elevation, before they are treated and disposed with.

From the time the EPA wanted to dredge this hot-spot many years ago, I had always been against this type of operation here, for this harbor is too poisoned for such a operation and I had in the past public information meetings repeatedly stated that the proper way to take care of this hot-spot, was with a covered cofferdam, be built around that area, and move that sludge to a higher area far from here, there you could best treat it.

But, this agency has refused to do what is best for this region, which has been repeat destroyed by many other Federal Agencies, in the years following WWII, these government agencies have encouraged and payed them to go over-seas. Other companys have come here, purchased companys only for their working capital, invested some place else this working capital, and closed the factorys here, thats how many companys from other parts of this nation became conglomerates, this the justice dept. should have stepped many years ago.

But the EPA has refused to do what the public thought best for this region and it went ahead with its dredging of the hot-spot, which it never covered, even cell #1 was not covered when the dredging started and as for cell #2 & 3 have never been covered, this allowed for the evaporation for many of the poisons into the atmosphere here, effecting people living close by and those working close by.

The poisons in this harbor go back to WW One when thousands of tons were dumped here. The years following that time, much of this harbors mud was removed and put on the soil in Fairhaven.

The past few years as I have walked on the area beaches from the dike to the state beach and the town beach on West Island, I have found many dead sea gulls and wild ducks, this I find as very unusual, I have never seen so many dead sea gulls and wild ducks dead on the shores of this town, in all the past 60 years I have lived here, the area I walked on is only 1% of the shore line of Fairhaven, Mass. In my younger years I was a fisherman and fished all the area of this town. The area from the fort to Popes beach, before the storm of 1938, the waters there were always crystal clear and very warm during the months of July and August, planes use to land off the end of Farmfield St. and many huge yachts came into this harbor to bath in these water, the people from these crafts knew of the health propertys of warm clean salt water. Last summer (1994) as I watched the people swimming in the dirty warm water at the state beach, I went in for a while and after took a shower, but the next day a few rashes appeared on my body. The poisons in the water are so great here, that a changing tide can not clear them. When the tide comes in, it cannot get into the harbor quick enough so it goes to the Fairhaven side of the harbor and when the tides change, the Fairhaven's side goes out first and the poisons behind the dike, which cannot leave fast, end up near the state beach, when the tide changes again. I hope this improves after New Bedfords new sewerage plant goes into operation. The first one they built should have been three times larger, I wonder why those in government allowed that city to build such a small treatment plant. The areas I grew up in, where my parents once had a summer cottage at the end of Washburn Ave., before the storm of 1938, use to be all sandy beaches there, a couple weeks ago I went there, the place really stinks now, with the sewerage from New Bedford on the shore, what a mess!!

Sincerely

Mr. Roman Rusinoski

P.O. Box 163

Fairhaven, Mass. 02719-0163





# CITY OF NEW BEDFORD

MASSACHUSETTS

CITY COUNCIL

FREDERICK M. KALISZ, JR.

COUNCILLOR WARD 2  
231 COLLETTE ST.  
NEW BEDFORD, MA 02746  
Home (508) 994-4474

April 13, 1995

David J. Dickerson, Remedial Project Manager  
U. S. EPA - New England Region 1  
J.F.K. Federal Building (HRS)  
Boston, MA 02203-2211

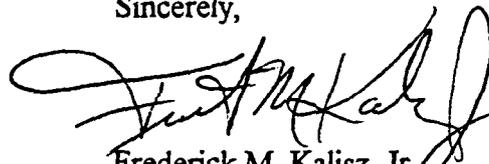
Dear Mr. Dickerson:

I am writing to offer comment with regard to the draft ESD (Explanation of Significant Differences) for continued storage of Hot Spot Sediments - New Bedford Harbor Superfund Site, March 28, 1995. I was present for part of the presentation at the Greater New Bedford Regional Vocational Technical High School and have taken advantage of the opportunity to review the draft document that was distributed to the public at that time.

