Final Environmental Impact Report (EOEA File Number 8695)
and
Final Environmental Impact Statement
Volume 2 of 3 - Comments and Responses to DEIR/S

Boston Harbor, Massachusetts

Navigation Improvement Project and Berth Dredging Project

June 1995

US Army Corps
of Engineers
New England Division

Massachusetts
Port Authority
Maritime Department

FINAL
ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT STATEMENT (FEIR/S)
Volume 2 of 3

BOSTON HARBOR NAVIGATION IMPROVEMENT DREDGING AND BERTH DREDGING PROJECT

RESPONSIBLE LEAD AGENCIES ARE:

U.S. Army Corps of Engineers
Impact Analysis Division
424 Trapelo Road
Waltham, Massachusetts 02254

Massachusetts Port Authority
Maritime Department
Boston Fish Pier II
Boston, Massachusetts 02210

FEDERAL COOPERATING AGENCIES:

National Marine Fisheries Service, U.S. Fish and Wildlife Service, and the U.S. Environmental Protection Agency

DOCUMENT WAS PREPARED BY:

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424 Trapelo Road
Waltham, Massachusetts 02254

This joint Federal and State document addresses the impacts associated with the Congressionally authorized navigation improvement dredging and disposal of material from the Federal navigation channel and associated berthing areas in Boston Harbor, Massachusetts. The Reserved Channel and Mystic River would be deepened from 35 feet mean low water (MLW) to 40 feet MLW. The Chelsea Creek would be deepened from 35 feet MLW to 38 feet MLW. Disposal of the underlying parent material is proposed at the Massachusetts Bay Disposal Site. Disposal alternatives for the silt material (maintenance material) overtopping the parent material are assessed and the preferred alternative selected in this FEIR/S.

Comments should be sent to Colonel Richardson at the U.S Army Corps of Engineers and Ms. Trudy Coxe, Secretary, Executive Office of Environmental Affairs, Commonwealth of Massachusetts by the date indicated in the transmittal letter. If you would like further information on this document, Mr. Peter Jackson of the U.S. Army Corps of Engineers can be reached at (617) 647-8861 or contact Ms. Janeen Hansen, Massport, at (617) 973-5355.

BOSTON HARBOR NAVIGATION IMPROVEMENTS AND BERTH DREDGING PROJECT

DEIR/S COMMENT LETTERS AND RESPONSE

COMMENT LETTERS RECEIVED ON THE DRAFT EIR/S

FEDERAL AGENCIES

F1 Office of the Under Secretary for Oceans and Atmosphere, United States Department of Commerce

F2 United States Environmental Protection Agency, Region I

F3 Office of the Secretary, Office of Environmental Policy and Compliance, United States Department of the Interior

F4 Fish and Wildlife Service, United States Department of the Interior

F5 National Marine Fisheries service, Northeast Region, United States Department of Commerce

STATE AGENCIES

S1 Secretary, Executive Office of Environmental Affairs

S2 Massachusetts Water Resources Authority

S3 Department of Envioronmental Protection

S4 Division of Marine Fisheries

S5 Massachusetts Highway Department

S6 Massachusetts Coastal Zone Management Office

S7 Marine Fisheries Commission

LOCAL AGENCIES AND OFFICES

L1 Public Works department, Boston

L2 Boston Redevelopment Authority

L3 Boston Water and Sewer Commission

L4 Cape Cod Commission, Executive Director

L5 Cape Cod Commission, Chair

L6 Chelsea Department of Planning and Community Development

L7 City of Everett, Mayor

L8 City of Gloucester, Mayor

L9 Nahant, Board of Selectmen

L10 Nahant, Town Administrator

L11 Swanpscott, Conservation Commission

L12 Swampscott, Board of Selectmen

ENVIRONMENTAL GROUPS, ADVOCACY GROUPS

E1 The Boston Harbor Association

E2 Center for Coastal Studies

E3 Center for Maine Conservation

E4 Cetacean Research Unit

E5 Coastal Advocacy Network

E6 Conservation Law Foundation

E7 Green World Inc.

E8 Massachusetts Bays Program

E9 Massachusetts Sierra Club

E10 save the Harbor Save the Bay

E11 Stop the Outfall Pipe (S.T.O.P.)

E12 Nahant SWIM, Inc.

COMMERCIAL

C1 Boston Gas

C2 Boston Harbor Docking Pilots

C3 Boston Pilots

C4 The Boston Shipping Assocation, Inc.

C5 Boston Towing and Transportation Company

C6 John T. Clark and Son

C7 Containership Agency, Inc.

C8 Decorative Specialties International Inc.

C9 I.T.O. Corporation of New England

C10 LADS System, Inc

C11 Massachusetts Lobstermen's Association, Inc.

C12 Maesk Inc.

C13 F. Mirarchi

C14 Moran Shipping Agencies, Inc

C15 Nedlloyd Lines

C16 North Shore Recycled Fibers

C17 P&O Containers

C18 Patterson, Wylde and Co., Inc.

C19 C.H. Powell Company

C20 Rexham

C21 Sea-Land Service, Inc.

C22 Boston Edison

PRIVATE CITIZENS

P1 B. Carney

P2 P. Codinha

P3 P.F. Murray

LETTERS RECEIVED AFTER THE COMMENT PERIOD

1. P.G. Torkildson, Member of Congress

2. Massachusetts Harbormasters Association (North Shore)

3. F.M. Valenti, Inc. and Association

4. N. Wilson

5. B. Lattimer

6. Coastal Advocacy Network

FEDERAL AGENCIES

COMMENTS AND RESPONSES

UNITED STATES DEPARTMENT OF COMMERCE
Office of the Under Secretary for
Oceans and Atmosphere
Washington, D.C. 20230

June 28, 1994

F1

LTC Dwight S. Durham
Acting Division Engineer
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, Massachusetts 02254-9149

Dear Colonel Durham:

The National Oceanic and Atmospheric Administration (NOAA) has reviewed the Draft Environmental Impact Report/Statement (DEIR/S) for the Boston Harbor Navigation Improvement and Berth Dredging Project. Enclosed are comments from the National Marine Fisheries Service (NMFS), the Stellwagen Bank National Marine Sanctuary, and the National Ocean Service/Office of Coastal Resource Management.

NOAA has participated in the planning for this project over the past few years, including participation on the Advisory Group, the Sediment Characterization Technical Working Group, and the Disposal Options Technical Working Group. We recognize the need to maintain adequate navigational access to Boston Harbor, and we acknowledge the potential economic benefits of the project.

NOAA is interested in the project from five slightly different perspectives. First, we are interested in the broad issue of the overall environmental impacts of the full project on all living marine resources and their habitat. Second, pursuant to the Endangered Species Act of 1973, as amended, we are particularly interested in the potential impacts of the project (including dredging, vessel traffic, and dredged material disposal) on threatened and endangered species in Massachusetts Bay. Third, we have a specific and unique interest in the impacts of the project to NOAA's Stellwagen Bank National Marine Sanctuary. Fourth, we are interested in ensuring the consistency of the project with the NOAA-approved Coastal Zone Management Plan for Massachusetts. Finally, pursuant to the Superfund law, NOAA has a strong interest in seeing that the project is carried out in a manner that ensures that NOAA trust resources are not adversely affected by the handling of contaminated marine sediments, in order to minimize the need to pursue natural resource damage claims in the future. (NOAA may pursue potentially responsible parties -- owners or operators of facilities or vessels, or transporters or generators, that release hazardous substances into the environment -- for the

costs of restoring marine resources that have been adversely affected by contaminants.)

If you have any questions regarding this letter, please contact Jonathan Kurland at 508/281-9204.

Sincerely,

Susan Fuchsler

for Donna Wieting
Acting Director
Ecology and Conservation Office

Enclosure

cc: Trudy Coxe, MEPA, Boston, MA
Ed Woo - EPA, Boston
Vern Lang - USFWS, Concord
Deerin Babb-Brott - MA CZM, Boston
Scott Cassel - MA EOEA, Boston
Leigh Bridges - MA DMF, Boston
Brad Barr - SBNMS, Plymouth
Cathy Demos - ACOE, Waltham
Pete Jackson - ACOE, Waltham
Tom Bruha - ACOE, Waltham
Pat Fiorelli - NEFMC, Saugus
Janeen Hanson - Massport
Grace Perez - Conservation Law Foundation
Jodi Sugerman - Save the Harbor / Save the Bay
Tim Eichenberg - Center for Marine Conservation
NOAA
F/NEO2 - Mantzaris, Beach, Kurland
F/NEO - Jon Rittgers
F/NEC - Jack Pearce
F/NECx1 - David Dow
F/HP1 - Jim Burgess
N/ORM3 - Patricia Scott
N/ORCA - John Lindsay
GCNE - Tony Giedt
GCNE - Jack Moakley

General Comments

The proposed project includes the removal and disposal of approximately 1.3 million cubic yards of contaminated silty material, 2 million cubic yards of parent material (primarily Boston blue clay and gravel), and 132,000 cubic yards of rock. The Mystic River Channel and Reserved Channel would be deepened to -40 feet mean low water, Chelsea Creek Channel would be deepened to -38 feet mean low water, and the Massport and private berth areas would be dredged to the depth of their corresponding access channels. An additional 4.4 million cubic yards of silt from subsequent maintenance dredging of the harbor channels would be generated over the 50-year life of the project.

The environmental impacts of the Boston Harbor navigation project can be separated into several categories: sediment quality, dredging operations, handling and transportation of dredged material, disposal operations, disposal site impacts over time, and changes in vessel traffic as a result of the project. NOAA is concerned about potential adverse effects to our trust resources within each of these categories of impacts. However, the most significant issues from our standpoint surround the disposal and management of contaminated dredged materials.

NOAA concurs with the Environmental Protection Agency's (EPA's) conclusion that all 1.3 million cubic yards of the silt (maintenance) material associated with the project is unsuitable for unconfined open water disposal. Conversely, we disagree with the Corps of Engineers' assessment that the silt material from the Reserved Channel and from the berth areas of Gulf Oil, Army Base, Conley Terminal, and the Boston Edison Barge Berth are suitable for unconfined disposal. The sediments in these areas contain elevated levels of PCBs, PAHs, and heavy metals, and sediment testing revealed statistically significant bioaccumulation of several contaminants and/or significant mortality of test organisms. As we stated in an April 21, 1993 letter from NMFS to the Corps, NOAA believes that the sediments from these areas do not satisfy the Ocean Dumping Criteria for open water disposal. F1-1

Because such a large volume of material is unsuitable for unconfined open water disposal, a thorough screening and evaluation of potential disposal options is an essential component of the DEIR/S. NOAA participated in the disposal options screening process, and we agree with the general methodology used to narrow the range of disposal alternatives. However, we are concerned with two aspects of the portrayal of disposal options in the DEIR/S.

First, the use of the Massachusetts Bay Disposal Site (MBDS) as the comparative standard for evaluating the feasibility of other disposal options is fundamentally flawed. The MBDS is formally F1-2

designated as a disposal site for clean material only (i.e., material that satisfies the Ocean Dumping Criteria and is suitable for unconfined ocean disposal). While MBDS would serve as a sound basis for comparison for the disposal of clean material at other sites, MBDS is not presently an option for disposal of unsuitable (contaminated) material, and thus should not be used as a starting point against which to judge the costs, logistics, or environmental impacts of other alternatives for contaminated material.

Secondly, in our view the DEIR/S provides an insufficient analysis of the proposed aquatic disposal sites to allow an informed decision regarding potential environmental impacts. Based on the information available, it is difficult to determine the likely effects of disposal (particularly of contaminated material) on biological resources and habitat quality at the various disposal sites. Substantial additional information is necessary to characterize the existing environmental conditions at the proposed aquatic sites before selecting a final alternative, and will be critical for evaluating the recovery of borrow pit sites should they be selected for the project. We recommend that the Corps and Massport document the year-round use of the aquatic sites by fish, shellfish, and other organisms, and for the Meisburger sites and Spectacle Island CAD, determine the relative geologic stability of the areas and evaluate the potential for maintaining cap integrity over time. The Final EIR/S should include a minimum of one full year of data in support of these analyses. F1-3

We are also concerned that the DEIR/S does not describe how the contaminated (silt) material can effectively be separated from the clean parent material during dredging operations, and thus how Massport and the Corps can insure that the parent material will not become contaminated as it is removed. The DEIR/S suggests that all of the silt material can be removed from the harbor bottom using a modified "environmental" bucket, and that clean parent material could then be removed during a subsequent pass of the dredge using a standard bucket. In reality, a substantial fraction of contaminated material will likely remain on the surface of the parent material due to hydrated bucket overflow, sloughing of side slopes, the normal dynamic movement of silt on the harbor bottom from tidal and storm forces, and sediment resuspension due to vessel traffic and the dredging itself. As a result, it is highly likely that much of the dredged parent material, on a barge-load basis, will become tainted by residual contaminated silt. The Final EIR/S should evaluate in detail the degree of mixing between sediments during the dredging process, including an analysis of whether the parent clays (especially in the most contaminated portions of the harbor) may ultimately be unsuitable for unconfined ocean disposal. F1-4 F1-5

Specific Comments on the DEIR/S

Executive Summary - Pages ES-6 and ES-7 describe the analysis of disposal options and the process used to determine practicability of disposal alternatives. The text here and the accompanying chart (Figure ES-3) compare the costs of various disposal options for the silty dredged material (i.e., that which is unsuitable for unrestricted ocean disposal) with the cost for unrestricted disposal at MBDS. This comparison implies that disposal of the contaminated material at MBDS is a viable option. We strongly disagree with this characterization of the disposal options. Disposal at MBDS -- either confined or unconfined -- is not a viable alternative for the contaminated silty material from the project because (1) MBDS is designated as a disposal site for materials that are suitable for unconfined disposal only, and (2) the efficacy of capping dredged materials at MBDS remains unproven. F1-6

Section 2.2.1 - The discussion of sediment characterization contains a brief description of the three tiered evaluation process, and ends with the following sentence: "The feasibility of capping dredged material not meeting the requirements for unconfined disposal can also be evaluated from the results" [of the Tier I, II, and III analyses]. A determination of capping feasibility does depend somewhat on the nature of the material, but other criteria are equally important, such as the location of the proposed capping site, its depth, ambient hydrography, susceptibility to storm-induced erosion, etc. In other words, dredged material testing is only one step in evaluating the feasibility of capping contaminated sediments. F1-7

Section 2.2.4 - NOAA disagrees with the Corps of Engineers' assessment that 160,000 cubic yards of silt from the Reserved Channel and 200,000 cubic yards of silt from the berth areas of Gulf Oil, Army Base, Conley Terminal, and the Boston Edison Barge Berth are suitable for unconfined open water disposal. The EPA has concluded that all of the silt material is unsuitable for unconfined open water disposal, and NOAA concurs with this assessment (see EPA's September 9, 1993 letter to the Corps and NMFS' April 21, 1993 letter to the Corps). The Marine Protection, Research and Sanctuaries Act (§103c) requires that in cases where the EPA disagrees with the Corps' suitability determination, the determination of EPA shall prevail. We recommend clarifying this point in the Final EIR/S. F1-8

Section 3.1 - The DEIR/S briefly mentions that various federal and state agencies have established a goal of developing a long term regional dredged material management plan to help address recurring environmental review problems. Although such a plan will not be complete and ready for implementation for the Boston Harbor dredging project, we recommend that the involved agencies redouble their efforts to develop such a plan so that it is in F1-9

place for the next maintenance dredging cycle in Boston Harbor. NOAA is committed to participating actively in this process.

