EPA/AMD/R01-99/001
1999

EPA Superfund
Record of Decision Amendment:

NEW BEDFORD
EPA ID: MAD980731335
OU 02
NEW BEDFORD, MA
04/27/1999

NB Harbor
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DECLARATION FOR THE AMENDED RECORD OF DECISION

NEW BEDFORD HARBOR SUPERFUND SITE
HOT SPOT OPERABLE UNIT

STATEMENT OF PURPOSE

This decision document amends the selected remedial action for the New Bedford Harbor Superfund Site, Hot Spot Operable Unit located in New Bedford, Massachusetts, as outlined in the April 6, 1990 Record of Decision, and is developed in accordance with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 USC Part 9601 et seq., as amended, and to the extent practicable, the National Oil and Hazardous Substances Contingency Plan (NCP), 40 CFR Part 300 et seq., as amended. The Director of the Office of Site Remediation and Restoration has been delegated the authority to approve the Amended Record Of Decision (ROD).

The Commonwealth of Massachusetts concurs with the selected remedy.

STATEMENT OF BASIS

This decision is based on the Administrative Record which has been developed in accordance with Section 113(k) of CERCLA and which is available for public review at the Wilks Branch Library in New Bedford, Massachusetts and at the USEPA - Region I Office of Site Remediation and Restoration Records Center in Boston, Massachusetts. The Administrative Record Index (Appendix B to the Amended ROD) identifies each of the items comprising the Administrative Record upon which the selection of the remedial action is based.

ASSESSMENT OF THE SITE

Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action selected in this Amended ROD, may present an imminent and substantial endangerment to the public health or welfare or to the environment.

DESCRIPTION OF THE SELECTED REMEDY

This decision document amends portions of EPA's 1990 ROD for the Hot Spot Operable Unit. The 1990 ROD called for dredging contaminated sediments from the identified hot spot areas with PCB concentrations of 4,000 ppm or greater, transporting the dredged sediments to a

SDMS DocID 9721

shoreline Confined Disposal Facility (CDF), treatment of the supernatant, dewatering the sediments and destruction of the PCBs in an on-site incinerator. The ash generated from the incineration process was to be solidified/stabilized if necessary and permanently contained in the on-site CDF. A more detailed description of the 1990 remedy is provided in Section V of this decision document. The activities associated with dredging the hot spot areas and treating the supernatant have been completed. This decision document selects off-site landfilling instead of on-site incineration. The modified remedy consists of the following activities:

1. Upgrade Existing Site Facilities As Needed. To accommodate sediment handling and dewatering activities it may be necessary to construct or improve access to the CDF and other areas of the site. Treatment pads, temporary buildings and upgrades to site utilities may also be needed.

2. Sediment Dewatering and Water Treatment. The hot spot sediments currently stored in the Sawyer Street CDF are approximately 50% water, which is too wet to be accepted by a TSCA permitted hazardous waste landfill. The sediments will be dewatered to that level which is in compliance with the permits and other requirements for the selected off-site TSCA permitted landfill. Options for dewatering the sediments will be evaluated during the design process. The sediment may be dewatered in-situ by extracting water via installed well points, or by removing the sediment from the CDF and mechanically dewatering it ex-situ, or a combination of in-situ and ex-situ dewatering.

3. Transportation to an Off-Site TSCA Permitted Landfill. Following dewatering, the sediments will be loaded into sealed containers for transport to a TSCA permitted off-site hazardous waste landfill.

4. Air Monitoring Program. There is a potential for air emissions of PCBs during the sediment removal and dewatering activities. A comprehensive ambient air monitoring program will be designed, documented and implemented during the sediment removal and dewatering operations to ensure that engineering controls are effective at protecting site workers and the local community.

SPECIAL FINDINGS

Issuance of this ROD Amendment embodies specific determinations made by the Regional Administrator pursuant to CERCLA. Under section 121(d)(4)(B) of CERCLA, the Regional Administrator hereby waives 40 CFR 122.4(i) of the Clean Water Act (a regulation regarding discharges to polluted water bodies). Due to the nature of the New Bedford Harbor site, full compliance with this requirement would result in greater risk to human health and the environment than non-compliance.

DECLARATION

The selected remedy is protective of human health and the environment, attains federal and state requirements that are applicable or relevant and appropriate for this remedial action, and is cost effective. The selected remedy provides a permanent solution for the hot spot sediments. While it does not satisfy the statutory preference for remedies that utilize treatment as a principal element to reduce the toxicity, mobility or volume of hazardous substances, it does permanently isolate these sediments from human and environmental receptors by containing them in an off-site TSCA permitted chemical waste landfill in perpetuity in a safe and protective fashion. In addition, water removed from the hot spot sediments prior to off-site transportation to a TSCA landfill will be treated to meet stringent discharge standards.

As the remedy for this operable unit will not result in hazardous substances remaining on site above health-based levels, site reviews for this operable unit will not be needed every five years. The remedy selected in the September 1998 ROD for the Upper and Lower Operable Unit of this Site will result in hazardous substances remaining on site above health-based levels and, therefore, site reviews will be conducted every five years after commencement of the upper and lower harbor remedial action to ensure that the upper and lower harbor remedy continues to provide adequate protection of human health and the environment.

4/27/99
Date

Patricia L. Meaney, Director
Office of Site Remediation and Restoration
EPA - New England

NB Harbor
5.4

NEW BEDFORD HARBOR SUPERFUND SITE

HOT SPOT OPERABLE UNIT

FINAL DRAFT AMENDED RECORD OF DECISION

April 1999

U.S. Environmental Protection Agency - Region I

New England

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NEW BEDFORD HARBOR SUPERFUND SITE
HOT SPOT OPERABLE UNIT
AMENDED RECORD OF DECISION
APRIL, 1999

I. SITE NAME, LOCATION, DESCRIPTION AND RATIONALE FOR AMENDMENT

SITE NAME: The New Bedford Harbor Superfund Site.

SITE LOCATION: The New Bedford Harbor Superfund Site (the Site), located in Bristol County, Massachusetts, extends from the shallow northern reaches of the Acushnet River estuary south through the commercial harbor of New Bedford and into 17,000 adjacent acres of Buzzards Bay (Figure 1).

SITE DESCRIPTION: Industrial and urban development surrounding the harbor has resulted in sediments becoming contaminated with high concentrations of many pollutants, notably polychlorinated biphenyls (PCBs) and heavy metals, with contaminant gradients decreasing from north to south. From the 1940s into the 1970s two electrical capacitor manufacturing facilities, one located near the northern boundary of the site (the Aerovox facility) and one located just south of the New Bedford Harbor hurricane barrier (the Cornell-Dublier facility), discharged PCB-wastes either directly into the harbor or indirectly via discharges to the City's sewerage system. The Site has been divided into three geographical areas: upper harbor (including the hot spot area), lower harbor and outer harbor (Figure 1). The hot spot is an area of approximately five acres with sediment PCB levels in excess of 4,000 ppm located along the western bank of the upper harbor, directly adjacent to the Aerovox facility (Figure 1). The Site is also defined by three state-sanctioned fishing closure areas extending approximately 6.8 miles north to south and encompassing approximately 18,000 acres in total (Figure 2).

The City of New Bedford, located along the western shore of the Site, is approximately 55 miles south of Boston. During most of the 1800s, New Bedford was a world renown center of the whaling industry. More recently New Bedford has attracted large community of immigrants from Portugal and the Cape Verde islands. As of 1990, approximately 27% of New Bedford's 99,922 residents spoke Portuguese in their homes (US Census Bureau, 1997). Including the neighboring towns of Acushnet, Fairhaven and Dartmouth, the combined 1990 population of the New Bedford area was approximately 153,000. New Bedford is currently home port to a large offshore fishing fleet and is a densely populated manufacturing and commercial center. By comparison, in Fairhaven and Acushnet, the eastern shore of the Acushnet River is predominantly residential or undeveloped. Some of Fairhaven's shore is utilized by small boating related industries. A large (approximately 70 acre) salt marsh system has formed along almost the entire eastern shore of the upper harbor.

The Acushnet River's 16.5 square mile (43 km^2) drainage basin (VHB, 1996) discharges to New Bedford Harbor in the northern reaches of the Site, contributing relatively minor volumes of fresh water to the tidally influenced harbor. Its estimated mean annual flow of 30 cubic feet per second is only about 1% of the average tidal prism (the volume of water which flows into and out of the Harbor during the course of a complete flood/ebb tide cycle) (NUS, 1984). Numerous storm drains, combined sewer overflows (CSOs) and industrial discharges, as well as smaller brooks and creeks, also discharge directly to the Site. The upper and lower harbors are believed to be areas of net groundwater discharge and are generally described as a shallow, well-mixed estuary.

The upper harbor comprises approximately 187 acres, with current sediment PCB levels ranging from below detection to approximately 4,000 ppm. Prior to the removal of the Hot Spot sediments from the upper harbor in 1994 and 1995 as part of EPA's original Hot Spot cleanup plan (see Section V. below), sediment PCB levels were reported higher than 100,000 ppm in the upper harbor. The boundary between the upper and lower harbor is the Coggeshall Street bridge where the width of the harbor narrows to approximately 100 feet. The lower harbor comprises approximately 750 acres, with sediment PCB levels ranging from below detection to over 100 ppm. The boundary between the lower and outer harbor is the 150 foot wide opening of the New Bedford hurricane barrier. (The hurricane barrier was constructed in the mid-1960s). Sediment PCB levels in the outer harbor are generally low, with only localized areas of PCBs in the 50-100 ppm range near the Cornell-Dubilier facility and the City's sewage treatment plant's outfall pipes. However, this area is still being characterized by EPA. The southern extent of the outer harbor and the Site is an imaginary line drawn from Rock Point (the southern tip of West Island in Fairhaven) southwesterly to Negro Ledge and then southwesterly to Mishaum Point in Dartmouth (Figure 2).

RATIONALE FOR AMENDMENT: In 1990, EPA issued the Record of Decision (1990 Hot Spot ROD) for the Hot Spot Operable Unit of the Site (USEPA, 1990), in accordance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 USC §§ 9601 *et seq.*, and the National Oil and Hazardous Substances Pollution Consistency Plan (NCP), 40 CFR Part 300. Based on a vehement and Congressionally supported reversal in community acceptance of the 1990 Hot Spot ROD's on-site incineration component of the remedy, EPA suspended plans to incinerate the Hot Spot sediments in New Bedford. Working with the local community, EPA agreed to study other options for treating the Hot Spot sediments and to amend the 1990 Hot Spot ROD with a consensus based cleanup plan. Refer to the Community Participation section of this Amendment for additional details regarding community opposition to incineration and the consensus building process. This ROD Amendment addresses the changes to the original 1990 Hot Spot ROD which resulted from both community input and additional research into treatment and disposal alternatives for the Hot Spot sediments.

II. SITE HISTORY AND ENFORCEMENT ACTIVITIES

Details of the earlier Site History and Enforcement Activities are presented in the 1990 Hot Spot ROD and the December 1997 Hot Spot Feasibility Study Addendum (Foster Wheeler, 1997a). The following is an update to the Site History and Enforcement Activities which have occurred since issuing the 1990 Hot Spot ROD.

In April 1990, EPA issued the Hot Spot ROD. The original cleanup plan set forth in the 1990 Hot Spot ROD called for dredging of the Site's most highly PCB-contaminated sediments from the upper harbor, incinerating the sediments in an on-site treatment facility to destroy the PCBs, and storage of the treated sediments in a shoreline disposal facility . This ROD specified a 4,000 ppm PCB level to define the area of Hot Spot sediments to be dredged.

In 1991 and 1992, the Unites States, the Commonwealth and five defendants in litigation filed by the EPA and Commonwealth of Massachusetts regarding this site - Aerovox Incorporated, Belleville Industries, Inc., AVX Corporation, Cornell-Dubilier Electronics, Inc., and Federal Pacific Electric Company (FPE) - reached settlement regarding the governments' claims. The governments' claims against the sixth defendant, RTE Corporation, were dismissed on jurisdictional grounds. The federal and state governments recovered a total of $99.6 million, plus interest, from the five settling defendants.

The terms of the settlements are set forth in three separate consent decrees. Under the first consent decree, Aerovox Incorporated and Belleville Industries, Inc. were required to pay a total of $12.6 million, plus interest, to the United States and the Commonwealth for damages to natural resources and for past and future Site response costs. The court approved and entered this consent decree in July 1991. Under the second consent decree, AVX Corporation was required to pay $66 million, plus interest, to the governments for natural resource damages and for past and future Site response costs. This decree was approved and entered by the court in February 1992. Under the third consent decree, CDE and FPE paid $21 million, plus interest, to the governments for natural resource damages and for past and future Site response costs. This decree was approved and entered by the Court in November 1992.

In April 1992, EPA issued an Explanation of Significant Differences (USEPA, 1992) to change the storage of ash generated from the incineration of Hot Spot sediments from temporary storage in an on-site Confined Disposal Facility (CDF) to permanent storage in an on-site CDF.

In 1993, due to a vehement and Congressionally supported reversal in public support for the incineration component of the cleanup plan at about the time the incinerator was being mobilized, EPA agreed to terminate the incineration contract and begin studies of other possible options for treating the Hot Spot sediments. The New Bedford Harbor Superfund Site Community Forum (see Section III. below) was created in late 1993 to develop a consensus based cleanup plan to replace the on-site incineration component of the original cleanup plan.

During the 1994-95 construction seasons the dredging component of the 1990 Hot Spot remedy decision was implemented. Dredging of about 14,000 cubic-yards in volume and 5 acres in area began in April 1994 and was completed in September 1995. The dredged sediments are currently stored in a shoreline confined disposal facility (CDF) located at the eastern end of Sawyer Street in New Bedford.

In October 1995, the EPA issued an Explanation of Significant Differences (USEPA 1995) to document the need for interim storage of the dredged Hot Spot sediments in the Sawyer Street CDF while studies of treatment options not involving on-site incineration were conducted.

In December 1997, EPA issued a Hot Spot Feasibility Study Addendum Report (Foster Wheeler, 1997a) which presented the evaluation of the non-incineration treatment options investigated. In August 1998, EPA issued a Proposed Plan (USEPA, 1998a) to amend the 1990 Hot Spot cleanup plan. The 1998 Proposed Plan called for dewatering the Hot Spot sediments and transporting them to a permitted off-site hazardous waste landfill.

In September 1998, EPA issued the ROD for the Upper and Lower Harbor Operable Unit (USEPA, 1998b). This ROD involves the dredging and containment of approximately 450,000 cubic-yards of PCB-contaminated sediments spread over about 170 acres. The dredged sediments will be placed in four shoreline confined disposal facilities (CDFs). Seawater decanted from these sediments will be treated before discharge back to the harbor. Refer to the September 1998 Upper and Lower Harbor ROD for a more detailed description of the remedy.

III. COMMUNITY PARTICIPATION

Community Participation in the decision-making process has always been and continues to be at a high level for this Site. EPA went far beyond the regulatory requirements for public involvement while developing the 1989 Proposed Plan and 1990 Hot Spot ROD (refer to the 1990 Hot Spot ROD for details). Even though EPA sought to ensure that the public was well informed and accepted the proposed cleanup plan, public opposition to the incineration component of the Hot Spot cleanup plan formed soon after issuing the ROD. In late 1990, a New Bedford citizen's group, Hands Across the River (later renamed the Hands Across the River Coalition), formed in part to oppose on-site incineration of the Hot Spot sediments. Another group, Concerned Parents of Fairhaven, also organized to oppose on-site incineration. Finally, in the spring of 1993, a third citizen's group, the Downwind Coalition, was formed to oppose on-site incineration. Later that year the New Bedford City Council passed an ordinance (City of New Bedford, 1993) which required City approval to transport the proposed incinerator through the City streets (however the ordinance was not signed by the Mayor).

In December 1993, EPA and other site stakeholders initiated a professionally mediated Community Forum process as an effort to build a lasting consensus for the Site's cleanup, including the upper and lower harbor. Created to address public concerns raised by the incineration component

of the 1990 Hot Spot cleanup plan, the Forum is made up of a wide variety of Site stakeholders, including citizen group leaders, local and state elected officials, business representatives, EPA, the MA DEP and other relevant state and federal agencies. The Forum continues to meet regularly and has expanded its scope to include virtually all Site related cleanup issues. The Forum meetings are taped and televised on local cable-access TV to reach as broad an audience as possible. All of the Forum's proceedings have been documented in the Administrative Record for this Hot Spot ROD Amendment and the Administrative Record for the September 1998 Upper and Lower Harbor ROD.

The Forum adopted, as part of its mission, the identification of viable innovative technologies which could be used as an alternative to on-site incineration. During a six month period in 1994, the Forum engaged in an extensive technology review consisting of company presentations and literature reviews of alternative technologies for the on-site destruction of the PCB contaminated Hot Spot sediments. Three general types of PCB treatment methods were selected by the Forum for treatability studies: (1) solidification/stabilization; (2) contaminant destruction; and (3) contaminant separation and destruction. In the summer of 1994, Forum members signed an agreement which states that "the Forum favors a remedy for the Hot Sot sediments that permanently destroys the PCBs". The agreement also outlined the Forum's continued involvement in the on-site treatability studies.

The treatability study program was initiated in early 1995 with the field testing occurring in late fall 1995 through 1996. Forum members agreed that the sediment dredging component of the 1990 Hot Spot cleanup plan should be implemented while the treatability studies were being completed. Dredging of the Hot Spot Sediments was completed in September 1995. As stated previously, the sediments are currently being stored in a shoreline confined disposal facility at the eastern end of Sawyer Street in New Bedford.

A series of frequent Forum meetings were held throughout 1997 and into the early summer of 1998 to publicly discuss and debate the results of the treatability studies and work toward a consensus on the best cleanup option for the Hot Spot sediments. The results of the treatability studies are documented in the December 1997 Hot Spot Feasibility Study Addendum Report (Foster Wheeler, 1997a). The Feasibility Study Addendum evaluated eleven cleanup alternatives. Refer to Section VIII of this Addendum for a description of the eleven Alternatives evaluated. The eleven alternatives were evaluated against the NCP criteria (except for State and Community Acceptance). All the alternatives except No Further Action were found to satisfy the seven criteria evaluated although some ranked better than others (see Section 6.3, Foster Wheeler, 1997a). The Community Forum reviewed the findings of the Feasibility Study Addendum and provided feedback to EPA and the State.

In addition to these Community Forum efforts, an independent panel session was assembled by a local non-profit organization, Sea Change, Inc. Sea Change, an outgrowth of the Forum's work, is a non-profit organization, which draws in outside independent experts to perform technical evaluations of waste issues for local communities and the Government. Sea Change held this public panel session on October 30, 1997.

After extensive discussion of the treatability studies and the evaluations which used the nine NCP criteria, the Forum developed an initial recommendation which narrowed the range of alternatives to two cleanup options. One option was for the on-site dewatering of the sediments and transportation of the dewatered sediments to an off-site permitted hazardous waste landfill. The other option was for the on-site separation of the PCB's from the sediment by one of two innovative technologies demonstrated during the treatability studies, thermal desorption or solvent extraction. The resulting reduced volume of material containing the concentrated PCBs would be transported off-site to a permitted hazardous waste incinerator. The remaining treated sediment, which would contain small concentrations of heavy metals (but not at sufficient levels to be regulated as hazardous waste) would be placed in one of the confined disposal facilities to be constructed as part of the Upper and Lower Harbor ROD remedy to contain the less PCB-contaminated sediments to be dredged from the upper and lower harbor (USEPA, 1998b).

The Forum sponsored two open public meetings, on June 4, 1998, and June 10, 1998, to discuss the two options presented above. Over 800 invitations, along with a public Forum statement and informational materials describing the two options, were sent out prior to these meetings. In addition, the first meeting was broadcast over the local cable television station. The meetings were attended largely by residents of the neighborhoods in close proximity to the Sawyer Street CDF and the site where the proposed treatment and/or dewatering facility would be built. The comments received at these meetings strongly urged the Forum members to recommend off-site landfilling of the Hot Spot sediments. The key reasons stated were concerns about the possibility of air emissions or other problems occurring during the implementation of the separation technologies as well as concerns about noise, lights and dust caused by the 24-hour per day operations. In addition, residents pointed out that the landfilling option is significantly faster and less expensive than the separation/destruction option.

After consideration of the public input received at the two Forum sponsored meetings and after further discussion, the Forum made the following recommendations on June 17, 1998. For reasons similar to those expressed at the open meetings by members of the public, a majority of the Forum members recommend that the Hot Spot sediments be dewatered on-site and transported in sealed containers to an off-site hazardous waste landfill permitted to accept PCB waste under the Toxic Substances Control Act (TSCA), 15 USC §§ 2601 *et seq.* The reasons for this recommendation are that the landfilling option presents fewer possibilities for operational problems resulting in emissions or other impacts to the New Bedford community that the other options presents. Some members of the Forum are particularly concerned about the possibility for problems arising at the site, which is close to local businesses and residences, and thus feel that the Sawyer Street site is a problematic location for the implementation of an innovative technology. In addition, landfilling option can be done faster and at a lower cost than the other option. The Forum members urge the EPA to select a landfill that is the most environmentally sound and impacts surrounding community the least.

A minority of the Forum members conscientiously recommend on-site separation by solvent extraction and off-site destruction of the PCBs. The remaining treated sediment would be deposited in one of the CDFs that are planned for the rest of the Harbor sediments. In making this recommendation, the Forum minority's believes that EPA should choose an alternative that results in the permanent destruction of the PCBs at an approved facility, as opposed to simply sending a problem created in New Bedford to another community. The minority noted that this has been the Forum's objective since it's inception. The Forum minority recommends solvent extraction because it presents fewer possibilities for emissions than does thermal desorption. Further, the Forum minority urges that the sediments be destroyed by an off-site method other than incineration. The Forum minority is aware that all currently approved facilities for destruction of concentrated PCBs are incinerators. However, the Forum minority is also aware that at least one non-incineration technology (solvated electron technology) is under development and may be close to approval, and others may emerge in the near future. The Forum minority urges that the possibilities for using non-incineration technologies be maximized during the bid selection process.

Even though there were majority and minority recommendations, all Forum members reached consensus on the off-site landfilling option. The Forum recommendation for the landfilling option was officially confirmed as of the date of their signatures to a June 1998 document entitled New Bedford Harbor Superfund Site Community Forum Recommendation (Forum, 1998). The EPA and MA DEP also signed this document as members of the Forum. However, the EPA indicated that by concurring with the Forum consensus, EPA was not issuing a determination as to the remedy to be selected for this Site and that the remedy selection will not be determined until after completion of the requirements established under CERCLA and the NCP. The MA DEP also indicated that their final decision on which remedy to support will be made after consideration of comments received during the formal public comment period for the Proposed Plan, in accordance with CERCLA and the NCP.

EPA published a Proposed Plan to Amend the 1990 Cleanup Plan in August 1998. The proposed change calls for transporting the dewatered sediments to a TSCA permitted hazardous waste landfill. The cleanup plan was recommended because EPA believed it offered the best balance among the nine NCP criteria, including the protection of human health and the environment. EPA held a public informational meeting on August 26, 1998 and a formal public hearing on September 16, 1998. An informal poster board presentation was provided prior to starting the informational meeting and hearing. The public comment period ran from August 27-September 25, 1998. All formal comments received on the August 1998 Proposed Plan are summarized and responded to in the Responsiveness Summary, Appendix A. All original comments to the August 1998 Proposed Plan are included in the Administrative Record.

IV. SCOPE AND ROLE OF OPERABLE UNIT

The New Bedford Harbor Site has been divided into three operable units, or phases of site cleanup: The Hot Spot Operable Unit (which the April 1990 Hot Spot ROD and this Amendment encompasses), the Upper and Lower Harbor Operable Unit, and the Buzzards Bay or Outer Harbor Operable Unit. The ROD for the Upper and Lower Harbor Operable Unit was issued on September 25, 1998. The ROD for the Outer Harbor Operable Unit is currently unscheduled pending additional investigation in the outer harbor.

The hot spot areas are defined as those areas in the upper harbor with sediments contaminated above 4,000 ppm PCBs. Most of the hot spot areas were dredged from the harbor in 1994 and 1995. However, one of the hot spot areas (Area B, see USACE, 1991) was not dredged during the hot spot dredging operations due to its proximity to submerged high voltage power lines serving the City of New Bedford. The remedy for the Upper and Lower Harbor Operable Unit includes the relocation of the power lines and dredging of this last remaining hot spot area. See section XII of the September 1998 Upper and Lower Harbor ROD (USEPA, 1998b) for additional discussion regarding the cleanup approach for the submerged power line area.

V. DESCRIPTION OF CHANGES TO THE 1990 ROD

DESCRIPTION OF 1990 REMEDY

The remedy selected by the 1990 Hot Spot ROD was developed to satisfy the following remedial objectives:

- Significantly reduce PCB migration from the Hot Spot area sediment, which acts as a PCB source to the water column and to the remainder of the sediments in the harbor.
- Significantly reduce the amount of remaining PCB contamination that would need to be remediated in order to achieve overall harbor cleanup.
- Protect public health by preventing direct contact with Hot Spot sediments.
- Protect marine life by preventing direct contact with Hot Spot sediments.

The design and specifications for the remedy selected in the 1990 Hot Spot ROD to meet the above remedial objectives were completed in December 1991 (USACE, 1991b,c) and called for the following major activities:

1. Dredging. Dredging approximately 10,000 cubic yards of PCB-contaminated (from 4,000 to over 100,000 ppm) sediments and pumping this material to on-shore CDF (Sawyer Street Facility) for subsequent treatment.

2. Treating Supernatant. A large volume of water co-dredged along with the sediments requires treatment. As the dredged sediments settle in the CDF, the clarified surface layer, or supernatant will be removed or decanted and treated on-site using the following unit processes:

- equalization
- coagulation and flocculation
- settling
- filtration
- UV/oxidation

3. Sediment Removal Dewatering and Water Treatment After the sediments are decanted and the wastewater treated, the sediments will be removed from the CDF for dewatering prior to incineration. Water from the dewatering operation will be treated on-site prior to discharge to the harbor.

4. On-site Incineration. The dewatered sediments will be incinerated in a transportable incinerator that will be sited at the Sawyer Street location. The extremely high temperatures achieved by the incinerator will result in 99.9999% destruction of PCBs. Exhaust gases will be passed through air pollution control devices before being released into the atmosphere to ensure that appropriate health and safety and air quality requirements are met.