As the ward councillor for the immediate area, and having been part of the community input process since its inception, I raise concern with the actions proposed through the ESD with regard to "freeboard" and dredged material containment as it impacts maximum available space in the CDF (confined disposal facility). A major factor in setting to ease the concerns of citizens regarding on-shore containment of PCBs/contaminated material post dredging was the "buffer" to be provided by the 24-inch barrier of water that would cap the retained material. With the recommendation now of a minimum of 12 inches of freeboard and the floating cover liner, I was surprised that a better explanation of combined capability was not given in either the oral or written presentations on this matter. As a layman, I would have expected that comparisons would have been rendered or analogized between the density of retention between the 24 inches of water and the 12-inch water/floating cover models. This then leads to further concern of the anticipated increased volume of contaminated sediment to be yielded and the anticipated methods of handling beyond the capability of a 12-inch freeboard and the resulting additionally agitated bottom soil in the river.

I hope that beyond the recording of comment, answers may be available to clarify any mistaken understandings I may have or represent.

Sincerely,



Frederick M. Kalisz, Jr.  
Councillor Ward Two

K, JR/jhc



# City of New Bedford

OFFICE OF THE MAYOR

MAYOR  
ROSEMARY S. TIERNEY

133 William Street  
New Bedford, Massachusetts 02740  
508-979-1410  
Fax: 508-991-6189

April 26, 1995

David J. Dickerson, Remedial Project Manager  
U.S. EPA - New England  
J.F.K. Federal Building (HRS)  
Boston, MA 02203-2211

RE: New Bedford Harbor Superfund - Hot Spot Operable Unit;  
Explanation of Significant Differences

Dear Mr. Dickerson;

I am writing on behalf of the City of New Bedford to offer comment regarding the Explanation of Significant Differences (ESD) for Continued Storage of Hot Spot Sediments, dated March 28, 1995.

I am aware that the change in the proposed remedial action requires the contaminated dredged sediments to be stored in the Confined Disposal Facility (CDF) for a longer period of time than was previously expected. Also, I realize that this CDF was originally designed and constructed for short-term storage of the untreated dredged sediment.

After careful review of the ESD, the City is confident that EPA, and all other appropriate agencies, will take all necessary precautions to prevent any of the dredged material to be released from the CDF. The modifications to the CDF that have been made to date and the site improvements that are suggested in the ESD ensure that this will not occur.

Mr. David Dickerson  
April 26, 1995  
Page 2

I do feel that concerns of several citizens, and other public officials, regarding both the amount of freeboard on top of the dredged material and the long-term ability of the liner to prevent leakage, are very important, and should be carefully considered and addressed. Of utmost importance is the health and safety of the citizens of New Bedford and the surrounding community. It is my understanding that the EPA will take all necessary actions to ensure this safety and the confidence of these people.

I appreciate the opportunity to comment on this very important matter and look forward to continued work and cooperation between the City and the EPA on the cleanup of this very precious resource.

Sincerely,

A handwritten signature in cursive script, reading "Rosemary S. Tierney".

Rosemary S. Tierney  
Mayor

**Perland**

April 28, 1995

Mr. David J. Dickerson  
Remedial Project Manager  
US EPA/New England  
JFK Federal Building (HRS)  
Boston, MA 02203

Re: Comments on New Bedford Harbor Superfund Site  
Hot Spot Operable Unit  
Draft Explanation of Significant Differences for Continued Storage  
Of Hot Spot Sediments

Dear Mr. Dickerson:

Pursuant to the request for public comment in Subsection I. D. in the Explanation of Significant Differences ("ESD") issued by the EPA on March 28, 1995, Perland Environmental Technologies, Inc. ("Perland"), the current remedial action contractor at New Bedford, submits the following response.

Perland is concerned with three issues; one which is technical and two which cause Perland to assume significant risks: (1) lack of technical information to support longer term storage of untreated PCB sediments in the CDF which result in; (2) apparent unavailability of insurance to cover Perland's new risks resulting from the changed site configuration and work scope; and (3) apparent inability of the Government to restore equivalent risk protection to Perland, which has performed the work on the site to date.

1. **Inadequacy of Technical Support For Decision**

Through the ESD, EPA now proposes to store wet PCB sediments in the existing CDF, which initially had been designed for interim storage and originally was scheduled for storage periods ranging from 10 months to 12 months, for at least three and up to five or more years. In the summary paragraph on Page 1, the EPA states that "the use of the CDF to store [PCB] sediments over this long a period was not envisioned in the 1990 ROD", acknowledging that this is a significant difference.

