

**THIRD EXPLANATION OF SIGNIFICANT DIFFERENCES
NEW BEDFORD HARBOR SUPERFUND SITE/OPERABLE UNIT #1
NEW BEDFORD, MASSACHUSETTS
FOR TEMPORARY STORAGE OF SEDIMENTS IN CELL #1,
EPA SAWYER STREET FACILITY**

Site Name: New Bedford Harbor Superfund Site
Location: New Bedford, Massachusetts
Lead Agency: U.S. Environmental Protection Agency
Support Agency: Massachusetts Department of Environmental Protection

Under Section 117(c) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), and promulgated in 40 C.F.R. Sections 300.435(c)(2)(i) and 300.825(a)(2), if the United States Environmental Protection Agency ("EPA") determines that the remedial action at the Site differs significantly in scope, performance or cost from the Record of Decision ("ROD"), EPA shall publish an explanation of significant differences ("ESD") between the remedial action being undertaken and the remedial action set forth in the ROD and the reasons such changes are being made.

This is the third ESD for Operable Unit 1, Upper and Lower Harbor ROD, September 25, 1998 ("OU 1 ROD") and contains a brief history of the New Bedford Harbor Superfund Site ("Site"), a description of the remedy selected in the ROD, changes to the ROD through the first ESD, dated September 27, 2001 and the second ESD, dated August 15, 2002 and a description of and rationale for this ESD's change to the ROD.

EPA solicited a fourteen (14) day public comment period on the draft ESD from September 1 to September 15, 2009 and then extended the period until September 30, 2009. In particular, EPA solicited public comment concerning a CERCLA waiver of a requirement under the Massachusetts Hazardous Waste Regulations that an existing surface impoundment, which EPA has been using for the temporary storage of contaminated sediments at its facility at Sawyer Street in New Bedford, should have a double liner rather than the single liner that presently exists. The basis for the waiver is that the single liner, in combination with site conditions and facility monitoring, is equally protective as a double liner for the temporary storage facility. In addition, EPA solicited comments concerning the Region's finding under the Toxic Substances Control Act's ("TSCA") risk-based regulations that the use of the surface impoundment for polychlorinated biphenyls ("PCB")-contaminated sediments does not pose a risk to health and the environment and is consistent with a previous risk-based finding concerning the facility made in 2001 in the first OU 1 ESD.

This ESD and other supporting documents, including comments submitted during the public comment period and EPA's response to those comments (Attachment 1 to the ESD), can be found in the Administrative Record located at EPA's Region 1 Records Center, located at



Five Post Office Square, Suite 100, Boston, Massachusetts 02109-3912 with hours from Monday thru Friday 9 a.m. - 5 p.m. and at the New Bedford Free Public Library, 613 Pleasant Street, New Bedford, Massachusetts 02740.

I. Site History

The Site is located in Bristol County, Massachusetts, and extends from the shallow northern reaches of the Acushnet River estuary south through the commercial harbor of New Bedford and into 17,000 adjacent areas of Buzzards Bay. Industrial and urban development surrounding the harbor has resulted in sediments becoming contaminated with high concentrations of many pollutants, notably PCBs and heavy metals, with contaminant gradients decreasing from north to south. The Site is divided into three areas, the upper, lower and outer harbors - consistent with geographical features of the area and gradients of contamination. 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.

There are three operable units (“OUs”) at this site. They include: OU 1 - the upper and lower harbor; OU 2 – the “hot spot” operable unit, consisting of some of the Site’s most highly PCB-contaminated sediments (concentrations greater than 4,000 parts per million (“ppm”)) located adjacent to the Aerovox facility; and OU 3 - the outer harbor.

The upper harbor comprises approximately 187 acres. The boundary between the upper and lower harbor is the Coggeshall Street bridge where the width of the bridge is approximately 100 feet. The lower harbor comprises approximately 750 acres. The boundary between the lower and outer harbor is the 150 foot wide opening of the New Bedford hurricane barrier, 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 plant and the City’s sewerage treatment plant’s outfall pipes. The outer harbor is comprised of approximately 17,000 acres with its southern extent (and the Site’s boundary) formed by 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.

This Site’s CERCLIS identification number is MAD980731335. EPA is the lead agency at the Site.

II. Summary of Remedy

In 1988-89, prior to the issuance of any RODs for the Site, as part of EPA’s pilot study of dredging and disposal techniques, a six acre confined disposal facility (“pilot study CDF”) was constructed along the shoreline immediately north of Sawyer Street in New Bedford. This pilot study CDF consisted of a primary and a secondary cell separated by a sheet pile wall, and was partially filled with PCB-contaminated sediments dredged from the cove just north of the pilot study CDF. Cleaner, deeper sediments from this cove were used to cap the contaminated sediments (see Figure 1).