5. Stabilization (if determined to be necessary). Following incineration, the Toxicity Characteristic Leaching Procedure (TCLP), a leaching test, will be performed on the ash to determine if it exhibits the characteristic of toxicity and is, therefore, considered a hazardous waste under the Resource Conservation and Recovery Act (RCRA), 42 USC §§ 6901 *et seq.* If the TCLP test reveals that the ash is a RCRA hazardous waste, the ash will be solidified such that the metals no longer leach from the ash at concentrations that exceed the standards set forth for determining the toxicity of a material.

6. On-site Disposal of Incinerator Ash. The ash from the incinerator will be permanently disposed of in the Sawyer Street CDF. To ensure protectiveness, the CDF will be closed in accordance with RCRA hazardous waste regulations for landfills.

1990 REMEDY ACTIVITIES COMPLETED TO DATE

Activities associated with the first two major components of the 1990 remedy, dredging and treating the supernatant, have been completed. The CDF was upgraded in 1993 to include a double high density polyethylene liner system. The CDF was originally constructed in 1988 as part of a pilot dredging and disposal study conducted by the EPA and the U.S. Army Corps of Engineers

(USACE). Construction of a wastewater treatment facility consisting of the unit processes described above was completed in June 1994. Dredging and treatment of the supernatant was completed in September 1995. It was estimated that about 10,000 cubic yards of sediments needed to be dredged. About 14,000 cubic yards of Hot Spot sediments were actually removed from the upper harbor via hydraulic dredging and placed for interim storage in the Sawyer Street CDF. In October1995, EPA prepared an Explanation of Significant Difference to the 1990 Hot Spot ROD to address the need for temporary storage of the Hot Spot sediment in the CDF while studies of alternatives to incineration (the fourth component of the 1990 remedy) were being completed.

A concrete decontamination pad equipped with a steam cleaner and sump pump is also located on the site. Six trailers are currently located on the site and are used as shower/decontamination, laboratory, and office trailers. Six air monitoring stations are located on platforms around the site. Electric power, potable water, and sewage facilities are also available on the site. USACE staff are present at the site during the day and a guard provides security at night. Overall site security is provided by a six foot tall chain link fence. An aerial photograph of the Sawyer Street Facility is provided as Figure 3.

CHANGES TO THE 1990 REMEDY

As discussed previously, EPA terminated the incineration component of the 1990 remedy and worked with the New Bedford Harbor Community Forum to find an alternative to on-site incineration of the Hot Spot sediments. This ROD Amendment selects off-site landfilling instead of on-site incineration. This ROD Amendment satisfies the original remedial action objectives presented above. The amended remedy replaces major activities three through six of the 1990 remedy described above with the following major activities:

1. Sediment Dewatering and Water Treatment. The sediments stored in the CDF are approximately 50% water, which is too wet to be accepted by a TSCA permitted hazardous waste landfill. The sediments will be dewatered to at least that level which is in compliance with the permits for the selected off-site TSCA permitted landfill. Options for dewatering the sediments will be evaluated during the design process. The amount of dewatering required for the landfilling option will be less than the amount of dewatering that would have been required prior to on-site incineration of the sediments.

2. Transportation to an Off-Site TSCA Permitted Landfill. Following dewatering, the sediments will be loaded into sealed containers for transport to a TSCA permitted off-site hazardous waste landfill.

A comparison of the original 1990 remedy and the modified remedy is provided below.

Original Remedy	Modified Remedy
Dredge the Hot Spot sediments from the harbor and pump to Sawyer Street CDF (completed in September 1995)	Dredge the Hot Spot sediments from the harbor and pump to Sawyer Street CDF (completed in September 1995)
Decant supernatant, treat supernatant on-site and discharge to the harbor (completed in September 1995)	Decant supernatant, treat supernatant on-site and discharge to the harbor (completed in September 1995)
Dewater sediments prior to incineration, on-site treatment of the water from dewatering process and discharge of treated water to the harbor	Dewater sediments prior to off-site landfilling, on-site treatment of the water from dewatering process and discharge of treated water to the harbor
On-site incineration of the dewatered sediments	Load dewatered sediments into sealed containers and transport to a TSCA permitted landfill
Perform TCLP testing of the incinerator ash and stabilize as necessary	
Place incinerator ash in Sawyer Street CDF and close in accordance with RCRA regulations for hazardous waste landfills.	

VI. SUMMARY OF SITE CHARACTERISTICS

This section of the report provides a description of the existing Sawyer Street Confined Disposal Facility (CDF) that is currently being used to store the Hot Spot sediments and a chemical and physical description of these sediments.

EXISTING SITE CONDITIONS

The Hot Spot sediments are currently stored in a double-lined CDF constructed along the New Bedford Harbor shoreline. This CDF is adjacent to facilities at the Sawyer Street site remaining from the Hot Spot dredging activities that were conducted by EPA and the USACE during 1994 and 1995. The Sawyer Street site was also the location where the treatability studies were conducted. The following subsections describe the overall site layout and the existing CDF conditions.

Overall Site Layout:

The Sawyer Street location of the New Bedford Harbor Site is approximately eight acres in size, including approximately three acres occupied by the CDF. The site is located at the eastern end of Sawyer Street, on its north side, and abuts the Acushnet River to the east and vacant land to the north and west. Land use in the vicinity of the site is a mixture of urban industrial and residential. An aerial photograph of the site and surrounding area is included as Figure 3. A Site Layout Plan is included as Figure 4.

An 80 foot x 120 foot bermed asphalt pad is located on the western side of the site. The pad was constructed for the treatability study program. During the testing, the pad was covered with an impermeable liner to prevent an inadvertent release of sediment or treatment reagents to the soil on the site. Sump drainage from this pad was routed to the on-site water treatment facility. Following completion of the treatability studies in 1996, this liner was appropriately decontaminated.

The site also includes a 350 gallon per minute (gpm) water treatment system enclosed within a building. A concrete decontamination pad equipped with a steam cleaner and sump pump is also located on the site. Several trailers are currently located on the site, these are used as shower/decontamination, laboratory, and office trailers. Six air monitoring stations are located on platforms around the site. Electric power, potable water, and sewage facilities are currently available on the site. Overall site security is provided by a six foot tall chain link fence.

Existing CDF Conditions:

The CDF is illustrated on Figure 4 and can be seen in the aerial photograph included as Figure 3. As shown in Figure 2, the CDF has three individual cells. Cell #1 was used as the initial settling basin where the Hot Spot sediments were pumped following dredging. The cell has a double HDPE liner and is approximately 200 feet by 400 feet wide and approximately nine feet deep. The Hot Spot sediment in this cell is approximately six to seven feet deep.

The contaminated sediments in the CDF are currently covered with a 10-mil permalon cover. This relatively thin cover was placed over the sediments as a temporary measure to minimize volatilization and potential direct contact by human and/or ecological receptors. The cover is weighted down with sand bags to prevent wind-damage. A layer of water is often maintained over the cover during the summer months to assist in controlling PCB emissions.

As the dredged material settled in Cell #1, the clarified surface layer, or supernatant was routed to Cell #2 for temporary storage/flow equalization before receiving additional water treatment. The supernatant was then pumped into the treatment building where a polymer was added to enhance additional settling of solids in Cell #3, which acted as a secondary clarifier. Subsequent water treatment steps included sand filtration and treatment of the PCBs through Ultra Violet Oxidation (UV/Ox) prior to discharge to the Acushnet River.

As mentioned previously, during 1994 and 1995, the Hot Spot sediments were dredged from the northern portion of the Acushnet River and placed in the Sawyer Street CDF. The dredging was continued until analysis of post-dredging samples indicated that the Hot Spot sediments had been removed and the cleanup goal of 4,000 ppm was achieved. In total, approximately 14,000 cubic yards of sediment, weighing approximately 18,000 tons, were removed from the harbor and placed in CDF Cell #1. Additional description of the Hot Spot sediments and their chemical and physical composition are presented in the following section.

HOT SPOT SEDIMENT CHARACTERIZATION

The chemical and physical characteristics of the Hot Spot sediments are described in this section. These descriptions are based largely on recent pilot study data, with reference to historical data, as appropriate. The source of the data points and the results used to characterize the material are discussed below.

Hot Spot sediments were initially defined in-situ as having total PCB concentrations greater than 4,000 ppm and averaging approximately 20,000 ppm to 30,000 ppm. Removal of this Hot Spot sediment was estimated to result in a total reduction of PCBs in the upper harbor by approximately 50 percent.

Sediment PCB concentrations determined during recent sampling of sediments from the CDF ranged from 1,600 to 7,700 ppm. Based on results for samples collected from the CDF, in conjunction with available historical data on the physical and chemical nature of the sediment, average PCB concentrations in the CDF are estimated to be approximately 6,000 ppm.

This is lower than the historical in situ average of approximately 20,000 to 30,000 ppm. The reason for this difference may be due to a variety of reasons including a biased CDF sampling approach due to the limited number of sampling points, the heterogeneous nature of the dredged material, treatment of PCBs that were transferred to the aqueous and colloidal phases during sediment dredging and disposal within the CDF, dredging more sediments than originally planned, and changes in analytical methodology.

In addition to PCBs, the Hot Spot sediment contains several other organic and inorganic contaminants. Extractable oil and grease, as measured gravimetrically, comprise approximately two to three percent of the sediment matrix. The sediment contains concentrations of other organic compounds including chlorinated benzenes, polynuclear aromatic hydrocarbons (PAHs), polychlorinated dibenzo-p-dioxins (dioxins) and polychlorinated dibenzofurans (furans). Several heavy metals including arsenic, cadmium, chromium, copper, lead and zinc, were also detected at elevated concentrations in the samples collected from the CDF. None of these contaminants have been measured at sufficient levels so that the sediments would be regulated as hazardous waste. Each of these contaminant groups are described in more detail below.

Samples were collected from the CDF during several recent sampling events. The analytical findings from these events are summarized in this section and, where appropriate, compared with available historical data. The analytical methodologies and associated measures of quality control and quality assurance are discussed in more detail in Section 4.3 of the December 1997 Hot Spot Feasibiliy Study Addendum Report. Laboratory data reporting forms for the samples collected during the pilot study program are included in the Data Compendium (Foster Wheeler 1997b).

Hot Spot sediment contained in the CDF was sampled on four occasions. These events include a sampling event conducted by the USACE in June 1995 and sampling conducted for each of the three pilot study treatment processes tested in 1996. These three pilot scale studies (Ionics RCC, Geosafe and SAIC/Eco Logic) are hereafter referred to as the first, second and third pilot studies. The results from these four sampling events provide the basis for the Hot Spot sediment characterization described in this section.

Samples collected by the USACE in June 1995 were collected directly from six locations in the CDF. Sediment for the first two pilot studies was removed from the CDF in the spring of 1996 and placed into oversized drums. Samples of this material were collected from the drums prior to its use as feed material for the first and second pilot studies. Sediment for the third study was removed from the CDF, transferred to drums, and sampled from the drums in the fall of 1996. This sediment was removed from a similar location within the CDF. However, the material was retrieved from a greater depth.

Chemical and physical data from the various sampling events are detailed in the following subsections. In summary, the results for samples collected during the third pilot study were chosen as the representative profile of the Hot Spot sediment. These results were generally consistent with the historical Hot Spot data, although the PCB results were lower than the historical average of approximately 20,000 ppm to 30,000 ppm. Results for oil and grease and four heavy metals of concern were essentially the same for the third pilot study and the historical data. Based on the available data, the results from the third pilot study appear to represent a reasonable average concentration of contaminants in the CDF.

Initial in-situ sampling of the Hot Spot sediments was conducted from 1982 through 1988. These data sets provide the basis for the historical information on the Hot Spot sediment. The following five sediment sampling data sets were used to determine the nature and extent of PCB contamination in sediment of the Acushnet River Estuary:

- U.S. Coast Guard Sediment Sampling Program (1982)
- USACE FIT Sampling Program (1986)
- Battelle Hot Spot Sediment Sampling Program (1987)
- USACE Wetlands and Benthic Sediment Sampling Program (1988)
- USACE Hot Spot Sediment Sampling Program (1988)

The data sets listed above were used by EPA to support the 1990 Hot Spot ROD. Other relevant data sets that were included by EPA in the Administrative Record:

- DEQE sampling (1981)
- EPA sampling (November 1981)
- Aerovox sampling (March 1982)
- Aerovox/GE sampling (June 1986)

In summary, these four data sets are consistent with the magnitude and location of PCB identified within the five data sets used to support the 1990 Hot Spot ROD.

Chemical Characterization:

PCB, oil and grease, selected semi-volatile, and Toxicity Characteristic Leaching Procedure (TCLP) results for the sediment samples collected during the pilot study program are discussed in this section. Where appropriate, the data are compared with the USACE sampling conducted in June 1995. PCB data from the third pilot study and the USACE 1995 samples 4 through 6 appear to be most representative of the sediment contained within the CDF, based on historical data for the sediment. Samples collected during the first and second pilot study and 1995 samples 1 through 3 appear to represent uncharacteristically low concentrations of contaminants due to settling at the end of the dredge pipe. These results are further summarized and discussed below.

Sediment PCB and Oil and Grease Concentrations:

PCB and oil and grease data for the pilot study feed sediment samples are summarized in Table 1. The results are presented as averages for the first and second studies, and averages for the third pilot scale study. This reflects the manner in which the sediment was collected and homogenized for each study. During the spring of 1996, approximately five cubic yards of Hot Spot sediment was removed from the CDF and homogenized. A similar procedure was performed in the summer of 1996 to gather and homogenize feed sediment for the third pilot scale study. As shown in the table, the average results for the first and second pilot studies were lower than for the third pilot study.

The difference in average PCB concentrations between these two sediment removal exercises is not surprising given the variability that is likely to exist throughout the CDF. However, it would appear that sediment removed to support the third treatability study may be more representative of the CDF as a whole. This judgment is in part, based on the PCB results obtained by the USACE during the June 1995 sampling event and the historical in-situ measurements. These results of the USACE's sampling of the CDF are summarized in Table 2.

In addition to the chemical analyses, the USACE evaluated the physical and chemical composition of these samples. The results of this evaluation identified two distinctly different types of sediment along the eastern wall of Cell #1 of the CDF. These included, the coarser material

which had settled out at the end of the dredge discharge pipe (samples 1 through 3), and the samples that were beyond the initial settling zone (samples 4 through 6). Given the hydrodynamic profile of the CDF as a settling lagoon and based on a comparison with historical data, samples 4 through 6 appeared more likely to be representative of the CDF material than samples 1 through 3.

Sediment Semivolatile Concentrations:

Feed sample results from the third pilot study for chlorinated benzenes are summarized in Table 3. Similar to the PCB and oil and grease results, chlorinated benzene results were slightly lower in the samples collected during the first and second studies that those collected during the third study, indicating that the chlorinated benzene concentrations may be somewhat proportional to the PCB concentrations.

PAH results from the third pilot study are summarized in Table 4. In contrast to the chlorinated benzenes, the results for PAHs were actually slightly higher in the samples for the first and second study than in those collected during the third study. The average total PAHs were reported to be 65 ppm in the first and second study, almost twice the 37 ppm average reported for the third study. The pattern of PAH contamination does not correlate with the PCB observations. This is likely due to historical point and non-point sources of PAHs along the harbor's edge. These sources likely contributed PAHs to the harbor in a manner different from that of PCB. To maintain consistency, the data from the third pilot study was used in Table 4 to categorize the sediment.

CDF sample results are consistent with previous in-situ sampling, where total PAH concentrations averaged approximately 70 ppm (the highest PAH concentration of 930 ppm was detected in the Hot Spot area). No discrete areas of elevated levels of PAH compounds were observed in the in-situ sampling, suggesting that the PAH contamination is from non-point sources such as urban runoff. PAH concentrations detected in the upper estuary sediment were similar to PAH concentrations detected in other urban and industrialized areas (EPA, 1992).

Overall, concentrations of the semivolatile compounds, including the PAHs and the chlorinated benzenes, total less than three percent of the PCB concentration. This, in addition to the relatively lower toxicity of most of these semivolatile compounds with respect to PCBs, indicates that the majority of risk associated with the Hot Spot is attributable to PCBs.

Sediment Dioxin and Furan Concentrations:

Data for 2,3,7,8-substituted dioxins and furans from the third pilot study and the 2,3,7,8 tetrachlorodibenzo (2,3,7,8-TCDD) toxicity equivalents (TEQs) are summarized in Table 5. TEQs were calculated by multiplying the concentration of the specific 2,3,7,8- substituted congener by its specific toxicity equivalent factor (TEFs). Further discussion of TEFs and a table summarizing the TEF values are included in Section 4.3 of the December 1997 Hot Spot Feasibility Study Addendum Report. The TEF calculation adjusts the concentration of the less toxic 2,3,7,8- substituted congeners to the equivalent concentration (based on toxicity) of the most toxic dioxin/furan congener

(2,3,7,8-TCDD). Note that, by definition, the TEQ is related to the concentration of 2, 3, 7, 8-substituted congeners but is not necessarily related to the total dioxin/furan concentration.

As was the case for the PCBs, dioxin and furan results from the first and second pilot studies were slightly lower than for the third pilot study. The total 2,3,7,8-substituted isomer concentration was 16.8 (ng/gm) (parts per billion or ppb) for the first and second studies, with a total TEQ concentration of 1.3 ng/gm.

Table 6 summarizes the total dioxin and furan results from the third pilot study. Total dioxins and furans total approximately 30 to 40 parts per billion (ppb). The total 2,3,7,8-TCDD toxicity equivalent averages were approximately one to two ppb, over one million times less than the total PCB concentration.

Sediment Metals Concentrations:

Metals results from the third pilot study are summarized in Table 7. Arsenic, cadmium, chromium, copper, lead and zinc were identified as metals of concern for the site during the initial phases of RI/FS studies conducted during the early 1980's. In addition to potential risks associated with these contaminants, metals contamination in the sediment is a concern from an engineering perspective.

There are some public health risks associated with exposure to these metals; however, this exposure is expected to comprise a small component of the total risk when compared to risks associated with exposure to PCB-contaminated sediment. The interim storage of the Hot Spot Sediment in the Sawyer Street CDF is currently preventing exposure.

TCLP Concentrations:

TCLP results for key contaminants are summarized in Table 8. The complete data set of TCLP analysis results, including the raw data sheets for the three pilot studies, is included in the Data Compendium (Foster Wheeler 1997b). The key contaminants summarized in Table 8 were chosen based on their presence in the Hot Spot sediment and/or because there is a TCLP regulatory criteria for the contaminant. Some organic contaminants which have a regulatory criteria were not included in this summary table, as they were reported as non-detect by the laboratory. As discussed above, results from the third pilot study were chosen as representative of the Hot Spot sediment, although the results from the first and second studies were similar. TCLP results for the sediment do not exceed regulatory criteria for being regulated as hazardous waste for any of the listed contaminants.

No regulatory criteria are available for TCLP PCBs. Because PCBs are the primary contaminant of concern in the Hot Spot sediment, the leachability (TCLP) data for PCBs are of interest. The average TCLP PCB result was approximately 28 ug/L (ppb). In comparison with the sediment concentration of 5,700 ppm, very little of the PCBs in the Hot Spot sediment leached into

the TCLP aqueous solution. This is presumably because the PCBs are preferentially entrained in the high organic matrix of the sediments.

Physical Characteristics

The Hot Spot sediments are generally a fine-sandy silt with some clay sized particles present. The sediments are roughly 50 percent solids and 50 percent water with a wet unit weight of approximately 1.2 tons per cubic yard. The specific gravity of the solid particles within the sediment matrix is on the order of 2.4 to 2.5. The sediments also contain some shell fragments. However, the majority of these fragments, passed a one-inch sieve that was used to pre-screen feed material for two of the three pilot scale treatability studies.

Sediment from the third pilot study was evaluated for grain size distribution and found to be similar in nature to the sediments from stations 4 through 6 of the 1995 USACE CDF sampling program. The results of a comparison of PCB concentrations from these samples have shown similar consistency.

For potential full-scale treatment operations, the sediment would likely be a fine sandy silt, with approximately 50% to 70% of the sediment passing the number 200 sieve. The sediment is also approximately 50 percent moisture by weight. A small volume of larger sized particles is located in the northeastern corner of the CDF, adjacent to the dredge disposal pipe terminus. In addition, the contaminant levels associated with these larger particles are generally lower than the average Hot Spot concentrations.

VII. SUMMARY OF SITE RISKS

Risks associated with exposure to the contaminants of concern (PCBs, cadmium, copper and lead) in the Hot Spot sediments prior to their removal from the harbor were evaluated and discussed in the 1990 Hot Spot ROD. As discussed previously, dredging of hot spot areas was completed in 1995 and the dredged sediments are currently stored in the Sawyer Street CDF.

The interim storage of the Hot Spot sediments in the Sawyer Street CDF has been protective of human health and the environment but provides limited long-term protection. The limitation in long-term protection is due, primarily, to the limitations of the existing cover in containing the Hot Spot sediments for a long period of time. The Sawyer Street CDF is currently operated as a temporary storage facility and does not include a cover system which would provide long-term isolation of contaminants within the CDF.

VIII. DESCRIPTION OF AMENDMENT ALTERNATIVES EVALUATED

The New Bedford Harbor Hot Spot Feasibility Study Addendum Report (Foster Wheeler, 1997a) presents and analyzes all of the options EPA considered to replace the on-site incineration component of the original remedy. EPA developed eleven options for the Hot Spot sediments currently stored in the Sawyer Street CDF. These options are summarized below. More detailed information on each option and a comparative analysis of the options can be found in the Feasibility Study Addendum Report.

A. Limited or No Further Action (HS-1)

1. No Further Action (HS-1): The Sawyer Street facility would be operated and maintained as it is today. This includes maintenance of the CDF cover, the current institutional controls of fencing and site security, and continuation of the air and groundwater monitoring programs.

B. Treat Contaminants On-site

2. Solvent Extraction and Solid Phase Chemical Destruction (HS-2A): Removal of the Hot Spot sediments from the Sawyer Street CDF and separation of the PCBs and other organics through solvent extraction. The concentrated oily extract would subsequently be treated on-site with solid phase chemical dechlorination to destroy the PCBs. The final step involves placement of the treatment residuals within a shoreline CDF.

3. Solvent Extraction and Gas Phase Chemical Destruction (HS-2B): Separation of the PCBs and other organics through solvent extraction as described for HS-2A. The concentrated oily extract would then be heated such that the waste would be transformed into a vapor and subsequently treated with an on-site gas phase reduction reactor to destroy the PCBs. The final step involves placement of the treatment residuals within a shoreline CDF.

4. Solvent Extraction and Off-Site Incineration(HS-2C): Separation of the PCBs and other organics through solvent extraction as described for HS-2A. The concentrated oily extract would then be transported off-site for incineration at a permitted TSCA facility to destroy the PCBs. The final step involves placement of the treatment residuals within a shoreline CDF.

5. Thermal Desorption and Solid Phase Chemical Destruction ((HS-3A): Removal of the Hot Spot sediments from the CDF followed by a mechanical dewatering step. The PCBs and other organics would be separated through thermal desorption. The concentrated oily extract generated by the thermal desorption process would subsequently be treated on-site with a solid phase chemical dechlorination agent to destroy the PCBs. The final step involves placement of the treatment residuals within a shoreline CDF.

6. Thermal Desorption and Gas Phase Chemical Destruction (HS-3B): Separation of the PCBs and other organics via thermal desorption as described for HS-3A. The separated

contaminants would subsequently be destroyed on-site in a gas phase reduction unit. The final step involves placement of the treatment residuals within a shoreline CDF.

7. Thermal Desorption and Off-Site Incineration (HS-3C): Separation of the PCBs and other organics via thermal desorption as described for HS-3A. The concentrated oily extract would be transported off-site for incineration at a permitted TSCA facility to destroy the PCBs. The final step involves placement of the treatment residuals within a shoreline CDF.

8. Staged Vitrification (HS-4): Removal of the Hot Spot sediments from the Sawyer Street CDF followed by a thermal dewatering step to significantly reduce the moisture content. The dried sediments would be placed within a portion of the CDF and treated through electrically generated high temperatures (pyrolisis). The resulting product is an inert glass-like solid in which the PCBs and other organics are thermally destroyed and any metals or other inorganics are immobilized into a non-leachable form.

C. Contain Contaminants

9. In-Place Capping (HS-5): Following in place dewatering of the sediments with wick drains, the sediments would be capped in-place using a multiple layer impermeable cap. This alternative includes a significant long-term monitoring program for groundwater quality in the vicinity of the CDF and potential air releases.

E. Move Contaminants Off-site

10. Off-Site Landfilling (HS-6): This alternative involves dewatering the sediments either in-situ or removing them from the Sawyer Street CDF and mechanically dewatering them. Following dewatering, the sediments are transported off-site to a TSCA permitted hazardous waste landfill.

11. Off-Site Incineration (HS-7): This alternative involves dewatering and removal of the sediments from the CDF as described in alternative HS-6. The dewatered sediments would then be transported off-site to a TSCA permitted incinerator to destroy the PCBs.

IX. COMPARATIVE ANALYSIS OF THE ORIGINAL REMEDY AND AMENDED REMEDY

Section 121(b)(1) of CERCLA presents several factors that EPA is required to consider in its assessment of alternatives. Building upon these specific statutory mandates, the NCP articulates nine evaluation criteria to be used in assessing remedial alternatives. These criteria are as follows:

Threshold Criteria

In accordance with the NCP, two threshold criteria must be met in order for the alternative to be eligible for selection:

1. **Overall protection of human health and the environment** addresses whether or not a remedy provides adequate protection, and describes how risks posed through each exposure pathway are eliminated, reduced or controlled through treatment, engineering controls or institutional controls.

2. **Compliance with applicable or relevant and appropriate requirements (ARARs)** addresses whether or not a remedy will meet all of the ARARs of promulgated state and federal environmental and facility-siting requirements, and if not, provides the grounds for invoking a CERCLA waiver(s) for those requirements.

Primary Balancing Criteria

The following five criteria are used to compare and evaluate those alternatives which fulfill the two threshold criteria.

3. **Long-term effectiveness and permanence** assesses alternatives for the long-term effectiveness and permanence they afford, along with the degree of certainty that they will be successful.

4. **Reduction of toxicity, mobility or volume through treatment** addresses the degree to which alternatives employ recycling or treatment to reduce toxicity, mobility or volume, and how treatment is used to address the principle threats posed by the site.