The "interim measure" waives design criteria for TSCA storage required by the permit process. Waiver of this ARAR is discussed on Page 6 of the ESD. That discussion does not explain why the existing design is now adequate for long term storage.

The one year limitation on storage of untreated PCB has also been waived; however, 40 CFR 761.65(a) states that "any PCB article or PCB container stored for disposal . . . shall be removed from storage and disposed of as required . . . within one year from the date when it was first placed into storage."

The issues of the adequacy of the CDF design and the new length of TSCA waste storage has adversely changed Perland's risk.

## 2. Apparent Unavailability of Insurance

Before starting the original New Bedford Harbor Hot Spot Operable Unit project, Perland agreed with the Government on a risk sharing mechanism which provided Perland and the Government acceptable levels of risk. An essential part of the risk sharing was Perland's ability to obtain adequate insurance. The draft ESD issued by the EPA was transmitted to Perland's insurance underwriters for their review and comment. At this point, the response has not been favorable, and one insurer has written that, if the ESD is adopted as drafted, insurance to Perland for protection from a discharge or potential discharge of the PCB contaminated sediment for the period starting from the completion of Perland's dredging and ending when the site is closed and a period of post closure monitoring has passed will not be available.

The position of the insurance underwriters is that the risk posed by longer term storage of untreated PCB sediments, particularly when no alternative technology is identified or explained in the ESD, is significantly greater than that which the insurer assumed under the original contract. Incineration, a well understood remediation technology, would have adequately treated all waste on the site. There is no mystery surrounding this established low risk technology. The new treatment is an unknown technology with unknown risks.

## 3. Apparent Unavailability of Equitable Relief to Contractor

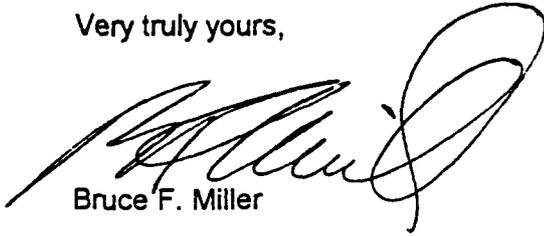
The unavailability of insurance for the new project scope has put risk-sharing off balance. Perland would be forced to accept more risk. The Government should provide equitable relief to restore Perland's original risk position. To date, the Government has not been able to provide Perland with assurances that it will restore Perland's risk protection and put Perland in the same position as it was prior to termination of incineration.

## 4. Summary

In summary, Perland, as the current contractor on this site, has significant concerns about the adverse impact on its risk position, which result from the technical changes presented in the ESD. The impact of those changes is further underscored by the insurance and equitable relief issues

identified above. Perland believes restoration of Perland's risk position is a necessary prerequisite before adoption of the ESD.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Bruce F. Miller', with a large, stylized flourish at the end.

Bruce F. Miller

David Dickerson , Remedial Project Manager  
U.S. EPA- New England  
J.F.K. Building (HRS)  
Boston, MA 02203-2211

**RE: Proposed second ESD dated March 28,1995 - New Bedford Harbor Superfund Site/Hot spot Operable Unit**

Dear Mr. Dickerson:

After review and discussion of the proposed Explanation of Significant Difference (ESD) dated March 28, 1995 for the New Bedford Harbor Superfund Site- Hot Spot Operable Unit - for Continued Storage of Jot Spot Sediments, the following are our comments and concerns. These comments do not oppose the ESD rather they are concerns and comments. We realize that the reason for continued storage is to allow the dredging to begin and continue in order that the quest for an alternative technology to incineration may be found. We also realize that without this ESD the search for an alternative technology would not begin. However, we feel that our concerns and comments need to be stated.