The pilot study CDF was further modified under the 1990 OU 2 Hot Spot ROD, which

called for the dredging of approximately 10,000 cubic yards (cy) of the most highly PCB-contaminated sediments and the treatment of the dredged sediments using on-site incineration. Three "cells" were constructed for sediment storage and water treatment operations as part of this remedy on the western end of the pilot study CDF¹.

In April 1995, EPA issued an Explanation of Significant Differences for the hot spot operable unit (OU 2 ESD #1) which modified the remedy so that the solidified ash from the incineration would permanently be disposed of in cell #1 of the water treatment facility. Cell #1 was to receive the solidified incinerator ash, and this cell was to be covered with a landfill-type cap. The ESD documented that cell #1 was constructed and could be managed in a manner that complied with federal and state hazardous waste disposal standards. As a first step in the process, hot spot sediments were dredged and temporarily stored in cell #1.

In October 1995 EPA issued a second OU 2 ESD (OU 2 ESD #2), which modified the hot spot remedy to change cell #1 from a disposal facility for incinerator ash to an interim storage facility for the untreated hot spot sediments while other treatment technologies were evaluated. This was done since EPA had initiated studies to determine other alternatives to incineration for the permanent treatment and/or disposal of the hot spot sediments. The OU 2 ESD #2 documented that the cell met federal and state standards for use for the temporary storage of contaminated sediments: specifically (1) the Massachusetts hazardous waste surface impoundment regulations under 310 CMR 30.610, and (2) the federal TSCA PCB storage regulations under 40 CFR 761.65.²

Pilot studies of solidification and chemical destruction technologies were completed in the fall of 1996, and a feasibility study of alternative remedial approaches was issued in December 1997. EPA issued a ROD Amendment in April 1999 which removed the incineration component of the remedy and replaced it with off-site landfilling as the final component for the hot spot remediation. Removal of the hot spot sediments that were stored in cell #1 and their transportation to an offsite TSCA permitted landfill started in December 1999. The cell was emptied of the hot spot sediments in May 2000. Since the excavation of the hot spot sediments damaged the double liner that had been installed within the cell, once the hot spot sediment was removed a single sixty (60) mil or 0.06 inch thick, high density polypropylene ("HDPE") liner was reinstalled in the cell.

Meanwhile, remediation of the upper and lower harbor operable unit (OU 1) was initiated with the issuance of the 1998 OU 1 ROD. This ROD called for approximately 450,000 cubic yards of PCB laden sediment to be dredged from the harbor bottom and surrounding wetlands, and to be disposed in perpetuity in four shoreline confined disposal facilities (CDFs A, B, C³ and D). Since that time EPA gathered additional site information and refined the cleanup approach for the upper and lower harbor area. A 2001 ESD ("OU 1 ESD

¹ The eastern area of the pilot study CDF has been used as a debris disposal area ("DDA").

² In making the determination several specific requirements of the hazardous waste surface impoundment and TSCA PCB storage regulations were waived under Sections 121(d)(4)(A) and (B) of CERCLA, 42 U.S.C. §§ 9621(d)(4)(A) and (B), because the design and operation of the cell as a temporary storage facility was found to be protective and was only an interim measure. See OU 2 ESD #2 and further discussion in Part III of this ESD.

³ CDF C would abut the pilot study CDF.

#1”) addressed five of these refinements: (1) additional intertidal cleanup areas; (2) mechanical dewatering; (3) use of the pilot study CDF as an interim TSCA facility (which is discussed in more detail below); (4) change in CDF D wall design; and (5) use of rail at CDF D. A second 2002 ESD (“OU 1 ESD #2) further modified the upper and lower harbor remedy to include offsite disposal for the dredged sediments slated for CDF D instead of constructing CDF D and disposing PCB contaminated sediments in it.

The 2001 OU 1 ESD #1 added the use of the pilot study CDF as an interim TSCA facility for PCB-contaminated sediment from the upper and lower harbor operable unit. The ESD specifically discussed EPA’s use of the eastern end of the CDF (the debris disposal area, or “DDA”) for storage of PCB-contaminated sediments and debris from the upper and lower harbor remediation, but did not specifically discuss the use of cell #1 in the western area of the pilot study CDF. The ESD identified that the upper and lower harbor sediments to be disposed in the pilot study CDF did not meet federal or state standards to be classified as hazardous waste and were regulated solely under TSCA.

In order for the use of the pilot study CDF as an interim TSCA facility to be protective to human health and the environment, the OU 1 ESD #1 documented that groundwater and air monitoring had been and would continue to be performed in and around the facility and that monitoring data up to that date showed that PCBs were not migrating from the facility. In addition, a clay layer is present under the pilot study CDF that acts as a naturally impermeable barrier to the movement of contaminants from the area.