Section 3.2 - The DEIR/S refers to guidance in the June 7, 1991 MEPA Scope stating that unconfined ocean disposal of dredged material at MBDS is the option against which other alternatives should be judged. This basis for comparison is appropriate for clean dredged material, but is not valid for contaminated materials, which may not be disposed at MBDS either with or without capping. Using MBDS as a standard by which to compare other disposal options is highly misleading, since it implies that the lowest attainable cost for disposal is lower than it realistically is, and thus that other options are vastly more expensive and in some cases impracticably so. F1-10

This section incorrectly states that "the silt from the Reserved Channel area was the only material for which a consistent opinion was not reached" between the Corps and EPA on suitability for open water disposal. The Corps also disagreed with EPA's (and NOAA's) opinion that sediments from the berth areas of Gulf Oil, Army Base, Conley Terminal, and the Boston Edison Barge Berth are unsuitable for open water disposal. F1-11

Section 3.3.1 - Land-based disposal alternatives may be worth considering for a portion of the contaminated material. We recommend that the Corps and Massport re-examine potential land-based sites prior to completing the Final EIR/S to determine whether any new sites are available or conditions have changed regarding the listed sites. F1-12

Section 3.3.2 - We agree that several of the aquatic disposal alternatives listed are worthy of serious consideration. Of the shoreline facilities, we recommend retaining in the Final EIR/S the partial and complete fill alternatives for Mystic Piers, Revere Sugar, and Amstar, plus the "shallowing" options for Little Mystic Channel and Reserved Channel. We recommend including additional details in the Final EIR/S on the proposal to establish salt marsh vegetation on dredged material as part of the Reserved Channel alternative. F1-13

We also recommend retaining in the Final EIR/S the in-channel and borrow pit (Spectacle Island CAD and Meisburger sites 2 and 7) alternatives. However, substantial additional information should be included in the Final EIR/S regarding the existing habitat use and value of all three borrow pit sites, as well as the susceptibility of these sites to erosion from storm waves and other forces. (See additional comments below regarding the description of the disposal sites in Attachment 1 to the DEIR/S.) F1-14

We are extremely concerned about the discussion of the feasibility of capping in this section of the DEIR/S, and particularly the suggestion that the silty sediments from Boston F1-15

Harbor could be used for a demonstration project to test the effectiveness of capping. The text in this section states that "the Corps has successfully demonstrated effective capping at sites with similar depths [to the Boston Lightship disposal site] elsewhere in New England." This assertion presumably refers to the Portland Disposal Site. However, we know of no documentation regarding successful tests of capping at Portland or any other New England disposal site with similar depths. Although capping has been used successfully at shallower and more sheltered sites in Long Island Sound, NOAA is not convinced that capping is a proven technology for the Portland site, or for Boston Lightship. Moreover, we are strongly opposed to the use of contaminated materials to test the efficacy of capping. Instead, we recommend that the Corps conduct a deep water capping demonstration project using clean materials only, marked with a distinct tracer to allow analysis of the entire disposal process, including cap placement and integrity over time.

Additionally, we recommend refraining from disposal activities at the Boston Lightship site until more detailed information is available regarding the presence, distribution, and extent of radioactive and other contamination at the site. EPA studies indicate that some hazardous chemical and radioactive barrels may be concentrated in relatively small areas at the Boston Lightship site (Keith, et al., 1992; Carey, et al., 1992), but it would be premature to cover the barrels with dredged material until one can verify their presence and determine if the barrels pose an environmental or human health risk. For example, the best management alternative for these barrels might be *in situ* isolation or retrieval. F1-16

Section 3.4 - The cost information for disposal options, which is displayed in Tables 3-13 through 3-18 and 3-20, provides useful information, including the assumptions underlying all calculations. In Table 3-20 (Cost Estimates for Using Existing Disposal Sites for Disposal of Silts from BHNIP) we recommend listing one additional assumption for clarity: the estimates assume that capping is a viable technology for use at these sites, including both environmental and regulatory criteria. F1-17

Sections 3.4.1 - 3.4.4 - The range of disposal options discussed in these sections comprise a good array of possibilities for the project. However, in the Final EIR/S we recommend providing a better discussion of possible combinations of alternatives which when used together could meet the disposal needs of the project. For example, although the land-based sites may be too costly or impractical for disposal of all of the project materials, they may be reasonable options for a portion of the material. F1-18

We also recommend adding a discussion of the potential use of dredged material filled geotextile containers in conjunction with the in-channel, subaqueous, and borrow pit alternatives. This F1-19

technology, which is currently under study by the Corps of Engineers' Waterways Experiment Station, could potentially alleviate water quality problems during disposal and help contain contaminants at disposal sites (Fowler and Sprague, 1994).

Section 3.4.4 - Option D2 would involve disposal of the contaminated silty material at either MBDS or Boston Lightship with capping. The text mentions that the proposed project "overcomes a major stumbling block faced in the past by proposals for capping at MBDS: availability (or lack thereof) of suitable capping material." As we stated above, NOAA is strongly opposed to the use of contaminated materials to test the viability of capping, and we recommend conducting a capping demonstration project at MBDS using clean materials only. F1-2

Section 3.5.1 - We recognize that few treatment technologies for contaminated sediments have been used beyond small scale tests on marine dredged materials. Nevertheless, we encourage the Corps and Massport to use a portion of the contaminated material from this project as a pilot test of promising treatment technologies. We recommend using the Disposal Options Technical Working Group as a forum to discuss and refine an appropriate test project. F1-21

Section 3.5.2 - We recommend that the Final EIR/S provide additional detail, including a range of specific potential projects, for beneficial uses of the clean parent material and rock from the Boston Harbor dredging project. The types of beneficial uses listed in the DEIR/S are appropriate, with the exception of cap material for contaminated silts disposed at MBDS or Boston Lightship (again, we are opposed to a test of capping using contaminated materials). F1-22

Section 3.6 - The Final EIR/S should explain why the screening process of practicability for disposal options used in the DEIR/S considered costs greater than 4 times that of ocean disposal as prohibitive. What is the basis for this standard? How was it developed? In particular, we are concerned with the use of unconfined ocean disposal at MBDS as the basis for cost comparisons with other alternatives for disposal of contaminated materials. Dredged materials that are unsuitable for unconfined open water disposal may not be dumped at MBDS, either with or without capping, as specified in the regulatory designation for the site (EPA, 1993; 40 CFR 228.12). Therefore, the use of unconfined disposal of contaminated sediments at MBDS as a comparative standard for evaluating the cost effectiveness of other disposal alternatives is inappropriate and highly misleading since MBDS is not an option for these sediments. F1-23

Section 3.6.1 - This section indicates that "sites with disposal costs greater than 4 times and higher, than capping at MBDS, were considered excessive." This statement appears to be inaccurate, since the "practicable alternatives" listed all would cost less F1-24

than four times the cubic yard cost of unconfined (no capping) disposal at MBDS, and several of the sites deemed too expensive (Revere Sugar, Amstar, Mystic Piers, Little Mystic Channel, and Reserved Channel B) would cost only 1.8 to 2.1 times as much as confined disposal at MBDS. We recommend clarifying this section in the Final EIR/S. Also, as noted above, we believe disposal at MBDS (with or without capping) should not be used as the basis for cost comparisons among alternatives.

Section 3.6.2.1 - The description of the proposed use of the Boston Lightship site mentions that capping has occurred at similar depths at the Portland, Maine disposal site. The Final EIR/S should note that capping is not an accepted management practice at the Portland site, and its efficacy remains in question. F1-25

The text states that the Boston Lightship site "is not known to be biologically unique..." Even if this statement is true, it is irrelevant for assessing potential environmental impacts from disposal at the site. Many resources that are not "unique" nevertheless have substantial value that could be diminished or lost due to dredged material disposal. F1-26

Information from the Massachusetts Division of Marine Fisheries indicates that the Boston Lightship site is heavily fished by the commercial fishing industry. The Final EIR/S should evaluate the extent of harvesting activity in this area, as well as any anticipated impacts to the industry from use of this site.

Section 3.6.2.2 - This section states that the only active breeding population of gray seals (*Halichoerus grypus*) in the eastern United States is located southwest of Nantucket Island. Actually, another gray seal pupping ground was identified this past year off Mt. Desert Island, Maine. F1-27

Sections 3.6.2.1 - 3.6.2.4 - These sections all refer to an ongoing consultation between NMFS and the Corps, pursuant to Section 7 of the Endangered Species Act (ESA), to evaluate the potential impacts of disposal at MBDS, Boston Lightship, Meisburger 2, and Meisburger 7 on threatened and endangered species. NMFS has determined that the Biological Assessment of potential impacts submitted by the Corps (reprinted in Appendix A-4 of the DEIR/S) is deficient, and that additional information is needed for NMFS to formulate a Biological Opinion under the ESA. The Corps has agreed to provide this information, and consultation will resume once NMFS receives the requested data. F1-28

The DEIR/S uses the Corps' ADDAMS model to predict no long term water quality or biological impacts from dumping dredged material at the offshore sites (MBDS, Boston Lightship, and Meisburgers 2 and 7). The resulting risk analysis for biological resources is somewhat rudimentary and confined to the near field area around F1-29

the dredged material disposal mound. The Final EIR/S should have an adequate baseline of information on the benthic and finfish resources that are potentially at risk in both the near field and far field areas.

Use of the ADDAMS model to predict the transport of sediment-bound contaminants, and elutriate tests to predict the transfer of contaminants from the particulate to dissolved phase, appears to be a crude approximation of reality, given the likelihood of dissolved organic matter from the Massachusetts Water Resources Authority outfall influencing the contaminant partitioning at the Boston Lightship and Meisburger sites. Also, event scale hydrologic transport resulting from storms and riverine peak discharges influence net water mass displacement (and the transport of fluid dredge spoil plumes) more so than do the mean current events on which the ADDAMS result are based. F1-3

Since most EPA water quality criteria for organic contaminants are based upon equilibrium partitioning, thus ignoring food chain transport and bioaccumulation, it is not clear that the water quality levels at the site boundary after 4 hours are indeed "safe" if they approximate the chronic toxicity critical concentration. For instance, copper, mercury, and lead, if methylated by bacteria in the dredge spoils (Gadd, 1993), have the potential for bioaccumulation. In this regard if one examines radionuclide bioconcentration in the environment many metals appear to bioaccumulate, even though this does not often occur in bioaccumulation tests conducted in laboratory flasks (Forstner, 1980). One should not confuse mathematical modelling simulations and elutriate tests with what will necessarily happen in the real world, since these models only approximate certain aspects of the natural aquatic ecosystem.

Sections 3.6.2.3 - 3.6.2.5 - In general, it is difficult to assess the potential impacts of disposal at the borrow pit sites (Meisburger 2, Meisburger 7, and Spectacle Island CAD) on fish stocks or their habitat because the DEIR/S contains little site-specific resource information. The DEIR/S also does not evaluate in detail the capability of these sites to resist erosion and maintain a secure cap during storm events. (Additional comments on the resource information for the various disposal sites are included below, in reference to Attachment 1 to the DEIR/S.) F1-31 F1-32

Dr. Gordon Wallace (University of Massachusetts-Boston, Environmental Sciences Program) has shown that winter flounder (*Pleuronectes americanus*) from Georges Bank have higher heavy metal levels in their liver than do the same species from Boston Harbor, in spite of the much higher heavy metal concentrations in the fine grained Boston Harbor sediments compared to the coarse grained Georges Bank sediments. This seemingly counterintuitive finding is directly applicable to the discussion of cap integrity for the borrow pit alternatives, since it may be difficult to F1-33

distinguish "background" heavy metal levels from contamination due to dredged material disposal. The Final EIR/S should consider interacting factors including the heavy metal concentration, bioavailability, metallothionein binding capacity for heavy metals, and the depuration/clearance rate (Marquenie and Tent, 1989; Roesijadi, 1992).

Section 3.6.2.5 - The proposed Spectacle Island CAD site is described as being in an area "having cleaner sediments" but the text does not identify the areas to which these sediments were compared. F1-34

Section 3.7 - The discussion of cumulative impacts from the project is extremely brief, and restricted primarily to impacts from disposal operations (disposal of clean material at MBDS and associated barge traffic). The Final EIR/S should include a more expansive cumulative impacts assessment to address the effects of the project in conjunction with other past and reasonably foreseeable future actions. Pertinent topics include the potential for: increases in the number of vessels using Boston Harbor and Massachusetts Bay, increases in the size of vessels using Boston Harbor and Massachusetts Bay, increases in vessel collisions with endangered humpback whales (*Megaptera novaeangliae*) and/or northern right whales (*Eubalaena glacialis*), and increases in vessel impacts to fishing gear. F1-35

Additionally, this section should evaluate cumulative impacts at the various disposal sites on the benthos, finfish, marine mammals, and sea turtles. In order to increase the ability of the Corps' Disposal Area Monitoring System program to detect changes between baseline and dredge spoil disposal periods, the Corps needs information on population age and size structure for finfish (including estimates of age/length at maturity, growth rate, sex ratios, etc.), as well as species identification and numbers, size structure, and seasonal changes in composition for benthic infaunal invertebrates. Since finfish and benthic invertebrates vary extensively in space and time, it is necessary to define what constitutes an ecologically significant level of change, since statistical significance may not be meaningful.

Section 3.10 - The Final EIR/S should include a more detailed explanation of the management measures that will be used to minimize fish mortalities during the blasting and removal of rock. For example, it may be necessary to use electronic fish finders and/or to station qualified observers in the blasting area prior to detonation to verify that significant schools of fish are not present. Another option might be to use hydroacoustics or other technologies to deter fish from congregating in the blast area. F1-36

The Final EIR/S should also provide a range of specific potential mitigation projects (including possible locations and conceptual F1-37

plans) for losses of subtidal habitat due to the inshore harbor filling options.

Final seasonal restrictions on dredging and other in-water work, as well as appropriate operational measures (e.g., use of silt curtains), should be coordinated with NMFS and the Massachusetts Division of Marine Fisheries prior to the commencement of work. F1-38

Section 4.1.1 - We concur with the decision to use a modified "environmental" bucket to dredge the contaminated silty material. This equipment should help to reduce turbidity and release of contaminants at the dredge site.

Section 4.2.2 - The fourth sentence in this section reads as follows: "Because much of the silt to be removed from Boston Harbor is considered unsuitable for unconfined open water disposal, these sediments will need to be separated from the suitable or parent material." We recommend changing this sentence to read: "Because <u>all</u> of the silt..." F1-39

The DEIR/S suggests that all of the contaminated silt material can be removed from the harbor bottom using a modified "environmental" bucket, and that underlying parent material could then be removed cleanly during subsequent dredging with a standard bucket. We believe this characterization is inaccurate. Dredging the silt material, even using a sealed "environmental" bucket, cannot neatly vacuum all of the contaminated material from the harbor floor. Instead, due to a variety of interacting factors, it is highly likely that a substantial fraction of the contaminated material will remain on the surface of the parent clays. Hydrated bucket overflow, sloughing of side slopes, the normal dynamic movement of silt on the harbor bottom from tidal and storm forces, and sediment resuspension due to vessel traffic and the dredging itself will all tend to cause contaminated silt material to accumulate rapidly on top of the parent material during the silt dredging, even if the top 0.5 feet of parent material is dredged with the silt as proposed. F1-40

NOAA is concerned that much of the parent material, despite its being uncontaminated while it is in place, may become mixed with contaminated silts during the dredging operation due to the movement of fine sediments on the harbor bottom. As a result, it is highly likely that a major portion of the dredged parent material, on a barge-load basis, will become tainted by residual contaminated silt, and could be rendered unsuitable for unconfined open water disposal. This concern is especially acute for parent material in the most contaminated portions of the harbor. The Final EIR/S should evaluate this issue in detail, including the degree of mixing between sediments during the dredging process, any mitigative measures that might minimize sediment commingling, and an expanded suitability analysis for

open water disposal to reevaluate the parent material in light of likely commingling with contaminated silts.

Section 4.3.5 - According to the DEIR/S, the dredge contractor will carry an inspector aboard the tug, and may also use an electronic "black box" recording device, to verify that open water disposal takes place at the disposal site buoy. The final EIR/S should discuss what measures will be used to prevent "short dumps" or otherwise dumping the dredged materials at a location other than the prescribed disposal point, and should explain what contingencies will be taken for disposal during storms, in rough seas, etc. F1-41

Section 4.5.1 - The DEIR/S tends to underestimate the bioavailability of heavy metals and their potential for bioaccumulation by benthic invertebrates and fish. Methylation of heavy metals increases their bioaccumulation potential (Gadd, 1993). The heavy metal levels in the pore water are a function of the binding/complexing component concentrations, hardness, salinity, dissolved organic carbon concentrations, and the pore water extraction method utilized. The pore water heavy metal concentrations appear to be related to the acute toxicity levels measured in laboratory bioassays (Ankley et al., 1994). F1-42

Section 4.5.2 - See the comments above under Section 3.10 regarding mitigation of potential blasting impacts to fish.

Sections 5.1 and 5.2.1 - The summary of pertinent federal statutes and compliance requirements should reference the Stellwagen Bank National Marine Sanctuary provisions of the Marine Protection, Research, and Sanctuaries Act, as amended (MPRSA). Specifically, the MPRSA (16 U.S.C. §1434(e)) states that "appropriate Federal agencies shall consult with the Secretary [of Commerce] on proposed agency actions in the vicinity of the Sanctuary that may affect sanctuary resources."