Prior to the beginning of dredging, we in a formal and filmed statement at the New Bedford Harbor forum expressed our concern of placing the most highly contaminated , untreated sediments from the Acushnet River in a confined disposal facility (CDF), because its long term storage was not envisioned during its construction and there was not any documentation of how these highly contaminated sediments would react. We felt at least there was documentation would happen where they were in the River, and also offered up the suggestion of a Cofferdam to prevent further movement of the PCB's. One of our concerns then as well as now , is the high levels of PCB noted from the air monitors that surround the CDF . Specifically, as the dredged sediments fill up the CDF, the warm weather raises the levels, and the concern that there may not be enough room for the sediments. To us , there did not seem to be a rush to dredge, as the PCB's had been there for 30 years, what would be the harm, if precautions were taken to making sure the PCB's did not go out to the outer harbor , (Cofferdam) to leaving it for a few more years until the alternative technology would be found. However, we realize that" the EPA believes that the use of the CDF for storage does not present an unacceptable risk to human health or the environment, and furthermore that this use significantly advances the clean-up of the New Bedford Harbor." .

Some of the things that are of concern with this ESD are:

- 1.. Since the sediments are currently being dredged from the River, they will need to be stored during this process until they are ultimately treated. The need to assure the citizens that air and water quality will continue and if a problem arises , citizens i.e. Dredging subcommittee will be notified and part of the solution.
2. Citizens need to be educated on how EPA plans to achieve air and water monitoring of the CDF, who checks it , how is it checked, how often is it checked, what are you checking for,

cracks in the liner below sediments are checked in manner. The need to understand how-when-where-what and by whom the CDF is checked- if something is detected that the citizens either by DCC or by Chairman of the Dredging Sub-Committee will be notified and involved in the solution.

3. Weather - weather has played an important factor since the beginning at this site. Through our involvement in the Dredging Sub-Committee, we have learnt that weather meaning rain, snow, sleet, wind: speed and direction, temperature and storms are all factors to consider when looking at air and water monitoring and quality. Citizens, on several occasions have requested to see the Hurricane /Storm Plans. It is our hope that EPA, USACE, DEP and the Site Contractor will together with the citizens develop specific storm contingency plans. This is especially important when the dredging has stopped and the CDF is full; the need for being prepared for unexpected failure, leakage and emergencies cannot be expressed loudly enough, the fact that together all concerns can be resolved. 615 (3) R&A.

4. Air monitoring program - after dredging is finished and /or CDF is filled should be re-evaluated with safe guards in place while waiting for alternative technology to be chosen.

5. On page 10 of ESD, last paragraph, 3rd sentence from the bottom which starts with " this body of air monitoring data supports the use of the covered cell #1 for interim sediment storage.....(continues to pg 11) ..in that it demonstrates that airborne PCB levels in the CDF area are typically at very low levels : this needs to be addressed as levels are and have been increasing at CDF air monitor #3, ( which is located on site) for the past month. At this point the CDF is filled approximately 63% filled and only leaves approximately 37% left for the continuation of dredging the HOT SPOTS. In the past month levels have exceeded action and shut down levels at air monitor #3 CDF, the USACE, the citizens and the EPA have been working together to find the reason and proceed with the correction. However, it 5/30/95 and as yet to our knowledge come up with either, although we have been trying really hard and working together to resolve why the levels are so high at this particular monitor, action has been taken with no results. Our other concern is that as the CDF fills up with the most highly contaminated PCB sediments, summer is approaching, temperatures will rise and we are again facing the unknown as to how these sediments will re-act being isolated and consolidated in a single area. The levels are sure to rise this needs to be addressed prior to further discussion of possible acceptance of the proposed ESD. It is the question of CDF, levels, capacity that needs to be answered and resolved, in order that we may feel comfortable once more. We have been working together on these issues and are prepared to work together again.

6. Page 7- paragraph 3 begins with .."To comply with this regulation, there is a possibility that at some future date EPA may be forced to end dredging activities prematurely in order to maintain two feet of freeboard above the dredged material". this further states our case that the fear of the unknown is at work here. We were told that the CDF would be able to hold all dredged material, before dredging began, no problem NOW we are being told we must waive this protectiveness waiver in order to ensure that dredging can continue. It goes on to say that it is believed to be more protective to continue and fill CDF to max. than leave it where it is. It is this changing from one statement to the other. to fit the need. that we question. always when we are beginning to get comfortable. It has always been our theory, don't put the cart before the horse, in

other words we felt don't dredge until you know what to do with it or until an alternative technology is a real possibility. All the changes in the ESD show us all we must justify- where we felt confident an eyebrow is raised- We have been faced with meeting statements from other citizens such as "You let them dredge ", "You did not speak loud enough", "See what happens", basically, this has never been done before in such a highly contaminated site such as ours and the result is still unknown. We are the experiment. We live here it means alot to us to do things logically, with reason along with the agencies making adjustments and explanations along the way.