The OU 1 ESD #1 included a finding under Section 761.61(c) of the TSCA regulations, 40 C.F.R. § 761.61(c), made by the Regional Administrator, EPA Region 1, that the facility did not pose an unreasonable risk to health or the environment. This finding was based on a determination, after reviewing the information contained in the Administrative Record, that the facility does not pose a risk as long as the following conditions are maintained: (1) groundwater and air monitoring of the area is continued as long as the PCB contaminated sediment remains in place; (2) subsurface conditions remain intact; (3) surface PCB levels in the DDA remain low or, alternatively, a clean soil cover (approximately six inches thick) is placed so that it does not pose an unreasonable risk to health or the environment; and (4) a final resolution of the facility is made in a later decision document.

III. This Explanation of Significant Differences

This ESD documents EPA’s use of cell #1 for temporary storage of PCB-contaminated sediments from OU 1, including VOC-impacted sediments removed from the Aerovox shoreline. This ESD restates EPA Region 1’s 2001 finding under TSCA, that the temporary storage of PCB-contaminated sediment within cell #1 does not pose an unreasonable risk to health or the environment. The ESD also modifies the previous OU 2 ESD #1 finding that cell #1 meets applicable standards for the temporary disposal of hazardous waste, as well as PCBs. However, in making this finding, it is necessary for EPA to invoke a waiver under Sections 121(d)(4)(A) and (B) of CERCLA, 42 U.S.C. §§ 9621(d)(4)(A) and (B), of the Massachusetts hazardous waste surface impoundment regulations’ requirement that the cell have a double liner. EPA has determined that the single liner present in the cell, in combination with the underlying clay layer and the extensive monitoring plan for the facility is equally protective as a double liner and is suitable for a temporary hazardous waste surface impoundment facility.

Use of Cell #1 for PCB-Contaminated Sediments

As discussed in the previous section, the OU 1 ESD #1 included a finding under 40 CFR 761.61(c) of the TSCA regulations that the entire pilot study CDF was suitable as a temporary disposal facility for PCB-contaminated sediments. Furthermore, the OU 2 ESD #1 found that the cell itself meets TSCA standards for a temporary storage facility under 40 CFR 761.65, except for several standards that were waived under the protectiveness, interim measure, and equivalent standard waivers under Sections 121(d)(4)(A), (B), and (D) of CERCLA, 42 U.S.C. §§ 9621(d)(4)(A), (B), and (D)⁴.

Although not specifically addressed under the OU 1 ESD #1, since the summer of 2000, cell #1 has been used to temporarily store PCB-contaminated sediments from upper and lower harbor remedial actions. Specifically, the following OU 1 PCB-contaminated sediments have been placed into cell #1:

- 2000 - dredged material from the upper harbor (on the east side of the Acushnet River across from Manomet Street) as part of the Pre-Design Field Test
- 2002 - excavated material from the North of Wood Street (NWS) remediation
- 2002 - dredged material from the North Lobe Dredging (NLD) project as part of the Packer pier relocation
- 2005 - 2008 - sand, etc. removed from the Area C desanding facility
- From June to August 2008, EPA excavated approximately 6,900 cubic yards of PCB-contaminated shoreline sediments at the former Aerovox facility. Portland cement was added to the sediments at a ratio of 7 to 12 percent in a temporary enclosure at the Aerovox property to stabilize free liquids in the material prior to shipment to cell #1.

As part of this ESD, the Director of the Office of Site Remediation and Restoration, EPA Region 1⁵ finds that the use of cell #1 to temporarily hold PCB-contaminated sediments meets the protectiveness criteria under 40 C.F.R. 761.61(c) of the TSCA regulations. This finding is based on a determination, after reviewing the information contained in the Administrative Record, that the use of the pilot study CDF, including cell #1, for temporary storage of PCB-contaminated sediment does not pose a risk as long as the following conditions are maintained: (1) groundwater and air monitoring of the area is continued as long as the

⁴ Sections of the TSCA temporary storage regulations waived by the 2001 OU 1 ESD #1 were: (1) 40 C.F.R. 761.65(a) – one year storage limit; (2) 40 C.F.R. 761.65(b)(1)(i) – roof and wall requirements for storage units; (3) 40 C.F.R. 761.65(b)(1)(ii) and (iv) – flooring and curbing requirements; (4) 40 C.F.R. 761.65(b)(1)(v) – 100-year floodwater protection; and (5) 40 C.F.R. 761.5(e)(6) – 90 day storage and 180 day closure requirements.

⁵ Since the time of the 2001 OU 1 ESD #1 the authority within EPA Region 1 to make a finding under 40 CFR 761.61(c) has been delegated from the Regional Administration to the Director of the Office of Site Remediation and Restoration.

dredged PCB-contaminated sediment remains in place; (2) subsurface conditions remain intact; (3) surface PCB levels remain low or, alternatively, a clean soil cover (approximately six inches thick) is placed so that it does not pose an unreasonable risk to health or the environment; and (4) a final resolution of the facility is made in a later decision document.