5. **Short term effectiveness** addresses the period of time needed to achieve protection and any adverse impacts on human health and the environment that may be posed during the construction and implementation of the alternative until cleanup goals are achieved.

6. **Implementability** addresses the technical and administrative feasibility of an alternative, including the availability of materials and services needed to implement a particular option.

7. **Cost** includes estimated capital as well as operation and maintenance costs, on a net present-worth basis.

Modifying Criteria

The two modifying criteria discussed below are used in the final evaluation of remedial alternatives generally after EPA has received public comment on the RI/FS and Proposed Plan.

8. **State acceptance** addresses the State's position and key concerns related to the preferred alternative and other alternatives, and the State's comments on ARARs or the proposed use of waivers.

9. **Community acceptance** addresses the public's general response to the alternatives described in the remedial investigation, feasibility study and Proposed Plan.

The following is a comparison of the 1990 Hot Spot ROD remedy and the Amended ROD remedy, contrasting each remedy's strength and weaknesses with respect to the nine evaluation criteria.

1. Overall Protection of Human Health and the Environment

This criterion considers whether the remedy, as a whole, will protect human health and the environment. This includes an assessment of how public health and environmental risks are properly eliminated, reduced, or controlled through treatment, engineering controls, or institutional controls.

The original remedy and amended remedy are both protective of human health and the environment. The original remedy called for dredging the Hot Spot sediments from the harbor, dewatering the sediments, and destroying the PCBs in an on-site incinerator. Incineration is a proven technology for the destruction of PCBs, and air pollution control devices are routinely used to meet allowable levels of air emissions. The residual ash from the incineration process was to be permanently stored in the Sawyer Street CDF. To ensure protectiveness of human health and the environment, the CDF was to be closed in accordance with the RCRA Hazardous Waste Regulations for landfills.

The amended remedy calls for transporting the dredged Hot Spot sediments, after dewatering on-site, to a TSCA permitted off-site hazardous waste landfill instead of on-site incineration. Therefore, no risks to the health of the community or harbor due to potential exposure to the Hot Spot sediments will remain at the Site. As with the original remedy, removing the sediments from the Sawyer Street CDF may pose some risk of exposure to PCB emissions during the removal and dewatering operations. These short-term risks can be easily minimized using engineering controls and are relatively minor in comparison with the long-term risks associated with leaving the sediments in place.

2. Compliance with Applicable and Relevant and Appropriate Requirements

This criterion addresses whether or not a remedy complies with all promulgated state and federal environmental and facility siting requirements that apply or are relevant and appropriate to the conditions and remedy at a specific site. If an Applicable or Relevant and Appropriate Requirement (ARAR) cannot be met, the analysis of a remedy must provide the grounds for invoking a statutory waiver.

The original and amended remedy comply with all Federal and State ARARs with only one waiver. The sediment dewatering component of the original and amended remedy requires discharging treated water into the upper harbor. Water discharges are regulated under state and federal water quality ARARs. Operation of the Sawyer Street treatment plants requires a waiver of a provision of the National Pollutant Discharge Elimination System requirements of the federal Clean Water Act (CWA), Section 402. The provision can be interpreted to prohibit new discharges into waters that do not meet applicable water quality criteria, unless certain conditions are met (40 CFR 122.4(i)). Harbor waters are presently degraded; they neither meet AWQCs for copper and PCBs nor are conditions concerning pollutant load allocations and compliance schedules for the upper harbor waters likely to be accomplished within a reasonable time before the remedy is implemented. A CERCLA waiver under Section 121(d)(4)(B) was invoked in the Proposed Plan to Amend the Original Remedy and public comment specifically requested. The waiver was invoked since compliance would essentially prevent the cleanup of this Site, resulting in greater risk to human health and the environment. No comments were received on this particular waiver. Issuance of the ROD enacts the waiver.

Further, since New Bedford Harbor water quality is so degraded as to preclude dilution of any proposed discharge of PCBs and copper, Section 402 of the CWA requires that discharges of PCBs and copper meet the respective AWQCs at the discharge point. Consistent with Section 303 of the CWA and its Total Maximum Daily Load (TMDL) approach, however, discharge limits for copper and PCBs will be below current background levels but above AWQCs. This approach allows for attainment of the water quality standards for copper and PCBs throughout the water body in a phased or step-wise approach. The amount of copper and PCBs that will be discharged from the treatment plants will be more than offset by the permanent removal of copper and PCB contaminated Hot Spot sediments from the Harbor. It is expected that the treatment facilities can attain the AWQCs for cadmium, chromium and lead, the other contaminants of concern from a wastewater discharge standpoint.

3. Long-term Effectiveness and Permanence

This criterion refers to the ability of a remedy to maintain reliable protection of human health and the environment over time once the remedial action is complete.

The original incineration remedy would have provided long-term protection and permanence since the PCBs would have been destroyed during the incineration process. The residual ash, which

could have been considered a hazardous waste, would have been safely contained and monitored in a facility built to comply with RCRA Hazardous Waste Regulations for landfills.

The amended remedy will provides long-term protection and permanence since the Hot Spot sediments will be transported from the Sawyer Street site to an off-site TSCA permitted hazardous waste landfill.

4. Reduction of Toxicity, Mobility, and Volume through Treatment

This criterion contains three measures of the overall performance of a remedy. The 1986 amendments to the Superfund statute emphasize that, whenever possible, EPA should select a remedy that uses a treatment process to permanently reduce the level of toxicity of contaminants at the Site, inhibit or eliminate the spread of contaminants away from the source of contamination, and reduce the volume, or amount of contamination at the Site.

The original remedy uses a proven treatment technology, incineration, to reduce the toxicity, mobility and volume of contaminants. Incineration would remove 99.9999% of the PCBs from the sediments.

The amended remedy does not use treatment to reduce the mobility or toxicity of contaminants. Although the 1986 amendments to CERCLA and the NCP states a preference for treatment, an evaluation of site conditions, such as proximity to urban communities, concluded that there were sufficient negative effects from operating innovative treatment technologies at the site to warrant selecting off-site landfilling over on-site treatment. The Hot Spot sediment dewatering process will reduce the volume of contaminated sediments by 20% to 30%.

5. Short-term Effectiveness

This criterion refers to the likelihood of adverse impacts on human health or the environment that may be posed during the construction and implementation of a remedy.

EPA does not believe that the original remedy or amended remedy pose significant short-term effectiveness concerns. The potential exposure of site workers and area residents to contaminated sediments or air emissions during implementation of the on-site incineration remedy or off-site landfilling would be minimized by using safety plans that include air emissions controls and a network of ambient air monitors to assess potential releases to the air during cleanup operations. Off-site transportation of the Hot Spot sediments will result in a small increase in truck traffic through the community. The trucks will be routed to minimize the impact to local traffic. The time to complete either the original or amended remedy is the same, about one year.

6. Implementability

This criterion refers to the technical and administrative feasibility of a remedy, including the availability of materials and services needed to implement the remedy.

EPA considers both the original and amended remedy to be implementable. The amended remedy is routine in comparison to the original remedy. While incineration is known to be a proven technology for the destruction of PCBs, testing in the form of a test burn would have been required to determine optimum equipment configuration and operating parameters. The technology to implement the amended remedy is routinely available and there are currently several off-site TSCA permitted hazardous waste landfills available for disposal of the Hot Spot sediments.

7. Cost

This criterion includes the capital (up-front) cost of implementing each remedy. The costs described below do not include previous costs which are substantial. The cost estimates only reflect those costs that would be incurred henceforth to implement either the unfinished components of the original on-site incineration remedy or the amended remedy.

Original On-Site Incineration Remedy: Total capital cost = $18,200,000
Amended Remedy (Off-Site Landfilling): Total capital cost = $14,800,000

Note: The original on-site incineration remedy included disposing the incinerator ash in an on-site CDF and capping the CDF. The long-term O&M costs for this component of the original remedy is not included in the capital cost of $18,200,000. The amended remedy does not require any long-term O&M.

8. State Acceptance

This criterion addresses whether, based on its review of the data derived from the Site and the Proposed Plan, the State concurs with, opposes, or has no comment on the Amendment EPA has selected for the Site.

The Massachusetts Department of Environmental Protection (DEP) has reviewed the August 1998 Proposed Plan to Amend the 1990 Cleanup Plan and a draft of this Amendment. The DEP concurs with the remedy change. The DEP has provided a letter of concurrence which is provided in Appendix C.

9. Community Acceptance

This criterion addresses whether the public concurs with EPA's proposed Amendment. Community acceptance of this Amendment to the 1990 Hot Spot ROD was evaluated based on

comments received at the public hearing and a recommendation from the New Bedford Harbor Community Forum discussed in Section III of this Amendment.

As discussed in Section III, EPA's proposed Amendment is also the consensus recommendation of the New Bedford Harbor Superfund Site Community Forum. Based on the Public Hearing and comments received during the public comment period, it appears that the proposed Amendment has broad community support. The proposed Amendment is also supported by the Mayor of New Bedford and Congressman Barney Frank.

X. THE SELECTED REMEDY

After an extensive process of evaluating alternatives to the on-site incineration component of the original remedy and developing a consensus among Site stakeholders, EPA has selected the remedy described below as the best balance between the nine criteria. The selected remedy is a removal and disposal alternative using a permitted off-site facility. The cleanup operations will include the following activities:

1. Upgrade Existing Site Facilities As Needed. To accommodate sediment handling and dewatering activities is may be necessary to construct or improve access to the CDF and other areas of the site. Treatment pads, temporary buildings and upgrades to site utilities may also be needed.

2. Sediment Dewatering and Water Treatment. The Hot Spot sediments currently stored in the Sawyer Street CDF are approximately 50% water, which is too wet to be accepted by a TSCA permitted hazardous waste landfill. The sediments will be dewatered to that level which is in compliance with the permits and other requirements for the selected off-site TSCA permitted landfill. Options for dewatering the sediments will be evaluated during the design process. The sediment may be dewatered in-situ by extracting water via installed well points, or by removing the sediment from the CDF and mechanically dewatering it ex-situ, or a combination of in-situ and ex-situ dewatering. Water extracted from the Hot Spot sediment during the dewatering operations will be treated in the existing Sawyer Street wastewater treatment plant prior to discharge into the harbor.

3. Transportation to an Off-Site TSCA Permitted Landfill. Following dewatering, the sediments will be loaded into sealed containers for transport to a TSCA permitted off-site hazardous waste landfill. Trucks leaving the Sawyer Street Site will be routed to minimize their impact to local traffic

4. Air Monitoring Program. There is a potential for air emissions of PCBs during the sediment removal and dewatering activities. A comprehensive ambient air monitoring program will be implemented during the sediment removal and dewatering operations to ensure that engineering controls are effective at protecting site workers and the local community.

The time to complete the activities describe above has been estimated at no more than two years, and

a cost of $14,800,000. EPA may use the Sawyer Street site, including the three cells of the CDF and the water treatment plant to support Phase II of the harbor cleanup. The Upper and Lower Harbor ROD for Phase II was released in September 1998 and calls for dredging an additional 450,000 cubic yards of PCB-contaminated sediments from the harbor and containing the dredged sediments in shoreline CDFs. The future use of the Sawyer Street site and facilities will be determined during implementation of the Phase II remedy.

XI. STATUTORY DETERMINATIONS

The remedial action selected herein for implementation at the New Bedford Harbor Site is consistent with CERCLA and, to the extent practicable, the NCP.

A. The Selected Remedy is Protective of Human Health and the Environment

The selected remedy will be protective of human health and the environment. There will be no Hot Spot sediments remaining at the Site after the cleanup is completed. Therefore, no risks to the health of the community or the environment due to potential exposure to the Hot Spot sediments will remain. There are no significant short-term risks to human health or the environment during implementation of the selected remedy. The potential exposure of site workers and area residents to contaminated sediments will be minimized by using safety plans that include air emission controls and a network of ambient air monitors to assess potential releases to the air during cleanup operations. Tables 9, 10 and 11 summarize the various chemical, location and action specific ARARs discussed below, as well as their impact on remedial activities.

B. The Selected Remedy Attains or Appropriately Waives ARARs

This section briefly summarizes the most significant chemical, location and action specific ARARs for the remedy.

Chemical-Specific ARARs

Chemical-specific ARARs govern the extent of site cleanup and provide either actual clean-up levels or a basis for calculating such levels. These requirements are usually health- or risk-based numerical values or methodologies which, when applied to site-specific conditions, result in numerical values which help define the degree of cleanup.

There are no "applicable" or "relevant and appropriate" federal or state chemical-specific ARARs for the selected remedy. All of the Hot Spot sediments currently contained in the Sawyer Street CDF will be removed and transported to a TSCA permitted chemical waste landfill.

Location-Specific ARARs

Location-specific ARARs are restrictions relating more directly to the geographical or physical setting of the site. These locations include natural site features such as wetlands and flood plains, as well as manmade features including existing landfills, disposal areas, and local historic buildings. Location-specific ARARs are generally restrictions on the concentration of hazardous substances or the conduct of activities solely because of the site's particular characteristics or location. These ARARs provide a basis for assessing existing site conditions and subsequently aid in assessing potential remedial alternatives.

Location-specific ARARs pertain to the site's location within a coastal flood plain, adjacent to the Harbor. Federal ARARs address flood plain management, protection of fish and wildlife resources, and coastal zone management. Alternatives located in a flood plain may not be selected unless a determination is made that no practicable alternative exists outside the flood plain. Under such circumstances the potential harm must be minimized and action taken to restore and preserve natural and beneficial values. The U.S. Fish and Wildlife Service must be consulted regarding preventing and mitigating any potential losses to fish and wildlife resources.

State ARARs address coastal zone management, work within flowed and filled tidelands, and wetlands protection. The state wetlands protection statute identifies the following protected resource areas that occur on or adjacent to the site: Land Subject to Coastal Storm Flowage, Land Under Ocean, Designated Port Area, Coastal Beaches (including tidal flats), Coastal Bank (including a 100-foot buffer zone inland from the edge of the bank), and Land Containing Shellfish.

Action-Specific ARARs

Action-specific ARARs are usually technology or activity-based limitations or requirements that control actions at CERCLA sites. After remedial alternatives are developed, action-specific ARARs pertaining to proposed site remedies provide a basis for assessing the feasibility and effectiveness of the remedies. These requirements generally define acceptable treatment, storage, and disposal procedures for PCB-contaminated and hazardous substances during the response action.

The primary action-specific ARARs are requirements regarding waste management and treatment. These ARARs include PCB storage, treatment and disposal requirements under TSCA and identification and regulation of characteristic hazardous waste under Massachusetts Hazardous Waste Management standards.

TSCA requires that any PCB contaminated dredge spoil with a concentration of 50 ppm or greater be disposed of either in an approved incinerator, an approved chemical waste landfill, or by using a disposal method to be approved by the Regional Administrator. Approval must be based on a finding that, based on technical, environmental, and economic considerations, disposal in an incinerator or chemical waste landfill is not reasonable and appropriate, and that the alternative disposal method will provide adequate protection to health and the environment.

The selected remedy complies with one of the TSCA approved disposal methods, i.e., disposal in an approved chemical waste landfill. The selected remedy requires temporary storage of the PCB sediment for greater than one year. TSCA regulations, 40 CFR 761.65(2), allow for a one-year extension of TSCA's one-year storage limitation upon the written notice to the Regional Administrator of the reasons for the delay in disposing of the material.

Massachusetts Hazardous Waste ARAR's apply to all non-PCB contaminants that meet characteristic hazardous waste standards. Recent toxicity characteristic leaching procedure (TCLP) data on the dredged sediment samples show the sediment does not meet the definition of a RCRA characteristic waste. Toxicity characteristic (TC) constituent concentrations are below TC regulatory limits for hazardous waste. Sediments, process wastes, and discharges from monitoring, operations, and/or maintenance will be tested for hazardous constituents. Any characteristic wastes identified will be stored, treated, and/or disposed of in compliance with state hazardous waste requirements.

Other federal and state action-specific ARARs include air quality and air pollution requirements, which preclude the release of PCBs and other contaminants. Air emissions from the proposed alternatives may result from Hot Spot sediment handling/dewatering operations before off-site transportation and disposal. Air emissions will be addressed by using safety plans that include air emission controls and a network of ambient air monitors to assess potential releases to the air during handling/dewatering

Water discharges are regulated under state and federal water quality ARARs. Water treatment at the facility's on-site water treatment plant will be required to treat the water derived from the Hot Spot sediment dewatering operation. Operation of the treatment plant requires a waiver of a provision of the National Pollutant Discharge Elimination System requirements of the federal Clean Water Act (CWA), Section 402. The provision prohibits new discharges into waters that do not meet applicable water quality criteria, unless certain conditions are met (40 CFR 122.4(i)). The plan proposed that a protectiveness waiver under Section 121(d)(4)(B) of CERCLA be used for this ARAR since compliance would essentially prevent the cleanup of this Site and result in greater risk to human health and the environment than other alternatives. The issue is the result of the degraded water quality in the Harbor, where permitting any new discharge is not possible unless the Harbor's waters reach water quality standards or until the other conditions of the regulations are met. Neither of these conditions are likely to be accomplished in a reasonable time. Therefore, this ARAR is waived.

Furthermore, since New Bedford Harbor water quality is so degraded as to preclude diluting any proposed discharge, Section 402 of the CWA requires that discharges meet ambient water quality criteria (WQC) at the discharge point. Except for copper and PCBs, it is expected that the treatment facility can attain compliance with WQC during the remedial activities. Consistent with Section 303 of the CWA and its Total Maximum Daily Load (TMDL) approach, it is proposed that discharge limits for the water treatment plant be implemented that are below current background levels of copper and PCBs, but above WQC. This approach helps achieve attainment of ambient WQC throughout the waterbody in a phased or step-wise approach, consistent with EPA's

September 1998 Record of Decision for the Upper and Lower Harbor Unit (USEPA, 1998b). The copper and PCBs that will be discharged from the treatment plant will be offset by the copper and PCB contaminated sediments which have been permanently removed from the Harbor as part of the 1994/1995 Hot Spot dredging operation..

Federal PCB policies and guidance regarding PCB air releases and treatment technologies for CERCLA remedial actions will be considered. Massachusetts guidelines to be considered include ambient air limits and noise levels. The Allowable Ambient Limits and Threshold Exposure Limits will be considered for air emissions. Revised TEF and the air dioxin guideline will be considered for evaluation of air emissions. Noise levels will be minimized to the extent practicable.

C. The Selected Remedial Action is Cost-Effective

The selected remedy is cost-effective since it provides overall effectiveness proportional to its cost. The costs for the eleven cleanup plans evaluated range from $5.4 million to $48.5 million. The two cleanup alternatives at the low end of the range (HS-1 at $5.4 million and HS-5 at $10.3 million), are alternatives that do not treat or remove the Hot Spot sediments from the Site. The selected remedy, at an estimated cost of $14.8 million, does not treat the sediments but does remove them from the site providing a higher level of protection than alternatives HS-1 and HS-5. The remaining eight cleanup plans evaluated are treatment alternatives ranging in cost from $19 million to $48.5 million. Since the selected remedy removes all of the Hot Spot sediments from the Sawyer Street CDF and transports them off-site, there will be no remaining risks at the Site. Therefore , a more costly treatment alternative will not provide more protection to the community or the harbor.

D. The Selected Remedy Utilizes Permanent Solutions and Alternative Treatment or Resource Recovery Technologies to the Maximum Extent Practicable

The selected remedy provides a permanent solution for the Hot Spot sediments currently stored on the Sawyer Street CDF. It permanently isolates these sediments from human and environmental receptors by containing them in a TSCA permitted off-site chemical waste landfill. Alternatives involving on-site treatment of the Hot Spot sediment were considered, but lack the community support that would make them a practicable option at this Site. Although the Hot Spot sediments will not be treated, a large volume of PCBs and metals contaminated water which was decanted during the dredging operation has been treated to meet stringent discharge standards. Furthermore, the contaminated water from the dewatering operations will also be treated to meet stringent discharge standards.

E. The Selected Remedy Does Not Satisfy the Preference for Treatment as a Principle Element

The selected remedy does not use treatment of the PCB-contaminated sediments as a principle element of the remedy, although as described above, decanted water from the Hot Spot dredging operations was treated. In addition, the Hot Spot sediment dewatering to be performed as

a part of the selected remedy will involve extensive treatment prior to discharging to the harbor. Protection against the future ecological and human health risks posed by the Hot Spot sediments is provided by removing them from the Sawyer Street CDF and permanently isolating them in a TSCA permitted off-site chemical waste landfill.

XII. DOCUMENTATION OF NO SIGNIFICANT CHANGES

The Proposed Plan to Amend the 1990 Cleanup Plan was released for public comment in August 1998. The proposed change calls for transporting the Hot Spot sediments off-site to a TSCA permitted chemical waste landfill rather than on-site incineration as called for in the 1990 cleanup plan. The amended cleanup plan includes:

1. Upgrade Existing Site Facilities As Needed. To accommodate sediment handling and dewatering activities it may be necessary to construct or improve access to the CDF and other areas of the site. Treatment pads, temporary buildings and upgrades to site utilities may also be needed.

2. Sediment Dewatering and Water Treatment. The Hot Spot sediments currently stored in the Sawyer Street CDF are approximately 50% water, which is too wet to be accepted by a TSCA permitted hazardous waste landfill. The sediments will be dewatered to that level which is in compliance with the permits and other requirements for the selected off-site TSCA permitted landfill. Options for dewatering the sediments will be evaluated during the design process. The sediment may be dewatered in-situ by extracting water via installed well points, or by removing the sediment from the CDF and mechanically dewatering it ex-situ, or a combination of in-situ and ex-situ dewatering. Water extracted from the Hot Spot sediment during the dewatering operations will be treated in the existing Sawyer Street wastewater treatment plant prior to discharge into the harbor.

3. Transportation to an Off-Site TSCA Permitted Landfill. Following dewatering, the sediments will be loaded into sealed containers for transport to a TSCA permitted off-site hazardous waste landfill. Trucks leaving the Sawyer Street Site will be routed to minimize their impact to local traffic.

4. Air Monitoring. There is a potential for air emissions of PCBs during the sediment removal and dewatering activities. A comprehensive ambient air monitoring program will be implemented during the sediment removal and dewatering operations to ensure that engineering controls are effective at protecting site workers and the local community.

EPA determined that, based on public comment, no significant change is needed to the proposed amended cleanup plan. EPA will evaluate potential dewatering strategies further during the design phase. Based on the results of these further evaluations, EPA may decide to dewater the sediments before removing them from the CDF by extracting water from well points or mechanically dewatering the sediments *ex-situ* as discussed above or a combination of *in-situ* and *ex-situ* dewatering.

XIII. STATE ROLE

The Massachusetts Department of Environmental Protection has reviewed the remedy change and concurs with the selected remedy described in Section X of this Amendment. A copy of the State concurrence letter is attached as Appendix C.