The text on the Coastal Zone Management Act of 1972, as amended (CZMA), inaccurately reflects the CZMA consistency review requirements. In accordance with the 1990 amendments to the CZMA (16 U.S.C. §1451 *et seq.*), the following language should be included in the Final EIR/S in lieu of the existing language contained in the DEIR/S: F1-43

> "Each Federal agency activity within or outside the coastal zone that affects any land or water use or natural resource of the coastal zone shall be carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of the Massachusetts Coastal Zone Management Program." (See §307(c)(1)(A) of the CZMA.)

Attachment 1 - In general, the DEIR/S does not contain sufficient information on the use of the proposed aquatic disposal sites by F1-44

living marine resources. Attachment 1 to the DEIR/S, which contains more detailed environmental information than the main text of the document, presents only a general discussion on potential uses of the sites by fish, shellfish, and other organisms. We believe substantial additional data is necessary to allow an adequate comparison between sites, and, for the proposed borrow pit sites, to provide a baseline against which to evaluate recovery after the project is complete.

We recommend that the Corps and Massport gather sufficient data to document the basic biological characteristics of all the aquatic sites on a seasonal basis. This documentation should include site-specific data on use of the sites by fish (both pelagic and demersal), shellfish, marine mammals, and other biota. Unfortunately, this type of information may not currently be available (except perhaps for MBDS), so new biological investigations may be necessary. Regardless, the Final EIR/S should include at least one full year of biological data for all aquatic sites.

For the proposed borrow pit sites, we also recommend providing additional data and analysis on the relative geologic stability of each site, including erosion and accretion patterns, susceptibility to storm induced erosion, and the ability to maintain cap integrity over time. F1-45

<u>Conclusions</u>

In summary, NOAA has many outstanding concerns regarding the Boston Harbor Navigation Improvement Project, most of which center on the management of contaminated sediments during dredging, handling, and disposal, and over the long term at the selected disposal site(s). We urge you to seriously consider our general and specific comments on the DEIR/S, and we look forward to working with you during the continuing environmental review of the project.

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Unnumbered Comment

1. 3rd para., 6th sent. - Dredged material from Boston Harbor is not subject to the Superfund law. Boston Harbor would have to be designated a Superfund site and placed on the National Priority List to receive Superfund funding. As this has not happened, natural resource claims would not be applicable.

In addition, the Corps does not believe dredged material is subject to the Resource Conservation and Recovery Act (RCRA). Dredged material does not clearly fall within the RCRA definition of solid waste or hazardous waste. The Clean Water Act and the Ocean Dumping Act provide the appropriate legal and regulatory regime for dredged material disposal and these regimes are incompatible with regulation under RCRA (33 CFR Parts 209, 335-338).

Although the Corps does not believe the material from Boston Harbor is subject to Superfund or RCRA law, the Corps and Massport are committed to minimizing damage to marine resources in a practicable manner. Water quality modelling has indicated that the proposed project would not have a significant effect on the aquatic environment. Dredged material will be managed to minimize impacts to the environment.

F1-1

Section 2.2.4 of the DEIR/S states that based on the Tier I-III evaluation of sediments in the berth areas. "the USACOE has determined that all maintenance material (silt), except 160,000 cy from Reserved Channel, and 200,000 cy from the berth areas of Gulf Barge berth, is unsuitable for unconfined open water disposal. Conversely, all of the silt material is considered to be unsuitable for unconfined open water disposal by the U.S. Environmental Protection Agency."

Given this USEPA consideration, BHNIP is not considering unconfined areas disposal as a practicable alternative for any of the silt material at this time.

F1-2

The Massachusetts Bay Disposal Site (MBDS) has been removed from discussion and charts as a point of reference for disposal of the silty dredged material. This site is not currently available for disposal of silty material until capping or other technology to immobilize the contaminants has been demonstrated. The currently viable sites will be used for comparison purposes.

F1-3

Section 3.6 of the DEIR/S discusses the project team's reluctance to identify "the single preferred disposal option" in this preliminary document. The selection of which will be based on several screening criteria identified as Figure 3-2.

Several technical and environmental feasibility parameters are also identified in Section 3.6 which must be evaluated against each alternative to establish the least damaging option(s).

As part of the EIS/R evaluation process, comments presented by viewers indicated that site and/or resource specific studies were required to address unresolved issues. Results of these studies were integrated into the impact evaluation to further select suitable and specific disposal alternatives.

These additional studies included lobster and finfish studies, sediment profiles and benthic biological community sampling which are fully described in this FEIS/R.

Also, the DEIR/S stated, " Massport and the Corps select MBDS, BLS, Meisburger 2 or 7 and Spectacle Island CAD as their preferred disposal alternatives. These sites did not represent "the single preferred disposal option". Based on the continued inputs of addition data and information, Section 4 of the FEIS/R identifies In-channel disposal at Mystic River, Chelsea River and the Inner Confluence as the current preferred disposal alternative.

F1-4

The silty dredged material will be removed by an environmental mechanical bucket. The bucket will remove the silty material until it hits the parent material. The parent material, composed mostly of Boston blue clay, will provide resistance to the toothless environmental bucket. In this manner the environmental bucket will be able to remove essentially all of the silty material. A standard mechanical bucket (with teeth) will be used to remove the parent material. Some silty material from other parts of the harbor may drift into the navigation channel after the silty material has been removed and before the dredge has returned to remove the parent material. The amount of this material is not expected to be significant to change the suitability characteristic of the parent material.

F1-5

Dredging of silts will be a distinctly different operation from the dredging of parent material. The consistency or compaction of the two layers will be distinguishable by the dredge operator. The parent material will be relatively more consolidated and therefore harder and more resistant to excavation. The dredge bucket used for the removal of silts, will penetrate into the parent material, estimated at up to

approximately 6-in, due to the weight of the bucket. Therefore it can be expected that some of the parent material will be removed during the excavation of the silts. This anticipated overdredging of the silts will minimize the volume of those materials which will be taken with the parent material. It can, however, be expected that some silt material will be "left behind" after dredging of those sediments. Use of currently available "environmental" buckets, which are capable of producing a relatively uniform and consistent horizontal cut, will minimize the volume of silts which are missed. It is highly unlikely that large volumes of silts, sufficient to contaminate the dredged parent material, will be removed during dredging of the clays.

F1-6

Again, BHNIP is not considering unconfined ocean disposal as practicable alternative for any of the silt material at this time.

F1-7

True, it is assumed that if dredged material needs to be capped, the conditions for an appropriate disposal site will be met. The sentence will be clarified.

F1-8

Although the Corps and the U.S. EPA disagree on the suitability determination for some areas in Boston Harbor, as a practical matter, all of the material is being treated in the EIR/S as unsuitable. This point will be clarified.

F1-9

The Corps and Massport agree wholeheartedly that a long term management plan for Boston Harbor and other harbors needs to continue. The Corps and Massport are committed to working towards a solution for the disposal of contaminated material. We appreciate the commitment of NOAA to actively participate in this project.

F1-10

See response to F1-2

F1-11

This sentence will be corrected. Again, BHNIP is not considering unconfined ocean disposal as a practicable alternative for any of the silt material at this time.

F1-12

Section 4.0 of the FEIS/R has re-examined the practicability of land based disposal alternatives and concludes that Squantum Point provides the most viable land-based location for disposal of a portion of the contaminated silts, however, no land-based site was more reasonable than aquatic sites for disposal based on environmental and practicability criteria. BHNIP was not able to identify any new practicable land based sites for disposal.

F1-13

Based on the addition evaluation of disposal area resources (Section 4.2 of the FEIR), BHNIP currently considers both the Mystic Piers and Revere Sugar as likely disposal sites, as part of a multiple site/technology approach for disposal. This multiple site approach will serve to minimize concentrating disposal activities or effects in any one location or resource type.

BHNIP would suggest establishing appropriate estuarine conditions (e.g. hydrology, tidal exposure and sediment matrixes) for natural recruitment of typical salt marsh species in Reserved Channel.

F1-14

Additional investigations on biological resources at all the potential aquatic disposal sites were undertaken in fall 1994. This information was reported in separate technical documents and in Attachment 1 of the FEIR/S. These data were used to re-evaluate the selection of the proposed preferred alternative site for disposal of silt from the BHNIP.

F1-15

Responses from agencies and other organizations indicate that using contaminated material from Boston Harbor to demonstrate capping will not be considered likely. Successful capping at Portland has been reported in the DAMOS 1984 Summary and report and draft publications. Suitable silty material from another project may be used for a capping demonstration at the MBDS. Appropriate agencies will be invited to give comments on the proposed monitoring plan.

F1-16

The status of the understanding of the distribution, character and condition of hazardous materials was considered in the re-evaluation of the disposal site selection process (Section 4 of the FEIR/S).

F1-17

As suggested by NMFS, the assumption that capping is a viable technology from both an environmental and a regulatory perspective has been added to cost estimates.

F1-18

Section 3.6 of the DEIR/S clearly stated that it was not the intent of BHNIP to identify "the single preferred disposal option". Section 4 of the FEIS/R details the targeted multiple site disposal alternatives which appear to be most practicable.

F1-19

Geotextile containers are discussed in more detail in Section 3 of the FEIR/S. The use of these containers would be dependent on whether a disposal operation would not pass water quality criteria or some other regulatory requirement. In addition the cost and feasibility of using these containers have not been fully demonstrated for contaminated silts and would need to be assessed in more detail for each particular disposal site.

F1-20

Again, Section 2.0 of the FEIS/R states that the Corps is interested in conducting a demonstration project for capping in depths of >50m; such a project could occur using clean non project silts and project parent material. BHNIP is not considering capping of project silts at either MBDS or BLS at this time.

F1-21

Silt from the BHNIP will be made available for pilot tests upon request.

F1-22

Section 3.5 of the FEIS/R detail all practicable potential beneficial uses and projects for clean parent material and rock from BHNIP.

The BHNIP is not considering disposal of project silts at MBDS and BLS, therefore capping of contaminated materials at these sites is no longer a practicable disposal option.

F1-23

This approach was eliminated in the FEIR/S based on comments by reviewers (Section 4.0). The current practicability analysis considers direct costs for each disposal site.

F1-24

See comment F1-23

F1-25

Capping has been successfully conducted at the Portland Disposal Site in conjunction with dredging of the Federal Channel in 1980. Monitoring has shown normal recovery of the benthic community.

F1-26

BLS is not biologically unique, and appears representative of the offshore environment. This comment was not made to suggest minimal value of the area, only to suggest that it is typical.

Section 4.2 and Attachment I of the FEIS/R describe biological resources and fishery usage very similar to the other offshore and inshore sites currently being considered as potential disposal sites.

F1-27

Corrected.

F1-28

Additional information has been provided to NMFS.

F1-29

Section 4.2 and Attachment I of the FEIS/R present the findings of several previous and on-going studies; and the results of a project sponsored sampling program which evaluated the areal biological resources presented within the BHNIP project area during the Fall 1994. The FEIS/R states that lobster abundance and biomass were greatest at the offshore stations during the Fall 1994 lobster sampling program (NAI

1994). BLS was located within the offshore stations along with Meisburger 2 and 7, and ranked slightly below both Meisburgers, according to these abundance and broman data. These data are also consistent with MADMF sampling data. A review of historical data indicate an overall consistency in inshore and offshore finfish community structure during the past 10-15 years. Winter flounder are the most important demersal fish species throughout the BHNIP project area. Other flatfish significant to the project area include yellowtail flounder, American dab and windowpane flounders. In less abundance than the flatfish, cod family appears to be significant, especially in the offshore area where Atlantic cod, silver and red hake, and pollack were consistently present in all catch results. Data from our study indicated the abundance of pelagic fish resources was highest at some inner harbor stations and the offshore stations. Abundance of pelagic fish resources was lowest at the remaining inner harbor stations and the outer harbor stations.

F1-30

Water quality modelling was one of numerous factors taken into account to evaluated the suitability of the aquatic sites for disposal of silts from the BHNIP (Section 4 of the FEIR/S). As a result of the reevaluation of the alternatives, the Boston Lightship and Meisburger sites were found not to be among the least environmentally damaging aquatic alternatives.

F1-31

Section 4.2 and Attachment I of the FEIS/R present the findings of several previous and on-going studies; and the results of a project sponsored sampling program which evaluated areal finfish catch data during the Fall 1994. Again, a review of historical data indicate an overall consistency in inshore and offshore finfish community structure during the past 10-15 years. Winter flounder are the most important demersal fish species throughout the BHNIP project area. Other flatfish significant to the project area include yellowtail flounder, American dab and windowpane flounders. In less abundance than the flatfish, cod family appears to be significant, especially in the offshore area where the Atlantic cod, silver and red hake, and pollack were consistently present in all catch results. Data from our study indicated that abundance of pelagic fish resources were highest at some inner harbor stations and the offshore stations. Abundance of pelagic fish resources was lowest at the remaining inner harbor stations and the outer harbor stations.

F1-32

Preliminary evaluations of wave induced bottom velocities (Roberge, 1995) have shown that relatively frequent storm events will generate bottom velocities sufficient to resuspend bottom sediments. While these analyses were not exhaustive, they certainly demonstrate that unprotected deposits of unconfined sediments would be

resuspended at the Meisburger 2, Meisburger 7, and Spectacle Island CAD. Reference Section 4.0 and Appendix G of the FEIR/S.

F1-33

The selection process for the least environmentally damaging alternative for disposal of silt included evaluation of potential for bioaccumulation during and after disposal, including the likelihood of catastrophic events causing future dispersion of the silt.

F1-34

The description of sediment quality in the vicinity of Spectacle Island CAD has been clarified in Attachment I.

F1-35

The discussion on cumulative impacts from the project has been expanded in the FEIS/S as suggested. A discussion of vessel traffic on whales is discussed in the Biological Assessment. Vessel traffic is not expected to have a significant effect on whales.

Disposal of dredged material will have a temporary impact on biological resources in the area. In addition silty material disposed in the nearshore and offshore areas will be capped, thereby isolating this material from biological resources. Monitoring would be focused on physical parameters of the disposal site (i.e. cap integrity).

Attachment I of the FEIS/R details the population, age and size structure of the areal finfish community and benthic community during the Fall 1994 season. Findings of which are also consistent with other previous and on-going studies

F1-36

Section 5.0 of the FEIR/S describes the Dredging Management Plan and addresses specific mitigation techniques to minimize fish mortality during blasting operations. These techniques include operation of sonic fish "startle" systems and installation of other control systems around each blast site. Such systems could include pneumatic barriers which effectively attenuate the pressure wave generated by the blast. These systems are proven and effective. In addition, as described in Section 5.2.1.5, *Seasonal Limitations*, blasting will be seasonally restricted to minimize

exposure of anadromous fish to those operations. The actual mitigation measure will be defined during the permitting process.

F1-37

Section 6.0 of the FEIR/S discusses the proposed mitigation approach to address losses of subtidal habitat. BHNIP commits to investigating compensatory mitigation , if required. However, as stated in Section 6.4.4, the BHNIP, as designed and with in-channel disposal, provides significant enhancement of project specific principal valuable functions (see Appendix K). As such, no compensatory resource mitigation should be required under either federal or state wetland regulations.

As local sponsor, Massport is willing to work with state resource agencies to identify resource enhancement opportunities in the Harbor area. As examples, these can include:

1. Assisting the Metropolitan District Commission (MDC) in their on-going efforts in coastal resource restoration in the Boston Harbor ACECs. The MDC is currently planning projects at the Rumney Marsh and Neponset River ACECs.

2. Massport is committed to increasing the number of vessel sewage pump-out facilities in the Harbor area and will work with the appropriate agencies on specific details.

3. Massport will also consider coordinating with the Department of Environmental Management (DEM) to identify potential areas of cooperation and assistance in DEM resource and facility enhancement projects on Harbor islands.

4. Massport will work with state and local resource agencies to identify potential resource enhancement options such as supporting the development of an "urban fishing park" through rehabilitation of water access structures (e.g., boat ramp in Little Mystic Channel) to enhance public use and access to functional recreational fishing areas.

F1-38

Coordination with NMFS and the Massachusetts Division of Marine Fisheries has resulted in the environmental restrictions displayed in the FEIR/S.

F1-39

The referenced sentence has been changed. It should be noted, however, that for the purposes of identifying sufficient capacity for disposal, the DEIR/S considered

all of the silt to be unsuitable for unconfined open water disposal. The FEIR/S continues to treat all the silt as unsuitable for unconfined open water disposal.