Site monitoring since the 2001 OU 1 ESD #1, continues to show no migration of contaminants from the facility. The OU 2 ESD #2 describes that cell #1 was originally designed and constructed so that it could safely hold the hot spot sediments, which contained higher concentrations of PCBs (over 4,000 ppm) than the upper and lower harbor sediments (generally less than 4,000 ppm). The only change in the cell's design was the replacement of the double liner with a single liner once the hot spot sediments had been removed. Monitoring continues to show that this design change has not changed the protectiveness of the facility (see recent air and groundwater monitoring results in Tables 2, 3 and 4). Location of the groundwater monitoring wells is shown on Figure 2. PCB-contaminated sediments will be temporarily stored in cell #1 until a final decision is made as to permanent treatment or disposal.

Use of Cell #1 for Sediments Contaminated with Hazardous Waste

From June to August 2008, EPA excavated approximately 6,900 cubic yards of contaminated shoreline sediments near the former Aerovox facility that were stored in cell #1. Two rounds of Toxicity Characteristic Leaching Procedure ("TCLP") analytical tests were performed on the sediment deposited into the cell in August and October 2008. Results from the first TCLP testing showed that the material exceeds Resource Conservation and Recovery Act ("RCRA") characteristic hazardous waste standards for toxicity due to the presence of trichloroethylene ("TCE") at TCLP levels ranging from 0.66 ppm to 23.0 ppm. The regulatory TCLP limit for a material to be a RCRA characteristic hazardous waste for TCE is 0.5 ppm. Results from the second round of testing showed TCE TCLP levels ranged from 0.130 ppm to 43.0 ppm (see Table 1).

As discussed in the OU 2 ESD #2, cell #1 was designed and constructed to meet federal and state standards for use for the temporary storage of hazardous waste, specifically the Massachusetts hazardous waste surface impoundment regulations under 310 CMR 30.610. As authorized under CERCLA, the OU 2 ESD #2 waived two surface impoundment regulatory requirements: (1) the requirement for a leak detection, collection and removal system, 310 CMR 30.612(3) and (2) the requirement that two feet of freeboard be maintained (freeboard refers to the distance from the top of the dredged sediments to the top of the surrounding cell wall) in order to ensure that at no time will dredged material be allowed to overtop the impoundment, 310 CMR 30.612(6). This ESD retains these two CERCLA waivers and adds a new waiver of the requirement for a hazardous waste surface impoundment to have a double liner, 310 CMR 30.612(1). This CERCLA waiver under Sections 121(d)(4)(A) and (B) of CERCLA, 42 U.S.C. §§ 9621(d)(4)(A) and (B), is based on EPA's determination that the single sixty mil (0.06 inch thick) HDPE liner present in the cell, in combination with the underlying clay layer under the pilot study CDF and the extensive monitoring of the facility, is equally protective as a double liner and is suitable for a temporary hazardous waste surface impoundment facility.

V. Support Agency Comments

The MassDEP has reviewed this ESD and has concurred with EPA in its issuance through a letter dated February 19, 2010.

VI. Statutory Determinations

As discussed in Section III, this ESD documents that the Director of the Office of Site Remediation and Restoration, Region 1 has made a regulatory finding under the authority of TSCA 40 C.F.R. 761.61(c) that the use of cell #1 and the pilot study CDF for the temporary storage of PCB-contaminated sediment does not pose an unreasonable risk of injury to health or the environment.

This ESD documents EPA's decision to temporarily store contaminated sediment in a manner protective of human health and the environment while alternative disposal options are explored. EPA believes that the remedy as revised by this ESD remains protective of human health and the environment, complies with federal and state ARARs that were identified in the ROD and subsequent ESDs as applicable or relevant and appropriate to this remedial action (except for regulatory requirements that have been waived within Site decision documents), and is cost-effective. Since cell #1 is only being authorized to serve as a temporary storage facility for contaminated sediments, a final disposal alternative will be developed in a future decision document.