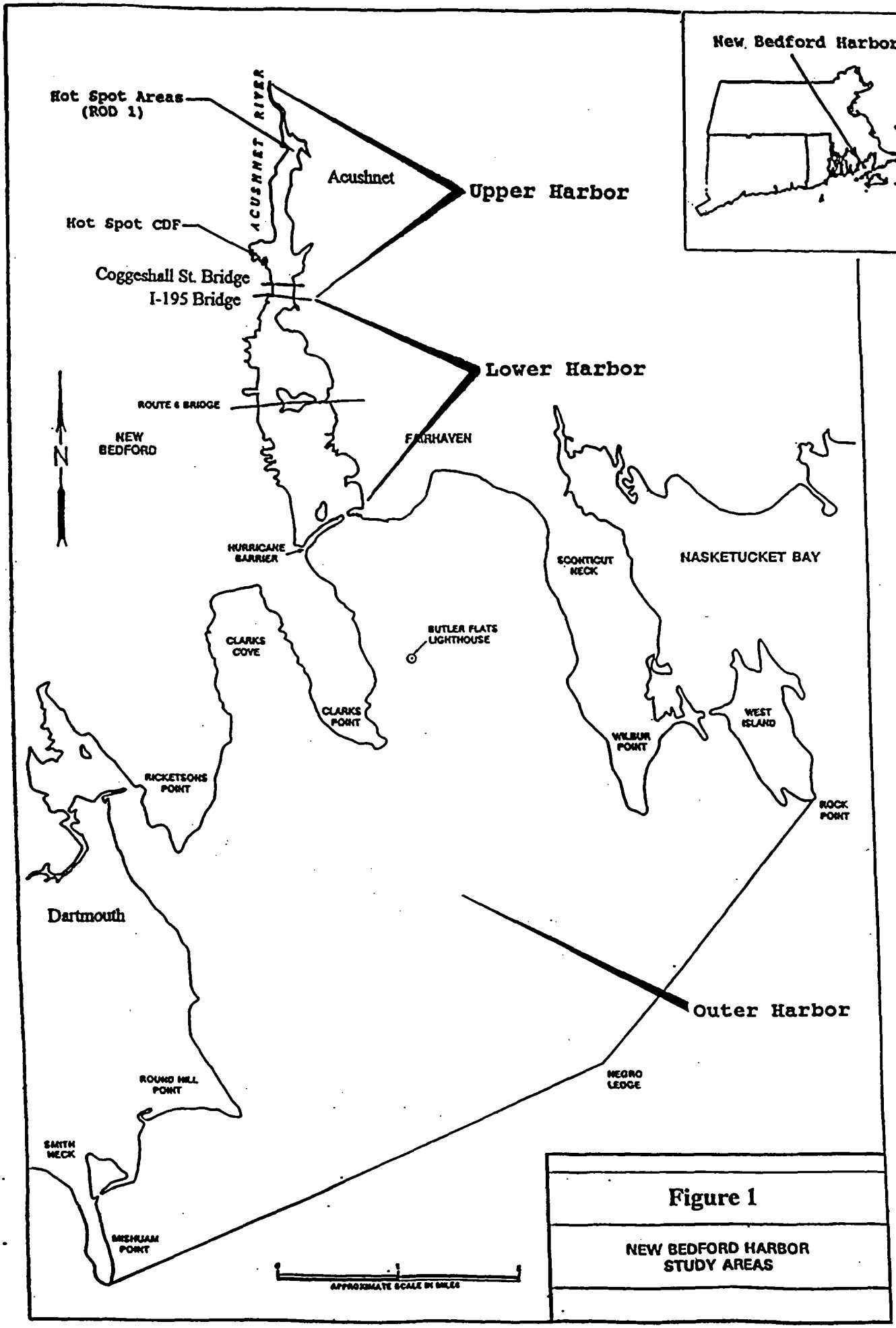

Figure 1

NEW BEDFORD HARBOR STUDY AREAS

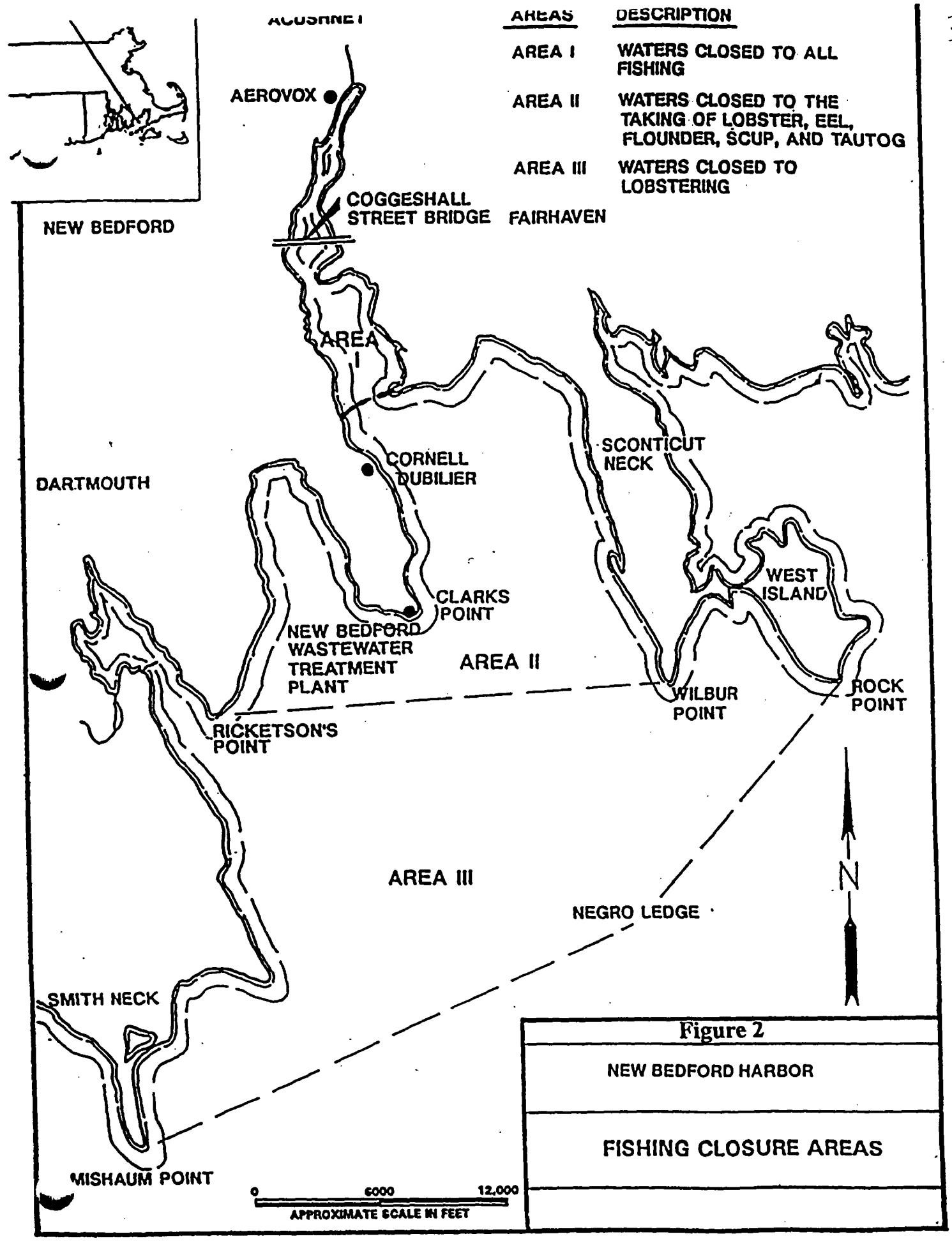

Figure 2

NEW BEDFORD HARBOR

FISHING CLOSURE AREAS

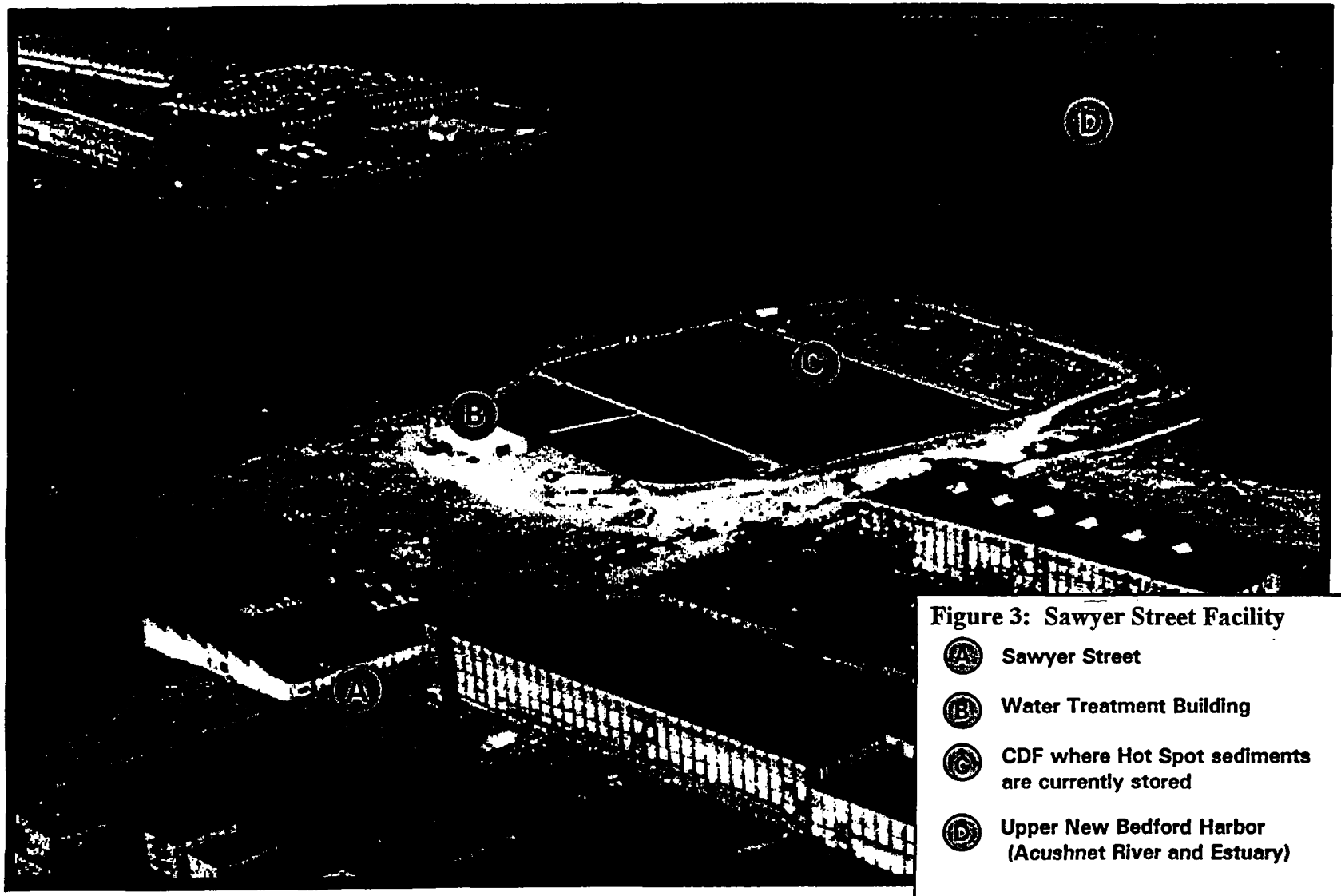

Figure 3: Sawyer Street Facility

- (A) Sawyer Street
- (B) Water Treatment Building
- (C) CDF where Hot Spot sediments are currently stored
- (D) Upper New Bedford Harbor (Acushnet River and Estuary)

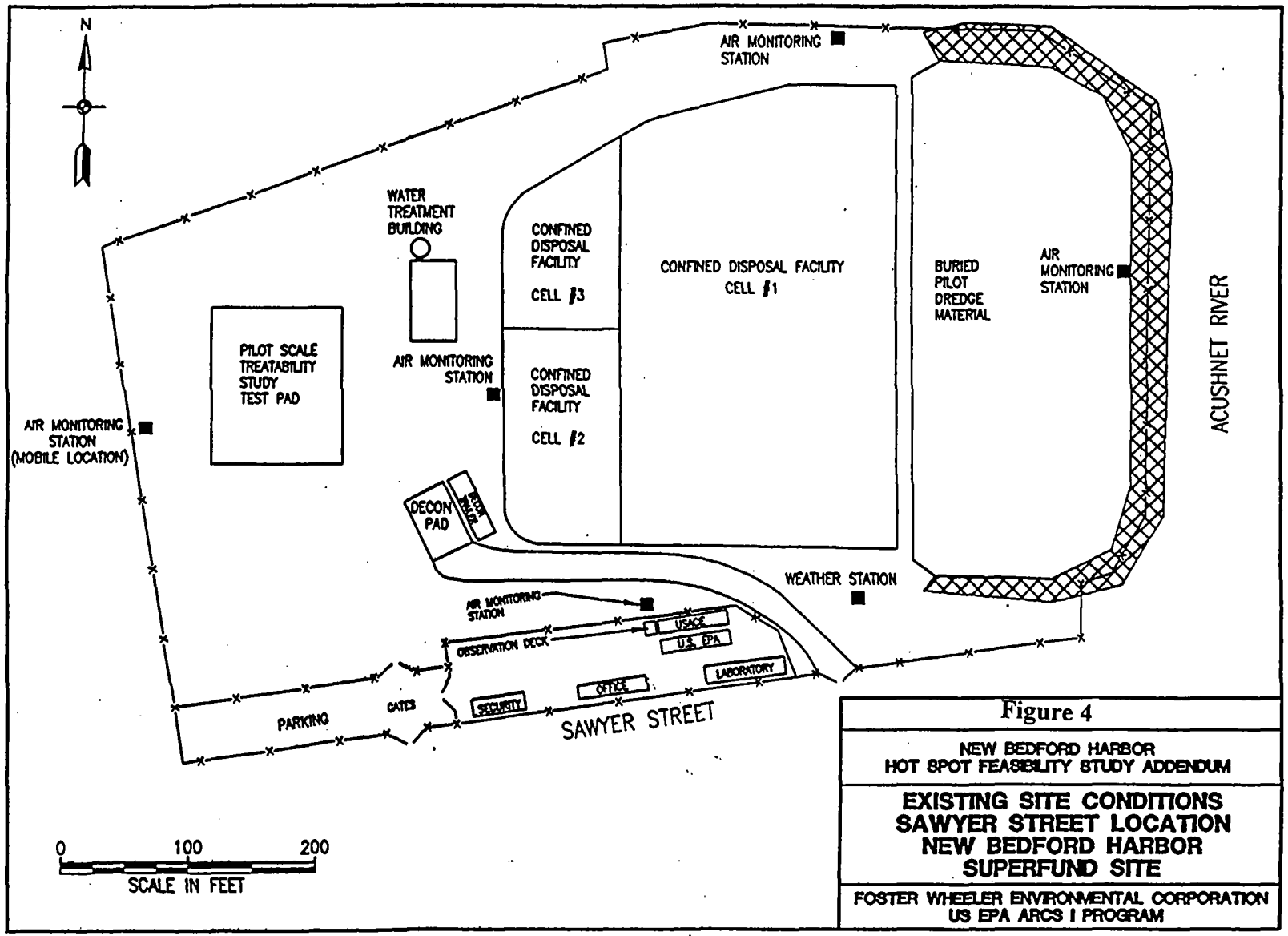

Figure 4

NEW BEDFORD HARBOR
HOT SPOT FEASIBILITY STUDY ADDENDUM

EXISTING SITE CONDITIONS
SAWYER STREET LOCATION
NEW BEDFORD HARBOR
SUPERFUND SITE

FOSTER WHEELER ENVIRONMENTAL CORPORATION
US EPA ARCS I PROGRAM

Table 1
Summary of PCB and Oil and Grease Data for the Hot Spot Sediment

Parameter	1st and 2nd Pilot Study Concentration Range (ppm) Minimum	1st and 2nd Pilot Study Concentration Range (ppm) Maximum	3rd Pilot Study Concentration Range (ppm) Minimum	3rd Pilot Study Concentration Range (ppm) Maximum	1st & 2nd Pilot Study Average Conc. (ppm)	3rd Pilot Study Average Conc. (ppm)
PCB	1,600	2,990	3,800	7,700	2,308	5,667
Oil and Grease	11,700	21,800	28,100	36,900	17,863	32,392

Table 2
PCB and Oil and Grease Results for the USACE Samples Collected in June 1995

Parameter	Sample Number and Concentration (ppm) 1	2	3	4	5	6	Conc. Range (ppm)	Average Conc. (ppm)
Total PCB	492	763	3,005	14,412	10,924	7,405	492 - 14,412	6,167
Oil & Grease	780	980	14,000	30,000	34,000	22,000	780 - 34,000	16,960

Table 3
Summary of Chlorinated Benzene Data for the Hot Spot Sediment (Third Pilot Study)

Parameter	Minimum Conc. (ppm)	Maximum Conc. (ppm)	Average Conc. (ppm)
1,3-Dichlorobenzene	3.9	10	6.8
1,4-Dichlorobenzene	13	28	20
1,2-Dichlorobenzene	0.32	0.90	0.49
1,2,4-Trichlorobenzene	7.7	38	15

Table 4
Summary of PAH Concentrations for the Hot Spot Sediment (Third Pilot Study)

Parameter	Minimum Conc. (ppm)	Minimum Conc. (ppm)	Average Conc. (ppm)
Naphthalene	0.31	0.78	0.50
2-Methylnaphthalene	0.50	1.3	0.84
Acenaphthylene	0.16	8.2	1.4
Acenaphthene	0.45	1.9	0.91
Fluorene	0.44	1.7	0.88
Phenanthrene	1.1	6.4	2.3
Anthracene	0.3	1.7	0.62
Fluoranthene	1.8	12	3.9
Pyrene	2.6	8.2	4.8
Benzo(a)anthracene	1.9	6.4	3.7
Chrysene	2.1	7.3	4.1
Benzo(b)fluoranthene	2.0	10	4.2
Benzo(k)fluoranthene	1.5	8.5	3.9
Benzo(a)pyrene	1.8	6.6	3.7
Indeno(1,2,3-cd)pyrene	0.13	0.72	0.28
Dibenz(a,h)anthracene	0.07	3.3	1.1
Benzo(g,h,i)perylene	0.08	0.4	0.22
Total PAH:			37

Table 5
Summary of {2, 3, 7, 8 Substituted Isomers} Data
for the Hot Spot Sediment
(Third Pilot Study)

Parameter	3rd Pilot Study Conc. (pg/gm) Average	3rd Pilot Study TEQ (pg/gm)
2,3,7,8-TCDD	3.6	3.6
1,2,3,7,8-PeCDD	9.1	4.5
1,2,3,4,7,8-HxCDD	7.9	0.79
1,2,3,6,7,8-HxCDD	31	3.1
1,2,3,7,8,9-HxCDD	20	2.0
1,2,3,4,6,7,8-HpCDD	386	3.9
OCDD	3,000	3
2,3,7,8-TCDF	690	69
1,2,3,7,8-PeCDF	276	14
2,3,4,7,8-PeCDF	1,520	760
1,2,3,4,7,8-HxCDF	4,440	444
1,2,3,6,7,8-HxCDF	1,920	192
2,3,4,6,7,8-HxCDF	844	84
1,2,3,7,8,9-HxCDF	986	99
1,2,3,4,6,7,8-HpCDF	1,680	17
1,2,3,4,7,8,9-HpCDF	1,260	13
OCDF	1,860	1.9
Total:	18,933	1,714

Table 6
Summary of Dioxin and Furan Data (Totals)
for the Hot Spot Sediment
(Third Pilot Study)

Parameter	3rd Pilot Study Average (pg/gm)
Total TCDD	17
Total PeCDD	50
Total-HxCDD	284
Total-HpCDD	770
OCDD	3,000
Total TCDF	5,080
Total PeCDF	3,920
Total-HxCDF	10,520
Total-HpCDF	4,580
OCDF	1,860
Total PCDD/PCDF (pg/gm):	30,081

Table 7
Summary of Metals Data for the Hot Spot Sediment
(Third Pilot Study)

Parameter	Minimum Concentration	Maximum Concentration	Average Concentration
Aluminum	13,300	17,200	15,658
Antimony	2.9	8.7	5.1
Arsenic	10.2	14.4	11.9
Barium	145	221	159
Beryllium	0.49	0.55	0.51
Cadmium	13.4	17.0	15.1
Calcium	5,910	8,960	7,275
Chromium	295	366	330
Cobalt	7.3	9.3	8.3
Copper	656	861	762
Iron	21,200	28,000	25,533
Lead	550	632	600
Magnesium	6,980	9,210	8,278
Manganese	200	243	223
Mercury	0.87	3.6	1.3
Nickel	56.7	73.7	64.6
Potassium	3,040	3,950	3,458
Selenium	2.4	3.6	3.0
Silver	2.5	4.4	3.2
Sodium	12,200	16,900	14,083
Thallium	ND	0	ND
Vanadium	48.6	69.2	56.8
Zinc	1,720	2,130	1,924

Results are reported in mg/kg
ND = Not Detected

Table 8
TCLP Results for Hot Spot Sediment
(Third Pilot Study)

TCLP Analyte	Regulatory Limit (ug/L)	3rd Pilot Study (ug/L)
PCB	NC	26.85
1,3-Dichlorobenzene	NC	22
1,4-Dichlorobenzene	7,500	85
1,2,4-Trichlorobenzene	NC	20
Phenanthrene	NC	ND
Fluoranthene	NC	ND
Pyrene	NC	ND
Arsenic	5,000	22.4
Barium	100,000	352
Cadmium	1,000	18.0
Chromium	5,000	21.2
Copper	NC	50.8
Lead	5,000	472
Mercury	200	ND
Selenium	1,000	12.7
Silver	5,000	ND
Zinc	NC	8,260

NC No Criterion

Tab
Chemical Specific ARs and TBCs

Requirement	Citation	Status	Requirement Synopsis	Actions To Be Taken To Attain ARARs
Federal				
Cancer Slope Factors (CSFs)		To Be Considered	These are guidance values used to evaluate the potential carcinogenic hazard caused by exposure to contaminants.	Operation and maintenance of the facility will minimize exposure to potential receptors.
Reference Doses (RfDs)		To Be Considered	These are guidance values used to evaluate the potential non-carcinogenic hazard caused by exposure to contaminants.	Operation and maintenance of the facility will minimize exposure to potential receptors.
Massachusetts				
			There are no state chemical-specific ARARs.	

T 10

Location Specific ARARs and TBCs

Requirement	Citation	Status	Requirement Synopsis	Actions To Be Taken To Attain ARARs
Federal				
Floodplain Management - Executive Order 11988	40 CFR Part 6, Appendix A	Applicable	Federal agencies are required to reduce the risk of flood loss, minimize impact of floods, and restore and preserve the natural and beneficial values of floodplains.	The facility lies within the 100-year coastal floodplain. The potential effects of any action must be evaluated to ensure that the planning and decision making reflect consideration of flood hazards and floodplain management, including restoration and preservation of natural and beneficial values, wherever feasible.
Fish and Wildlife Coordination Act	16 USC Part 661 et seq.; 40 CFR 6.302	Applicable	Requires consultation with appropriate agencies to protect fish and wildlife when federal actions may alter waterways. Must develop measures to prevent and mitigate potential loss.	Appropriate agencies will be consulted prior to implementation to find ways to minimize adverse effects to fish and wildlife from facility operation and maintenance.
Coastal Zone Management Act	16 USC Parts 1451 et seq.	Applicable	Requires that any actions must be conducted in a manner consistent with state approved management programs.	The entire site is located in a coastal zone management area, therefore applicable coastal zone management requirements will be met.
Massachusetts				
Wetlands Protection Act	131 MGL 40; 310 CMR 10.00	Applicable	These standards regulate the dredging, filling, altering, or polluting of coastal and inland wetland resource areas. Protected resource areas within and adjacent to the site include: Land Subject to Coastal Storm Flowage (Sec. 10.02(1)(d)), Land Under Ocean (Sec. 10.25), Designated Port Area (Sec. 10.26), Coastal Beaches (including tidal flats)(Sec. 10.27), Coastal Bank (Sec. 10.30), and Land Containing Shellfish (Sec. 10.34). There is a 100-foot buffer zone landward of the Coastal Bank.	Operation and maintenance of the facility within the 100-year floodplain and the 100-foot buffer zone to the coastal bank will comply with the substantive requirements of the standards. Dewatering and loading facilities will be protected from flooding.
Coastal Zone Management	301 CMR 21.00	Applicable	Requires that any actions must be conducted in a manner consistent with state approved management programs.	The entire site is located in a coastal zone management area, therefore substantive coastal zone management requirements will be met.

Table 1 ontinued
Location Specific ARARs and TBCs

Requirement	Citation	Status	Requirement Synopsis	Actions To Be Taken To Attain ARARs
Waterways	310 CMR 9.00	Applicable	Sets forth criteria for work within flowed and filled tidelands. Waterways concerns focus on the long term viability of marine uses and protecting public rights in tidelands, including fishing and access.	Actions within filled and flowed tidelands at the site will comply with the regulation's environmental standards.

ble 11
Action Specific ARARs and TBCs

Medium/Authority	Citation	Status	Requirement Synopsis	Actions to be Taken to Attain ARARs
Federal				
Toxic Substances Control Act (TSCA), Disposal Requirements- PCBs Contaminated Dredged Spoil	15 USC 2601-2692; 40 CFR 761.60(a)(5)	Applicable	Dredged materials with PCBs at concentrations greater than 50 ppm must be disposed of either in an incinerator, or in a chemical waste landfill, or, when the first 2 options are not reasonable and appropriate, by a disposal method which will protect health and the environment.	Sediments will be disposed of in a permitted TSCA facility.
TSCA PCB Storage Regulations	40 CFR 761.65(a)	Applicable	PCBs stored for disposal must be properly disposed of within one-year of being placed in storage. A one-year extension is granted upon notification to the Regional Administrator.	If the remedy requires on-site storage of PCB contaminated material for more than one-year an extension will be required.
TSCA PCB Storage Regulations	40 CFR 761.65(b)(1)(i)	Applicable	Storage facilities must have adequate roof and walls to prevent rainwater from reaching the stored PCBs.	Present cover, if properly maintained, does prevent rainwater from reaching the stored PCBs. Rainwater that falls directly on Cell #1 may require treatment if contamination occurs.
TSCA PCB Storage Regulations	40 CFR 761.65(b)(1)(ii)	Applicable	Storage facilities cannot have floor drains or openings that would allow liquids to flow from the storage area.	Cell #1 has two continuous, impermeable bottom liners.

Table Continued
Action Speci ARARs and TBCs

Medium/Authority	Citation	Status	Requirement Synopsis	Actions to be Taken to Attain ARARs
TSCA PCB Storage Regulations	40 CFR 761.65(b)(1)(iv)	Applicable	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.
TSCA PCB Storage Regulations	40 CFR 761.65(b)(1)(v)	Applicable	Storage facilities must not be located below the 100-year floodwater elevation.	The CDF's top-of-berm elevation is two feet higher than the 100-year flood elevation. If a dewatering facility is needed it will constructed so that it is above the 100-year flood elevation.
TSCA PCB Commercial Storage Regulations	40 CFR 761.65(d)(2)(ii)	Relevant and Appropriate	CDF facilities 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.
TSCA PCB Commercial Storage Regulations	40 CFR 761.65(d)(2)(vi)	Relevant and Appropriate	The operation of a commercial storage facility must not pose an unreasonable risk of injury to health or the environment.	The cover for Cell #1 would have to be extended to overlap the cell walls to prevent persons from falling in. Air, groundwater, and surface water monitoring in the vicinity of the CDF will be continued to verify protectiveness of controls until all of the sediments are removed off-site.
TSCA PCB Spill Cleanup Policy	40 CFR 761.120 - .135	Relevant and Appropriate	Establishes criteria to determine adequacy of the cleanup of spills (occurring after 5/4/87) from the release of materials with > 50 ppm PCBs.	Although this policy is directed at electrical equipment-type spills, it will be considered to address any PCB leakage or spillage from the CDF.
Clean Water Act (CWA), Section 402, National Pollutant Discharge Elimination System (NPDES)	33 USC 1342; 40 CFR 122-125, 131	Applicable	These standards govern discharge of water into surface waters. Due to the degraded nature of New Bedford Harbor waters, regulated discharges into the waterway must meet ambient water quality criteria (WQC) at the discharge point.	Any drainage off the site which becomes contaminated by the stored sediments and any process or dewatering discharge will be treated by the on-site treatment plant and discharged to the harbor. Ambient water quality criteria, particularly for copper and PCBs, will be addressed through a phased Total Maximum Daily Load (TMDL) approach
CWA, Section 402, NPDES, Prohibitions	40 CFR 122.4(i)	Applicable	Prohibition on new discharges into waters that do not meet applicable water quality criteria (WQC) unless certain conditions are met.	A waiver will be sought for this provision since compliance would prevent cleanup of the site until Harbor waters either reach water quality standards or until the other conditions in the regulation are met. Neither of which can be accomplished in a reasonable time frame.