F1-40

A fraction of the contaminated silts will likely be resuspended due to any of several mechanisms. Use of the "environmental" bucket will significantly reduce the loss of the silts due to bucket overflow, adhesion to the bucket fixtures, and spillage during bucket haul. Operator sensitivity to minimizing bucket impact velocities, dragging, and other operational functions will be stressed in the contract documents and continuously evaluated by the Project Manager during dredging activities. Un-skilled operators will be replaced. The environmental bucket is approximately 40 % lighter per footprint area than conventional clamshell buckets. The footprint area of the environmental bucket can be approximately 60% larger than conventional buckets with the same capacity. In addition, the bucket includes a horizontal closing action which produces a level bottom cut. These features provide an optimum cleanup mode. The bucket can be fully instrumented, including video cameras, seal alarms, and depth sensors, to fully monitor performance.

Bottom silts can potentially be resuspended by environmental and vessel influence. These events are of relatively low frequency. Sediment movement will be monitored during all phases of the project. Any deposition of such mobile materials over parent clays which have already been exposed by prior dredging will be identified and quantified. Any significant quantities could be removed prior to dredging the parent material. This would minimize commingling of the silt and parent sediments.

F1-41

The on-board Inspector serves as an agent to the US Army Corps of Engineers. His purpose on the dump runs is to verify the location of the dredged material disposal. The coordinates, based upon Loran fixes and/or satellite global positioning system (GPS), is recorded on the log sheet which is prepared by the Inspector and submitted to the Project Manager. "Short dumps" will not be allowed as a condition of the permitted work. Disposal runs will not be performed in weather which will not allow access to the designated dump buoy site.

Additional information is contained in the Dredged Material Management Plan described in Section 5.

F1-42

As stated in the EIR/S, documentation showing evidence of significant bioaccumulation in finfish is varied and difficult to document. As stated in comment F1-33, even in supposedly pristine areas, contamination of finfish was evident.

F1-43

Corrected.

F1-44

Attachment I of the FEIS/R present the findings of several previous and on-going studies which evaluate the periodic and overall state of the Boston Harbor biological resource. Also, presented are the findings of the Fall 1994 sampling program for benthic resources, lobster and finfish resources. All studies indicate a relatively significant (non-statistical) ecological resource .

F1-45

Substrate conditions at all potential aquatic disposal sites were evaluated using sediment profile imagery (Attachment I). This technique provides insight into recent geologic history of the substrate. The susceptibility to various erosional forces was also evaluated (Appendix G) and considered in overall site evaluations.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203-0001

F2

June 27, 1994

Dwight S. Durham
Lt. Colonel, Corps of Engineers
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254-9149

OFFICE OF THE
REGIONAL ADMINISTRATOR

Dear Lt. Colonel Durham:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, we have reviewed the Draft Environmental Impact Statement (DEIS) for the proposed Boston Harbor Navigation Improvement project (BHNIP).

This project proposes to remove and dispose of approximately 3.3 million cubic yards (mcy) of sediment from the Reserved, Mystic River, and Chelsea Creek Channels, portions of the Main Ship Channel, and associated berthing areas in Boston Harbor in order to increase the navigational efficiency of Boston Harbor for deep draft vessels. In addition to the above volumes, the Corps will need to dredge another 4.4 mcy of material from the main channel for future maintenance over the next 50 years. Recognizing the importance that this project will have to improving navigational safety and enhancing the economic potential of Boston's port, EPA's review of the DEIS focussed on potential environmental impacts that need to be addressed now to avoid possible future delays. We appreciate the opportunity to work with the Corps to ensure that this project is conducted in the most environmentally sound manner possible.

The DEIS evaluates two sets of alternatives - dredging alternatives and disposal alternatives for the dredged material. Alternatives to the proposed dredging include: maintenance dredging only; the full project (maintenance and improvement dredging); a reduced project (e.g., eliminating portions of the project, such as channel dredging); a delayed project; and No Action (no maintenance or improvement dredging). Alternatives to disposal include a number of land-based and aquatic-based options, alone and in combination with each other, however the DEIS identifies the preferred options to include the full dredging project with disposal at Boston Lightship (BLS); the Massachusetts Bay Disposal Site (MBDS); Meisburger 2; Meisburger 7; or Spectacle Island Confined Aquatic Disposal (CAD).

Summary of Comments

Based on our review of the DEIS, we believe that the analysis does not provide the information necessary to fully evaluate the

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practicability and potential environmental impacts of many of the disposal site alternatives. We do believe, however, that while more information is necessary, the analysis indicates that the In-Channel disposal option is environmentally preferable over the other options presented. Further, EPA does not consider either MBDS or BLS to be viable disposal options for contaminated material and we thus would oppose the issuance of an ocean dumping permit for disposal and capping of contaminated material at these sites. Also, this project provides an important opportunity to investigate promising new dredged material treatment technologies, to resolve issues surrounding capping in deep ocean waters, to implement beneficial uses of the clean dredged material and to demonstrate new types of reuse to enhance habitat, shorelines, or recreational opportunities. Although these issues are briefly discussed in the DEIS, the Final EIS should fully examine and commit to specific actions to implement these measures. EPA is eager to assist in this regard. Each of these concerns are summarized below and, along with other comments, detailed in the Attachment to this letter.

- The Final EIS must present more information on the site-specific biological resources present at the proposed dredging and disposal sites and a more rigorous evaluation and comparison of the impacts to these resources. Much of this information has been generated by the MWRA or other researchers as part of studies conducted for the Boston Harbor cleanup or the Central Artery/Third Harbor Tunnel project, and should be presented in the Final EIS to provide the public an opportunity to understand and weigh the potential costs and benefits of disposal options. Further, we believe the EIS should more thoroughly identify and evaluate potential mitigation measures at both dredging and disposal sites. For example, the Final EIS should discuss the measures to be used to prevent cross-contamination of clean material, and to ensure that only suitable material is being disposed of at the MBDS.

F2-1

F2-2

- Based on the Ocean Disposal Criteria regulations at 40 C.F.R. Part 227, EPA believes that all of the surface sediments from the BHNIP and its associated berthing areas do not meet the discharge criteria and therefore are not suitable for uncontrolled ocean disposal. Of the total volume to be dredged, our interpretation of the data indicates that 1.3 mcy is contaminated with metals, PAHs, PCBs, and other chemicals and is thus unsuitable for unconfined open water disposal, as regulated under the Marine Protection, Research and Sanctuaries Act (33 U.S.C. §§ 1401 et seq.) (MPRSA). The contaminated material constitutes essentially the maintenance portion of this project, while the remaining two mcy constitutes the improvement portion. This position is outlined in our September 9, 1993, letter to Colonel Brink Miller, which reviews the chemical and biological data and the relevant regulatory provisions supporting our conclusion (copy attached).

F2-3

• EPA believes that capping of contaminated dredged material has not been shown to be an effective, environmentally sound approach to disposal of contaminated sediments at deep water sites like the MBDS or the Boston Lightship Site BLS. Based on this, and consistent with the Massachusetts Coastal Zone Management certification requirements, EPA's designation of the MBDS for dredged material disposal prohibits disposal of contaminated dredged material at the site, with or without capping (58 Fed. Reg. 42496). While the DEIS acknowledges this prohibition, it identifies disposal and capping of the contaminated materials at either the MBDS or the BLS as preferred alternatives. The DEIS also suggests that perhaps the BHNIP's contaminated sediments could be used as a demonstration project at the MBDS. F2-4

EPA does not believe that dumping-and-capping at the MBDS or BLS, either as a legitimate disposal option or as a demonstration, is acceptable. As we have discussed previously, however, we are happy to participate in a demonstration project at the MBDS to help settle the scientific uncertainty surrounding this issue, but maintain that such a project can and should be conducted with uncontaminated material (perhaps using tracers as appropriate to track material movement).

• We believe the near-shore disposal options are more promising, however, more complete information on the existing biological resources and the potential environmental impacts that disposal would have on those resources must be provided to fully evaluate these options. As mentioned above, based on the information provided thus far, we believe that the In-Channel alternative has a number of logistical and environmental advantages over the other options considered -- in particular its small footprint, or total area of impact, in an area that has already been disturbed by previous dredging operations. We realize that, as presented, this alternative does not accommodate disposal of future maintenance dredging material. We recommend, therefore, that the Final EIS evaluate alternatives that would combine the In-Channel option with another option(s) that can accommodate all or portions of the future maintenance material. F2-5

• We also believe the EIS should provide a more rigorous and thorough examination of alternatives that combine several disposal options to meet current and future project needs. In our view, the current analysis fails to fully explore these options or provide the detail necessary to sharply define and fully evaluate whether these options are preferable from either an environmental or practicability standpoint. We further believe it is inappropriate to dismiss combination alternatives as not practicable based solely on costs or the inability of any one of the sites to accommodate the full volume of material. For a dredging project of this magnitude, we believe that limiting the final list of disposal options to those that will accommodate the full volume of material F2-6

inappropriately constrains the analysis of practicable alternatives.

- The Draft EIS discusses the potential for demonstrating some experimental technologies for dredged material treatment, but does not go far enough in realizing the potential this project poses for demonstrating new techniques for dredged material management. As we embark on one of the largest dredging projects that New England has seen, we must seize this opportunity to demonstrate creative and innovative technologies and techniques that may be useful in the future. We strongly recommend that the Final EIS outline a series of demonstration projects to be conducted, including tests of new technologies such as stabilization and solidification, and new techniques for reuse of dredged material, including marine habitat enhancement, shoreline protection and creation of new recreational opportunities through bulkheading or other shoreline enhancements. EPA stands ready to assist in these demonstration projects. F2-7

- The Final EIS should also more fully explore the traditional options for beneficial reuse of the two mcy of uncontaminated material and the 132,000 cy of rock material to be generated by the BHNIP. We recommend that in the Final EIS the Corps commit to specific reuse goals for options identified in the Draft EIS, including highway construction, landfill cover, construction aggregate and other commercial reuses. F2-8

For the reasons discussed above, EPA has rated this EIS "EO-2 - Environmental objections--Insufficient Information" in accordance with EPA's national rating system, a description of which is attached to this letter. This rating is based on EPA's evaluation of the "preferred disposal options," -- excluding the MBDS and BLS, which are environmentally unacceptable for contaminated dredged material disposal -- and our conclusion that the project could cause significant environmental impacts that must be avoided and that additional information is required to fully assess the project's impacts, alternatives, and mitigation. We believe the concerns we have identified can be resolved and that we can, in the course of this project, demonstrate new technologies and options for dredged material management that will serve us well in the future. We look forward to working with the Corps to that end. Please feel free to call me (617/565-3400) or Patience Whitten of my staff (617/565-3413) if you wish to discuss these comments further.

Sincerely,

John P. DeVillars
Regional Administrator

Attachment

DETAILED COMMENTS

Dredging: The DEIS states that an environmental bucket will be used to dredge the contaminated silt material and a standard dredge will be used to dredge the clay. What method will be used to determine when it is appropriate to change dredging equipment? F2-9

The DEIS acknowledges that the dredge operator will likely pick up debris of a wide variety. The document discusses briefly steps to be taken by the dredge operator if he encounters debris that will not allow the dredge to close properly. The Final EIS should outline a contingency plan and proper disposal methodology if the contractor picks up debris (i.e. unidentified 55 gallon drums, etc.) inappropriate for the designated disposal site. F2-10

The DEIS states that blasting of rock material will be done, but does not discuss potential strategies such as timing restrictions, bubble curtains or other techniques that could be instituted to minimize fish mortality. If these techniques are not being considered, please provide an explanation as to why they are not. F2-11

Depending on which disposal option is selected, the Corps has suggested eelgrass and saltmarsh planting as mitigation. EPA recommends that in that instance, the Corps convene a panel of experts to provide suggestions on the specifics of any such planting efforts. This is currently being done for an eelgrass planting project in Narragansett Bay to much benefit. F2-12

Suitability Determination: As stated in our September 9, 1993 letter to Colonel Brink Miller, EPA believes that all of the surface sediments from the BHNIP and its associated berthing areas are not suitable for uncontrolled ocean disposal under the Ocean Disposal Criteria regulations at 40 C.F.R. Part 227. We reiterate those comments here.

The Corps characterizes the testing of materials for acceptability for ocean dumping as "not clearcut" owing to the need to interpret "ecological significance" of biological test results (DEIS, p. 3-5). While we agree that there is a great need for better understanding of the effects of pollution on complex coastal and marine ecosystems, EPA found numerous concerns with the biological test data for the maintenance material from the project leading us to conclude that it was not suitable for ocean dumping (see attached letter). The sediments from the federal Reserved Channel, however, are insufficiently described to allow for a sound determination of suitability because of the high detection limits achieved for organic contaminants. EPA repeats its recommendation that additional bioaccumulation testing be conducted for these sediments in order to assess compliance with EPA's Ocean Dumping F2-13

Criteria ("ODC"). EPA recommends that the Final EIS rank the contamination levels of the sediments to be dredged from different areas of the project, discuss any uncertainties in the ranking and explain the level of contamination and type of potential impacts that lead to an unsuitability determination.

Also note that the DEIS seems to confuse EPA's and the Army Corps' positions on the suitability of materials of uncontrolled ocean disposal. On page 2-14 the DEIS recognizes that EPA and the Corps have interpreted the test results differently for the Army Base berths, Conley Terminals, Boston Edison Barge Berth, and Gulf Oil, however, a later statement suggests that the material from the Reserved Channel is the only material for which a consistent opinion was not reached (DEIS, p. 3-5). We share this confusion given what seems to be a change in position for the Corps as regards the sediments to be dredged from the Army Base Berths. At a meeting in Portland, Oregon (minutes attached to the aforementioned letter) it was EPA's understanding that the Corps had agreed that the Army Base Berths were not suitable for ocean dumping because of the significant amphipod mortality exhibited in the toxicity tests (disposal of dredged material exhibiting significant toxicity is not authorized under the MPRSA and EPA's ODC regulations at 40 C.F.R. Part 227).

Since the alternatives analysis presented in the DEIS is based on the Corps' interpretation of the test data, EPA requests that the Corps seek alternatives (other than disposal-and-capping at either the MBDS or the BLS) for the dredged material determined to be unsuitable for ocean disposal by EPA. Section 103(c) of the MPRSA specifically states that "...In any case in which the Administrator disagrees with the determination of the Secretary as to the compliance with the criteria established pursuant to section 102(a) relating to the effects of the dumping or with the restrictions established pursuant to section 102(c), relating to critical areas, the determination of the Administrator shall prevail...." Moreover, Section 504(c)(3) of the Water Resources Development Act of 1992 amended this section to make written concurrence from EPA a mandatory requirement prior to permit issuance.

Disposal Alternatives

The DEIS evaluates a number of upland, nearshore, and aquatic disposal sites as a possible disposal solution(s) for the Boston Harbor dredged material. These options were evaluated for both their practicability and their feasibility based on various screening criteria. In phase one of a three-phased screening process, the number of potential options were reduced from 326 to 24 sites. Using these 24 sites, the DEIS evaluates potential combinations of land-based and aquatic-based options, based on the understanding that few sites are large enough to accommodate the full volume of proposed dredged material. Ultimately, the DEIS identifies five disposal options, all aquatic-based, as the

"preferred" set of options. We have a number of concerns with regard to the overall analysis and the elimination of various disposal options, as follows.

Preferred Alternatives: The five options identified in the DEIS as the "preferred alternatives" - BLS; MBDS; Meisburger 2; Meisburger 7; and Spectacle Island CAD - are part of a larger set of options considered practicable by the Corps and evaluated in the DEIS (these other practicable sites include In-Channel Sites; Little Mystic Channel; Reserved Channel; Amstar; Mystic Piers; and Revere Sugar).

Overall, we believe the DEIS does not provide the information necessary to fully evaluate the potential environmental impacts of the practicable disposal options. Further, with regard to the preferred options in particular, we are concerned that these sites have been too narrowly evaluated based on whether they can individually accommodate the full volume of proposed dredged material. The DEIS states that other constraints, including environmental and social impacts, were factored into the final choice of preferred options, but it is unclear how they were used. For example, the DEIS states (p. ES-3) that combining more than one site would cost at least $10 million more than using any one full capacity site. The DEIS does not, however, provide cost projection data to validate this assertion. Since it is not at all obvious that multiple disposal site options, whether on land or in the water, would always cost more than any single site, the Final EIS should explain the assumptions and calculations that go into the cost comparisons and conclusions. F2-14

Finally, we believe the decision to advance only those options that can accommodate the full volume of material skews the alternatives analysis and compounds the difficulty of objectively comparing disposal options. Our more specific comments on the Preferred Alternatives are as follows. F2-15

<u>In-Channel Disposal (ICD)</u>: While a number of concerns remain about the feasibility of this disposal option, based on the information presented, we believe that this alternative has a number of logistical and environmental advantages over other options considered that make it the most promising solution.