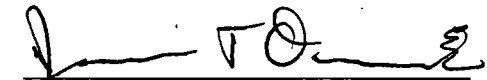
VII. Public Participation Activities

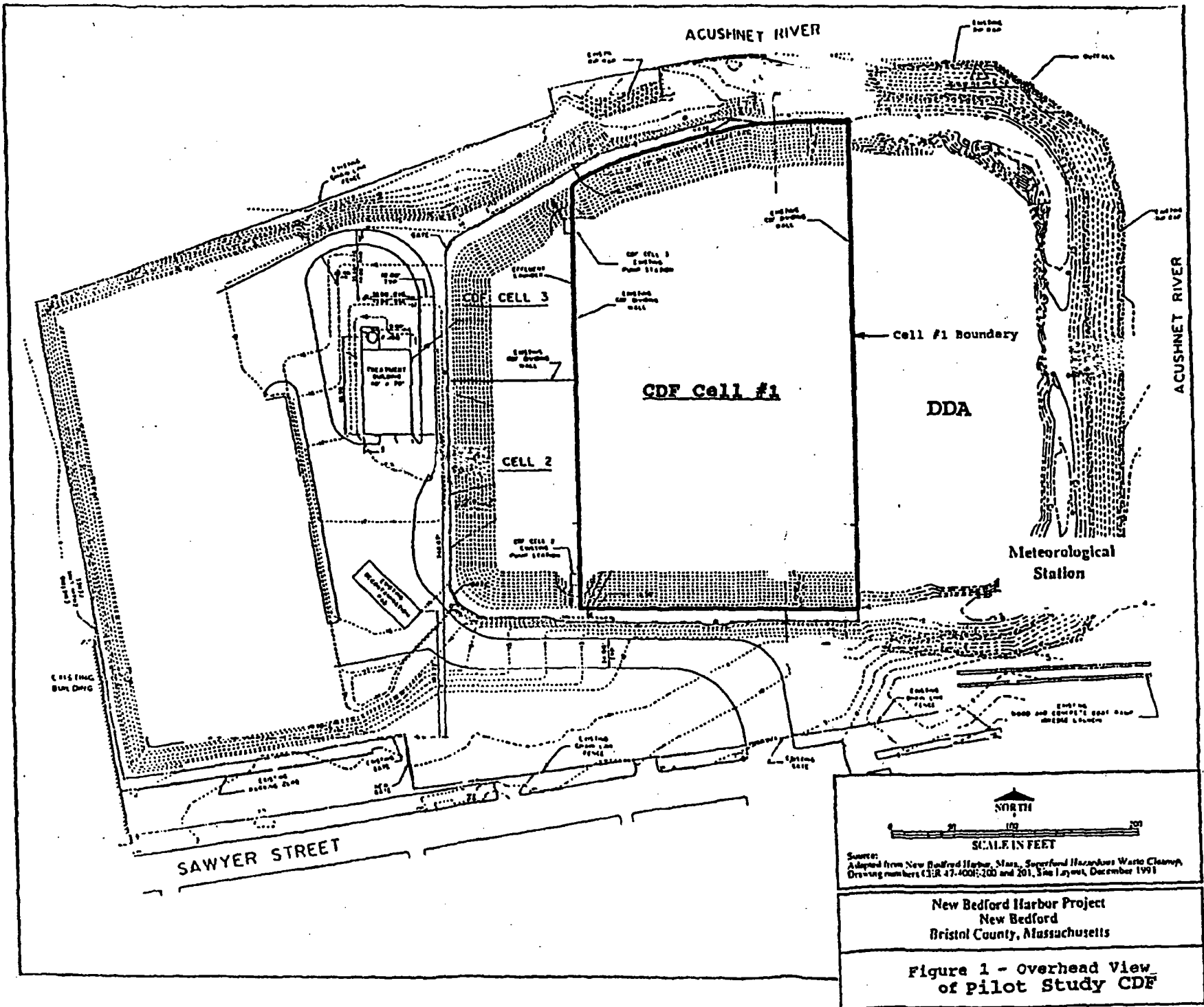
This ESD and supporting information are available for public review at the locations and times identified in the introduction of this document. The public comment period for this ESD ran from September 1, 2009 until September 15, 2009 and was extended to September 30, 2009. A summary of the public comments and EPA's response to these comments are included as Attachment 1 to this ESD. On September 24, 2009, EPA held an informal Q&A session at the Sawyer Street facility to discuss this ESD and site cleanup activities. In addition, a notice of availability and brief description of the ESD was provided to a local newspaper of general circulation, the New Bedford Standard Times.

VIII. Declaration

For the foregoing reasons, by my signature below, EPA is issuing this Explanation of Significant Differences and reaffirming the TSCA finding under 40 C.F.R. 761.61(c) for the New Bedford Harbor Superfund Site in New Bedford, Massachusetts.