Table Continued
Action Specific ARARs and TBCs

Medium/Authority	Citation	Status	Requirement Synopsis	Actions to be Taken to Attain ARARs
Clean Air Act (CAA), National Emissions Standards for Hazardous Air Pollutants (NESHAPS)	42 USC 7401 et seq.; 40 CFR Part 61	Applicable	NESHAPS are a set of emissions standards for specific chemicals, including PCBs, from specific production activities.	Monitoring of air emissions from the facility, including from the dewatering process, will be used to assess compliance with these standards. Operation and maintenance activities will be carried out in a manner which will minimize potential air releases.
Guidance on Remedial Actions for Superfund Sites with PCB Contamination (OSWER Directive)		To Be Considered	Describes the recommended approach for evaluating and remediating CERCLA sites with PCB contamination.	This guidance will be considered when evaluating PCB issues associated with removal, dewatering, and offsite disposal of contaminated sediment.
Massachusetts				
Hazardous Waste Management - Identification and Listing	21C MGL 4 and 6; 310 CMR 30.100	Relevant and Appropriate	Establishes standards for identifying and listing hazardous waste.	Monitoring will assess whether hazardous wastes are present in discharges or dewatering wastes from the facility.
Hazardous Waste Management - Requirements for Generators of Hazardous Waste	21C MGL 4 and 6; 310 CMR 30.300	Relevant and Appropriate	Establishes standards for various classes of generators.	Any hazardous waste generated from the facility will be managed in accordance with the substantive requirements of these regulations.
Hazardous Waste Management - Management Standards for all Hazardous Waste Facilities	21C MGL 4 and 6, 310 CMR 30.500	Relevant and Appropriate	Establishes standards for treatment, storage, and disposal of hazardous waste, and establishes standards for closure, post closure and ground water monitoring. Sec. 30.501(3)(a) exempts facilities which treat, dispose or store hazardous waste containing 50 ppm or more PCBs if they are adequately regulated under TSCA, 40 CFR 761.	Any non-PCB hazardous waste which is treated, stored or disposed of at this facility as part of the remedy will be managed in accordance with the substantive requirements of this section.
Supplemental Requirements for Hazardous Waste Management Facilities	21 MGL 27(12), 34 and 43; 314 CMR 8.00	Relevant and Appropriate	This regulation outlines the additional requirements that must be satisfied in order for a RCRA facility to comply with the NPDES regulation.	The substantive requirements of these provisions will be met.

Tabl[illegible], Continued
Action Spe[illegible] ARARs and TBCs

Medium/Authority	Citation	Status	Requirement Synopsis	Actions to be Taken to Attain ARARs
Surface Water Discharge	21 MGL 23(12) and 34; 314 CMR 1.00-7.00	Applicable	This section outlines the requirements for obtaining a National Pollutant Discharge Elimination System (NPDES) permit in Massachusetts. The waters of New Bedford Harbor adjacent to the site are classified as SB.	Any drainage off the site which becomes contaminated by the stored sediments and the water from dewatering will be treated by the on-site treatment plant and discharged in accordance with the substantive provisions of the regulations.
Surface Water Quality Standards	27 MGL 27; 314 CMR 4.00	Applicable	MADEP surface water quality standards incorporate the federal AWQC as standards for surface waters of the state. Standards establish acute and chronic effects on aquatic life for contaminants including PCBs, cadmium, copper, and lead.	Ambient water quality criteria, particularly for copper, will be addressed through a phased Total Maximum Daily Load (TMDL) approach.
Rules for the Prevention and Control of Oil Pollution in the Waters of the Commonwealth	21 MGL 26-53; 314 CMR 15.000	Applicable	Regulates the discharge of oil or sewage, industrial waste or other material containing oil into waters of the Commonwealth.	The remedy will comply with the substantive requirements of the provisions.
Massachusetts Water Quality Standards Implementation Policy of Toxic Pollutants in Surface Waters (2/23/90)		To Be Considered	Recommends surface water quality standards for specified contaminants and implementation to achieve standards.	This implementation policy and appropriate standards will be considered for alternatives which impact surface water quality.
Ambient Air Quality Standards	111 MGL 142D; 310 CMR 6.00	Applicable	Establishes ambient air level for contaminants including PCBs and particulates.	Emissions from the CDF and the dewatering facility will comply with these standards. Dust suppression will be used to reduce particulate emissions.
Air Pollution Control	111 MGL 142A-J, 310 CMR 7.00	Applicable	Standards for sources of emissions. Pollution abatement controls may be required.	Operation and maintenance of the CDF and the dewatering facility will comply with the substantive requirements of these provisions.
MADEP - Recommended Threshold Effect Exposure Limits (TELs) and Allowable Ambient Limits (AALs)		To Be Considered	Establishes exposure concentrations for air contaminants developed and recommended by the Office of Research and Standards to protect public health.	On-site containment and dewatering technologies having air emissions will consider the TELs and AALs.

Table , Continued
Action Specific ARARs and TBCs

Medium/Authority	Citation	Status	Requirement Synopsis	Actions to be Taken to Attain ARARs
DAQC Policy (90.001): Allowable Sound Emissions (2/1/90)		To Be Considered	Establishes guidelines where the source of new noise should not emit more than 10 decibels above the existing (background) level.	Site operations noise level will be minimized and will follow the suggested noise limit to the extent practicable.
MA DEP - Assessment and Control of Dioxin in Massachusetts (10/31/91)		To Be Considered	Recommends revisions to Toxicity Equivalence Factors (TEFs) for polychlorinated dibenzodioxins (PCDDs) and dibenzofurans (PCDFs) in air/emissions.	Alternatives with on-site sediment dewatering technologies that potentially include air emissions of PCDDs and PCDFs will consider the revised TEFs for evaluating the toxicity of these air emissions.

Appendix A - Responsiveness Summary

New Bedford Harbor Superfund Site
Amended Record of Decision for the Hot Spot Sediments

1.0 INTRODUCTION

This responsiveness summary summarizes and provides EPA's responses to formal comments regarding the Proposed Plan to amend the 1990 cleanup plan for the New Bedford Harbor Hot Spot Sediments. These comments were received during the period August 27-September 25, 1998. The comments and responses are organized into the following categories.

Section	Type of Comment	Page
2.1	Citizen	A-1
2.2	Local Government	A-7
2.3	State Government	A-8
2.4	Congressional	A-9
2.5	AVX Corporation	A-10

2.0 SUMMARY OF COMMENTS RECEIVED DURING THE AUGUST 27-SEPTEMBER 25, 1998 PUBLIC COMMENT PERIOD

2.1 Citizen Comments

2.1.1 Mr. Barrett:

Mr. Barrett supports the Proposed Plan. He commented that in his opinion off-site landfilling would be the fastest, the safest and the most economical way to dispose of the Hot Spot sediments. However, he commented further that the off-site landfill chosen should not necessarily be the least expensive, but, the most secluded site and the least likely to cause any damage to the environment. He also commented that he believes transport by rail will be the safest and less likeliness for accidents that endanger public safety.

EPA Response:

The selection of an off-site landfill will be based on a competitive bidding process which involves an evaluation of the off-site transportation and disposal proposals received from various Offerors during that competitive bidding process. Price is one of five criteria which will be used to evaluate the various proposals. The other four criteria are: technical approach; relevant experience; management approach; and available resources. Lowest price does not guarantee award of the off-site disposal contract.

The selection of the off-site landfill must be done in accordance with EPA Off-site Rule which became effective on October 22, 1993. The purpose of the Off-site Rule is to ensure that wastes shipped off-site from Superfund clean-ups are sent to environmentally sound waste management facilities. The rule describes the criteria that off-site waste management facilities must meet when taking waste from Superfund sites and the procedures that EPA must follow when making determinations on the acceptability of these facilities. Any facility which meets the requirements of the Off-site rule is acceptable to EPA. A requirement that the site be the most secluded site is not a criteria under the Off-site Rule.

EPA appreciates your concern over the possibility of an accident occurring while transporting the hot spot sediments to a landfill. EPA believes that both trucking and rail are safe means of transporting the dewatered Hot Spot sediments to a landfill. Traffic accidents involving hazardous waste transportation are very rare events.

2.1.2 Ms. Jacobsen:

Ms. Jacobsen supports the Proposed Plan. She commented that she is very happy that the situation is finally being addressed and resolved.

EPA Response:

The EPA appreciates your support for the Proposed Plan.

2.1.3 Ms. Kirk

Ms Kirk commented that as a member of Concerned Parents of Fairhaven and the New Bedford Harbor Superfund Site Community Forum (Forum) she is disappointed and opposes the Proposed Plan. She commented further that in 1993, community groups wanted EPA to find an innovative, non-incineration PCB destruction technology that could be used on-site and that landfilling was <u>not</u> an alternative favored by the community groups. She discussed the creation of the Forum and the results of innovative technology pilot scale testing performed by EPA at the New Bedford Harbor site which concluded that there were innovative technologies that could be safely used on-site at full scale. Ms Kirk concluded her comments with the following:

> **"In conclusion, I am disappointed in the decision of the majority of the Forum members to off-site landfill. In my mind, <u>landfill</u> does not treat or destroy. The hot spot sediments will be buried forever. To send it an off-site facility adds insult to injury. It simply sends a problem created in New Bedford to another community. Off-site landfill goes against our mission since the beginning and we demonstrated that there are alternative, innovative technologies that could have been chosen that could have destroyed PCB's and been safe for human health and the environment. It was a rushed decision, with a lot of misinformation and fear fed to a community**

about health and safety issues that were resolved long before. The neighborhood that came to these last meetings was not involved from the beginning and was not part of our learning process. Off-site landfilling will move the problem but does not solve the problem."

EPA Response

EPA agrees that the results of pilot scale studies of innovative treatment technologies did show that there are non-incineration destruction technologies which EPA believes could be safely implemented on-site to destroy the PCB-contaminated hot spot sediments. Although EPA is also disappointed that a treatment alternative which is acceptable to the community could not be found, we do believe that the off-site landfilling alternative does provide the beast balance among the nine NCP remedy selection criteria. EPA's rationale for selecting the off-site landfilling alternative, using the NCP criteria, is provided on page 6 of the August 1998 Proposed Plan.

2.1.4 Mr. Kopcych

Mr. Kopcych commented at the public hearing that he is in favor of dewatering the sediments, placing them in sealed containers and transporting them off-site. He commented further that he would like to see the dewatered sediments taken over to the New Bedford rail yard which he said the city owns and which is also contaminated with PCB's. He would like the sediment to be shipped out of the city by rail from the New Bedford rail yard. He believes the city is allowed to charge a tipping fee, which would assists them in cleaning up the PCB contamination at the rail yard.

EPA Response

As discussed in EPA's response to Mr. Barrett's comments above, the transportation component of the Proposed Plan will be determined as part of a competitive bidding process. EPA has no objection to bidders including the use of the New Bedford rail yard in their proposals provided that it can be demonstrated that the rail yard is an approved facility in compliance with all appropriate local and state regulations.

2.1.5 Mr. Lapointe

Mr. Lapointe provided verbal comments at the public hearing. Mr Lapointe's comments appear to support the proposed plan. He stated:

"I wish they would just take it out of the site, bring it to wherever they bring it. Just don't burn it. Dioxin scares me."

EPA Response

EPA appreciates your support for the Proposed Plan. The Proposed Plan does not include burning the Hot Spot sediments. The sediments will be transported to a TSCA permitted chemical waste landfill.

2.1.6 Mr. Nadeau

Mr. Nadeau provided verbal comments at the public hearing. Mr. Nadeau's supports the proposed plan. However, he did not believe that the hearing was adequately publicized. He stated that his name is on the mailing list, but, he never received a letter notifying him of the public hearing.

EPA Response

EPA is disappointed to hear that you did not receive notice of the public informational meeting and hearing. EPA sent out notices to over 800 people, advertised the meeting in the local paper and sent out press releases to local radio stations. We will make sure that you are on our mailing list and receive all future planned mailings and notices of any future public hearings.

2.1.7 Mr. Rusinoski

Mr. Rusinoski provided oral comments at the public hearing and written comments in a letter dated September 14, 1998. Mr. Rusinoski does not agree with EPA's Proposed Plan. Mr. Rusinoski believes a better approach is to deposit the Hot Spot sediments in a lined cofferdam which could be used in the construction of a pier or wharf north and east of Fairhaven Hardware, on the New Bedford and Fairhaven bridge.

EPA Response

EPA believes that transporting the Hot Spot sediments to an off-site landfill provides greater long-term protection of human health and the environment than the approach suggested by Mr. Rusinoski. Although the construction of a pier or a wharf was not discussed with the Forum and the community, on-site containment was discussed and is one of the alternatives that EPA evaluated in the December 1997 Hot Spot Feasibility Study Addendum Report. On-site containment is not acceptable to the Forum and the majority of public comments received support off-site landfilling.

2.1.8 Ms. Sanz

Ms. Sanz submitted written comments in a letter to EPA dated September 23, 1998. She stated:

"As a citizen member of the New Bedford Harbor Superfund Community Forum, I

am extremely disappointed in the Forum's recommendation to the EPA. The Forum followed the process we all agreed upon to find a technology, alternative to on-site incineration, which would clean up the hot spot material stored in a CDF. Viable alternatives were found after lengthy and costly treatability studies. But at the very last moment and after no study of landfill, the majority decision was to recommend landfill, a decision, I believe, that was forced by the political motives of some members of the Forum.

The Forum process worked in general, and my hope now is that what was learned from both the process and the technology studies will be applied to other Superfund sites across the country."

EPA Response

As stated above in EPA's response to Ms. Kirk's comments, we are also disappointed that we could not find a on-site treatment technology that is acceptable to the community. EPA does not agree with the comment that landfilling received no study. The Proposed Plan, off-site landfilling, was evaluated in the December 1997 Feasibility Study Addendum Report and discussed and compared against the other alternatives at several of the Forum meetings.

2.1.9 Mr. Simmons

Mr. Simmons provided oral comments and submitted written comments at the public hearing. He read a comment letter submitted by a Mr. Barret. A summary of Mr. Barret's comments and EPA's response is provided above in section 2.1.1. Mr. Simmons also read a comment letter submitted by a Ms. And Mr. Sylvia. A summary of Ms. And Mr. Sylvia's comments and EPA's response is provided below in section 2.1.11. Mr. Simons provided comments on behalf of Hands Across the River Coalition. Hands Across the River is generally supportive of the Proposed Plan. But, they request that the sediments be transported out of New Bedford via rail utilizing the New Bedford rail yard and that the sediments be transported to a landfill in the state of Nevada. He also stated that:

"I think in my opinion, aside from Hands Across the River, that everything that we've looked at, the safest, fastest, cheapest, best way to go would be by rail to a desert facility to get this stuff out of here as fast as possible. And I also think in my opinion if that is done that Phase II would move a lot faster and we might find something out from this endeavor that might help us in Phase II."

EPA Response

EPA appreciates your support for the Proposed Plan. Your comments regarding the use of the New Bedford rail yard and the location of the off-site landfill are addressed in EPA's

response to Mr. Barrett's and Mr. Kopcych's comments. In summary, the means of transportation and the location of the off-site landfill will be decided during the competitive bidding process.

2.1.10 Ms. Sousa

Ms. Sousa provided oral comments at the public hearing. Ms. Souza expressed no objections to the Proposed Plan. Ms. Sousa's congratulated the EPA and the Forum for their efforts. She stated:

> **"There are many years and much to do ahead of us, but we as a community of Southeastern Massachusetts have spoken to the government and the government has listened to us. Thank you."**

EPA Response

EPA appreciates your support for the Proposed Plan.

2.1.11 Mr. Sylvia

Mr. Sylvia provided oral comments and a comment letter (presented by Mr. Simmons) at the public hearing. Mr. Sylvia's oral comments support the Proposed Plan. He prefers that the sediments be transported by rail to Nevada. Mr. Sylvia's written comments also support the Proposed Plan and his letter included a petition signed by over 400 people. The petition reads:

> **"The undersigned respectfully asks that the New Bedford Harbor-Superfund Forum members recommend that the contaminated soils at the Sawyer St. site be dewatered and the remaining sediment be transported by rail to a permitted landfill as far from New Bedford as possible, and that the clean-up of the railroad terminal in New Bedford proceed in conjunction with this remedy."**

EPA Response

The EPA appreciates your support for the Proposed Plan. Your comment regarding transportation by rail is addressed in EPA's response to Mr. Barrett's, Mr. Kopcych's, and Mr. Simmons' comments. The New Bedford railroad terminal is not part of the New Bedford Harbor Superfund Site and is being addressed by the Massachusetts Department of Environmental Protection under State cleanup standards.

2.2 Local Government Comments

2.2.1 Mayor Kalisz, Mayor of New Bedford

Mayor Kalisz submitted a letter dated September 22, 19998 which supports the Proposed Plan. In his letter he also stated that EPA should carefully consider the feasibility of shipping these sediments via rail from the City to the off-site disposal location. He also asks that the EPA, through all means possible, make every effort to employ local businesses and residents on this, and all future cleanup efforts in New Bedford. There is a skilled workforce in New Bedford, and there are local businesses that could aid in this process.

EPA Response

EPA appreciates Mayor Kalisz's support for the Proposed Plan. Your comments regarding the use of the New Bedford rail yard is addressed in EPA's response to Mr. Barrett's and Mr. Kopcych's comments. In summary, the means of transportation and the location of the off-site landfill will be decided during the competitive bidding process.

EPA supports the goal of using local labor to the maximum extent practicable. EPA will not be directly responsible for hiring during the cleanup. However, we will continue to work with the U.S. Army Corps of Engineers, their contractors and the City toward the goal of using local labor. EPA has asked the City council to provide us with a list of local contractors that could possibly be used during the harbor cleanup. Contractors on this list may be notified by the Corps of Engineers and their contractors of job opportunities during the harbor cleanup.

2.2.2 Councilman Rogers, New Bedford

Councilman Rogers provided oral comments at the public hearing. Councilman Rogers "wholeheartedly" endorses the Proposed Plan. Councilman Rogers encourage EPA to use local labor and if possible ship the material out of New Bedford by rail. Councilman Rogers also recommends that a location remote to any community be chosen as the off-site disposal location and suggests that a Nevada landfill be selected.

EPA Response

EPA appreciates Councilman Roger's support for the Proposed Plan. EPA supports the goal of using local labor to the maximum extent practicable. EPA will not be directly responsible for hiring during the cleanup. However, we will continue to work with the U.S. Army Corps of Engineers, their contractors and the City toward the goal of using local labor. EPA has asked the City council to provide us with a list of local contractors that could possibly be used during the harbor cleanup. Contractors on this list may be notified by the Corps of

Engineers and their contractors of job opportunities during the harbor cleanup.

Your comments regarding the use of the New Bedford rail yard is addressed in EPA's response to Mr. Barrett's and Mr. Kopcych's comments. In summary, the means of transportation and the location of the off-site landfill will be decided during the competitive bidding process.

2.3 State Government Comments

2.3.1 Commonwealth of Massachusetts, Executive Office of Environmental Affairs, Department of Environmental Protection

The Commonwealth submitted written comments on the Proposed Plan in a letter dated September 24, 1998. The Commonwealth reserves its concurrence of the amended Record of Decision until all public comments have been received and reviewed. However, the DEP has the following comments on the Proposed Plan.

1. The DEP appreciates the EPA's efforts in participating in the New Bedford Harbor Community Forum in an attempt to gain a consensus on the final resolution for the Hot Spot sediments. Both the DEP and EPA reached basically the same conclusion regarding a preference for treatment of the Hot Spot material. However, the Forum's consensus was the off-site landfilling alternative in the Proposed Plan. The DEP will accept this alternative pending review of the comments received during the comment period.

2. While the DEP will support the off-site landfilling option, if supported by the public, it is disappointing that a treatment option was not selected. Both conventional and innovative destruction technologies are readily available and were reviewed by the Forum. While the difficulties in treatment of all the contamination at the Site are insurmountable, the original intent of having the Hot Spot Operable unit was to treat the most highly contaminated material. The Hot Spot contains about 45% of the total PCBs at the Site in about 15,000 cubic yards of highly contaminated sediment. It is the DEP's opinion that there are on-site and off-site treatment options that can be implemented in a manner protective of both human health and the environment which would result in destruction of the PCBs and therefore a better long term outcome.

EPA Response

The EPA appreciates and agrees with DEP's comments. We also believe that an on-site treatment option could have been safely implemented.

2.4 Congressional Comments

2.4.1 Congressman Frank

Congressman Frank prepared written comments dated September 16, 1998 which were read by Ms. Elsie Sousa at the public hearing. Congressman Frank's comments are as follows:

First:

Concerning the clean up alternatives for the Hot Spot sediments, I support the proposed changes to the 1990 clean up plan which were generated by discussions in the Forum.

EPA Response:

EPA appreciates Congressman Frank"s support for the Proposed Plan.

Second:

It is my very strong belief that it is in the best interests of the harbor, and of the community as a whole, for the Record of Decision on Phase II of the Clean Up be expedited, so that it is published as quickly as is allowable.

EPA Response

The Record of Decision on Phase II was signed on September 25, 1998.

Third:

I want to take this opportunity to state that I support the linkage of navigational dredging with Superfund dredging wherever possible.

EPA Response:

EPA also supports the linkage of navigational dredging with Superfund dredging wherever possible. EPA will cooperate with the Commonwealth of Massachusetts and the City of New Bedford in its efforts to implement an effective and timely navigational dredging program. It should be noted that the opportunities for linkage exists with the Phase II cleanup, not the Hot Spot cleanup.

Finally:

I strongly support the development of a more comprehensive process for ensuring that local residents receive hiring preference over non local residents for jobs created as a result of the clean up.

EPA Response

EPA supports the goal of using local labor to the maximum extent practicable. EPA will not be directly responsible for hiring during the cleanup. However, we will continue to work with the U.S. Army Corps of Engineers, their contractors and the City toward the goal of using local labor. EPA has asked the City council to provide us with a list of local contractors that could possibly be used during the harbor cleanup. Contractors on this list may be notified by the Corps of Engineers and their contractors of job opportunities during the harbor cleanup.

2.5 AVX Corporation's Comments

AVX Corporation, one of the settling parties involved in Site-related litigation, submitted written comments in a letter to EPA dated September 25, 1998. The AVX comments consisted of four parts: Part I is titled "Consent Decree Reopeners Are Not Available"; Part II is titled "The Proposed ROD Amendment's Cleanup Plan Is Likely to Cost More and Take Longer Than Now Estimated"; Part III is titled "The Proposed ROD Amendment Fails to Evaluate Comparative Risk"; and Part IV is titled "Now Is the Time for EPA to Learn From the OU1 Experience and Reconsider the Plan for the Rest of the New Bedford Harbor."

AVX requested that their comments be included in the Administrative Record for both OU1 and OU2. EPA will include these comments in the Administrative Record for the Hot Spot Operable Unit (OU2). However, since these comments were received long after the public comment period for OU1 ended, they will not be added to the OU1 Administrative Record.

2.5.1 Part I (Consent Decree Reopeners Are Not Available)

AVX Comment #1

The definition of "Remedial Costs" in the Consent Decree entered by the United States District Court for the District of Massachusetts in Civil Action No. 83-3882-Y excludes "any increase in costs resulting from any amendments to the RODS" for the first and second operable units at the New Bedford Harbor Site. AVX believes that they should not be subject to any future efforts to seek additional reimbursement of costs for this Amended ROD.

EPA Response

While EPA understands AVX's concern about future government demands for reimbursement for costs associated with this Amendment to the Hot Spot Rod, this document is not the forum for interpreting the provisions of the Consent Decree. The remedy selection process is based on the nine criteria of the NCP, one of which is a consideration of the cost of the remedy. However, the source of funding for the remedy is not part of the cost criteria.

2.5.2 Part II (The Proposed ROD Amendment's Cleanup Plan Is likely to Cost More and Take Longer Than Now Estimated)

AVX Comment #1

EPA has consistently underestimated the costs and time required to implement the work at the New Bedford Harbor Superfund Site.

EPA Response

AVX claims that EPA spent $33,700,000 on dredging. The costs which EPA incurred were for much more than dredging the Hot Spot sediments. EPA incurred costs associated with the design of the entire remedy including dredging and incineration of the sediments, all site upgrades in preparation of dredging and incineration, award and subsequent cancellation of the remedial action contract for incineration, construction and operation of the waste water treatment plant, modifications to the CDF for interim storage of the Hot Spot sediments, dredging of the sediments, environmental monitoring during dredging, and continued operations and maintenance of the Sawyer Street CDF since 1995. EPA admits that the number of days to dredge the sediments were significantly greater than originally estimated and the total project costs were also significantly greater than originally estimated. As AVX pointed out, the intended accuracy of EPA's original estimate was +50%/-30%, which means that the original estimate could be low by as much as 50%. A significant portion of the total project delays and increased costs were due to delays associated with the post ROD, congressionally supported public opposition to the incineration component of the original remedy. This public opposition could not have been predicted at the time the ROD was released in 1990.

AVX Comment #2

EPA's present selection of a comparatively low cost remedial option for OU1 suggests an effort to avoid unnecessary costs and to limit the grossly protracted schedule, but AVX's and the public's confidence in EPA was long ago lost due to the indefensible escalation of costs, extension of time and erratic remedy selection process. AVX believes that EPA's track record at the New Bedford Harbor Superfund Site strongly suggests the great likelihood of further cost increases and scheduling extensions, which EPA should consider now, rather than later.

EPA Response

EPA's selection of off-site landfilling was based on a comparative analysis of eleven remedial options using the nine NCP criteria. Cost was only one of the nine NCP criteria. EPA's rationale for selecting the off-ste landfilling option was presented in the August 1998 Proposed Plan. Off-site landfilling was also the consensus decision of the Community Forum which was established in late 1993 to help regain the public's trust. The EPA is confident in the

public's support for the Proposed Plan and EPA is confident that off-site landfilling can be completed in the two year estimate and that the cost estimate is within the +50%/-30% range.

2.5.3 Part III (The Proposed ROD Amendment Fails to Evaluate Comparative Risk)

AVX commented that it appears that EPA's Hot Spot Feasibility Study Addendum (December 1997) does not include an evaluation of the risk associated with implementation of the Proposed ROD Amendment, i.e., transporting the Hot Spot sediments off site and placing them in a landfill. AVX commented further that since trucks will be operating in an urban environment for at least two years and driving collectively thousands of miles over public highways, and since large volumes of contaminated sediments will be placed in a landfill, it is extremely important to evaluate the incremental risk to the public. It could be that the risk to the public from these relatively risky operations would exceed the risks associated with leaving the Hot Spot sediments in place.

EPA Response

EPA discussed the risks associated with the Proposed ROD Amendment in Section 6.2.10 of the December 1997 Hot Spot Feasibility Study Addendum and in the August 1998 Proposed Plan.

The off-site transportation of dewatered sediments may be accomplished using trucks or a combination of trucks and rail. It has been approximated that seven trucks per day, five days per week will enter and leave the site for a period of six months to a year, not two years. EPA does not consider of transportation of the dewatered Hot Spot sediment via truck or rail and disposal in a TSCA permitted chemical waste landfill to be relatively risky operations. These activities are routine. EPA believes that the continued storage of the Hot Spot sediments in the Sawyer Street CDF will pose a greater potential future risk to the public health and the environment than any risk associated with off-site transportation and disposal.