In-channel disposal sites have the advantage of minimizing the footprint or total area of impact. Additionally, resources in these areas will already be impacted due to the dredging, so disposal activities will be affecting a disturbed community versus an undisturbed biological community at some other disposal site. Furthermore, these channels will be used for heavy shipping traffic in the future so they will already be subject to environmental degradation.

The DEIS states, however, that the In-Channel alternative cannot accommodate all the silt from the BHNIP. The reasons for this need to be explained, the amount of silt left over needs to be quantified, and alternatives for this material need to be evaluated. While, according to the DEIS, we understand that, as envisioned, this alternative does not accommodate disposal of future maintenance material, we believe the FEIS should evaluate whether another option(s) could be combined with this alternative so as to meet all or portions of the future maintenance requirements. F2-1

MBDS and Boston LightShip: The DEIS is unclear about potential use of the MBDS or BLS for contaminated material disposal. According to the DEIS, use of the MBDS is being considered only for the two mcy of "clean" material and only after first evaluating potential beneficial uses of the dredged sediment. While use of the MBDS with capping is discussed in relation the disposal of the contaminated silt, the DEIS acknowledges that this option is "....not implementable at this time..." (DEIS, p. 3-11) based on judgements by EPA and the MCZM that such use as proposed is prohibited without a demonstration of its effectiveness. Later, however, the DEIS does seem to indicate a desire to conduct a demonstration project to test the efficacy of capping at the MBDS (DEIS, p. 3-11), perhaps utilizing the entire 1.3 mcy of contaminated material.

Dumping of dredged material outside the territorial sea baseline is subject to the MPRSA and EPA's ODC regulations at 40 C.F.R. Part 227. Two of the Corps' alternative sites, the MBDS and the BLS, are located in MPRSA-regulated waters. EPA believes that dumping-and-capping has not been shown to be an effective, environmentally sound approach to disposal of contaminated sediments at such relatively deep water sites. Additionally, for the MBDS, the Massachusetts Coastal Zone Management (MCZM) certified the MBDS designation with the condition that no contaminated sediments be dumped at the site, at least until capping was proven effective. Accordingly, EPA's designation included this restriction and, thus, dumping-and-capping of contaminated sediments is currently prohibited at the site.

We know of no instances where capping has been successfully demonstrated at depths similar to the MBDS or BLS elsewhere in New England, as is claimed in the DEIS (DEIS, p. 3-11). The deepest sites where disposal-and-capping has shown to be effective are the New London Disposal Site (NLDS) and the Central Long Island Sound Disposal Site (CLISDS), where depths average 70 feet. We are aware that the Corps believes that capping is effective at the Portland Disposal Site (where depths average 140 feet) but have not seen such studies despite asking for them on numerous occasions. Given that there is generally greater dispersion with increasing depths, EPA believes that the studies at the NLDS and the CLISDS are inconclusive in demonstrating the effectiveness of capping at the

MBDS and the BLS, where depths average 300 feet and 200 feet, respectively.

The DEIS fails to disclose the scientific and public controversy surrounding both the technical feasibility and legality of dumping-and-capping contaminated sediments. In designating the MBDS for dredged material disposal, EPA received many public comments opposing any disposal of contaminated dredged material at the site, with or without capping. Capping at such a site was regarded by commentors as infeasible or, at best, unproven. Commentors noted that the proximity of the MBDS to the western edge of the Stellwagen Bank National Marine Sanctuary provides further justification for taking a conservative approach to proposals to dump-and-cap contaminated sediments. The view that capping is unlikely to be effective at a deep water site, or is at least unproven, is also repeatedly reflected in the comments of other federal and state agencies and members of the public that have been submitted on the BHNIP (DEIS, Appendix A-3). F2-17

While the BLS is not as near to the Sanctuary, we believe the technical concerns regarding the feasibility of capping at the BLS to be virtually identical to those for the MBDS (see 9-27-91 letter to Corps). At BLS, however, these concerns are heightened by unknowns about the locations of drums of industrial and radioactive waste; a productive winter flounder fishery; its location within a major traffic lane; and the need to go through an EPA-approved site designation process. Based on our experience with the MBDS designation, such a process would surely be lengthy, controversial, and expensive.[1] F2-18

Finally, regarding a demonstration project, we do not believe that the disposal of 1.3 mcy of contaminated silt from the BHNIP is an appropriate vehicle with which to test the effectiveness of capping in a deep ocean environment. We concur, however, and have stated previously that a demonstration project - using dredged material that meets the requirements of the ODC - would be useful to help resolve the uncertainties of this disposal technique and we stand ready to assist the Corps in its design and implementation. F2-19

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[1] While the technical concerns are sufficient reason for EPA to oppose dumping-and-capping of contaminated sediments at the MBDS or the BLS, there are also legal issues. Whether the MPRSA and EPA's ODC regulations simply forbid the dumping of any dredged materials that fail the biological tests, regardless of proposals to cap the materials, has been a matter of some controversy. EPA is presently evaluating this legal issue to develop a definitive agency position on it, but since we presently would oppose dumping and capping at the two proposed MPRSA-regulated sites on technical grounds, it is not critical that we resolve this legal issue in order to respond to the proposed BHNIP alternatives.

It should also be noted that a proposal to dump contaminated sediments (i.e., unsuitable for ocean disposal) at the MBDS, with or without capping, would clearly trigger the requirement of formal coordination with the Secretary of Commerce regarding potential effects on the Stellwagen Bank National Marine Sanctuary as provided for in the October 1992 amendments to Section 304 of the MPRSA (DEIS, p. 3-31). See Sections 2104(d) and 2202(e) of the National Marine Sanctuaries Program Amendments Act of 1992 (P.L. 102-587). Such a proposal would also require EPA to modify the MBDS site designation, which is currently limited to disposal of dredged material meeting the requirements of the MPRSA and its accompanying regulations. This would require initiation of a formal rulemaking process, and MCZM certification of the modification. Finally, the National Marine Fisheries Service, in an April 19, 1993 letter, has indicated that it believes dumping-and-capping at the MBDS has not been shown to be effective, and that such an alternative should be dropped, or further formal consultation and analysis will be needed under the Endangered Species Act regarding potential effects of such an action on endangered species and their habitat.

F2-2

F2-2

Aquatic Disposal Alternatives Governed by Section 404 of the Clean Water Act: In general, near-shore, relatively shallow water offers more controlled conditions that are more conducive to effective capping. There has been notable experience with capping in such waters, some of it successful and some of it unsuccessful. Some failed caps at the Central Long Island Sound Disposal Site have exhibited significant mortality, incomplete covering of the contaminated material, partial diffusion of contaminants, bioaccumulation in biota recolonizing the cap, and significant erosion of the cap from hurricanes.

We believe the DEIS should discuss in detail both the failures and the successes in capping experiments so that the public may accurately assess the efficacy of capping. Given the uncertainty of capping, we would require detailed resource information and impact analysis before approving use of any of these potential sites.

F2-

Decisions regarding sites landward of the territorial sea are subject to the Clean Water Act Section 404(b)(1) Guidelines found in EPA regulations at 40 C.F.R. Part 230. Dumping-and-capping contaminated sediments are not per se barred in such waters, but the 404(b)(1) Guidelines' alternatives analysis tests and environmental impact criteria must be satisfied.

F2-

Combination Alternatives: We believe the combination alternatives analysis fails to provide the detail necessary to sharply define and fully evaluate either the practicability or the environmental impacts of these alternatives as disposal options. In particular, we believe this discussion presents numerous conclusions about logistics, cost, and other constraints that are unsupported by the

F2-

analysis and that the basis for these conclusions need to be more thoroughly documented in the Final EIS. While these instances are too numerous to cite, the following example is illustrative.

With regard to Option A3, a land-based alternative, the DEIS states that "(s)ignificant drawbacks include long-term management of three sites along with attendant costs....and on-site and neighborhood impacts from constructing the facilities and transporting up to 55,000 truckloads of silt to the sites." (DEIS, p. 3-13). No analysis is provided, however, of what long-term management entails and we are thus unable to evaluate whether such a requirement is preferable over the environmental or other impacts associated with other disposal options. F2-25

In addition, while on its face, the truck traffic projected seems potentially significant, no analysis is provided of what the actual impacts may be (e.g., impact on roadways, disruption of normal traffic patterns, alternative routes that may have less social and environmental impacts, air quality impacts). F2-26

Finally, while in some instances the DEIS states that alternatives to truck transport exist (e.g., barging is feasible for Option A3), it does not fully evaluate those alternatives. We believe the analysis should identify what alternatives to truck transport exist, such as rail or barge, and what their relative environmental and social impacts would be.

<u>Beneficial Uses</u>: We believe the DEIS provides an insufficient analysis of the potential beneficial uses of the projected two mcy of clean, "parent" material and 132,000 cy of rock. Failure to do this does not meet requirements under NEPA to fully evaluate such options. Statements such as "Each option assumes that dredged parent material and rock will be used for beneficial uses to the maximum extent possible and that these uses will be identified and expanded throughout the EIR/S process" are inadequate under NEPA because they ignore requirements to fully disclose potential impacts, both positive and negative, and fully inform the public and allow for public input before a decision is finalized. F2-27

As the DEIS acknowledges, the significant volume of clean sediment from the BHNIP provides a rare opportunity to realize beneficial uses. The DEIS falls far short, however, of what is required under NEPA to fully examine such options.

<u>Treatment Technologies</u> - While it is evident from the analysis in the DEIS that treatment technology cannot, at this time, provide a practical solution to the disposal of the BHNIP's contaminated dredged material, we believe this project does provide an opportunity to conduct a demonstration project that may begin to resolve some of the outstanding issues that such methods as these present. In particular, the Corps should investigate the use of F2-28

geotextile bags to isolate the contaminated dredged material; solidification; and incineration to create construction aggregate.

Indirect and Cumulative Impacts

CEQ regulations define indirect impacts as those effects that are "....caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." Indirect impacts include "....growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems." (40 CFR, Sec. 1508.8(b))

A cumulative impact is "....the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." (40 CFR, Sec. 1508.7)

The DEIS states that the purpose of the BHNIP is to "....increase navigational efficiency and safety of Boston Harbor for present types of deep drafted vessels that are currently transiting the project area." (DEIS, p. 1-2) We believe the analysis also clearly indicates an underlying project purpose, which is to bring Boston Harbor up to the future operational standards of a major U.S. shipping port by dredging beyond maintenance depths to accommodate the future class of deep-draft, double-hulled tankers. The DEIS in fact states, "....not dredging the Port may mean not being able to attract new shipping business. The ability to bring in additional shipping lines with large container ships and frequent schedules is important for the future growth of the Port." (DEIS, p. 1-4) F2-2

Given this, we believe the DEIS does not adequately identify or evaluate the indirect and cumulative impacts that will likely result from the changes in type, volume, and frequency of shipping traffic. In particular, we believe the EIS should more fully evaluate the potential impacts to the Port and related infrastructure (e.g., inland transportation networks that may be effected, such as rail or trucking; off-loading and storage facilities) from the potential increase in both volume and frequency of shipping traffic. This analysis should include the relationship, if any, between the potential changes in shipping traffic and the proposed "inland port," which is an already partly operating venture (on an interim basis) between the Port of Boston and Fort Devens in Ayer, Massachusetts. (This should include, for example, whether the change in shipping traffic will stimulate development at the inland port. If so, this should be identified, along with potential impacts from induced growth at the inland port). F2-3

Further, this analysis should examine the potential impacts to biological resources, especially endangered species, in Massachusetts Bay and Boston Harbor from the change in vessel traffic, as well as the relationship between any increase in vessel traffic and the likelihood of spills (fuel oil, ect.). F2-31

POLICY AND PROCEDURES

SUMMARY OF RATING DEFINITIONS AND FOLLOW UP ACTION

Environmental Impact of the Action

LO–Lack of Objections
The EPA review has not identified any potential environmental impacts recurring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC–Environmental Concerns
The EPA review has identified environmental impact that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO–Environmental Objections
The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU–Environmentally Unsatisfactory
The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at e final EIS stage, this potential will be recommended for referral to the CEQ.

Adequacy of the Impact statement

Category 1–Adequate
EPA believes that draft EIS adequately sets forth the environmental impact(s) of the preferred alternatives and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2–Insufficient Information
The draft EIS does not contain sufficient information for EPA to full assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyzes or discussion should be included in the final EIS.

Category 3–Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussion are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purpose of the NEPS and or/ Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

September 9, 1993

Colonel Brink Miller
Division Engineer
U.S. Army Corps of Engineers
New England Division
424 Trapelo Road
Waltham, MA 02254-9149

Re: Boston Harbor Dredging

Dear ~~Colonel~~ Brink Miller:

In response to our meeting of June 17, 1993, this letter presents in writing EPA's concerns regarding the federal and non-federal portions of the Boston Harbor dredging project.

To date, our agencies have agreed that 1.8 million cubic yards of native marine clays and bedrock is suitable for ocean disposal. We have also agreed that 440,000 cubic yards of surface sediments from Prolerized, Distrigas, Moran, Mystic Piers, North Jetty, Eastern Minerals, the Mystic River, and the Chelsea River are unsuitable for ocean disposal at the Massachusetts Bay Disposal Site ("MBDS").

This letter therefore focuses on the remaining 163,200 cubic yards of surface dredged material (Reserved Channel, 100,000; Army Base Berths, 31,200; Conley Terminals, 23,500; Gulf Oil, 4,900; Boston Edison Barge Berth, 3,600). EPA needs to have reasonable assurance that disposal of a particular dredged material will not cause a significant undesirable effect, or else such material cannot be approved for dumping in the ocean in accordance with the applicable regulations. EPA has assessed the tissue residue data in accordance with the Green Book bioaccumulation evaluative factors. Our detailed technical rationale in light of the regulations, national guidance, and supporting scientific evidence can be found in Attachment A. These analyses have raised a number of serious concerns about the suitability of these sediments for ocean disposal at the MBDS under the Marine Protection, Research, and Sanctuaries Act and the federal regulations at 40 CFR §§ 227.6, 227.13, and 227.27. Therefore, given the magnitude of our concerns, EPA recommends that the Corps focus their efforts on thoroughly exploring alternative methods of disposal for the sediments in question. EPA remains willing to participate in future meetings and discussions regarding our analysis or additional information.

As agreed at our meeting of June 17, 1993, representatives of our respective headquarters, regional, and research offices have met to discuss the areas where our views differ on the Boston Harbor project. Our understanding of the results of the meeting is as follows: 1) we agreed that the amphipod mortality data from the Army Base Berths renders those sediments

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unsuitable for ocean disposal at the MBDS; and 2) that we did not reach complete agreement regarding the bioaccumulation issues. The first item indicates that EPA and the Corps have now agreed, in effect, that the Army Base Berth sediments cannot be dumped at the MBDS because of the amphipod toxicity from exposure to them. Although we did not reach total agreement in interpreting the bioaccumulation data, EPA believes that significant concerns regarding the data from the other three Massport berthing areas and the Reserved Channel were raised by a number of EPA and Corps participants. It was evident that a number of participants believed that a suitability determination could not be made on the existing bioaccumulation data from the Reserved Channel and retesting should be required if the ocean disposal option for the surface sediments is still pursued. EPA's summary of this meeting is included in Attachment B.

As added evidence to support our concerns, EPA has also estimated effects to human health from the consumption of seafood from the MBDS feeding on benthos exposed to the four Massport berthing areas in question. This conservative assessment is consistent with the risk assessment approach used in several EPA programs. Our preliminary assessment indicates that disposal of the surface sediments from the Army Base Berths, Conley Terminals, Gulf Oil, and the Boston Edison Barge Berth could pose unacceptable cancer risks to human health. This information indicated another reason to be concerned regarding the suitability for ocean dumping. An explanation of our risk assessment can be found in Attachment C.

We understand that the COE is currently preparing an Environmental Impact Report/Environmental Impact Statement ("EIR/EIS") in accordance with the National Environmental Policy Act for the Boston Harbor dredging project. EPA recognizes that determining suitability of dredged material for ocean dumping is relevant to the EIS/EIR's evaluation of reasonable disposal alternatives for the dredged material. EPA has been actively working with the COE during the preparation of the EIS/EIR, as part of an interagency workgroup, to help identify potential disposal options to be examined in the EIS/EIR. It is apparent through our participation on the workgroup that alternatives other than disposal at the MBDS may be viable. We look forward to the opportunity to review and comment on the full analysis in the EIS/EIR once complete.