3/4/10
Date


James T. Owens, III, Director
Office of Site Remediation & Restoration
EPA - New England



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

New Bedford Harbor Project
 New Bedford
 Bristol County, Massachusetts

**Figure 1 - Overhead View
 of pilot Study CDF**

Document: P:\GIS\Projects\New Bedford\Mapdocuments\NewBedford_8x11P.mxd Figure: P:\3650\09\0138 - WHG - NBH Monitoring Project\4.0 Project Deliverables\4.1 Reports\Figure 2 - Site Plan.pdf



Legend

◆ Monitoring Well

N

0 50 100
Feet

Prepared/Date: BJR 01/22/10
Checked/Date: DGK 01/22/10

Sawyer Street
Confined Disposal Facility
New Bedford Harbor Superfund Site
New Bedford, Massachusetts



Figure 2
Site Plan
3650-09-0138

TABLE 1

Summary of PCB Total Aroclor and TCLP Sampling Results for TCE at the New Bedford Harbor Superfund Site – Cell #1 Sediment

Sample No.	Total PCBs¹ (ppm)³	Trichloroethylene² (ppm) TCLP
1 ⁴	780	1.60
2	158	23.0
3	940	23.0
4	770	0.66
5	310	0.20
6	166	0.13
7 ⁵	710	0.71
7	980	0.87
8	610	0.87
9	1,930	43.0
10	780	2.70

Notes

1. Total Aroclors
2. RCRA Total Characteristic Leaching Procedure (TCLP) regulatory limit for TCE is 0.50 ppm.
3. ppm = part per million
4. Samples 1-5 taken August 2008 & Samples 6-10 taken October 2008
5. Duplicate

TABLE 2
Air Monitoring Results
Sawyer Street Cell # 1

Air Contaminant ^{1,2}	10/07/08	02/24/09	04/24/09	07/13/09	10/14/09
Vinyl Chloride (VC)	ND ³	ND	ND	ND	ND
Perchloroethene (PCE)	ND	ND	ND	ND	0.71 ⁴
Trichloroethene (TCE)	ND	ND	ND	ND	ND
1,2-Dichloroethene (1,2-DCE)	ND	ND	ND	ND	ND

Notes

1. ppbv/m³ = parts per billion/volume
2. 8-hour collection period
3. ND – compound not detected
4. The Threshold Limit Value (TLV) for this compound is 25 parts per million per volume for an 8-hour occupational exposure per ACGIH (American Conference of Governmental Industrial Hygienists)

Air Contaminant ^{1,2}	08/21/08	09/24/08	11/10/08	06/16/09	07//13/09	08/13/09	09/17/09	10/14/09	11/09/09
PCBs ³	123.4 116.4 ⁴	42	6.2	42.61	76.48 75.53 ⁴	32	35	13.26	51.8

Notes

1. The Public Exposure Tracking System (PETS) site specific risk-based allowable exposure limit for PCBs for this location's fence line = 202 ng/m³/day
2. ng/m³ = nanograms per cubic meter
3. 24-hour collection period
4. Duplicate

TABLE 3

**SUMMARY OF DETECTED ANALYTES¹
JULY 8, 2009 GROUNDWATER SAMPLING
SAWYER STREET PILOT STUDY CDF
NEW BEDFORD HARBOR SUPERFUND SITE**

Monitoring Well ID	Result ($\mu\text{g/l}$) ²	
	Total PCBs ³	Copper ⁵
MW-1	0.02U ⁴	3.6
MW-1 - Duplicate	0.023U	3.3
MW-3	0.052	2.0U
MW-4A	0.021U	2.0U
MW-5	0.051	9.0
MW-6	0.021U	2.7
MW-7A	0.02U	4.7

Notes:

1. Only detected compounds are shown in table (and not all wells showed detections of that compound). VOCs, chromium and lead were not detected above the detection limit in any wells.
2. μl = micrograms per liter or parts per billion
3. Massachusetts Contingency Plan (MCP), Method 1 MCP GW-3 standard for total PCBs is 10 μl
4. U – not detected at concentration above the laboratory reporting limit
5. No Method 1 MCP GW-3 standard for copper

Table 4

PCB, Metal and VOC Groundwater Results, May and November 2008 Sampling Events

Well ID	Sample Date	Result (µg/L)					
		Total PCB ^(a)	Cadmium	Chromium	Copper	Lead	Acetone
MW-1	5/19/2008	— U ^(b)	0.249	5.35	0.984 U ^(c)	0.739	2.79 EB
	11/6/2008	— U ^(b)	0.435	1.78 U ^(c)	1.46 U ^(c)	0.894 U ^(c)	10.3
MW-3	5/20/2008	— U ^(b)	0.124	6.36	1.95	0.085 U ^(c)	8.4 EB
	11/7/2008	— U ^(b)	0.03	5.63	0.855 U ^(c)	0.063 U ^(c)	5.36
MW-4A	5/20/2008	0.043 J	0.028 U ^(c)	6.57	1.46	0.071 U ^(c)	3.05 EB
	11/7/2008	— UD ^(b)	0.027	5.62	2.27	0.175 U ^(c)	5.32
MW-5	5/20/2008	— U ^(b)	0.046 U ^(c)	1.89 U ^(c)	1.12 U ^(c)	0.061 U ^(c)	16 EB
	11/6/2008	0.032 J	0.052	4.04	2.10	0.274 U ^(c)	5 U
MW-6	5/19/2008	— U ^(b)	0.044 U ^(c)	2.45 U ^(c)	0.453 U ^(c)	0.057 U ^(c)	1.26 EB
	11/6/2008	— U ^(b)	0.052	0.346 U ^(c)	0.666 U ^(c)	0.183 U ^(c)	23.3
MW-7A	5/19/2008	— U ^(b)	0.711	5.28	4.99	0.071 U ^(c)	5 U
	11/6/2008	— U ^(b)	0.648	1.01 U ^(c)	4.99	0.023 U ^(c)	5 U
MCP GW-3 Criteria		10	1	300	NA	10	50000
Equipment Blank	5/20/2008	— U ^(b)	0.011 J	0.843	0.269	0.077	7.19
	11/5/2008	0.095	0.005 U	0.608	0.354	0.078	5