7. Liners: (614)(8) Liners --How, when and by whom are liners tested? What are the criteria for liners? What do you do if a problem arises? Liners will be tested to the extent possible upon request. What does that mean? Who requests who will test and who will be the judge that all is well, with the liner? Who do they report to?

614(3) inspections required weekly and immediately after storms. what do they look for , by whom , who do they report to? after dredging stops will this continue.

How to assure the public that the liners will not leak in a five year period even though there is more in the sediment than PCB. What documentation do you have to go on?

8. 617(4B) Citizens will be ready to design along with the Agencies and the USACE and the Site Contractor a post-closure plan. Air and groundwater monitoring around the site before, during and after are a concern for us.

9. Citizens are still fearful that a storm/hurracaine/thunderstorm/tornado could flood our area of CDF and that the highest concentration of PCB's will flow into adjacent neighborhoods, playgrounds as well as pollute the River once more, regardless of the fact that the top -of-berm elevation is two feet higher than the 100 year flood elevation- need to better understand this , address it and resolve it.

10. Table 1 page 4 -- # 30 - (d)(2)(ii) R&A - CDF has shown it may not have the capacity to contain all dredged hot spot sediments- needs to be known, addressed, resolved.

We must make this statement one more time - it is not our intention through these statements to protest or stop this ESD. It is our right to question and be answered . We value the fact that the EPA has "elected to identify , test and ultimately implement alternative, non-incineration methods of treating hot spot sediments". In no way do we want to be perceived as oppositional . We do however want to be perceived as thoughtful, educated and concerned citizens. We Do realize that because the EPA is willing to do this "ultimately implement alternative, non-incineration method" the PCB sediment must be stored untreated for approximately five years and that this lengthened period of storage in cell#1 is "the significant difference that requires this ESD".

It is our intention through this statement to make EPA aware of our concerns and through these comments work together to find solutions that will only add to the health and safety of the public and the environment. These statements are in no way argumentative, rather to be used in a constructive way inviting dialogue from both sides.

We appreciate the opportunity to provide our thoughts, concerns, and comments on this proposed ESD, Explanation of Significant Differences for continued storage of Hot Spot Sediments and look forward to hearing from the Agencies.

Thank You,

We are,

Claudia Kirk  
Concerned Parents of Fairhaven  
57 Church Street  
Fairhaven, MA 02719  
508-997-7727



Roland R. Pepin  
Dredging Sub-Committee Chairman ( Claudia Kirk was given permission by Roland to sign  
64 Slocum Street his name due to the shortness in time. He will get  
Acushnet, MA 02743 a copy and sign it and send it into the EPA in order  
508-995-9228 that his signature will be in the records )



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May 30, 1995  
11478-122

## BY HAND

David Dickerson,  
EPA Project Manager, USCPA,  
Waste Management Division (HRS-CAN3)  
JFK Federal Building  
Boston, MA 02203

Re: Draft Explanation of Significant Differences,  
Hot Spot Operable Unit,  
New Bedford Harbor NPL Site

Dear Mr. Dickerson:

AVX Corporation ("AVX") is submitting these comments on the Draft Explanation of Significant Differences ("ESD") for the Hot Spot Operable Unit of the New Bedford Harbor NPL site. EPA's latest decision epitomizes the consequences of its ill-considered, rushed approach to remediation of New Bedford Harbor. As recited in the ESD (p. 3), EPA has been studying New Bedford Harbor in one way or another since 1976. After the commencement of NPL studies in the early 1980's, EPA precipitously announced a dredging cleanup in the 1985 Fast Track Feasibility Study, only to abandon it in the face of unanimous criticism that EPA had failed to consider the potentially deleterious consequences of dredging. EPA yet again rushed to judgment in 1989 when, despite the fact that key studies were not yet complete, EPA announced that it would proceed to remediate the Hot Spot as a separate operable unit. A critical component of EPA's decision was the determination that the incineration alternative selected for the Hot Spot was not only feasible and protective, but highly cost-effective. The decision, some five years later, to reject the incineration alternative demonstrates without any doubt that EPA's 1990 decision was wrong. EPA has always viewed New Bedford Harbor as a problem that can be solved by the quick fix of dredging without thinking about the consequences. EPA has consistently refused to acknowledge that remediating a complex estuarine-harbor ecosystem may require a totally different approach than any other Superfund site in the country. As a result of its precipitous actions, EPA cannot now fairly consider the full range of appropriate remedial options for the Upper Estuary.

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AVX's more specific comments follow.

1. The Justification for the ESD Is Not Based on New Information or Unknown Conditions.

AVX has followed with interest and concern the proceedings over the last few years that have led to the proposed ESD. It is nothing short of amazing that, after many years of evaluating remedial alternatives for sediments in the upper estuary of New Bedford Harbor, and eventually deciding and justifying the preferred remedy of incineration, EPA now backs away from that alternative and reverses its decision in response to the community's comments and concerns. AVX has no criticism of the community response or the decision to suspend incineration, but only of EPA's intransigence in not having reached this conclusion six years ago. These are the same comments and concerns that were originally raised in 1988 and 1989 by both local constituencies and PRPs, who pointed to the unacceptable risk to the local environment that on-site incineration would create. The circumstances which EPA relies upon to justify the ESD were readily anticipated. They do not constitute new or unknown conditions, nor are they based on any new information.

2. EPA's Decision to Issue the ESD is Further Proof That the Decision to Remediate the Hot Spot as a Separate Operable Unit is Arbitrary, Capricious, and Contrary to Law.

The National Contingency Plan ("NCP") permits EPA to implement remedial action at an NPL site through an operable unit approach only if it is consistent with the overall remedy and is cost-effective. The necessity for abandoning the key component of the selected Hot Spot remedy illustrates once again that EPA's decision to treat the Hot Spot as a separate operable unit was flawed from the outset.

A. EPA's Action Prematurely Eliminated Remedial Scenarios That May Have Been More Consistent With An Overall Remedy. EPA previously looked at a broad variety of options for handling the dredged sediments from the Hot Spot. It rejected all but incineration for a variety of reasons, including cost. Incineration was clearly critical in selection of the Hot Spot remedy as an appropriate and cost-effective interim approach, primarily because it permanently reduced toxicity, mobility and volume through destruction of PCBs. EPA has now completed little more than half of the dredging called for in the Hot Spot ROD and has no idea what it will do with the dredge spoils. By selecting -- and then abandoning -- the incineration remedy, EPA has done nothing to achieve the permanent destruction of PCBs, but has also effectively foreclosed or impeded what could be much more cost-effective, less environmentally disruptive solutions such as in-situ capping or in-situ bioremediation (whether biologically enhanced or naturally occurring).

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If AVX could have used ARAR waivers as liberally as EPA has in this ESD, then AVX's proposal to cap the Upper Estuary would have met the standards of an interim measure (i.e., prevention of mobility and toxicity until in-situ biodegradation had adequate time to decontaminate the sediments). It could also have met the standard EPA applies for the equivalency waiver since the cap limited exposure to contaminants in the sediment and, thus, eliminated any perceived risk to both the environment and to human health.

One consequence of EPA's change of course is that EPA should revisit the remedies proposed for Operable Unit 2, the remainder of the Upper Estuary, Harbor and Bay. AVX strongly recommends that EPA reconsider capping of the estuary as a preferred alternative to dredging and storage in a CDF. Based upon the experience that has led to this draft ESD, it is likely that the same rationale that has halted the incineration option would be just as likely to foreclose the option of storage at multiple CDFs within New Bedford Harbor or the Upper Estuary. In addition, as AVX has continually stressed, the capping alternative would satisfy the objectives of Superfund, particularly if an interim measure waiver or equivalency waiver was invoked for the period of time during which natural attenuation took place. Simultaneously, EPA should update research on in-situ dechlorination and destruction processes and include this work as part of its studies over the next five years.