2.5.4 Part IV (Now Is the Time for EPA to Learn From the OU1 Experience and Reconsider the Plan for the Rest of the New Bedford Harbor)

AVX's comments in this section appear to be primarily focused on EPA's cleanup plan for the Upper and Lower Harbor Operable Unit, not the Hot Spot Operable Unit. AVX refers to the plan for the rest of the harbor as OU2. For the record, the Hot Spot Operable Unit is OU2 and the Upper and Lower Harbor Operable Unit is OU1. AVX commented that in its selection of the OU2 remedy (actually OU1, see preceding sentence) should not repeat the errors made patent by the Hot Spot remedy and its selection (including its modification and amendment).

EPA Response

AVX had ample opportunity to comment on the Upper and Lower Harbor cleanup plan during the formal public comment period for that operable unit and, in fact, did submit many comments to EPA during the Upper and Lower Harbor comment period. EPA will not respond to these comments to the OU1 cleanup plan in this OU2 Responsiveness Summary.

Appendix B - Administrative Record Index

New Bedford Harbor Superfund Site
Amended Record of Decision for the Hot Spot Sediments

New Bedford Harbor Hot Spot Operable Unit

NPL Site

Administrative Record
for the Amended Record of Decision

Index

Compiled: April 22, 1999

Prepared by
EPA New England
Office of Site Remediation & Restoration

With Assistance from
ads
2070 Chain Bridge Road
Vienna, VA 22182

Introduction

This document is the Index to the Administrative Record for the Amended Record of Decision at the New Bedford Harbor Superfund Site Hot Spot Operable Unit. The citations in the Index are for those documents that EPA relied upon in selecting a response action at the Site. Site-specific documents are cited in Section I of the Index, and EPA guidance documents are cited in Section II. Documents cited in Section I of the Index are ordered by the Documents Number that appears at the end of each citation.

The Administrative Record is available for public review at the EPA Region I Superfund Records Center, One Congress Street, Boston, MA 02114 [(617) 918-1440], and Wilkes Library, 1911 Acushnet Avenue, New Bedford, MA 02740. Please note that this Administrative Record also includes documents from Administrative Records for this Site that were issued on April 6, 1990, April 27, 1992, October 30, 1995 and September 25, 1998. EPA guidance documents cited in Section II are available for review only at the EPA Region I Superfund Records Center. The Staff of the EPA Region I Superfund Records Center recommends that you set up an appointment prior to your visit.

Questions concerning the Administrative Record should be addressed to the Project Manager for the New Bedford Harbor Superfund Site Hot Spot Operable Unit.

An Administrative Record is required by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA).

ADMINISTRATIVE RECORD INDEX
NEW BEDFORD HARBOR
HOT SPOT OPERABLE UNIT

04.01 FEASIBILITY STUDY - CORRESPONDENCE

Title:	Concerning Approval to Dispose PCBs.		
Addressee:	DR. NEIL L. DROBNY - COMMODORE REMEDIATION TECHNOLOGIES, INC.		
Authors:	JOHN W. MELONE - EPA-HEADQUARTERS		
Date:	March 7, 1996		
Format:	LETTER	No. Pgs:	5
AR No.	04.01.1	Document No.	000064

Title:	Request from Molten Metal Technology to Deploy its Catalytic Extraction Processing System in Order to Process PCB Sediment.		
Addressee:	THEODORE NIXON - EBASCO SERVICES INC		
Authors:	VICTOR GATTO - MOLTEN METAL TECHNOLOGY INC.		
Date:	March 8, 1996		
Format:	LETTER	No. Pgs:	1
AR No.	04.01.2	Document No.	000135

Title:	Letter Concerning the Shipment of a Few Gallons of Sediment to Commodore's Ohio Facility.		
Addressee:	DAVE DICKERSON - EPA - REGION I		
Authors:	O.M. JONES, JR. - COMMODORE SOLUTION TECHNOLOGIES, INC.		
Date:	November 1, 1996		
Format:	LETTER	No. Pgs:	5
AR No.	04.01.3	Document No.	000134

Title:	Recommendation That a New Commodore Technology Be Used to Treat Hot Spot Sediments.		
Addressee:	DAVE DICKERSON - EPA - REGION I		
Authors:	O.M. JONES, JR. - COMMODORE SOLUTION TECHNOLOGIES, INC.		
Date:	November 15, 1996		
Format:	LETTER	No. Pgs:	1
AR No.	04.01.4	Document No.	000110

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Title: Conditional Approval to Commodore to Address Untreated Sediment from the Hot Spot Confined Disposal Facility.
Addressee: O.M. JONES, JR. - COMMODORE SOLUTION TECHNOLOGIES, INC.
Authors: DAVE DICKERSON - EPA - REGION I
Date: January 24, 1997
Format: LETTER No. Pgs: 1
AR No. 04.01.5 Document No. 000109

Title: Authorization to Commodore to Use Its Ultrafiltration Unit.
Addressee: DR. NEIL L. DROBNY - COMMODORE REMEDIATION TECHNOLOGIES, INC.
Authors: JOHN W. MELONE - EPA-HEADQUARTERS
Date: June 9, 1997
Format: LETTER No. Pgs: 14
AR No. 04.01.6 Document No. 000108

Title: Discussion of SET Process and Its Ability to Remediate Contaminated New Bedford Harbor Sediments.
Addressee: NEW BEDFORD HARBOR SUPERFUND FORUM
Authors: PAUL E. HANNESSON - COMMODORE SOLUTION TECHNOLOGIES, INC.
Date: October 15, 1997
Format: LETTER No. Pgs: 1
AR No. 04.01.7 Document No. 000107

Title: Issues Concerning ETHEC's Process for On-Site Remediation of Contaminated New Bedford Harbor Sediments.
Addressee: JIM BROWN - EPA - REGION I
Authors: WILL N. CLURMAN, ALEXANDER GURFINKEL - ETHEC, INC.
Date: January 9, 1998
Format: LETTER No. Pgs: 1
AR No. 04.01.8 Document No. 000106

Title: Retention of One of Four Drums of New Bedford Harbor Sludge by Commodore.
Addressee: JIM BROWN - EPA - REGION I
Authors: GLEN JONES - COMMODORE SOLUTION TECHNOLOGIES, INC.
Date: March 10, 1998
Format: LETTER No. Pgs: 1
AR No. 04.01.9 Document No. 000105

Title: Commodore's PCB Permits.
Addressee: HARLEY LAING - EPA - REGION I
Authors: RAYBURN HANZLIK - COMMODORE SOLUTION TECHNOLOGIES, INC.
Date: May 21, 1998
Format: LETTER No. Pgs: 3
AR No. 04.01.10 Document No. 000063

Title: Authorization to Destroy Waste Oils Containing PCBs.
Addressee: VINCE VALERI - COMMODORE APPLIED TECHNOLOGIES, INC.
Authors: JOHN W. MELONE - EPA-HEADQUARTERS
Date: May 29, 1998
Format: LETTER No. Pgs: 38
AR No. 04.01.11 Document No. 000062

Title: Certificate of Destruction Regarding Three of Four Drums of New Bedford Harbor Sludge.
Addressee: JIM BROWN - EPA - REGION I
Authors: GLEN JONES - COMMODORE APPLIED TECHNOLOGIES, INC.
Date: June 23, 1998
Format: LETTER No. Pgs: 9
AR No. 04.01.12 Document No. 000061

04.03 FEASIBILITY STUDY - SCOPES OF WORK

Title: New Bedford Harbor Treatability Study Scope of Work.
Addressee: KATHLEEN HUNT
Authors: DAVE DICKERSON - EPA - REGION I
Date: January 1995
Format: REPORT, STUDY No. Pgs: 19
AR No. 04.03.1 Document No. 000184

04.04 FEASIBILITY STUDY - INTERIM DELIVERABLES

Title:	Draft Work Plan, New Bedford Harbor RI/FS, Hot Spot Sediment Treatability Studies, New Bedford, Massachusetts.		
Addressee:	EPA - REGION I		
Authors:	EBASCO SERVICES INC		
Date:	February 1995		
Format:	REPORT, STUDY	No. Pgs:	153
AR No.	04.04.1	Document No.	000111

Title:	Massachusetts Department of Environmental Protection Review of Draft Work Plan - Treatability Studies.		
Addressee:	DAVE DICKERSON - EPA - REGION I		
Authors:	JAY NAPARSTEK - MA DEPT OF ENVIRONMENTAL PROTECTION		
Date:	February 24, 1995		
Format:	LETTER	No. Pgs:	4
AR No.	04.04.2	Document No.	000185

Title:	Draft Field Operations Plan - Pilot Scale Treatability Studies (Vol. I - Overall Pilot Scale Test Program.)		
Addressee:	FOSTER WHEELER ENVIRONMENTAL CORPORATION		
Authors:	EBASCO SERVICES INC		
Date:	March 1996		
Format:	REPORT, STUDY	No. Pgs:	73
AR No.	04.04.3	Document No.	000099

Title:	Draft Field Operations Plan - Pilot Scale Treatability Studies (Vol. II - Ionics RCC Detailed Demonstration Plan.)		
Addressee:	FOSTER WHEELER ENVIRONMENTAL CORPORATION		
Authors:	EBASCO SERVICES INC		
Date:	March 1996		
Format:	REPORT, STUDY	No. Pgs:	111
AR No.	04.04.4	Document No.	000100

Title: Review Draft - Field Operations Plan - Pilot Scale Treatability Studies - (Volume II of V - Ionics RCC Detailed Demonstration Plan.
Authors: FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: May 1996
Format: REPORT, STUDY No. Pgs: 168
AR No. 04.04.5 Document No. 000101

Title: Site Specific Safety & Health Plan - Pilot-Scale Treatability Studies - (Vol. V of V - Overall Pilot-Scale Test Program.)
Authors: FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: May 1996
Format: REPORT, STUDY No. Pgs: 247
AR No. 04.04.6 Document No. 000102

Title: Field Laboratory Technical Systems Audit Report.
Addressee: DAVE DICKERSON - EPA - REGION I
Authors: ANN JEFFERIES, NORA CONLON - EPA-ENVIRO MEASUREMENT & EVALUATION
Date: June 21, 1996
Format: MEMORANDUM No. Pgs: 4
AR No. 04.04.7 Document No. 000160

Title: Field Operations Plan - Pilot Scale Treatability Studies - (Vol. III of V - Geosafe Detailed Demonstration Plan.)
Authors: FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: July 1996
Format: REPORT, STUDY No. Pgs: 431
AR No. 04.04.8 Document No. 000104

Title: Comments on the Draft Volume III of the New Bedford Hot Spot Treatability Study Field Operations Plan.
Addressee: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Authors: ROBERT G. CIANCIARULO - EPA - REGION I
Date: July 11, 1996
Format: LETTER No. Pgs: 18
AR No. 04.04.9 Document No. 000159

Title: New Bedford Risk Assessment.
Addressee: NEW BEDFORD ARCS PERSONNEL
Authors: PETER W. VERNON - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: September 19, 1996
Format: MEMORANDUM No. Pgs: 4
AR No. 04.04.10 Document No. 000158

Title: New Bedford Harbor Pilot-Scale Treatability Study Project Schedule and Review of Draft SAIC Project Plans.
Addressee: ARTHUR SHATTUCK - SCIENCE APPLICATIONS INTERNATIONAL CO.
Authors: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: October 2, 1996
Format: LETTER No. Pgs: 15
AR No. 04.04.11 Document No. 000157

Title: Field Operations Plan - Pilot Scale Treatability Studies - (Vol. IV of V - SAIC/ECO Logic Detailed Demonstration Plan.)
Authors: FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: November 1996
Format: REPORT, STUDY No. Pgs: 485
AR No. 04.04.12 Document No. 000103

Title: New Bedford RI/FS Response to EPA and DEP Comments on the Draft Volume IV - Field Operations Plan.
Addressee: DAVE DICKERSON - EPA - REGION I
Authors: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: November 27, 1996
Format: LETTER No. Pgs: 15
AR No. 04.04.13 Document No. 000156

Title: New Bedford Harbor RI/FS Response to Sea Change Comments on the Draft Volume IV - Field Operations Plan.
Addressee: DAVE DICKERSON - EPA - REGION I
Authors: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: December 5, 1996
Format: LETTER No. Pgs: 18
AR No. 04.04.14 Document No. 000155

Title: Third ISV Treatability Test at New Bedford Harbor.
Addressee: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Authors: DALE M. TIMMONS - GEOSAFE CORPORATION
Date: January 23, 1997
Format: LETTER No. Pgs: 3
AR No. 04.04.15 Document No. 000154

Title: Comments on January 1997 Draft RCC/CRTI Test Report.
Addressee: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Authors: DAVE DICKERSON - EPA - REGION I
Date: January 28, 1997
Format: LETTER No. Pgs: 1
AR No. 04.04.16 Document No. 000153

Title: Pilot Scale Treatability Testing of the In Situ Vitrification Technology.
Addressee: FOSTER WHEELER ENVIRONMENTAL CORPORATION
Authors: GEOSAFE CORPORATION
Date: February 10, 1997
Format: REPORT, STUDY No. Pgs: 166
AR No. 04.04.17 Document No. 000131

Title: Response to Comments on Draft Report.
Addressee: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Authors: DALE M. TIMMONS - GEOSAFE CORPORATION
Date: February 10, 1997
Format: LETTER No. Pgs: 5
AR No. 04.04.18 Document No. 000152

Title: Test Report for On Site Pilot Scale Demonstration Testing of the B.E.S.T. Solvent Extraction Process and Solvated Electron Technology.
Addressee: FOSTER WHEELER ENVIRONMENTAL CORPORATION.
Authors: IONICS RESOURCES CONSERVATION COMPANY
Date: March 1997
Format: REPORT, STUDY No. Pgs: 160
AR No. 04.04.19 Document No. 000132

Title: Follow-Up to ISV Treatbility Test at New Bedford.
Addressee: DAVE DICKERSON - EPA - REGION I
Authors: DALE M. TIMMONS - GEOSAFE CORPORATION
Date: March 20, 1997
Format: LETTER No. Pgs: 12
AR No. 04.04.20 Document No. 000151

Title: Final Report - On Site Pilot Scale Testing of the ECO LOGIC Process.
Addressee: FOSTER WHEELER ENVIRONMENTAL CORPORATION
Authors: SCIENCE APPLICATIONS INTERNATIONAL CO.
Date: May 15, 1997
Format: REPORT, STUDY No. Pgs: 184
AR No. 04.04.21 Document No. 000133

Title: New Bedford Harbor RI/FS, Hot Spot Treatability Studies, SAIC/ECO Logic-Vendor Report of Pilot Study Testing.
Addressee: DAVE DICKERSON - EPA - REGION I
Authors: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: May 15, 1997
Format: LETTER No. Pgs: 10
AR No. 04.04.22 Document No. 000150

Title: MA DEP Comments on Hot Spot Treatability Studies, New Bedford Harbor Superfund Site.
Addressee: JIM BROWN - EPA - REGION I
Authors: PAUL CRAFFEY - MA DEPT OF ENVIRONMENTAL PROTECTION
Date: July 8, 1997
Format: LETTER No. Pgs: 5
AR No. 04.04.23 Document No. 000149

Title: Response to Concerns Expressed in Foster Wheeler's March 26, 1997 Letter.
Addressee: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Authors: O.M. JONES, JR. - COMMODORE SOLUTION TECHNOLOGIES, INC.
Date: July 22, 1997
Format: LETTER No. Pgs: 3
AR No. 04.04.24 Document No. 000148

Title: New Bedford Harbor RI/FS Hot Spot Treatability Studies Data Compendium.
Addressee: JIM BROWN - EPA - REGION I
Authors: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: September 25, 1997
Format: LETTER No. Pgs: 3
AR No. 04.04.25 Document No. 000147

Title: Drum and Waste Container Sampling, New Bedford Harbor Superfund Site.
Addressee: U.S. ARMY CORPS OF ENGINEERS
Authors: ROY F. WESTON
Date: March 1998
Format: REPORT, STUDY
AR No. 04.04.26 Document No. 000041

04.06 FEASIBILITY STUDY - FEASIBILITY STUDY REPORTS

Title: New Bedford Harbor Hot Spot Treatibility Study Volume I.
Addressee: EPA - REGION I
Authors: FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: September 1997
Format: REPORT, STUDY
AR No. 04.06.1 Document No. 000113

Title: New Bedford Harbor Hot Spot Treatability Study Data Compendium Volume II.
Addressee: EPA - REGION I
Authors: FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: September 1997
Format: REPORT, STUDY
AR No. 04.06.2 Document No. 000114

Title: New Bedford Harbor Hot Spot Treatability Study Data Compendium Volume III.
Addressee: EPA - REGION I
Authors: FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: September 1997
Format: REPORT, STUDY
AR No. 04.06.3 Document No. 000115

Title: New Bedford Harbor Hot Spot Treatibility Study Data Compendium Volume IV.
Addressee: EPA - REGION I
Authors: FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: September 1997
Format: REPORT, STUDY No. Pgs: 172
AR No. 04.06.4 Document No. 000116

Title: New Bedford Harbor Hot Spot Treatability Study Data Compendium Volume V.
Addressee: EPA - REGION I
Authors: FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: September 1997
Format: REPORT, STUDY No. Pgs: 336
AR No. 04.06.5 Document No. 000117

Title: New Bedford Harbor Hot Spot Treatability Study Data Compendium Volume VI.
Addressee: EPA - REGION I
Authors: FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: September 1997
Format: REPORT, STUDY No. Pgs: 307
AR No. 04.06.6 Document No. 000118

Title: New Bedford Harbor Hot Spot Treatability Study Data Compendium Volume VII.
Addressee: EPA - REGION I
Authors: FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: September 1997
Format: REPORT, STUDY No. Pgs: 469
AR No. 04.06.7 Document No. 000119

Title: New Bedford Harbor Hot Spot Treatability Study Data Compendium Volume VIII.
Addressee: EPA - REGION I
Authors: FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: September 1997
Format: REPORT, STUDY No. Pgs: 235
AR No. 04.06.8 Document No. 000120

Title: New Bedford Harbor Hot Spot Treatability Study Data Compendium Volume IX.
Addressee: EPA - REGION I
Authors: FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: September 1997
Format: REPORT, STUDY No. Pgs: 412
AR No. 04.06.9 Document No. 000121

Title: New Bedford Harbor Hot Spot Treatability Study Data Compendium Volume X.
Addressee: EPA - REGION I
Authors: FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: September 1997
Format: REPORT, STUDY No. Pgs: 303
AR No. 04.06.10 Document No. 000122

Title: Announcing the Results of a Revised Test of the SET Process on Hot Spot Sediments.
Addressee: NEW BEDFORD HARBOR SUPERFUND FORUM
Authors: PAUL E. HANNESSON - COMMODORE SOLUTION TECHNOLOGIES, INC.
Date: October 15, 1997
Format: LETTER No. Pgs: 1
AR No. 04.06.11 Document No. 000145

Title: Comments on Draft Feasibility Study Addendum Hot Spot Operable Unit.
Addressee: JIM BROWN - EPA - REGION I
Authors: PAUL CRAFFEY - MA DEPT OF ENVIRONMENTAL PROTECTION
Date: November 13, 1997
Format: LETTER No. Pgs: 4
AR No. 04.06.12 Document No. 000144

Title: Comments on Draft New Bedford Harbor Hot Spot Feasibility Study Addendum.
Addressee: JIM BROWN - EPA - REGION I
Authors: DALE M. TIMMONS - GEOSAFE CORPORATION
Date: November 19, 1997
Format: LETTER No. Pgs: 8
AR No. 04.06.13 Document No. 000143

Title: Comments on the Foster Wheeler Draft New Bedford Harbor Hot Spot Feasibility Study Addendum.
Addressee: JIM BROWN - EPA - REGION I
Authors: ARTHUR SHATTUCK - SCIENCE APPLICATIONS INTERNATIONAL CO.
Date: November 26, 1997
Format: LETTER No. Pgs: 35
AR No. 04.06.14 Document No. 000142

Title: Draft Final New Bedford Harbor Hot Spot Feasibility Study Addendum.
Addressee: EPA - REGION I
Authors: FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: December 1997
Format: REPORT, STUDY
AR No. 04.06.15 Document No. 000112

Title: Comments on Draft Final Feasibility Study Addendum, Hot Spot Operable Unit, New Bedford Superfund Site.
Addressee: JIM BROWN - EPA - REGION I
Authors: PAUL CRAFFEY - MA DEPT OF ENVIRONMENTAL PROTECTION
Date: June 15, 1998
Format: LETTER No. Pgs: 5
AR No. 04.06.16 Document No. 000146

04.07 FEASIBILITY STUDY - WORK PLANS & PROGRESS REPORTS

Title: New Bedford Harbor OU3 RI/FS Scoping Acknowledgement Letter Hot Spot Sediment Treatability Studies.
Addressee: DAVE DICKERSON - EPA - REGION I
Authors: ALAN FOWLER - EBASCO SERVICES INC
Date: February 1, 1995
Format: LETTER No. Pgs: 9
AR No. 04.07.1 Document No. 000181

Title: Scoping Ackowledgement Letter - Hot Spot Sediment Treatability Studies.
Addressee: DAVE DICKERSON - EPA - REGION I
Authors: ALAN FOWLER - EBASCO SERVICES INC
Date: February 1, 1995
Format: LETTER No. Pgs: 8
AR No. 04.07.2 Document No. 000186

Title: New Bedford Harbor - Hot Spot Treatability Studies Draft Work Plan and Cost Estimate.
Addressee: KATHLEEN HUNT - EPA - REGION I
Authors: ALAN FOWLER - EBASCO SERVICES INC
Date: March 24, 1995
Format: LETTER No. Pgs: 2
AR No. 04.07.3 Document No. 000180

Title: New Bedford Harbor RI/FS Hot Spot Treatability Studies Work Plan Amendment No. 1.
Addressee: KATHLEEN HUNT - EPA - REGION I
Authors: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: April 26, 1996
Format: LETTER No. Pgs: 2
AR No. 04.07.4 Document No. 000179

Title: Technical Direction for Additional Work - Job Change No. 01.
Addressee: THOMAS J. ABDELLA - ROY F. WESTON
Authors: MAURICE BEAUDOIN - U.S. ARMY CORPS OF ENGINEERS
Date: May 6, 1996
Format: LETTER No. Pgs: 3
AR No. 04.07.5 Document No. 000178

Title: Notification of Delay and Request for Contract Change Order.
Addressee: THEODORE NIXON - EBASCO SERVICES INC
Authors: WILLIAM F. HEINS - RESOURCES CONSERVATION COMPANY
Date: May 30, 1996
Format: LETTER No. Pgs: 3
AR No. 04.07.6 Document No. 000177

Title: New Bedford Harbor RI/FS Treatability Study Activities and Schedule.
Addressee: DAN SHEA - ST. LUKES HOSPITAL
Authors: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: July 12, 1996
Format: LETTER No. Pgs: 1
AR No. 04.07.7 Document No. 000176

Title: New Bedford RI/FS Limitation of Cost Notice.
Addressee: LINDA BYRNE - EPA - REGION I
Authors: MARK TUCKER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: August 12, 1996
Format: LETTER No. Pgs: 1
AR No. 04.07.8 Document No. 000175

Title: New Bedford Harbor RI/FS Treatability Studies Geosafe Corporation Testing Program Utility Support Requirements.
Addressee: MAURICE BEAUDOIN - U.S. ARMY CORPS OF ENGINEERS
Authors: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: August 16, 1996
Format: LETTER No. Pgs: 2
AR No. 04.07.9 Document No. 000174

Title: New Bedford Harbor RI/FS OU3 Treatability Study Request for Additional Information.
Addressee: LINDA BYRNE - EPA - REGION I
Authors: MARK TUCKER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: September 4, 1996
Format: LETTER No. Pgs: 4
AR No. 04.07.10 Document No. 000173

Title: New Bedford Harbor RI/FS OU3 Treatability Study Request for Additional Information.
Addressee: LINDA BYRNE - EPA - REGION I
Authors: MARK TUCKER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: September 10, 1996
Format: LETTER No. Pgs: 2
AR No. 04.07.11 Document No. 000172

Title: Consent to Subcontract with SAIC for the Third Treatability Study.
Addressee: MARK TUCKER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Authors: LINDA BYRNE - EPA - REGION I
Date: September 12, 1996
Format: LETTER No. Pgs: 2
AR No. 04.07.12 Document No. 000171

Title: New Bedford Harbor RI/FS Treatability Studies SAIC Testing Program Support Requirements.
Addressee: MAURICE BEAUDOIN - U.S. ARMY CORPS OF ENGINEERS
Authors: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: September 24, 1996
Format: LETTER No. Pgs: 1
AR No. 04.07.13 Document No. 000170

Title: New Bedford Harbor RI/FS Treatbility Studies SAIC Testing Program Site Lighting Requirements.
Addressee: MAURICE BEAUDOIN - U.S. ARMY CORPS OF ENGINEERS
Authors: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: October 3, 1996
Format: LETTER No. Pgs: 1
AR No. 04.07.14 Document No. 000169

Title: New Bedford Harbor Pilot-Scale Treatability Study Revised Project Schedule.
Addressee: ARTHUR SHATTUCK - SCIENCE APPLICATIONS INTERNATIONAL CO.
Authors: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: October 8, 1996
Format: LETTER No. Pgs: 3
AR No. 04.07.15 Document No. 000168

Title: New Bedford Harbor Pilot-Scale Treatbility Study Outstanding Items for Draft Field Operation Plan.
Addressee: ARTHUR SHATTUCK - SCIENCE APPLICATIONS INTERNATIONAL CO.
Authors: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: October 15, 1996
Format: LETTER No. Pgs: 2
AR No. 04.07.16 Document No. 000167

Title: Deliverables Promised to Foster Wheeler for the New Bedford Project.
Addressee: K. CAMPBELL
Authors: ARTHUR SHATTUCK
Date: October 17, 1996
Format: MEMORANDUM No. Pgs: 1
AR No. 04.07.17 Document No. 000166

Title: New Bedford Harbor Work Plan Amendment No. 2.
Addressee: LINDA BYRNE - EPA - REGION I
Authors: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: October 18, 1996
Format: LETTER No. Pgs: 4
AR No. 04.07.18 Document No. 000165