^(a) Total PCB calculated as the sum of Aroclors 1016, 1221, 1232, 1242, 1248, 1254 and 1260; a value of zero (0) used in summation for non-detects. For example, total PCB was calculated as follows for sample MW-4A collected on 05/20/2008:

Parameter	Result (µg/L)	Final Qual	Result (µg/L)	Comment
Aroclor 1016	0.047	U	0	zero
Aroclor 1221	0.047	U	0	substituted for non-detect
Aroclor 1232	0.047	U	0	
Aroclor 1242	0.043	J	0.043	J
Aroclor 1248	0.047	U	0	zero
Aroclor 1254	0.047	U	0	substituted for non-detect
Aroclor 1260	0.047	U	0	
	0.043 J			Total PCB

^(b) PCB Aroclors undetected in the study samples at concentrations above the laboratory reporting limit (see Appendix B).

^(c) Chemical detected at concentration <5X equipment blank values.

^(d) MCP: Massachusetts Contingency Plan, Method 1 MCP GW-3 standard from 310 CMR 40.0974(2).

Key:

EB: Chemical not detected at concentration above 10X equipment blank values.

U: Chemical not detected at concentration above the laboratory reporting limit.

J: Estimated value.

NA: Not applicable.

ATTACHMENT 1

Response to Comments for the Third Explanation of Significant Differences for Temporary Storage of Sediments in Cell #1, EPA Sawyer Street Facility New Bedford Harbor Superfund Site/Operable Unit #1 New Bedford, Massachusetts

A draft Explanation of Significant Differences (ESD) was released for a 15-day public comment on August 31, 2009. The comment period was extended to September 30, 2009 at the request of the City of New Bedford. Comments were provided by four individuals/organizations: Kerri J. Murphy, Esq., Advocacy Specialist, The Coalition for Buzzards Bay; Karen Vilandry, Environmental Activist; Cora Pierce, Fairhaven Resident; and Mayor Scott W. Lang, City of New Bedford.

Outlined below is a summary of significant comments received from the public and other interested parties during the public comment periods and EPA's response to those comments. Similar comments have been summarized and grouped together.

COMMENT #1: Several commentors asked for specific information on the use of cell #1 and for EPA's definition of "temporary storage". Several of these commentors requested that EPA remove this material and ship it off-site immediately.

Response: Since the summer of 2000, cell #1 located at EPA's Sawyer Street facility has been used to temporarily store PCB-contaminated material excavated or dredged from the upper and lower harbor. These sediment sources are listed on pages 5 and 6 of the subject ESD and are still present in the cell today. EPA does consider this storage of material to be temporary in nature. EPA will remove the material in the cell when funding becomes available. Removal of the material will cost approximately \$15 million. Funding for this activity is not yet available.

Approximately 6,900 cubic yards of the sediment stored in cell # 1 is from the Aerovox shoreline which, besides PCBs, contains the volatile organic compound (VOC) trichloroethylene (TCE). The concentration of TCE in the sediment is at a level which classifies it as a RCRA hazardous waste and once the sediment is removed from cell #1, will have to be shipped to a licensed RCRA hazardous waste disposal facility via truck. Extensive air and groundwater monitoring has been, and will continue to be conducted that ensures that the cell remains protective (see Figure 2 and Tables 2-4 of the ESD for monitoring well locations and recent monitoring results, respectively). Since sediment in the cell does not pose a risk to human health or the environment, EPA funding priorities have focused on uncontrolled contaminated sediments that still remain in the Harbor which are freely releasing PCBs into the environment. Once uncontrolled releases are addressed, EPA will remove the materials in cell #1. However, EPA is also looking into all other means of acquiring funding for the removal of the material in the cell, outside of the funding currently being spent dredging the contaminated sediments in the Harbor.

In summary, EPA considers storage of material in cell # 1 to be temporary and does not intend to leave any material in the cell permanently. It has been some time since material has been stored in the cell (since 2000). Groundwater and air monitoring have shown that the material is not posing a risk to human health and the environment by being there. When EPA obtains the funds to remove the material, it will be shipped off-site to an appropriate disposal facility.