B. Costs. Action leading up to, and implementation of, the ESD remedy will entail substantial incremental costs. These costs are associated with the last two years of negotiation of this interim remedy, design changes to the CDF and treatment systems, development of operational and management (O & M) costs, as well as additional costs required to re-evaluate a final remedy for the sediments stored in the CDF. AVX believes these costs are due to work that is not only incremental to, but duplicative of, efforts that had already taken place during the process leading to the original ROD for Operable Unit 1. In addition, the eventual cost for alternative remedies, when they are finally implemented, will have significantly escalated due to inflation. Despite EPA's stated "belief" that the modified remedy is cost-effective, the draft ESD is completely silent as to the costs associated with the change in remedy, so that neither the community or the PRPs have any idea of what is involved. This is a glaring deficiency that belies EPA's assertion of cost-effectiveness. To the extent it may ever become necessary, AVX will vigorously contest any attempt to recover from AVX unnecessary, duplicative costs which are not consistent with the NCP.

### 3. Other Technical Issues.

A. Although EPA indicates that there is less risk involved in temporary storage of sediments in the CDF than if they were left in place, it has offered no evidence for this opinion. In addition, it has not evaluated the alternative of halting dredging activities and capping the remaining Operable Unit 1 sediments in place and then evaluating the risk

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created by that alternative compared to temporary storage in a CDF. One obvious benefit to that solution would be that it would maximize future options, rather than limit them.

B. While EPA states that the CDF is secure for temporary storage of these sediments, it has not evaluated the probability of catastrophic failure of the CDF due to earthquakes, hurricanes, or slumping of subsurface soils.

C. AVX is also concerned that the period of interim storage will be greater than anticipated. Even now, EPA's statements and DEP's statements as to exactly what will be accomplished in the next four to five years are inconsistent. EPA (ESD, page 1) states that "The total time period required for treatability studies and design and implementation of the final treatment method could be four to five years." DEP, on the other hand, anticipates storage of sediments "up to five years." See March 28, 1995 DEP Concurrence Letter. The discrepancy illustrates the lack of certainty how this change in remedial approach will actually turn out.

4. ARARS. EPA's ARARs analysis for this draft ESD has all the hallmarks of a post facto justification for a predetermined course of action. The ARARs analysis is the major component of the ESD. EPA has invoked what it characterizes as three bases for waiver of ARARs to support the ESD: the interim measure waiver, the equivalency waiver, and the protectiveness waiver. If EPA had decided to utilize the same approach in 1990, it might have reached an entirely different result on remedy selection. With the exception of HS-1, the no action alternative, the other three alternatives retained for detailed consideration in the July 1989 Draft Final Hot Spot Feasibility Study for New Bedford Harbor satisfied all location- and action- specific ARARs. (None of the alternatives satisfied chemical-specific ARARs because they were insufficient to achieve AWQC criteria or to reduce PCB levels and biota to below the FDA action level). In the absence of an incineration remedy, which offered the highest degree of permanent reduction in PCB toxicity, mobility, and volume, it is hard to understand how the EPA would have been justified in proceeding with any of the other alternatives.

Particularly in view of EPA's extensive reliance on justifying the ESD on the grounds that leaving PCBs in place would create a greater risk to human health and the environment than the long term storage of PCBs in a CDF, AVX notes that its earlier comments addressed a number of other issues, including the lack of any demonstrated human health or risk to the environment from PCB contamination in New Bedford Harbor. These comments remain relevant to EPA's ongoing decision process, particularly in light of EPA's invocation of the protectiveness waiver. AVX refers the EPA to, and continues to rely upon, the information presented in its earlier comments.

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AVX wishes to acknowledge that the technical input for these comments was provided by Weldon S. Bosworth, Ph.D., Principal-in-Charge, Balsam Environmental Consultants, Inc., a unit of Dames & Moore, Inc., 5 Industrial Way, Salem, NH 03079-2830.

Thank you for the opportunity to submit these additional comments for inclusion in the Administrative Record.

Very truly yours,



Mary K. Ryan

MKR/jas

cc: Joan Prager, AVX Corporation  
Weldon S. Bosworth

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