Title: New Bedford Harbor Pilot Scale Treatability Study Notice to Cure.
Addressee: ROBERT W. LARRICK JR. - SCIENCE APPLICATIONS INTERNATIONAL CO.
Authors: THEODORE NIXON - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: October 28, 1996
Format: LETTER No. Pgs: 3
AR No. 04.07.19 Document No. 000164

Title: New Bedford Harbor RI/FS Work Plan Amendment No. 2, Revised Budget Recap Table and Technical Memorandum.
Addressee: LINDA BYRNE - EPA - REGION I
Authors: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: November 1, 1996
Format: LETTER No. Pgs: 5
AR No. 04.07.20 Document No. 000163

Title: Treatability Study Activities and Schedule.
Addressee: DAN SHEA - ST. LUKES HOSPITAL
Authors: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: November 6, 1996
Format: LETTER No. Pgs: 1
AR No. 04.07.21 Document No. 000141

Title: New Bedford Harbor RI/FS Treatability Study Activities and Schedule.
Addressee: KEN SILVIA - CITY OF NEW BEDFORD
Authors: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: November 6, 1996
Format: LETTER No. Pgs: 1
AR No. 04.07.22 Document No. 000161

Title: New Bedford Harbor Pilot-Scale Treatability Study Notice to Proceed with Field Mobilization.
Addressee: ARTHUR SHATTUCK - SCIENCE APPLICATIONS INTERNATIONAL CO.
Authors: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: November 6, 1996
Format: LETTER No. Pgs: 2
AR No. 04.07.23 Document No. 000162

Title: New Bedford Harbor Treatability Study - Work Assignment #30.
Addressee: HEIDI HORAHAN - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Authors: DAVE DICKERSON - EPA - REGION I
Date: November 14, 1996
Format: MEMORANDUM No. Pgs: 2
AR No. 04.07.24 Document No. 000140

Title: Request for a No-Cost Extension to the Project Schedule and Extended Working Hours During System Integrity Testing.
Addressee: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Authors: ARTHUR SHATTUCK - SCIENCE APPLICATIONS INTERNATIONAL CO.
Date: November 15, 1996
Format: LETTER No. Pgs: 1
AR No. 04.07.25 Document No. 000139

Title: 852 Hours of Proposed "New Scope" in the Work Plan Amendment of 10/18/96.
Addressee: LINDA BYRNE - EPA - REGION I
Authors: DAVE DICKERSON - EPA - REGION I
Date: November 19, 1996
Format: MISCELLANEOUS No. Pgs: 1
AR No. 04.07.26 Document No. 000138

Title: Work Plan Amendment No. 3.
Addressee: LINDA BYRNE - EPA - REGION I
Authors: MARK TUCKER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: February 24, 1997
Format: LETTER No. Pgs: 3
AR No. 04.07.27 Document No. 000137

Title: Work Plan - Scoping for Time Extension and New Tasking.
Addressee: DAVE DICKERSON - EPA - REGION I
Authors: HELEN DOUGLAS - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: June 27, 1997
Format: LETTER No. Pgs: 3
AR No. 04.07.28 Document No. 000136

04.09 FEASIBILITY STUDY - PROPOSED PLANS FOR SELECTED REMEDIAL ACTION

Title: Draft Proposed Plan.
Addressee: JIM BROWN - EPA - REGION I
Authors: DEBORAH M. SIMONE - METCALF & EDDY
Date: July 20, 1998
Format: FACT SHEET, PRESS RELEASE No. Pgs: 14
AR No. 04.09.1 Document No. 000060

Title: Agency Comments on Draft Proposed Plan.
Addressee: JIM BROWN - EPA - REGION I
Authors: PAUL CRAFFEY - MA DEPT OF ENVIRONMENTAL PROTECTION
Date: July 24, 1998
Format: LETTER No. Pgs: 2
AR No. 04.09.2 Document No. 000059

Title: Proposed Plan to Amend the 1990 Cleanup Plan for the New Bedford Harbor Hot Spot Sediments.
Authors: EPA - REGION I
Date: August 1998
Format: FACT SHEET, PRESS RELEASE No. Pgs: 13
AR No. 04.09.3 Document No. 000057

Title: Plano Proposto Emendar o Plano de Limpeza de 1990 dos Sedimentos no 'Hot Spot' do Porto de New Bedford.
Authors: EPA - REGION I
Date: August 1998
Format: FACT SHEET, PRESS RELEASE No. Pgs: 13
AR Nc. 04.09.4 Document No. 000058

05.01 RECORD OF DECISION - CORRESPONDENCE

Title: DEP Concurrence with Proposed Second ESD.
Addressee: DAVE DICKERSON - EPA - REGION I
Authors: MADELINE SNOW - MA DEPT OF ENVIRONMENTAL PROTECTION
Date: March 28, 1995
Format: LETTER No. Pgs: 2
AR No. 05.01.1 Document No. 000194

05.03 RECORD OF DECISION - RESPONSIVENESS SUMMARIES

Title: Comments on the Proposed Plan (Cross Reference to 13.1.).
Addressee: EPA - REGION I
Authors: MANUEL SYLVIA, BERYL SYLVIA
Format: LETTER No. Pgs: 44
AR No. 05.03.1 Document No. 000195

Title: Comments on the Proposed Plan.
Addressee: JIM BROWN - EPA - REGION I
Authors: CLAUDIA JACOBSEN
Date: August 28, 1998
Format: CORRESPONDENCE No. Pgs: 1
AR No. 05.03.2 Document No. 000190

Title: Comments on the Proposed Plan.
Addressee: JIM BROWN - EPA - REGION I
Authors: ROMAN RUSINOSKI
Date: September 14, 1998
Format: CORRESPONDENCE No. Pgs: 2
AR No. 05.03.3 Document No. 000192

Title: Comments on the Proposed Plan.
Addressee: JAMES SIMMONS - HANDS ACROSS THE RIVER COALITION
Authors: DAVE BARRETT
Date: September 16, 1998
Format: MISCELLANEOUS No. Pgs: 1
AR No. 05.03.4 Document No. 000187

Title: Comments on the Proposed Plan.
Addressee: JIM BROWN - EPA - REGION I
Authors: CAROL SANZ - DOWNWIND COALITION
Date: September 23, 1998
Format: LETTER No. Pgs: 1
AR No. 05.03.5 Document No. 000191

Title: Comments on the Proposed Plan.
Addressee: JIM BROWN - EPA - REGION I
Authors: CLAUDIA KIRK
Date: September 24, 1998
Format: LETTER No. Pgs: 2
AR No. 05.03.6 Document No. 000188

Title: Comments on the Proposed Plan.
Addressee: JIM BROWN - EPA - REGION I
Authors: MARY RYAN - NUTTER MC CLENNEN & FISH
Date: September 25, 1998
Format: LETTER No. Pgs: 9
AR No. 05.03.7 Document No. 000193

06.01 REMEDIAL DESIGN - CORRESPONDENCE

Title: Review of the Draft Report on Pilot Scale Incineration of Hot Spot Sediments.
Addressee: KEVIN HOWE - U.S. ARMY CORPS OF ENGINEERS
Authors: GAYLE GARMAN - EPA - REGION I
Date: October 17, 1991
Format: MEMORANDUM No. Pgs: 4
AR No. 06.01.1 Document No. 000125

Title: Comments on the Draft Test Burn Report.
Addressee: KEVIN HOWE - U.S. ARMY CORPS OF ENGINEERS
Authors: PAUL CRAFFEY - MA DEPT OF ENVIRONMENTAL PROTECTION
Date: October 24, 1991
Format: LETTER No. Pgs: 2
AR No. 06.01.2 Document No. 000124

Title: Cover Letter - Submittal of the 100% Design Report.
Addressee: KEVIN HOWE - U.S. ARMY CORPS OF ENGINEERS
Authors: ROBERT FOXEN, JAMES FITZGERALD - ERM-NEW ENGLAND INC.
Date: November 27, 1991
Format: LETTER No. Pgs: 1
AR No. 06.01.3 Document No. 000123

06.04 REMEDIAL DESIGN - REMEDIAL DESIGN DOCUMENTS

Title:	Preliminary Data Summary Report for Evaluating the Incinerability of the New Bedford/Hot Spot Operable Unit at the EPA Incineration Research Facility.		
Addressee:	EPA OFFICE OF R & D - CINICNNATI		
Authors:	ACUREX CORPORATION		
Date:	August 28, 1991		
Format:	REPORT, STUDY	No. Pgs:	96
AR No.	06.04.1	Document No.	000183

Title:	Final Design Analysis.		
Addressee:	U.S. ARMY CORPS OF ENGINEERS		
Authors:	ERM-NEW ENGLAND INC.		
Date:	November 1991		
Format:	REPORT, STUDY	No. Pgs:	606
AR No.	06.04.2	Document No.	000128

Title:	Specifications for Construction Contract - Hazardous Waste Cleanup (Vol. 1 of 2 - Proposal Information - Divisions 1 and 2).		
Authors:	U.S. ARMY CORPS OF ENGINEERS		
Date:	December 1991		
Format:	REPORT, STUDY	No. Pgs:	431
AR No.	06.04.3	Document No.	000126

Title:	Specifications for Construction Project - Hazardous Waste Cleanup (Vol. 2 of 2 Divisions 3 thru 16).		
Authors:	U.S. ARMY CORPS OF ENGINEERS		
Date:	December 1991		
Format:	REPORT, STUDY	No. Pgs:	241
AR No.	06.04.4	Document No.	000127

Title:	Specifications for the Pilot-Scale Incineration.		
Authors:	U.S. ARMY CORPS OF ENGINEERS		
Date:	February 12, 1992		
Format:	REPORT, STUDY	No. Pgs:	257
AR No.	06.04.5	Document No.	000130

06.09 REMEDIAL DESIGN - BID DOCUMENTS

Title: Request for Proposal For Construction Contract New Bedford Harbor/Hot Spot Operable Unit.
Authors: U.S. ARMY CORPS OF ENGINEERS
Date: November 1991
Format: REPORT, STUDY — No. Pgs: 627
AR No. 06.09.1 — Document No. 000129

09.01 STATE COORDINATION - CORRESPONDENCE

Title: Comments on Proposed Plan (Cross Reference to 5.3.).
Addressee: JIM BROWN - EPA - REGION I
Authors: PAUL CRAFFEY - MA DEPT OF ENVIRONMENTAL PROTECTION
Date: September 24, 1998
Format: LETTER — No. Pgs: 2
AR No. 09.01.1 — Document No. 000189

09.10 STATE COORDINATION - STATE TECHNICAL AND HISTORICAL RECORDS

Title: Final Record of Decision for the New Bedford Harbor Hot Spot Operable Unit.
Authors: JOHN DEVILLARS - MASSACHUSETTS OFFICE OF ENVIR. AFFAIRS
Date: December 14, 1990
Format: MISCELLANEOUS — No. Pgs: 5
AR No. 09.10.1 — Document No. 000197
*Attached to Document No. 000196 In 13.01

13.01 COMMUNITY RELATIONS - CORRESPONDENCE

Title: EPA Remedy Selection Process.
Addressee: PETER KOCZERA - TOWN OF ACUSHNET BOARD OF SELECTMAN
Authors: JOHN DEVILLARS - EPA - REGION I
Format: LETTER — No. Pgs: 2
AR No. 13.01.1 — Document No. 000046

Title: Letter of Appreciation for Jane Wells on Serving as a Neutral Facilitator for the New Bedford Harbor Forum.
Addressee: JANE WELLS - MASSACHUSETTS OFFICE OF DISPUTE RESOLUT
Authors: PAUL KEOUGH - EPA - REGION I
Format: LETTER No. Pgs: 1
AR No. 13.01.2 Document No. 000199

Title: Response to the August 31, 1993 Newspaper Article, "What's the Rush to Incinerate? It's Time for EPA to Look Again."
Addressee: STEVE URBON - NEW BEDFORD STANDARD TIMES
Authors: PAUL KEOUGH - EPA - REGION I
Date: September 16, 1993
Format: LETTER No. Pgs: 1
AR No. 13.01.3 Document No. 000200

Title: Response to George Rogers Letter of October 4, 1993 Regarding Hot Spot Remediation - (Cross Reference to 5.3.)
Addressee: GEORGE ROGERS - CITY OF NEW BEDFORD
Authors: DANIEL GREENBAUM - MA DEPT OF ENVIRONMENTAL PROTECTION
Date: October 13, 1993
Format: LETTER No. Pgs: 12
AR No. 13.01.4 Document No. 000196

Title: Letter Which Requests Jonathan Cairns's Support for a Review of Strategies for PCB Cleanup.
Addressee: JOHNATHAN CAIRNS
Authors: HENRY LONGEST - EPA - REGION I
Date: November 12, 1993
Format: LETTER No. Pgs: 1
AR No. 13.01.5 Document No. 000201

Title: Letter Which Requests Claudia Kirk's Support of Strategies for PCB Cleanup.
Addressee: CLAUDIA KIRK - CONCERNED PARENTS OF FAIRHAVEN
Authors: HENRY LONGEST - EPA - REGION I
Date: November 19, 1993
Format: LETTER No. Pgs: 1
AR No. 13.01.6 Document No. 000202

Title: Response to Susan Grace's September 20, 1993 Letter Expressing Opposition to Incineration as an Alternative Technology.
Addressee: SUSAN GRACE
Authors: PAUL KEOUGH - EPA - REGION I
Date: December 23, 1993
Format: LETTER No. Pgs: 1
AR No. 13.01.7 Document No. 000203

Title: Letter Concerning Future Decisions on the New Bedford Harbor Cleanup.
Addressee: DAVID HAMMOND - HANDS ACROSS THE RIVER COALITION
Authors: HARLEY LAING - EPA - REGION I
Date: June 14, 1994
Format: LETTER No. Pgs: 2
AR No. 13.01.8 Document No. 000204

Title: Article Requested by Diana Cobbold of Sea Change on the Long Term Stability and Leaching of ISV Products.
Addressee: DAVE DICKERSON - EPA - REGION I
Authors: ALAN FOWLER - FOSTER WHEELER ENVIRONMENTAL CORPORATION
Date: August 30, 1996
Format: LETTER No. Pgs: 12
AR No. 13.01.9 Document No. 000069

Title: Support Thermal Disorption as a Cleanup Remedy.
Addressee: JOHN DEVILLARS - EPA - REGION I
Authors: JAMES SIMMONS, DANIEL MATTO, MAUREEN SANTOS, ELIZABETH TAYLOR - HANDS ACROSS THE RIVER COALITION
Date: June 13, 1997
Format: LETTER No. Pgs: 2
AR No. 13.01.10 Document No. 000068

Title: PCB Harbor Forum.
Addressee: JOHN DEVILLARS - EPA - REGION I
Authors: PETER KOCZERA - TOWN OF ACUSHNET BOARD OF SELECTMAN
Date: July 14, 1997
Format: LETTER No. Pgs: 2
AR No. 13.01.11 Document No. 000067

Title: Development of the Feasibility Study Addendum Report.
Addressee: JAMES SIMMONS - HANDS ACROSS THE RIVER COALITION
Authors: HARLEY LAING - EPA - REGION I
Date: July 18, 1997
Format: LETTER No. Pgs: 3
AR No. 13.01.12 Document No. 000066

Title: Selection of One Remedial Technology Over Another.
Addressee: CAROL SANZ
Authors: JOHN DEVILLARS - EPA - REGION I
Date: August 19, 1997
Format: LETTER No. Pgs: 1
AR No. 13.01.13 Document No. 000045

Title: List of Questions to Submit to the Sea Change Panel Review.
Addressee: DIANA COBBOLD - SEA CHANGE INC.
Authors: JIM BROWN - EPA - REGION I
Date: October 22, 1997
Format: LETTER No. Pgs: 1
AR No. 13.01.14 Document No. 000044

Title: Organization of the October 30, 1997 Public Sea Change Review of the Technologies for New Bedford.
Addressee: DIANA COBBOLD - SEA CHANGE INC.
Authors: HARLEY LAING - EPA - REGION I
Date: December 12, 1997
Format: LETTER No. Pgs: 1
AR No. 13.01.15 Document No. 000043

Title: Resumes of Jim Brown and Dave Dickerson.
Addressee: JAMES SIMMONS - HANDS ACROSS THE RIVER COALITION
Authors: HARLEY LAING - EPA - REGION I
Date: December 23, 1997
Format: LETTER No. Pgs: 4
AR No. 13.01.16 Document No. 000042

Title: Complaint from a Resident Regarding a Release of Hazardous Materials from the Sawyer Street Facility.
Addressee: WARREN IDE - CITY OF NEW BEDFORD FIRE DEPARTMENT
Authors: JIM BROWN - EPA - REGION I
Date: June 3, 1998
Format: LETTER No. Pgs: 1
AR No. 13.01.17 Document No. 000065

13.03 COMMUNITY RELATIONS - NEWS CLIPPINGS/PRESS RELEASES

Title: New Bedford Still Seeks Way to Deal with PCBs.
Authors: PETER HOWE - BOSTON GLOBE
Format: NEWS CLIPPING No. Pgs: 2
AR No. 13.03.1 Document No. 000052

Title: EPA Announces a Meeting and Invites Public Comment on the Explanation of Significant Differences.
Authors: EPA - REGION I
Format: NEWS CLIPPING No. Pgs: 1
AR No. 13.03.2 Document No. 000208

Title: What's the Rush to Incinerate? It's Time for EPA to Look Again.
Authors: STEVE URBON - NEW BEDFORD STANDARD TIMES
Date: August 31, 1993
Format: NEWS CLIPPING No. Pgs: 1
AR No. 13.03.3 Document No. 000205
*Attached to Document No. 000200 In 13.01

Title: EPA Virtually Abandons Plan to Burn PCB's.
Authors: NATALIE WHITE - NEW BEDFORD STANDARD TIMES
Date: January 27, 1994
Format: NEWS CLIPPING No. Pgs: 2
AR No. 13.03.4 Document No. 000207

Title: EPA Will Proceed with Dredging New Bedford Harbor Hot Spots.
Authors: EPA - REGION I
Date: February 10, 1994
Format: NEWS CLIPPING No. Pgs: 1
AR No. 13.03.5 Document No. 000206

Title: Briton to Document Agency's Victory Against PCB Incineration.
Authors: WILLIAM COREY - STANDARD-TIMES
Date: January 16, 1998
Format: NEWS CLIPPING No. Pgs: 2
AR No. 13.03.6 Document No. 000049

Title: Harbor Cleanup of PCBs is Still a Long Way Away.
Authors: RACHEL G. THOMAS - STANDARD-TIMES
Date: January 22, 1998
Format: NEWS CLIPPING No. Pgs: 1
AR No. 13.03.7 Document No. 000048

Title: Time's a Wasting.
Authors: JACK STEWARDSON - STANDARD-TIMES
Date: February 7, 1998
Format: NEWS CLIPPING No. Pgs: 5
AR No. 13.03.8 Document No. 000047

Title: Still No Decision on Disposal of PCBs.
Authors: JACK STEWARDSON - STANDARD-TIMES
Date: April 1, 1998
Format: NEWS CLIPPING No. Pgs: 1
AR No. 13.03.9 Document No. 000051

Title: Forum Winding Up PCB Talks, Ready for Action.
Authors: JACK STEWARDSON - STANDARD-TIMES
Date: April 29, 1998
Format: NEWS CLIPPING No. Pgs: 2
AR No. 13.03.10 Document No. 000053

Title: EPA Agrees to Meet Over Hiring Complaint.
Authors: STANDARD-TIMES
Date: May 1, 1998
Format: NEWS CLIPPING No. Pgs: 4
AR No. 13.03.11 Document No. 000054

Title: PCBs: To Fill or Not To Fill.
Authors: JACK STEWARDSON - STANDARD-TIMES
Date: June 6, 1998
Format: NEWS CLIPPING No. Pgs: 2
AR No. 13.03.12 Document No. 000056

Title: River Cleanup Takes a Giant Step.
Authors: JACK STEWARDSON - STANDARD-TIMES
Date: June 19, 1998
Format: NEWS CLIPPING No. Pgs: 2
AR No. 13.03.13 Document No. 000055

13.04 COMMUNITY RELATIONS - PUBLIC MEETINGS

Title: Invitation to Attend Two Meetings to Discuss the Treatment of the Hot Spot Sediment.
Authors: NEW BEDFORD SITE COMMUNITY FORUM
Date:
Format: FACT SHEET, PRESS RELEASE No. Pgs: 2
AR No. 13.04.1 Document No. 000094

Title: Minutes of Meeting Held on December 7, 1993.
Date: December 16, 1993
Format: PUBLIC MEETING RECORDS No. Pgs: 4
AR No. 13.04.2 Document No. 000209

Title: Minutes of Meeting Held January 5, 1994.
Date: January 5, 1994
Format: PUBLIC MEETING RECORDS No. Pgs: 8
AR No. 13.04.3 Document No. 000210

Title: New Bedford Superfund Site Meeting Agenda - January 12, 1994.
Date: January 12, 1994
Format: PUBLIC MEETING RECORDS No. Pgs: 1
AR No. 13.04.4 Document No. 000211

Title: Minutes of Meeting Held January 12, 1994.
Date: January 12, 1994
Format: PUBLIC MEETING RECORDS No. Pgs: 3
AR No. 13.04.5 Document No. 000212

Title: New Bedford Harbor Superfund Site Meeting Agenda - January 26, 1994.
Date: January 26, 1994
Format: PUBLIC MEETING RECORDS No. Pgs: 1
AR No. 13.04.6 Document No. 000213

Title: Minutes of Meeting Held January 26, 1994.
Date: January 26, 1994
Format: PUBLIC MEETING RECORDS No. Pgs: 1
AR No. 13.04.7 Document No. 000214

Title: Minutes of Meeting Held February 9, 1994.
Date: February 9, 1994
Format: PUBLIC MEETING RECORDS No. Pgs: 2
AR No. 13.04.8 Document No. 000215

Title: New Bedford Harbor Superfund Forum Meeting Agenda - March 1, 1994.
Date: March 1, 1994
Format: PUBLIC MEETING RECORDS No. Pgs: 6
AR No. 13.04.9 Document No. 000216

Title: Minutes of Meeting Held March 1, 1994.
Date: March 1, 1994
Format: PUBLIC MEETING RECORDS No. Pgs: 5
AR No. 13.04.10 Document No. 000217

Title: New Bedford Harbor Superfund Site Meeting Agenda - March 9, 1994.
Date: March 9, 1994
Format: PUBLIC MEETING RECORDS No. Pgs: 1
AR No. 13.04.11 Document No. 000218

Title: Minutes of Meeting Held March 9, 1994.
Date: March 9, 1994
Format: PUBLIC MEETING RECORDS No. Pgs: 2
AR No. 13.04.12 Document No. 000219

Title: Minutes of Meeting Held March 30, 1994.
Date: March 30, 1994
Format: PUBLIC MEETING RECORDS No. Pgs: 2
AR No. 13.04.13 Document No. 000220

Title: Minutes of Meeting Held April 6, 1994.
Date: April 6, 1994
Format: PUBLIC MEETING RECORDS No. Pgs: 3
AR No. 13.04.14 Document No. 000221

Title: Minutes of Meeting Held April 13, 1994.
Date: April 13, 1994
Format: PUBLIC MEETING RECORDS No. Pgs: 2
AR No. 13.04.15 Document No. 000222

Title: Minutes of Meeting Held April 26, 1994.
Date: April 26, 1994
Format: PUBLIC MEETING RECORDS No. Pgs: 2
AR No. 13.04.16 Document No. 000223

Title: Minutes of Meeting Held May 18, 1994.
Date: May 18, 1994
Format: PUBLIC MEETING RECORDS No. Pgs: 2
AR No. 13.04.17 Document No. 000224

Title: New Bedford Harbor Superfund Site Meeting Agenda - June 14, 1994.
Date: June 14, 1994
Format: PUBLIC MEETING RECORDS No. Pgs: 1
AR No. 13.04.18 Document No. 000226

Title: Minutes of Meeting Held June 14, 1994.
Date: June 14, 1994
Format: PUBLIC MEETING RECORDS No. Pgs: 2
AR No. 13.04.19 Document No. 000227

Title: Minutes of Meeting Held July 12, 1994.
Date: July 12, 1994
Format: PUBLIC MEETING RECORDS No. Pgs: 3
AR No. 13.04.20 Document No. 000228

Title: Minutes of Meeting Held August 9, 1994.
Date: August 9, 1994
Format: PUBLIC MEETING RECORDS No. Pgs: 6
AR No. 13.04.21 Document No. 000230

Title: New Bedford Harbor Superfund Site Community Forum Agreement - (Cross Reference to 13.1.)
Date: November 21, 1994
Format: PUBLIC MEETING RECORDS No. Pgs: 13
AR No. 13.04.22 Document No. 000231

Title: New Bedford Harbor Superfund Forum - May 21, 1997.
Date: May 21, 1997
Format: PUBLIC MEETING RECORDS No. Pgs: 19
AR No. 13.04.23 Document No. 000070

Title: New Bedford Harbor Treatability Study Subcommittee Meeting.
Date: July 16, 1997
Format: PUBLIC MEETING RECORDS No. Pgs: 8
AR No. 13.04.24 Document No. 000071

Title: New Bedford Superfund Forum Meeting - July 30, 1997.
Date: July 30, 1997
Format: PUBLIC MEETING RECORDS No. Pgs: 17
AR No. 13.04.25 Document No. 000072

Title: New Bedford Harbor Treatability Subcommittee Meeting - October 8, 1997.
Date: October 8, 1997
Format: PUBLIC MEETING RECORDS No. Pgs: 8
AR No. 13.04.26 Document No. 000073

Title: New Bedford Harbor Superfund Forum Meeting - October 20, 1997.
Date: October 20, 1997
Format: PUBLIC MEETING RECORDS No. Pgs: 48
AR No. 13.04.27 Document No. 000074

Title: Sea Change Panel - New Bedford Harbor Treatability Studies.
Date: October 30, 1997
Format: PUBLIC MEETING RECORDS No. Pgs: 27
AR No. 13.04.28 Document No. 000075

Title: New Bedford Harbor Superfund Forum Meeting - November 6, 1997.
Date: November 6, 1997
Format: PUBLIC MEETING RECORDS No. Pgs: 4
AR No. 13.04.29 Document No. 000076

Title: New Bedford Harbor Superfund Site Treatability Study Participants - Presentations.
Addressee: TREATABILITY STUDY PARTICIPANTS
Authors: JIM BROWN - EPA - REGION I
Date: November 18, 1997
Format: LETTER No. Pgs: 3
AR No. 13.04.30 Document No. 000077