COMMENT #2: One commentor asked for specific information on the liner material itself and its compatibility with materials stored in the cell.

Response: The liner is made of high density polyethylene (HDPE) which is a hard but pliable plastic material commonly used in landfills for liner and cover applications. The liner is 60 mil or 0.06 inch thick. It is not reactive to most hazardous wastes, including PCBs, metals and solvents or a combination of these compounds. Most landfills which use this material for liners have at least a thirty year life span. EPA plans to remove this material as soon as funding is made available.

COMMENT #3: Several commentors expressed concerns regarding EPA's determination that a double liner was not required and questioned EPA's decision to waive state requirements for a double liner.

Response: In May 2000, the hot spot sediment being stored in the then double-lined cell was emptied and shipped off-site. The double liner was damaged during the sediment removal process and a single 60 mil or 0.06 inch thick high density polypropylene (HDPE) liner was reinstalled in the cell. However, the cell has a natural clay layer underlying the area. Clay is an extremely impervious material and is routinely used as a liner or cover in landfill construction. Based on the clay's impervious property, along with an existing liner, as well as the cell having a cover of clean fill and an active groundwater and air monitoring program in place at and near the cell, EPA has determined that the material is secure and the facility is equally protective as a cell with a double liner. Therefore, the single liner cell, underlain with clay, is determined to be suitable as a temporary hazardous waste surface impoundment to contain this material. Based on these findings, this ESD waives a state requirement for surface impoundments currently holding hazardous waste to be double lined.

COMMENT #4: One commentor requested additional information (and expressed concerns) regarding detections of acetone in groundwater in the cell # 1 area.

Response: During the same sampling event in which acetone was detected in groundwater samples taken from the cell # 1 area, acetone was also detected in the equipment blanks (pure water, unrelated to the site samples). Acetone is a common laboratory contaminant. Because this compound was found in the equipment blank and no other volatile organic compounds (VOCs) were found in either the equipment blank or site samples, EPA determined that the acetone came from the laboratory and not the site. Further, the analytical results for the continued groundwater sampling that EPA is conducting, have shown that the cell is protective and not leaching or "leaking" out any

contaminants (see Table 3 in the ESD for the most recent groundwater sampling results). On-going air quality monitoring also shows neither PCB nor VOC concentrations which would pose a risk. This shows us that the cap on the cell is also protective.

COMMENT #5: *Comments from Mayor Lang of New Bedford expressed concerns about risks from the temporary storage of the cell contents as well as negative impacts on the City's desire to redevelop the Sawyer Street property. The Mayor also requested that any future use of Confined Disposal Facilities (CDFs) be removed from the overall cleanup plan.*

Response: With regard to temporary risks, EPA has determined that there are not temporary risks associated with the material in cell # 1. The material is capped with at least six inches of clean fill, the cell has a single liner, is underlain by impervious natural clay, and has frequent and on-going groundwater and air monitoring. There is no risk to human health at any location in the Sawyer Street facility area, including cell # 1 from the material in the cell. The U.S. Army Corps of Engineers and its contractors and subcontractors are present on-site full time. They have stringent safety protocols, including exposure limits for contaminants of concern such as PCBs and VOCs. There have been no exceedences of worker safety action levels for these compounds (see Table 2 of the final ESD) at and near the cell.

EPA supports the City in its desire to develop portions of the Sawyer Street facility, and is taking proactive steps to facilitate this process. For example, EPA has retrofit the facility's hot spot water treatment building for use as office space, so the project staff can be relocated to it and thereby free-up the facility's construction trailer area. The presence of the stored material in cell #1 will not pose a risk to development of the former trailer area (development of the area will need to address any contamination that may be present in the fill that created the pilot study CDF upland area).

EPA intends to remove the hazardous material from cell # 1 and dispose of it at a licensed hazardous waste landfill. Any permanent disposition of the material in this area would require EPA to issue an additional decision document. As noted in EPA's response to Comment #1, since the sediment in the cell does not pose a risk to human health or the environment, EPA funding priorities have focused on uncontrolled contaminated sediments that still remain in the Harbor which are freely releasing PCBs into the environment. Once uncontrolled releases are addressed, EPA will remove the materials in cell #1. However, EPA is also looking into all other means of acquiring funding for the removal of the material in the cell, outside of the funding currently being spent dredging the contaminated sediments in the Harbor.

Regarding the use of CDFs, the construction of three CDFs in the upper harbor is still part of the current approved cleanup plan selected after public comment. However, EPA is in the process of re-evaluating remedial options for addressing the sediment currently slated to be disposed in them. Additional public comment and decision making are anticipated for this element of the cleanup plan.