In summary, EPA and the COE have agreed that the surface sediments from the Army Base Berths are unsuitable for ocean dumping at the MBDS. EPA also believes that a significant number of concerns regarding Gulf Oil, Conley Terminals, and the Boston Edison Barge Berth have been raised to recommend that alternatives for disposal - other than ocean dumping at the MBDS - should be investigated. If ocean dumping is pursued for the surface sediments of the federal portion of the Reserved Channel, EPA believes that the sediments need to be further characterized. In particular, we believe that additional bioaccumulation testing is needed.

At the meeting between EPA and the COE in Portland, Oregon, the COE's Waterways Experiment Station offered to host an additional meeting among our agency experts to further discuss interpretation of the Massport and Reserved Channel data. We are prepared to meet with you and look forward to coordinating with you on this project and to attaining a

mutually acceptable solution to the disposal issue. Please do not hesitate to contact Kymberlee Keckler of my staff at (617) 565-4432 should you have any questions.

Sincerely,

Paul

Paul G. Keough, Acting
Regional Administrator

Attachments

cc: Thomas Fredette, USACOE, Waltham, MA
John Catena, NMFS, Gloucester, MA
Vern Lang, USFWS, Concord, NH
Judith Pederson, MCZM, Boston, MA

REFERENCES

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ATTACHMENT A

A. ANALYSIS OF MASSPORT BERTHING AREAS

I. Summary of the Biological Testing

Eight of the Massport berthing areas were subjected to the biological tests prescribed in the national and regional testing protocols. Of the original eighteen, three were already determined to be unsuitable for ocean disposal without further testing (Prolerized, Distrigas, and Revere Sugar), five no longer pursued ocean disposal as an alternative (BMIP Piers 5 & 6, Boston Edison Intake, MBTA Power Plant, East Boston Pier 3, and East Boston Pier 5), and two groups of two berthing areas were combined for one test (Conley Terminal Berths 11 to 13 was composited with Conley Terminal Berths 14 & 15; Boston Army Base Berths 1 to 3 were composited with Boston Army Base Berths 4 to 9). These sediments were assessed for their potential to cause toxicity, either mortality or bioaccumulation, if disposed at the MBDS.

All of the berthing areas exhibited at least 90% survival in both the clams and the worms. All of the berthing areas exhibited statistically significant differences between the dredged material and the reference material for the amphipod bioassay. Mystic Piers, Moran Terminals, North Jetty, Eastern Minerals, and the Army Base Berths all exhibited greater than 20% mortality over the reference sediment in the amphipod, *Ampelisca abdita*, stipulated in both the national and regional testing protocols. Gulf Oil, Conley, and the Boston Edison Barge Berth did not exhibit greater than 20% mortality over the reference sediment in the amphipod.

All of the test sediments exhibited statistically significant bioaccumulation over reference of either metals, polycyclic aromatic hydrocarbons ("PAHs"), or polychlorinated biphenyls ("PCBs") (varying degrees of each) in either the clam, *Macoma nasuta*, or the polychaete worm, *Nereis virens*. Seven of the sixteen PAHs tested were carcinogenic (prohibited from ocean disposal in other than trace amounts per 40 CFR § 227.6(a)(5)).

II. Detailed Description of the Bioaccumulation Assessment

EPA evaluated the biological test data from the Massport project in light of the eight factors listed in the Green Book (EPA/COE, 1991) in order to evaluate compliance with the Limiting Permissible Concentration (40 CFR Part 227) criteria regarding acceptability for ocean disposal. The eight factors are listed on page 6-6 of the Green Book and summarized below. A brief description of how this factor was used in making a determination regarding acceptability for ocean disposal of the four berthing areas in question (Gulf Oil, Army Bases, Conley terminals, Boston Edison Barge Berth) follows each of the factors.

- *Number and the phylogenetic diversity of the species in which bioaccumulation from dredged material is statistically greater than bioaccumulation from the reference material*

  Berthing areas that exhibited bioaccumulation in both the clams and the worms were of greater concern (e.g., Gulf Oil, Army Base Berths, and the Boston Edison Barge Berth).

• *Toxicological importance of and the number of contaminants for which bioaccumulation from dredged material is statistically greater than bioaccumulation from the reference material*

All of the berthing areas exhibited statistically significant bioaccumulation of at least five chemicals in at least one species.

Contaminants prohibited in other than trace amounts (e.g., cadmium, mercury, organohalogens, carcinogens, oil) were also assessed (40 CFR § 227.6). All four of these berthing areas were contaminated with carcinogenic compounds and contaminants that are likely to bioaccumulate (and persist) in the marine environment. Gulf Oil, the Army Bases, and the Boston Edison Barge Berth exhibited bioaccumulation of mercury in the worms. Conley Terminals exhibited bioaccumulation of mercury in the clams. Cadmium was not detected in the test organisms from any berth. PCBs were detected in the clams from Gulf Oil and the Army Berths and in both clams and worms in the Boston Edison Barge Berth.

The levels of PCBs in the tissues of both the clam and the worm indicate the potential for chronic effects in fish feeding on the benthos. Adverse effects from PCB exposure were exhibited at residue levels as low as 0.1 mg/kg (Field, *et al.*, 1988). These effects included egg mortality and reproductive failure. Based upon a food chain multiplier approach developed by EPA's Duluth laboratory, tissue residues in demersal fish are projected to be three-fold higher than in the benthos. Assuming that steady-state PCB residues in the clam and worm were not underestimated in the 28-day test, the PCB bioaccumulation data (clams exposed to sediments from Gulf Oil, Army Base Berths, and Conley; and both clams and worms from the Boston Edison Barge Berth) suggest that fish feeding off the benthos exposed to these sediments could experience chronic effects from PCB residues alone.

• *Propensity for the contaminants with statistically significant bioaccumulation to biomagnify within aquatic food webs*

Sediments exhibiting the presence of PCBs, chlorinated pesticides, or methyl mercury were considered to have the potential to biomagnify (Biddinger and Gloss, 1984; Kay, 1984). Chlorinated pesticides were not detected in the sediments, and therefore not measured in the tissues. Mercury was measured as total mercury, and as discussed above, was detected in the worms from Gulf Oil, the Army Bases, and the Boston Edison Barge Berth; and clams from Conley Terminals. PCBs were detected in the clams from Gulf Oil and the Army Berths and in both clams and worms in the Boston Edison Barge Berth.

• *Magnitude by which bioaccumulation from the dredged material exceeds bioaccumulation from the reference material*

All of the levels of individual PAH compounds in the tissues were below 80 parts per billion ("ppb") and were less than an order of magnitude higher that the detection limits achieved (20 ppb). Because the concentrations of each of the PAHs in the reference material was less than the detection limit, the magnitude of the bioaccumulation over reference was difficult to judge. EPA

considered "statistical significance of effects at the 95 percent confidence level" (40 CFR §227.6(c)) between the detection limit and the concentration detected in the dredged material to indicate a level of concern. EPA believes that the levels of PAHs in the sediments could exert adverse ecological impacts during long-term exposures or through interactions with other classes of contaminants.

- *Magnitude of toxicity and number and phylogenetic diversity of species exhibiting greater mortality in the dredged material than in the reference material*

  All of the berthing areas exhibited statistically significant differences between the dredged material and the reference material for the amphipod (*Ampelisca abdita*) bioassay. The Army Base Berths exhibited greater than 20% mortality over the reference sediment in the amphipod, stipulated in both the national and regional testing protocols. Gulf Oil, Conley, and the Boston Edison Barge Berth did not exhibit greater than 20% mortality over the reference sediment in the amphipod.

- *Magnitude by which contaminants whose bioaccumulation from the dredged material exceeds that from the reference material also exceed the concentrations found in comparable species living in the vicinity of the proposed disposal site*

  Data from organisms in the vicinity of the MBDS that are similar to those organisms used in the bioaccumulation tests are not available. As a result, this factor was not able to be considered in the analysis.

III. Data Discrepancies

Sediment chemical concentrations were remeasured in the sediments used for the biological tests to determine if the chemical concentrations were consistent with those detected during Tier II. We note that the PAH concentrations from the Conley Terminals and the PCB concentrations from the Boston Edison Barge Berth were below the original range measured during the Tier II. Since PAHs and PCBs were major "contaminants of concern", EPA questions whether the bioaccumulation tests from Conley Terminals and the Boston Edison Barge Berth areas accurately represent the sediment quality and its potential to cause toxicity, including bioaccumulation, in the organisms present in the environs of the MBDS. EPA is aware that the statistical analysis performed by Wade Research, Inc. indicated that the sediments used for the Conley Terminal bioaccumulation test were representative of the sediments measured during Tier II. EPA's environmental research laboratory in Narragansett, RI has reviewed this analysis and believes that the statistical methods used are not appropriate. Given the substantial variability in Boston Harbor sediments, this information heightens EPA's concern regarding disposal of these sediments.

IV. Summary

EPA and the COE have agreed that the surface sediments from the Army Base Berths are unsuitable for ocean dumping at the MBDS. EPA also believes that a substantial number of concerns regarding Gulf Oil, Conley Terminals, and the Boston Edison Barge Berth have

been raised to recommend that alternatives for disposal - other than ocean dumping at the MBDS - should be investigated.

B. ANALYSIS OF FEDERAL RESERVED CHANNEL

EPA provided letters to the Corps regarding EPA's suitability determination and testing recommendations for ocean disposal of the Reserved Channel sediments on June 12, 1991, August 4, 1992, and May 27, 1993.

I. Toxicity Assessment

EPA believes that the original (1990) amphipod tests conducted for the Reserved Channel which indicated statistically significant differences from the reference sediment and greater than 20% mortality than in the reference sediment may be considered questionable because of the extended holding time of the sediments (John Scott, personal communication). Based on the results of two subsequent tests on sediments near the same site, EPA concurs that the whole sediment toxicity requirements meet the LPC for this part of the project.

II. Bioaccumulation Assessment

EPA has stated that the detection limits achieved for PAHs were much higher than those jointly recommended by EPA and the COE in the regional testing protocol. Since these detection limits were at concentrations several orders of magnitude over those jointly recommended by EPA and the COE, it is possible that any bioaccumulation could have been concealed. As a result, EPA believes that the sediments from the Reserved Channel are inadequately characterized. Dredged material that is insufficiently described cannot be approved for ocean dumping under any circumstances per 40 CFR § 227.5(c). Until new bioaccumulation testing is conducted, EPA cannot make a determination regarding acceptability for ocean dumping.

ATTACHMENT B

SUMMARY OF JUNE 23, 1993 MEETING
REGARDING BOSTON HARBOR
PORTLAND, OREGON

EPA and the Corps met at the national ocean disposal coordinator's meeting in Portland, Oregon to discuss the federal and non-federal portions of the Boston Harbor dredging project. The list of attendees included: EPA HQ (Craig Vogt, John Lishman, Dave Redford, Catherine Crane, Tom Chase); EPA Region I (Dave Tomey, Kymberlee Keckler); EPA's national ocean dumping expert from Region III (Bill Muir); EPA ORD (Norm Rubinstein); Corps HQ (Joe Wilson, Dave Mathis); Corps NED (Tom Fredette); and Corps WES (Tom Wright, Bob Engler, Tom Dillon). Keckler provided copies of the data.

The discussion started with agency interpretation of toxicity data. Fredette stated that the Green book does not provide clear guidance when there is toxicity in only one of three species tested (i.e., toxicity in the amphipod, but no toxicity in the clam or worm). Keckler stated that the clams and worms were appropriate species for bioaccumulation, but not toxicity. Therefore, toxicity exhibited in one species, the amphipod, is sufficient information to declare the material unsuitable for ocean dumping. Wright and Engler concurred with Keckler for the toxicity data from the Army Base Berths. Wright stated that the new 404 inland manual does not list the clam and worm as toxicity organisms because we have learned something since the Green book was published. Interpretation of toxicity data in this manner enabled EPA and the Corps to declare the Army Base Berths unsuitable for ocean dumping. Wright, Engler, and Redford all agreed that the Green book should be revised to reflect this.

Regarding bioaccumulation, Keckler stated that her interpretation of the ocean dumping regulations was that if there is not sufficient information to provide reasonable assurance that disposal of the material **will not** cause an adverse effect, it cannot be disposed. Rubinstein and Dillon stated that there is not much information concerning what level of contaminants in the tissues elicits an effect in an organism. Most people agreed that there is a need for 1) a manual to use in interpreting the results and 2) more research on tissue residues.

Rubinstein read from a memo by Henry Lee of EPA ORD in Newport, Oregon that showed the levels of PCBs in the tissues from several berths are projected to cause reproductive impairment in fish. Adverse effects from PCB exposure were exhibited at residue levels as low as 0.1 mg/kg (Field, *et al.*, 1988). The likely effect would be reduced egg survival or similar reproductive impairment. The clam bioaccumulation data from Gulf Oil, Army Base Berths and Conley Terminals, and the clam and worm bioaccumulation data from the Boston Edison Barge Berths suggest that fish feeding off the benthos exposed to these sediments could experience chronic effects from PCB residues alone. Rubinstein further explained that a food chain multiplier approach developed by EPA's Duluth laboratory was applied to the bioaccumulation data. Specifically, tissue residues in demersal fish are projected to be three-fold higher than in the benthos. These projections could be underestimated if steady-state PCB residues in the clam and worm were underestimated in the 28-day test.

Muir and Keckler explained that, using the 8 factors in the Green book guidance for interpreting bioaccumulation data, a series of concerns (e.g., uptake of several contaminants, uptake of toxicologically important chemicals, uptake in both species in all berths except Conley, etc.) about the test results could lead to the conclusion that we should not allow the surface dredged material from Gulf Oil, Army Base Berths, Conley Terminals, and the Boston Edison Barge Berths to be disposed in the ocean.

Keckler explained that the Reserved Channel was determined to be unsuitable for ocean dumping because of 1) toxicity in one test and 2) the very high detection limits for PAHs in the tissue measurements could have concealed any bioaccumulation. Muir stated that these high detection limits renders the Reserved Channel sediments to be inadequately characterized, which prohibits them from ocean disposal per 40 CFR § 227.5(c).

Keckler indicated that a quick calculation of human health risk assessment showed that all of the sediments could pose a cancer risk to human health.

Joe Wilson from Corps HQ stated that EPA's position regarding dredged material suitability for ocean dumping prevails and that the Corps should not be proponents of dredging projects, only administrators of the program. Keckler explained that Region I is in the process of evaluating alternatives and that alternatives (other than ocean dumping) for this material may exist. Keckler also explained that Stellwagen Bank has been recently designated as a National Marine Sanctuary and that conditions of only clean dredged material disposal have been placed on the MBDS designation. EPA's actions on this project will therefore be closely watched.

Monte Greges from the Corps NY District stated very strongly that the New England Division should be looking for alternatives for all of the material first, and only seek ocean disposal if there are no other alternatives. Greges did not see the need for EPA to write its letter regarding suitability until the Boston Harbor EIS is out. Keckler stated that the regulations also direct proponents of ocean dumping to evaluate alternatives to ocean dumping first.

There was insufficient time to continue discussions regarding both the EPA, Region I and the Corps NED approaches. Bob Engler from WES stated that WES's review had only been a "cursory" one. Engler offered to pay travel to reconvene the group after everyone has had a chance to evaluate the data in detail.

ATTACHMENT C

INCREASED CANCER RISKS TO HUMAN HEALTH FROM THE CONSUMPTION OF CONTAMINATED SEAFOOD FROM MBDS IF MASSPORT SEDIMENTS ARE DUMPED

Risk assessments are typically used to help make regulatory risk management decisions concerning the appropriate course of action to protect human health from exposure to toxic substances. In a risk assessment, the chemicals of concern are identified, the rate of exposure to populations of concern are estimated, the potential toxicological responses to various doses of the chemicals are determined, and the potential risks of adverse health effects based on dose-response data and exposure data are estimated. The resulting numbers represent a potential upper-bound likelihood of adverse health effects.

Cancer risks are expressed in terms of predicted additional cases of cancer in an exposed population over a lifetime. For example, 2.7 additional cancer cases in 100,000 individuals would be expressed as 2.7×10^{-5}. Various EPA regulatory programs define acceptable risk differently, with levels of acceptable risk ranging from a level of risk of 1 in 10,000 (10^{-4}) to 1 in 1,000,000 (10^{-6}).