Title: New Bedford Harbor Superfund Forum - December 1, 1997.
Date: December 1, 1997
Format: PUBLIC MEETING RECORDS No. Pgs: 15
AR No. 13.04.31 Document No. 000078

Title: New Bedford Harbor Superfund Forum - December 8, 1997.
Date: December 8, 1997
Format: PUBLIC MEETING RECORDS No. Pgs: 28
AR No. 13.04.32 Document No. 000079

Title: Summary of Meeting of the New Bedford Harbor Forum - December 16, 1997.
Date: December 16, 1997
Format: PUBLIC MEETING RECORDS No. Pgs: 5
AR No. 13.04.33 Document No. 000080

Title: New Bedford Harbor Superfund Forum - January 21, 1998.
Date: January 21, 1998
Format: PUBLIC MEETING RECORDS No. Pgs: 16
AR No. 13.04.34 Document No. 000081

Title: New Bedford Harbor Superfund Forum - January 21, 1998.
Date: January 21, 1998
Format: PUBLIC MEETING RECORDS No. Pgs: 9
AR No. 13.04.35 Document No. 000098

Title: New Bedford Harbor Superfund Forum - February 5, 1998.
Date: February 5, 1998
Format: PUBLIC MEETING RECORDS No. Pgs: 3
AR No. 13.04.36 Document No. 000082

Title: New Bedford Harbor Superfund Forum - February 12, 1998.
Date: February 12, 1998
Format: PUBLIC MEETING RECORDS No. Pgs: 6
AR No. 13.04.37 Document No. 000083

Title: New Bedford Community Meeting.
Date: February 19, 1998
Format: PUBLIC MEETING RECORDS No. Pgs: 2
AR No. 13.04.38 Document No. 000084

Title: New Bedford Harbor Superfund Forum - February 25, 1998.
Date: February 25, 1998
Format: PUBLIC MEETING RECORDS No. Pgs: 5
AR No. 13.04.39 Document No. 000085

Title: New Bedford Harbor Superfund Forum - March 15, 1998.
Date: March 15, 1998
Format: PUBLIC MEETING RECORDS No. Pgs: 21
AR No. 13.04.40 Document No. 000086

Title: New Bedford Harbor Superfund Forum - March 24, 1998.
Date: March 24, 1998
Format: PUBLIC MEETING RECORDS No. Pgs: 7
AR No. 13.04.41 Document No. 000087

Title: New Bedford Harbor Superfund Forum - March 31, 1998.
Date: March 31, 1998
Format: PUBLIC MEETING RECORDS No. Pgs: 34
AR No. 13.04.42 Document No. 000088

Title: New Bedford Harbor Superfund Forum - April 28, 1998.
Date: April 28, 1998
Format: PUBLIC MEETING RECORDS No. Pgs: 15
AR No. 13.04.43 Document No. 000089

Title: New Bedford Harbor Superfund Forum - May 7, 1998.
Date: May 7, 1998
Format: PUBLIC MEETING RECORDS No. Pgs: 6
AR No. 13.04.44 Document No. 000090

Title: New Bedford Harbor Superfund Forum - May 22, 1998.
Date: May 22, 1998
Format: PUBLIC MEETING RECORDS No. Pgs: 6
AR No. 13.04.45 Document No. 000091

Title: New Bedford Harbor Superfund Forum - June 4, 1998.
Date: June 4, 1998
Format: PUBLIC MEETING RECORDS No. Pgs: 6
AR No. 13.04.46 Document No. 000092

Title: New Bedford Harbor Superfund Forum - June 17, 1998.
Date: June 17, 1998
Format: PUBLIC MEETING RECORDS No. Pgs: 26
AR No. 13.04.47 Document No. 000093

Title: New Bedford Harbor Superfund Site Community Forum Recommendation.
Authors: NEW BEDFORD SITE COMMUNITY FORUM
Date: July 1998
Format: MEMORANDUM No. Pgs: 17
AR No. 13.04.48 Document No. 000234

Title: Notice of a Public Meeting on the Proposed Plan.
Authors: EPA - REGION I
Date: August 7, 1998
Format: NEWS CLIPPING No. Pgs: 1
AR No. 13.04.49 Document No. 000050

Title: Proposed Cleanup Plan for the Hot Spot Sediment - Public Informational Meeting.
Date: August 26, 1998
Format: PUBLIC MEETING RECORDS No. Pgs: 12
AR No. 13.04.50 Document No. 000096

Title: Attendance List - Proposed Plan to Amend the 1990 Cleanup Plan - Public Hearing.
Date: September 16, 1998
Format: LIST No. Pgs: 2
AR No. 13.04.51 Document No. 000097

Title: EPA Public Hearing - Cleanup Plan for the New Bedford Harbor Hot Spot Sediments.
Date: September 16, 1998
Format: PUBLIC MEETING RECORDS No. Pgs: 50
AR No. 13.04.52 Document No. 000232

13.05 COMMUNITY RELATIONS - FACT SHEETS

Title: New Bedford Harbor Superfund Site: The Community Forum's Focus on Cleanup of the Hot Spot Sediment.
Authors: EPA - REGION I
Format: FACT SHEET, PRESS RELEASE
AR No. 13.05.1 Document No. 000033

Title: The USEPA Announces the Scheduling of a Public Meeting, Hearing, and Public Comment Period on the Proposed Plan.
Format: FACT SHEET, PRESS RELEASE No. Pgs: 2
AR No. 13.05.2 Document No. 000095

Title: An Open Letter to the Members of the New Bedford Harbor Superfund Forum.
Addressee: NEW BEDFORD HARBOR SUPERFUND FORUM
Authors: THOMAS E. NOEL - COMMODORE ADVANCED SCIENCES
Date: July 30, 1997
Format: LETTER No. Pgs: 1
AR No. 13.05.3 Document No. 000037

Title: New Bedford Harbor Superfund Site Verification Test Program.
Authors: COMMODORE SOLUTION TECHNOLOGIES, INC.
Date: August 1997
Format: REPORT, STUDY
AR No. 13.05.4 Document No. 000035

Title: Explanation of the Merits of the Commodore SET Process in Remediating PCB Waste.
Addressee: NEW BEDFORD HARBOR SUPERFUND FORUM
Authors: PAUL E. HANNESSON - COMMODORE APPLIED TECHNOLOGIES, INC.
Date: November 5, 1997
Format: LETTER No. Pgs: 1
AR No. 13.05.5 Document No. 000036

Title: Innovative Treatment Technology Proposal Evaluation Criteria.
Authors: JIM BROWN - EPA - REGION I
Date: January 16, 1998
Format: CORRESPONDENCE No. Pgs: 5
AR No. 13.05.6 Document No. 000034

Title: New Bedford Harbor Superfund Site Community Forum Recommendation.
Date: July 1998
Format: REPORT, STUDY
AR No. 13.05.7 Document No. 000039

Title: Update on the Release of the Proposed Plan.
Addressee: NEW BEDFORD HARBOR SUPERFUND FORUM
Authors: JIM BROWN - EPA - REGION I
Date: July 17, 1998
Format: LETTER No. Pgs: 1
AR No. 13.05.8 Document No. 000038

14.01 CONGRESSIONAL RELATIONS - CORRESPONDENCE

Title: Request for Participation in Workshop - Alternatives to Incineration for Disposal of PCB Contaminants.
Addressee: JULIE BELAGA - EPA - REGION I
Authors: GERRY STUDDS - U.S. HOUSE OF REPRESENTATIVES
Date: January 29, 1992
Format: LETTER No. Pgs: 2
AR No. 14.01.1 Document No. 000001

Title: Response to Representative Studds Letter of January 29, 1992 Requesting EPA Participation in a Workshop.
Addressee: GERRY STUDDS - U.S. HOUSE OF REPRESENTATIVES
Authors: JULIE BELAGA - EPA - REGION I
Date: February 27, 1992
Format: LETTER No. Pgs: 2
AR No. 14.01.2 Document No. 000002

Title: Results of the Alternative Treatment Technologies Workshop Conducted on March 5, 1992.
Addressee: GERRY STUDDS - U.S. HOUSE OF REPRESENTATIVES
Authors: JULIE BELAGA - EPA - REGION I
Date: March 18, 1992
Format: LETTER No. Pgs: 1
AR No. 14.01.3 Document No. 000003

Title: Letter Congratulating EPA on Its Research into Treatment Technologies at the New Bedford Superfund Site.
Addressee: JULIE BELAGA - EPA - REGION I
Authors: EDWARD KENNEDY, JOHN KERRY - U.S. SENATE
Date: March 24, 1992
Format: LETTER No. Pgs: 1
AR No. 14.01.4 Document No. 000004

Title: Cover letter - Letter Sent to Congressman Studds on April 21, 1992 Regarding Use of Alternative Treatment Technologies.
Addressee: EDWARD KENNEDY - U.S. SENATE
Authors: JULIE BELAGA - EPA - REGION I
Date: April 21, 1992
Format: LETTER No. Pgs: 1
AR No. 14.01.5 Document No. 000005

Title: Cover letter - Letter Sent to Congressman Studds on April 21, 1992 Regarding Use of Alternative Treatment Technologies.
Addressee: JOHN KERRY - U.S. SENATE
Authors: JULIE BELAGA - EPA - REGION I
Date: April 21, 1992
Format: LETTER No. Pgs: 1
AR No. 14.01.6 Document No. 000006

Title: Incineration Considered as Best Treatment Technology for the New Bedford Harbor Superfund Site (Hot Spot).
Addressee: GERRY STUDDS - U.S. HOUSE OF REPRESENTATIVES
Authors: JULIE BELAGA - EPA - REGION I
Date: April 21, 1992
Format: LETTER No. Pgs: 2
AR No. 14.01.7 Document No. 000007

Title: Letter in Response to the Review of Technologies as Alternatives to Incineration for the New Bedford Superfund Site.
Addressee: JULIE BELAGA - EPA - REGION I
Authors: EDWARD KENNEDY, JOHN KERRY - U.S. SENATE
Date: May 11, 1992
Format: LETTER No. Pgs: 2
AR No. 14.01.8 Document No. 000009

Title: Letter Expressing Concerns Regarding EPA's Proposed Cleanup Plan for the Acushnet Bay, Lower New Bedford Harbor, and Parts of Buzzards Bay.
Addressee: JULIE BELAGA - EPA - REGION I
Authors: GERRY STUDDS - U.S. HOUSE OF REPRESENTATIVES
Date: May 15, 1992
Format: LETTER No. Pgs: 2
AR No. 14.01.9 Document No. 000010

Title: Response to Letter of May 11, 1992 Requesting Additional Information on EPA's Review of Technologies for the Remediation of the Hot Spot.
Addressee: JOHN KERRY - U.S. SENATE
Authcrs: JULIE BELAGA - EPA - REGION I
Date: June 12, 1992
Format: LETTER No. Pgs: 3
AR No. 14.01.10 Document No. 000011

Title: Response to Letter of May 11, 1992 Requesting Additional Information on EPA's Review of Technologies for the Remediation of the Hot Spot.
Addressee: EDWARD KENNEDY - U.S. SENATE
Authors: JULIE BELAGA - EPA - REGION I
Date: June 12, 1992
Format: LETTER No. Pgs: 3
AR No. 14.01.11 Document No. 000012

Title: Letter of Support for Overturning the Decision to Incinerate PCBs.
Addressee: WILLIAM REILLY - EPA-HEADQUARTERS
Authors: BARNEY FRANK - U.S. HOUSE OF REPRESENTATIVES
Date: June 17, 1992
Format: LETTER No. Pgs: 1
AR No. 14.01.12 Document No. 000013

Title: Response to Gerry Studds Letter of May 15, 1992 Which Commented on the Proposed Plan for the Estuary/Lower Harbor/Bay Portion of New Bedford Harbor.
Addressee: GERRY STUDDS - U.S. HOUSE OF REPRESENTATIVES
Authors: JULIE BELAGA - EPA - REGION I
Date: June 18, 1992
Format: LETTER No. Pgs: 2
AR No. 14.01.13 Document No. 000014

Title: Request Suspension of the Incineration of PCBs in Favor of an Alternative Method.
Addressee: CAROL BROWNER - EPA-HEADQUARTERS
Authors: BARNEY FRANK - U.S. HOUSE OF REPRESENTATIVES
Date: January 22, 1993
Format: LETTER No. Pgs: 2
AR No. 14.01.14 Document No. 000017

Title: Letter Identifying Incineration as the Best Treatment Technology.
Addressee: BARNEY FRANK - U.S. HOUSE OF REPRESENTATIVES
Authors: RICHARD GUIMOND - EPA-HEADQUARTERS
Date: March 8, 1993
Format: LETTER No. Pgs: 3
AR No. 14.01.15 Document No. 000015

Title: Request for an On-Site Test of Thermal Gas-Phase Reductive Chlorination.
Addressee: CAROL BROWNER - EPA-HEADQUARTERS
Authors: EDWARD KENNEDY, JOHN KERRY - U.S. SENATE
Date: July 9, 1993
Format: LETTER No. Pgs: 2
AR No. 14.01.16 Document No. 000016

Title: Support for Incineration as the Established Remedy for the New Bedford Superfund Site.
Addressee: EDWARD KENNEDY - U.S. SENATE
Authors: HENRY LONGEST - EPA-HEADQUARTERS
Date: August 18, 1993
Format: LETTER No. Pgs: 2
AR No. 14.01.17 Document No. 000018

Title: Request to Reconsider the Termination of the Incineration Remedial Treatment Technology.
Addressee: BARNEY FRANK - U.S. HOUSE OF REPRESENTATIVES
Authors: JOHN MORAN - LABORERS HEALTH & SAFETY FUND
Date: August 20, 1993
Format: LETTER No. Pgs: 6
AR No. 14.01.18 Document No. 000019

Title: Discussion of Issues Involving the Incineration of PCBs in New Bedford.
Addressee: CAROL BROWNER - EPA-HEADQUARTERS
Authors: BARNEY FRANK - U.S. HOUSE OF REPRESENTATIVES
Date: October 12, 1993
Format: LETTER No. Pgs: 3
AR No. 14.01.19 Document No. 000021

Title: Reopening Discussions about the Method of Cleanup at the New Bedford Harbor Superfund Site.
Addressee: PAUL KEOUGH - EPA - REGION I
Authors: EDWARD KENNEDY, JOHN KERRY, BARNEY FRANK - U.S. SENATE
Date: October 19, 1993
Format: LETTER No. Pgs: 2
AR No. 14.01.20 Document No. 000020

Title: Reopening the Question of How Best to Deal with the PCB Problem in New Bedford.
Addressee: PAUL KEOUGH - EPA - REGION I
Authors: BARNEY FRANK - U.S. HOUSE OF REPRESENTATIVES
Date: November 2, 1993
Format: LETTER No. Pgs: 1
AR No. 14.01.21 Document No. 000027

Title: Response to Senator Edward Kennedy's Letter of October 19, 1993 to Hold a Forum on the Issue of Incineration.
Addressee: EDWARD KENNEDY - U.S. SENATE
Authors: PAUL KEOUGH - EPA - REGION I
Date: November 8, 1993
Format: LETTER No. Pgs: 2
AR No. 14.01.22 Document No. 000022

Title: Response to Representative Barney Frank's Letter of October 19, 1993 to Hold a Forum on the Issue of Incineration.
Addressee: BARNEY FRANK - U.S. HOUSE OF REPRESENTATIVES
Authors: PAUL KEOUGH - EPA - REGION I
Date: November 8, 1993
Format: LETTER No. Pgs: 2
AR No. 14.01.23 Document No. 000023

Title: Response to Senator John Kerry's Letter of October 19, 1993 to Hold a Forum on the Issue of Incineration.
Addressee: JOHN KERRY - U.S. SENATE
Authors: PAUL KEOUGH - EPA - REGION I
Date: November 8, 1993
Format: LETTER No. Pgs: 2
AR No. 14.01.24 Document No. 000024

Title: Reconsider Support of Incineration as the Acceptable Treatment Technology.
Addressee: DANIEL GREENBAUM - MA DEPT OF ENVIRONMENTAL PROTECTION
Authors: BARNEY FRANK - U.S. HOUSE OF REPRESENTATIVES
Date: December 16, 1993
Format: LETTER No. Pgs: 1
AR No. 14.01.25 Document No. 000025

Title: Response to Representative Barney Frank's Letter on the Reconsideration of Incineration as the Chosen Treatment Technology.
Addressee: BARNEY FRANK - U.S. HOUSE OF REPRESENTATIVES
Authors: DANIEL GREENBAUM - MA DEPT OF ENVIRONMENTAL PROTECTION
Date: December 29, 1993
Format: LETTER No. Pgs: 2
AR No. 14.01.26 Document No. 000026

Title: Concern Regarding Change in the Cleanup Remedy at the New Bedford Harbor Superfund Site.
Addressee: STROM THURMOND - U.S. SENATE
Authors: BENEDICT ROSEN - AVX CORPORATION
Date: March 24, 1994
Format: LETTER No. Pgs: 4
AR No. 14.01.27 Document No. 000029

Title: Establishment of a Community Forum to Review Alternatives to On-Site Incineration.
Addressee: STROM THURMOND - U.S. SENATE
Authors: JOHN DEVILLARS - EPA - REGION I
Date: May 11, 1994
Format: LETTER No. Pgs: 3
AR No. 14.01.28 Document No. 000028

Title: EPA Reviewing Alternatives to On-Site Incineration at Community Forum.
Addressee: ERNEST HOLLINGS - U.S. SENATE
Authors: JOHN DEVILLARS - EPA - REGION I
Date: May 27, 1994
Format: LETTER No. Pgs: 3
AR No. 14.01.29 Document No. 000031

Title: EPA Reviewing Alternatives to On-Site Incineration at Community Forum.
Addressee: ARTHUR RAVENEL - U.S. HOUSE OF REPRESENTATIVES
Authors: JOHN DEVILLARS - EPA - REGION I
Date: June 1, 1994
Format: LETTER No. Pgs: 3
AR No. 14.01.30 Document No. 000030

Title: Response to Representative Barney Frank's Letter of January 25, 1996 Regarding the Performance of Treatability Studies.
Addressee: BARNEY FRANK - U.S. HOUSE OF REPRESENTATIVES
Authors: JOHN DEVILLARS - EPA - REGION I
Date: March 1, 1996
Format: LETTER No. Pgs: 2
AR No. 14.01.31 Document No. 000032

Title: Discussion of New Bedford Harbor Superfund Community Forum's Position on Site Cleanup.
Addressee: BARNEY FRANK - U.S. HOUSE OF REPRESENTATIVES
Authors: CLAUDIA KIRK - NEW BEDFORD HARBOR SUPERFUND FORUM
Date: July 26, 1997
Format: LETTER No. Pgs: 10
AR No. 14.01.32 Document No. 000040

Title: Issues Raised Regarding the New Bedford Harbor Cleanup Process.
Addressee: JIM BROWN - EPA - REGION I
Authors: BARNEY FRANK - U.S. HOUSE OF REPRESENTATIVES
Date: September 16, 1998
Format: LETTER No. Pgs: 1
AR No. 14.01.33 Document No. 000233

17.08 SITE MANAGEMENT RECORDS - STATE AND LOCAL TECHNICAL RECORDS

Title: Letter Against the Incineration Process at the New Bedford Harbor Superfund Site/Hot Spot.
Addressee: DANIEL GREENBAUM - MA DEPT OF ENVIRONMENTAL PROTECTION
Authors: GEORGE ROGERS - CITY OF NEW BEDFORD
Date: October 4, 1993
Format: LETTER No. Pgs: 2
AR No. 17.08.1 Document No. 000198
*Attached to Document No. 000196 In 13.01

Guidance Documents

The EPA guidance documents listed below were considered during the process of selecting the response action for the New Bedford Harbor Hot Spot Operable Unit. These EPA guidance documents may be reviewed at the EPA Region I Superfund Records Center.

1. Conducting Remedial Investigations/Feasibility Studies for CERCLA Municipal Landfill Sites. OSWER #9355.3-11. February 1, 1991. [C177]

2. Feasibility Study - Development and Screening of Remedial Action Alternatives [Quick Reference Fact Sheet]. OSWER #9355.3-01FS3. November 1, 1989. [2018]

3. Guidance on Feasibility Studies Under CERCLA. EPA 540/G-85-003. June 1, 1985. [C034]

4. Guidance on Preparing Superfund Decision Documents: The Proposed Plan, the Record of Decision, ESD's, ROD Amendment. Interim Final. OSWER #9355.3-02. April 3, 1989. [C179]

5. Guidance on Remedial Actions for Superfund Sites with PCB Contamination. OSWER # 9355.4-01. August 1, 1990. [2014]

6. Guide for Conducting Treatability Studies Under CERCLA. Interim Final. EPA/540/2-89/058. December 1, 1989. [2015]

7. Guide on Remedial Actions at Superfund Sites with PCB Contamination [Quick Reference Fact Sheet]. OSWER #9355.4-01FS. August 1, 1990. [C254]

8. Guide to Addressing Pre-ROD and Post-ROD Changes. OSWER #9355.3-02FS-4. April 1, 1991. [C259]

9. Guide to Selecting Superfund Remedial Actions. EPA/540/2-89/052. March 1, 1989. [2322].

Appendix C - State Concurrence Letter

New Bedford Harbor Superfund Site
Amended Record of Decision for the Hot Spot Sediments

18

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

ARGEO PAUL CELLUCCI
Governor

JANE SWIFT
Lieutenant Governor

BOB DURAND
Secretary

EDWARD P. KUNCE
Acting Commissioner

April 23, 1999

Ms. Patricia Meaney, Director
Office of Site Remediation and Restoration
U.S. EPA
JFK Federal Building
Boston, MA 02203

Re: Amended ROD - State Concurrence Letter
Hot Spot Operable Unit #2
New Bedford Harbor Superfund Site

Dear Ms. Meaney:

The Department of Environmental Protection (DEP) has reviewed the preferred remedial action alternative recommended by the EPA for the cleanup of the Hot Spot Operable Unit at the New Bedford Harbor Superfund Site. The DEP concurs with the selection of the preferred alternative for this operable unit.

The DEP has evaluated the EPA's preferred alternative for consistency with M.G.L. Chapter 21E, and the Massachusetts Contingency Plan (MCP). The preferred alternative addresses the contaminated sediments that were previously dredged and are currently being stored in a Confined Disposal Facility in New Bedford. This Operable Unit's amended remedial action has four components:

1) Upgrade site facilities;
2) Remove the Hot Spot sediment from the Confined Disposal Facility (CDF);
3) Sediment dewatering and water treatment; and
4) Sediment disposal to an appropriate disposal facility off site.

The DEP has determined that the preferred alternative for this Operable Unit is a remedial action on a portion of the disposal site which would be consistent with a future permanent or temporary solution for the entire disposal site. M.G.L. Chapter 21E allows the implementation of remedies on portions of a disposal site.

This information is available in alternate format by calling our ADA Coordinator at (617) 574-6872.

DEP on the World Wide Web: http://www.magnet.state.ma.us/dep
Printed on Recycled Paper

EPA's current project managers, Jim Brown and Dave Dickerson, should be commended for a superb job in managing this complex project. Their efforts to include the State and the public in the Superfund process at this site have been greatly appreciated.

The Department looks forward to working with you in implementing the preferred alternative. If you have any questions, please contact Paul Craffey at 292-5591.

Very truly yours,

Deirdre C. Menoyo

Deirdre C. Menoyo,
Assistant Commissioner
Bureau of Waste Site Cleanup

cc: Millie Garcia-Surette, Deputy Regional Director , SERO

DBS/BWSC /pc

Appendix D - References Cited

New Bedford Harbor Superfund Site
Amended Record of Decision for the Hot Spot Sediments

APPENDIX D - REFERENCES CITED

City of New Bedford, 1993. City of New Bedford, Code of City Ordinances, Chapter 15, Licenses and Permits; Business Regulations, Article III, Proposed amendments to Sec. 15-70 (June 10, 1993).

Forum Agreement, 1998. New Bedford Harbor Superfund Site Community Forum Recommendation. June-July 1998.

Foster Wheeler, 1997a. Draft Final New Bedford Harbor Hot Spot Feasibility Study Addendum, New Bedford, Massachusetts. December 1997.

Foster Wheeler, 1997b. New Bedford Harbor Hot Spot Treatability Study Data Compendium Volumes II-X. September 1997.

NUS Corporation (NUS), 1984. Draft Feasibility Study of Remedial Action Alternatives, Acushnet River Estuary Above Coggeshall Street Bridge, New Bedford Site, Bristol County, Massachusetts. August 1984.

USACE, 1991a. Construction Plans for the New Bedford Harbor Superfund Hazardous Waste Cleanup, Hot Spot Operable Unit, New Bedford, Massachusetts. US Army Corps of Engineers, Omaha District. December 1991.

USACE, 1991b. Final Design Analysis, New Bedford Harbor/Hot Spot Operable Unit Superfund Site, Contract No. DACW 45-91-C-0010, Interagency Agreement No. DW96934684-0, New Bedford, Massachusetts. November 1991.

USACE, 1991c. Specifications (For Construction Contract), Request for Proposal No. DACW45-92-R-0020, Hazardous Waste Cleanup, New Bedford Harbor/Hot Spot Operable Unit, Volumes 1-2. December 1991.

USEPA, 1990. Record of Decision, New Bedford Harbor Hot Spot Operable Unit, New Bedford, Massachusetts. U.S. Environmental Protection Agency, Region I. April 1990.

USEPA, 1992. New Bedford Harbor Site, Hot Spot Operable Unit, Explanation Of Significant Difference. April 1992.

USEPA, 1995. New Bedford Harbor Superfund Site, Hot Spot Operable Unit, Explanation Of Significant Difference for Continued Storage of Hot Spot Sediments. Prepared by the EPA-New England. October 1995.

USEPA 1998a. Proposed Plan to Amend the 1990 Cleanup Plan for the New Bedford Hot Spot Sediments, New Bedford, MA. August 1998.

USEPA 1998b. Record Of Decision for the Upper and Lower Operable Unit, New Bedford Harbor Superfund Site, New Bedford, Massachusetts. September 1998.

VHB, 1996. New Bedford Harbor Historic Overview, Natural Resources Uses Status Report. Prepared by Vanasse Hangen Brustlin, Inc. For New Bedford Harbor Trustee Council. July 1996.