The risk assessment procedure for seafood consumption consists of determining the dose of a chemical that a human would be exposed to during a lifetime, based on a certain consumption rate of seafood with observed tissue levels, and predicting the likelihood of adverse health effects from this dose, based on EPA toxicity values. EPA developed guidelines for performing risk assessments and issued a guidance manual entitled Assessing Human Health Risks from Chemically Contaminated Fish and Shellfish (USEPA, 1989). EPA evaluated potential human health risks associated with consumption of seafood harvested from the Massachusetts Bay Disposal Site ("MBDS") as part of its review of the Massport bioaccumulation data using this methodology. EPA used the 28-day bioaccumulation data from Conley Terminals, Army Base Berths, Gulf Oil, and the Boston Edison Barge Berth in its risk assessment calculations. EPA is concerned that disposal of surface dredged material at the MBDS could pose unacceptable cancer risks to public health. EPA also estimated the potential for effects other than cancer and did not identify any non-cancer risks. The methods and results of EPA's health risk assessment are discussed below.

Fish may accumulate toxic chemicals in their tissues through several routes of exposure to contaminants, including absorption through the water column, sediment contact, or by consumption of contaminated prey. Since EPA only had data for clams and worms exposed to the dredged material, EPA estimated what the tissue concentrations in fish would be if they were to feed on clams and worms exposed to Massport sediments. EPA assumed that polycyclic aromatic hydrocarbons ("PAHs") would be accumulated in fish to the same level achieved in clams and worms and polychlorinated biphenyls ("PCBs") would be accumulated to a higher level (Kay, 1984). EPA assumed that the benthos are a trophic level of 2 and a demersal fish feeding on them would have a trophic level of 3. Based on a food chain multiplier approach developed by EPA's Duluth laboratory, tissue residues in trophic step trophic level 3 are projected to be three-fold higher than in trophic level 2 for a compound with an octanol-water partitioning coefficient of 6 (estimate for PCBs). EPA

therefore multiplied the PCB concentration in the clam and worm tissue by 3 in order to estimate the PCB tissue concentration in fish feeding on them.

EPA assumed that the tissue residues measured in the 28-day test were representative of steady-state conditions. It is possible that the levels of contaminants in the test organisms would be higher if the exposure period was longer. This would tend to underestimate the risks calculations.

Average values for fish and shellfish consumption for the U.S. population generally range from 6.5 to 20.4 g/day (USEPA, 1989). Estimates of potential risks were made for the average New England consumer for each species. For this risk assessment, EPA used the lower bound consumption rate of 6.5 grams per day of seafood harvested from the MBDS. Although 6.5 grams per day may be high for consumption of seafood from the MBDS, EPA found that even incidental exposure to MBDS seafood could pose unacceptable health risks if Massport sediments were to be disposed. EPA found that ingestion of seafood at a consumption rate as low as 0.014 grams per day, or approximately one meal in 29 years, could result in a 1×10^{-6} cancer risk.

Benzo(a)pyrene is the only PAH compound that currently has a carcinogenic potency factor affiliated with it. EPA recognizes that the other six carcinogenic PAHs also pose a risk of developing cancer. However, since these compounds do not currently have a carcinogenic potency factor associated with them, EPA applied the carcinogenicity potency factor for benzo(a)pyrene, the most potent PAH compound, to the total of the seven carcinogenic PAHs measured. This methodology is consistent with current EPA policy. EPA's cancer risk estimates from both benzo(a)pyrene alone and the sum of the seven carcinogenic PAHs are presented in Table 1.

EPA's calculations for cancer risk indicate that the risk associated with the consumption of seafood harvested from the MBDS if Massport sediments were to be disposed exceeds values within the acceptable range. The results of the cancer risk estimates are presented in Table 1. The standard assumptions that were made include: i) exposure over a 70 year lifetime, ii) average human body weight of 70 kilograms, and iii) 100% of all of the chemicals ingested are absorbed. The increased cancer risks calculated ranged from 1.4×10^{-5} to 4.6×10^{-4}. These risk estimates indicate that consumption of seafood harvested from the MBDS if Massport sediments were to be disposed could pose unacceptable cancer risks. Unacceptable non-cancer risks from eating seafood harvested at the MBDS were not detected.

EXAMPLE CALCULATIONS

Increased Cancer Risk = Dose x Cancer Potency Factor

Dose = [Tissue concentration x Consumption Rate]/Average Body Weight

Example for carcinogenic PAHs in worms from the Conley Terminals:

= (0.144 mg/kg)(6.5 g/day)(7.3 kg/mg-day)/(70 kg)(1000 g/kg)

= 9.8×10^{-5}

Example for PCBs in clams from the Army Base Berths:

= (0.052 mg/kg)(3)(6.5 g/day)(7.7 kg/mg-day)/(70 kg)(1000 g/kg)

= 1.1×10^{-4}

TABLE 1: PUBLIC HEALTH RISK ASSESSMENT - INCREASED CANCER RISKS FROM EATING MBDS SEAFOOD IF MASSPORT SEDIMENTS ARE DUMPED

	Boston Edison Barge Berth		Gulf Oil		Conley Terminals		Army Base Berths	
	Clams	Worms	Clams	Worms	Clams	Worms	Clams	Worms
Risk from benzo(a)pyrene	1.9×10^{-5}	1.6×10^{-5}	1.9×10^{-5}	1.8×10^{-5}	1.6×10^{-5}	1.4×10^{-5}	2.0×10^{-5}	1.6×10^{-5}
Risk from carcinogenic PAHs	1.4×10^{-4}	1.2×10^{-4}	1.6×10^{-4}	1.4×10^{-4}	1.4×10^{-4}	9.8×10^{-5}	1.4×10^{-4}	1.0×10^{-4}
Risk from PCBs	2.8×10^{-4}	4.6×10^{-4}	1.2×10^{-4}	1.7×10^{-4}	7.2×10^{-5}	9.0×10^{-5}	1.1×10^{-4}	1.9×10^{-4}

F2-1

Additional investigations on biological resources at all the potential disposal sites were undertaken in fall 1994. This information was reported in separate technical documents and summarized in Attachment 1 of the FEIR/S. These data were used to reevaluate the selection of the proposed preferred alternative site for the disposal of silt from the BHNIP.

F2-2

Section 5 of the FEIR/S describes proposed means to mitigate for impacts of the dredging and disposal of silt from the BHNIP. This presentation includes methods to avoid and minimize potential impacts and suggests possible compensatory mitigation for unavoidable adverse impacts. Many of the techniques and guidelines for avoiding and minimizing impacts are specified in the Dredge Management Plan (Section 5 of the FEIR/S) and will become part of the dredging contract specifications.

F2-3

For the purposes of identifying sufficient disposal site capacity for the surface material (silt) to be dredged from Boston Harbor, the DEIR/S considered all silt to be unsuitable for unconfined open water disposal. This interpretation is carried through into the FEIR/S.

F2-4

The FEIR/S does not select the MBDS or BLS for disposal of the silt to be dredged for the BHNIP, therefore, capping is not an issue at these sites.

F2-5

As indicated in response to comment F2-1, additional biological investigations were conducted in the In-channel locations in the fall of 1994. These studies were used in the reevaluation of the site selection process for the FEIR/S.

F2-6

The site selection process has been reevaluated in the FEIR/S (Section 4.0) to separate the issues of "environmental damage" and "practicability" more clearly. In other words, the least environmentally damaging alternative(s) have been identified based on spatial and temporal impacts (nearfield and farfield) and risk of failure to isolate the contaminated sediments permanently prior to evaluating practicability.

Practicability includes capacity, cost, amount of structural engineering required, and ability to permit within the desired timeframe of the proposed project. Alternatives were screened based on both environmental and practicability criteria.

F2-7

Except for a few potential technologies, such as geotextile containers, few can accommodate the large volume of dredged material removed from the harbor and at a cost that is practicable. The Corps and Massport will consider accommodating new demonstration projects (Section 2.0), where authorized and feasible. However, the Clean Water Act 404 (b) (1) guidelines do not encourage the filling of the aquatic environment for recreational opportunities.

F2-8

Massport and the ACOE are committed to making dredged materials available for beneficial uses if economically feasible and practical to do so. As stated in Section 3.5 of the FEIR/S, potential commercial uses for the uncontaminated clay, gravel and rock material have been considered as alternative beneficial uses. The clay material could be utilized for landfill cover material while the gravel and rock material could be used for construction aggregate or fill. The major limitation to committing to a specific beneficial use disposal options at this time is the varying market demand for these materials. The local demand for clay, gravel and rock for construction purposes and landfill cover may be partially satisfied by the generation of such materials form the CA/T project which are expected to be available concurrently. The BHNIP FEIS explores the options of making clay available to landfills beyond the expected CA/T delivery range. The options for use of construction aggregate are also discussed in greater detail.

A portion of the rock will be used to enhance areas susceptible to erosion from ship turning in the navigation channels. The remaining rock will be used for fish enhancement habitat at the Massachusetts Bay Disposal Site (MBDS).

F2-9

Dredging of the silts vs. dredging of the parent material will be distinct operations. During the silt dredging operations, a small amount of parent material will be removed due to overdredging. The consistencies of the two materials are visually and mechanically distinguishable. The dredge operator will sense by resistance to the bucket "bite" and to bucket closure the location of the sediment interface. Coincidental hydrographic surveys will verify digging depth and location to enable comparison with geotechnical records. When the operator experience and survey data indicate that the parent level has been reached, the dredging equipment will be changed. The silt from

an entire designated area or cell will be completely removed before the parent material equipment will be utilized.

F2-10

Trash and unknown materials such as drums will be handled and controlled in accordance with the contingency operations described in Section 5.8.2.2, *Trash and Debris Management*, of the FEIR/S.

F2-11

All techniques to minimize fish mortality due to the proposed blasting operations have and will be considered. As noted in Section 5.0 of the FEIR/S, seasonal; restrictions on blasting will be observed. Other mitigation procedures will include employing fish "startle" devices.

F2-12

General concepts for compensatory mitigation are discussed in Section 6.0 of the FEIR/S. Detailed plans for compensatory mitigation will be developed during the permitting phase of the BHNIP and will involve close coordination with the appropriate agencies.

F2-13

See response to comment F2-3. Material from Reserved Channel and the berth areas (Army Base, Conley Terminal, Boston Edison, and Gulf Oil) are considered sufficiently characterized and suitable for unconfined open water disposal by the Corps. This statement has been corrected in the Final EIR/S.

F2-14

As indicated in responses to comments F2-1 and F2-6, additional studies have been conducted to aid in the reevaluation of the potential disposal sites. The process of selecting the least environmentally damaging alternative has been more clearly distinguished from the process of identifying practicable alternatives in the FEIR/S than the DEIR/S. The possibility of using multiple sites to attain the needed capacity has not been excluded in the analysis of environmental impacts.

F2-15

The revised alternatives analysis separates the evaluation of environmental impacts and practicability criteria (Section 4). Therefore, the sites are compared on the basis of their environmental effects without regard to capacity, allowing the identification of the "least environmentally damaging alternatives" for the disposal of contaminated silts in general. Capacity is considered to be a practicability criterion.

F2-16

Subsequent to publication of the DEIR/S, the Corps reevaluated the capacity of the In-channel options. They determined that by expanding the footprint (while still remaining within the boundaries of the federal channels) and increasing the depth, the capacity of the in-channel alternative is substantially higher than originally thought. The In-channel alternative assessed in the FEIR/S represents the larger design.

Unnumbered Comment

17. page 9, 3rd para., last sentence - This sentence has been clarified. If a capping demonstration could prove the efficacy of capping then the entire 1.3 million c.y. of silt could be disposed at MBDS. Since time for a demonstration project is not available for the improvement dredging, disposal at the MBDS is not viable.

Unnumbered Comment

18. page 9, last para. - Studies conducted by SAIC have indicated the efficacy of capping at the Portland Disposal Site. These studies are available for review.

F2-17

The Corps and Massport are and have been very much aware of public and agency concerns regarding capping at the MBDS. MBDS was not considered for silt disposal for the BHNIP in the FEIR/S. Capping at the preferred disposal site is discussed in Section 5.0.

F2-18

See response to Comments F2-4 and F2-17. Should BLS become a selected option the BHNIP will coordinate with EPA regarding the proported drums of industrial and radioactive waste at this site. Disposal of dredged material at this site to cover these drums may benefit the environment of this area. The EPA should play an active role in researching the locations and environmental status of any hazardous

materials at the BLS to determine whether it would be best to leave as is, remove, or cover in place.

NED believes that a site designation process is not necessary if there is not an U.S. EPA designated disposal site in the area. Since MBDS is not currently available for the disposal of unsuitable material, no site designation requirement is necessary, as long as the site meets MPRSA requirements (40 CFR 228.4 (e)(2).

F2-19

The Corps is investigating the use of clean silty material from another dredging project to demonstrate capping at the MBDS. This and other demonstration opportunities depend on the availability of suitable project material, authority and funding for monitoring.

F2-20

The manager of the Stellwagen Bank National Marine Sanctuary received a copy of the Draft EIR/S. His comments were incorporated into a NOAA response.

F2-21

A draft biological assessment has been submitted to the National Marine Fisheries Service for review. As a capping demonstration project can not performed in time for the improvement dredging project, the biological assessment will drop the capping alternative at the MBDS.

F2-22

As a capping demonstration project cannot be performed in time for the navigation improvement project, this alternative will dropped for the silt material. A capping demonstration project may go forward to address questions for future maintenance of the navigation channels. At that time, appropriate agencies will be brought forward to discuss the parameters of a demonstration project.

F2-23

The disposal site alternatives analysis thoroughly evaluates environmental impacts of all sites.

F2-24

In the DEIR/S, the impacts and practicability of using individual disposal sites was discussed. The discussion of combination alternatives was based on the premise that the impacts and practicability of using a site would be the same whether the site was used by itself or in combination with one or more other sites.

F2-25

Impacts and practicability of using land-based disposal sites (Option A3) were reevaluated in the FEIR/S (Section 4.0).

F2-26

If the entire quantity of dredged material was allowed to air dry in cells, then approximately 30 truck trips per day for 275 weeks or over 5 years (5 days a week 8-5 daytime hours, 3750 cycles/day) would be required to dispose of the silty material at an upland site. Additional noise, congestion and air quality impacts would be experienced with land based disposal. Coordination with local communities to minimize truck traffic impact on local traffic would occur if a land based disposal site were selected as the preferred disposal site.

Disposal sites with possible barge access are described in the draft and final EIR/S. The only upland site with barge access would be Squatum Point; a channel would need to be dredged to provide this access. Impacts from barge access are also described.

F2-27

See response to comment F2-8.

F2-28

The Corps may investigate the use of geotextile bags at other projects for dredged material. Coordination with appropriate agencies would occur, as appropriate.

F2-29

The statement of project purpose is partially correct, in that future vessels will require deeper drafts. However, numerous port users have indicated that existing channel clearances are insufficient for their efficient operations. Letters from numerous port users stating difficulties they have experienced waiting for tides to gain access

to the inner harbor are included in this volume (see letters under the Commercial category). Therefore, it is more correctly stated that the purpose of the improvement dredging in Boston Harbor is to bring the facilities up to current competitive standards. The purpose of the project is restated in Section of the FEIR/S.

F2-30

EPA suggests that dredging could have far-reaching implications for port terminals and for inland transportation because of the change in the type, frequency and volume of traffic calling on the Port of Boston.

In 1994, 53% of containers arrived in the Port of Boston by container vessels calling on the Port directly, while 40% arrived via barges from New York, and 7% by trucks over land. At present, most of the container ships arriving in the Port of Boston are either light-loaded or enter the harbor on the high tide due to the insufficient depths in the navigation channel and at berths. The BHNIP will enable the existing container ships to operate regardless of tide conditions. This should facilitate scheduling and make the Port of Boston more attractive to shipping lines.

With regard to type of traffic, the harbor dredging might increase the percentage of containers traveling on container ships to the Port of Boston compared to that coming by barge from New York. But the number of vessels bringing cargo is low enough so the shift in type would hardly be perceptible. At the present time, three overseas container vessels call on the Port of Boston weekly. In addition, a barge service calls twice a week from New York.

As for frequency of vessel calls, if the container trade remains more or less stable, showing no significant growth after the dredging is completed, fewer direct calls by large, fully loaded vessels would suffice to deliver the same amount of cargo. If there is a steady 3% or more growth in the amount of containerized cargo moving through the Port of Boston, there could be an increase in container ships arriving in the Port, but this increase is unlikely to trigger more than one or two additional container ship calls per week. Therefore, the BHNIP will not significantly alter the type of vessel, the number or the frequency of calls in the Port of Boston.

As for the transport of petroleum products, the BHNIP will enable the existing fleet of Chelsea-class tankers to transit the Harbor more safely. Currently, these tankers must frequently wait for tidal navigation. This poses special problems in winter months when the daylight hours, which are useful for navigating the bends in the waterway, are short. However, double-hulled tankers have recently been mandated for new tankers carrying petroleum. The new tankers will have the carrying capacity of the old tankers, but will draw more than the standard tankers because of the double-hull and will be wider. These tankers, as stated in the response to F2-29, will not be able to call at the existing facilities upstream of the Harbor tunnels. Lightering is unlikely to be eliminated even with the BHNIP because of the double-hull requirement and because the demand for petroleum products in the region continues to grow.

The BHNIP will not dramatically change operations in the Port of Boston. Vessel traffic will continue to include a mix of large container ships, barges and tankers. The volume of cargo will not change significantly as a result of dredging sine cargo volume depends on more than channel depth. The Massachusetts Port Authority (Massport) has been continuously upgrading its container handling facilities to provide "state of the art" off-loading and storage at Moran and Conley Terminals. Therefore, dredging need not trigger landside improvements at Moran and Conley Terminals.

Inland transportation improvements have long been the subject of planning and investment. The Seaport Access System, which is part of the Central Artery/Tunnel Project will result in more direct and convenient connections for trucks between port terminals and the regional highway network. At the same time, through State and Massport effort, infrastructure changes to accommodate double-stacked trains are being promoted. This latter effort is separate from the dredging project. It is designed to encourage shippers to use the Port of Boston.

EPA asks if the proposed dredging will result in the expansion of the "inland port" facility at Fort Devens, thereby causing environmental impacts in the surrounding communities. In short, no. Expansion at "Port Devens" will be more a function of the success of the referenced effort to accommodate "double-stacked" trains.

In 1994, only 3% of all containers handled in the Port of Boston were moved by rail. Of those containers, less than one third moved by rail between Moran Terminal and Ayer or beyond, with the rest going between Conley Terminal and inland destinations via Conrail. The containers going through he "inland port" facility represented only 1% of the total container trade in the Port of Boston. It is unlikely that this situation will change with the dredging of the harbor. The rail route via Ayer is convenient for export cargo from New England and Canada, which represents only a small portion of the total cargo handled by the Port.

Boston's imports substantially exceed the export cargo reflecting the nature of industry int he region. The New England textile and shoe industries which traditionally exported high volume cargo through the Port have given way to industries producing low volume, high value cargo which is now shipped by air. The current export/import balance is expected to continue in the future regardless of the impact of dredging. Thus Fort Devens is not going to become a major distribution facility as a result of dredging in the Port of Boston. Growth at Fort Devens will be a function of the increase in import cargoes being carried by rail from Moran Terminal. This would be totally separate from any dredging under the BHNIP.

F2-31

The biological assessment of the EIR/S includes a discussion of future vessel traffic on threatened and endangered species.

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
408 Atlantic Avenue - Room 142
Boston, Massachusetts 02210-3334

F3

REF: ER 94/0393

June 20, 1994

Colonel Brink P. Miller
Division Engineer
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254

Dear Colonel Miller:

This is in response to your April 20, 1994 joint notice with MassPort requesting comments on the draft environmental impact report/statement (DEIR/S) for the Boston Harbor Navigation Improvement and Berth Dredging Project (ER 94/0393).

General Comments:

MassPort and the Corps have attempted to satisfy the procedural requirements of the National Environmental Policy Act (NEPA) and Massachusetts Environmental Policy Act (MEPA) in a combined environmental document. This has been done successfully in the past on major projects such as the Central Artery/Tunnel (I93/90) project. However, in this instance, some basic NEPA procedural standards have been integrated with MEPA requirements resulting in questionable compliance with NEPA regulations. The Massachusetts environmental standards appear to be controlling in portions of this joint NEPA/MEPA document and may explain some of the procedural irregularity concerning which alternative, no action or the Massachusetts Bay Disposal Site (MBDS), is the standard of comparison. F3-1

A "rigorous" analysis of design alternatives as contemplated under Section 1502.14 of NEPA is not provided in Section 2 of the DEIR/S. The DEIR/S does not contain sufficient information on the physical, chemical and biological resources of the identified aquatic disposal sites to differentiate the environmentally acceptable sites from the unacceptable sites. Additional information is needed on most aquatic sites before informed decisions can be made about environmental acceptability. F3-2

Specific Comments:

Section 2 of the DEIR/S is inadequate in terms of the selection, presentation and analysis of design alternatives. The purpose of an EIS is not limited to assessing environmental impacts, but it must also serve to "inform decision makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment" (40 CFR Section 1502.1). Only three actual design alternatives are presented; the "full project"/preferred alternative, and two variations on the "no action" alternative, which include no action/maintenance dredging, and no action/no maintenance. The "reduced project" and "delayed project" alternatives are not presented as actions in and of themselves, but as *consequences or scenarios* under which variations to the full project might occur. F3-3

Potential design alternatives are not discussed in detail. For instance, Section 2.1.4 includes the following statement: "Each tributary channel can therefore be treated as a separate project or in any combination with other project tributaries." However, there is no discussion of what these combinations might include as a means of minimizing the overall impact. Nor is there any discussion of whether or not more complete utilization of the existing -40 foot MLW channel could complement any of the dredging alternatives. The purpose and need section of the DEIR/S, provides a historical perspective on the development of the -40 foot MLW main ship channel in Boston. The existing -40 foot main ship channel was authorized and constructed by the Federal Government to serve the commercial terminals then located along the main ship channel waterfront. The DEIR/S notes that active port terminals are now located on -35 foot MLW tributary channels and the -40 foot main ship channel waterfront is not being utilized for its Congressionally intended purpose.

We recognize that alternatives such as relocation of appropriate facilities would necessitate the deepening of berthing areas, disposal of dredged materials, and infrastructure modernization. However, a more thorough set of design alternatives is needed to allow for meaningful comparison with the expense and environmental disruption associated with deepening the tributary channels. Based on comments in the DEIR/S, the lack of design alternatives appears to derive in part from acceptance of the alternative chosen through the Feasibility Report and Environmental Assessment prepared in 1988 for the navigation improvement project. Such a conclusion presupposes the results of an Environmental Impact Statement.

The no action alternative, with and without maintenance dredging, was evaluated as part of the project design analysis. This section in Chapter 2 of the DEIR/S provides a brief discussion of some of the consequences of not dredging Boston Harbor in the present context. The analysis does not attempt to quantify the no action analysis, nor is the analysis broken down by future target year scenarios such as 2005, 2015, 2025, etc. Likewise, the actions by port users and regulators in response to continued channel shoaling are not evaluated under similar target years. We note that the Coast Guard recently promulgated a final rule establishing a Regulated Navigation Area for the Port of Providence (59 FR 18488). The Providence Harbor rule imposed restrictions on vessel drafts, one way traffic and communications. Interestingly, the Coast Guard concluded that the economic impact of its rule imposing draft limitations and one way traffic was minimal. This is in sharp contrast to a statement on page 2-1 of the DEIR/S which states "Not maintaining the channels to authorized depths would reduce Boston Harbor to a minor port unable to accommodate deeper draft container ships and petroleum tankers." These contrasting views from agencies with navigation responsibilities help demonstrate the shortcomings in the evaluation of the no action alternative. F3-4

The build alternatives (Full Project, Reduced Project and Delayed Action) do not evaluate maintenance dredging as an alternative action in the same fashion as is done for No Action. This is an important issue because future maintenance dredging and disposal could have major consequences for the identification, evaluation and selection of alternative disposal sites as well as overall project viability. The maintenance dredge material in Boston Harbor channels and berths is contaminated with toxic metals and organics and is not acceptable for unrestricted open water disposal. The F3-5

REF: ER 94/0393

DEIR/S should adopt a consistent approach to the evaluation of future maintenance dredging. Since future maintenance dredging was considered with the No Action alternative, it should be considered with the build alternatives also. An evaluation of the build alternatives with future maintenance dredging and disposal would provide a more realistic projection of the environmental consequences of implementing the Congressionally authorized project. Of the 376 disposal sites evaluated, only MBDS and Boston Lightship Disposal Site (BLDS) have excess capacity to handle improvement and 50-year maintenance dredging needs (DEIR/S Table 3-22a).

An apparent conflict seems to exist between NEPA and MEPA regulations concerning which alternative is the standard of comparison by which other alternatives are measured. According to Question 3 of the Forty Most Asked NEPA Questions (46 FR 18027), "This analysis (no action) provides a benchmark, enabling decision makers to compare the magnitude of environmental effects of action alternatives." However, on page 3-5 of the DEIR/S the following statement appears: "As stated in the MEPA scope, ocean disposal is the preferred disposal option for uncontaminated marine sediments of acceptable quality and is the option against which other alternatives should be judged." In fact, this latter case seems to be the prevailing view in this DEIR/S because the two ocean disposal sites, MBDS and BLDS, are used as the standards of comparison for the other alternatives including no action. No action is only included under design alternatives (Chapter 2). It is not included under the disposal site alternative analysis (Chapter 3). F3-6

The disposal site screening process described in Chapter 3 was an effective method of eliminating potential disposal sites from further consideration. A universe of 376 potential sites in Phase I were pared down to a short list of 24 sites and one treatment technique (solidification) in Phase III. While we are in general agreement with the Corps and MassPort that many of the sites were not reasonable, we also believe that some reasonable sites were dropped from further consideration and that several sites carried as reasonable alternatives, should have been dropped in Phase I or II screening. We also believe that all reasonable disposal sites have not been identified nor evaluated. This is especially true for the aquatic sites which cannot be identified nor evaluated as conveniently as terrestrial sites. The universe of 376 disposal sites only contained 21 aquatic sites which demonstrates the inherent numerical inequity in the site selection and evaluation process. F3-7

The Rowes Quarry site was dropped from further consideration during Phase II screening. Rowes Quarry and other quarries received considerable discussion as the DEIR/S intimates on page 3-5. Unfortunately, the document fails to divulge that the EPA found the Rowes Quarry site to be an environmentally satisfactory disposal site for residuals from the MWRA facility at Deer Island. This finding was published in the March 30, 1990 Record of Decision for the MWRA Residuals Management EIS. This DEIR/S does not provide a convincing argument to demonstrate that Rowes Quarry or other similar quarries are not reasonable containment sites for the contaminated maintenance dredge material. The information on pages 3-5 and E-14 indicates that the quarries were dropped as reasonable sites because Massport did not want to disrupt existing businesses or use Eminent Domain authority to acquire the property. None of these reasons would appear to be fatal flaws eliminating these or other sites from the list of reasonable alternatives because these same impediments existed during the MWRA process.

REF: ER 94/0393

Several shoreline landfill sites such as Reserved Channel and Little Mystic Channel were carried forward as reasonable alternatives despite the fact that Boston Harbor estuary has long ago exceeded the significant degradation threshold for filling and creating fastland in intertidal and subtidal habitat. Over 3,000 acres of intertidal and subtidal habitat have been filled to create fastland and several hundred additional acres have been degraded by dredging. Against this background of environmental degradation, additional shoreline landfill projects should not be considered reasonable alternatives since they would likely be precluded by Clean Water Act and other regulations. It appears that several of these in harbor shoreline sites were chosen because they are depositional areas containing Category II or III sediments and, if filled above MHW, could be used for future commercial purposes. Most depositional areas in Boston Harbor contain Category II or III sediments, hence this is not a valid reason for filling these sites. Additionally, as Boston Harbor water quality improves in the future, the natural sedimentation patterns will sequester these Class II and III sediments with cleaner material. F3-8

The list of preferred alternatives was ultimately pared down from the short list of alternatives by capacity and cost constraints. Economics (cost) was the major determinative factor for developing the final list of preferred disposal alternatives (DEIR/S pg. 3-25). These five preferred disposal sites--MBDS, BLDS, Meisberger 2 or 7, and Spectacle Island CAD--all have similar cost estimates.

Unfortunately, spatial and temporal information on living resources at the preferred sites and the other reasonable aquatic sites was not used to develop and refine the list of potential sites nor the list of preferred sites. This critical information simply does not exist except possibly for the MBDS. Therefore, the environmental acceptability of Spectacle Island CAD, Meisberger 2 or 7, Boston Lightship, and other reasonable aquatic sites has not been demonstrated. Additional data is needed to identify what the spatial and temporal characteristics of living resources are at each of these sites on a seasonal basis before any determination can be made that these are environmentally acceptable as disposal sites. Existing uses need to be determined at the Section 404 sites to insure that these uses can and will be protected in accordance with the State antidegradation policy if used for disposal purposes. The full disclosure provisions of NEPA cannot be complied with in the absence of the spatial and temporal data on living resources at these preferred and other reasonable sites. F3-9

During the planning process for this project and the formal designation process for the MBDS, considerable attention was focused on dredging, transport, and disposal of contaminated sediments at offshore disposal sites. Many of these concerns about contaminated sediments were expressed in scoping comments provided by FWS for this DEIR/S. The questions raised about mass balance, chemical and physical changes to contaminants in sediments from the undisturbed state until disposal, percentage of fine grained material and contaminant load dispersed during disposal, ability of cohesive parent material (blue clay) to cap fine grained unconsolidated material, details of dredge management plans and other scoping issues remain unanswered and unresolved in this DEIR/S. F3-10

Recent research by the Waterways Experiment Station with the use of large, barge size, geotextile containers may provide the Corps/Massport with an additional treatment technology alternative for the disposal of the F3-11

REF: ER 94/0393

contaminated maintenance material. However, the DEIR/S eliminated all treatment technologies except solidification from the short list of alternatives. If the Corps/Massport intend to pursue the use of geotextile containers as a treatment technology option at one or more of the listed sites, a supplemental EIR/S will need to be prepared which evaluates this technology and the expected environmental effects at the various disposal sites. This new technology appears to have the potential to address many of the longstanding concerns identified in the preceding paragraph about open water disposal of contaminated material.

Conclusions

We recommend that the Corps and MassPort initiate biological investigations of the preferred and other reasonable disposal sites to identify the temporal and spatial characteristics of the living resources at each site. This should include data for all seasons for at least a one-year period. While the biological investigators are underway, the Corps should address each of the other outstanding issues raised by the FWS/DOI during the scoping and review process, including new innovative treatment technologies. After the requested data has been collected, demonstrations conducted, and other information gaps have been filled, the Corps should publish all of the information in a supplemental DEIR/S so that interested parties have the opportunity to review and comment on the substantive issues identified during the review of the draft statement. F3-12

Sincerely,

Andrew L. Raddant
Acting Regional Environmental Officer

F3-1

The no action alternative and the Massachusetts Bay Disposal Site (MBDS) alternative involve two different assumptions. The no action alternative assumes the project would not be built but maintenance of the navigation channels would continue or no project and no maintenance would occur. MBDS was used as a comparison for dredged material disposal alternatives. MEPA requested the use of MBDS as a standard for comparison.

F3-2

Additional benthic, lobster, and finfish data has been collected for the disposal sites. This information is included in the final EIR/S.

F3-3

The proposed project is the Congressionally authorized project, based on the 1988 feasibility study. The reader may refer to this report and Environmental Assessment prepared by the Corps in 1988 for a more detailed analysis of the various channel depths and alignments investigated during the feasibility study. The "reduced project" and "delayed project" alternatives are within the range of reasonable alternatives to be evaluated under NEPA. As stated in the draft and final EIR/S, a tributary channel could be dropped from consideration if its economic benefit to cost ratio drops below 1:1. A tributary channel would not be dropped as a potential alternative otherwise, unless some other factor, such as a bridge replacement in Chelsea, delays construction.

A brief discussion on relocating the active port terminals to the main ship channel is discussed in Section 2.0. This alternative would have a significant impact on the amount of dredged material and capital to relocate the port activity and its supporting infrastructure.

F3-4

If maintenance dredging does not occur within ten years, ship traffic in Boston Harbor will continue to be forced to account for tidal delays. This will be happening concurrently with regulations effecting vessel design such as the double hull requirement for tankers. The combination of delays and cost of constructing vessels capable of use in 33 - 35 foot channels will undoubtedly be passed on to consumers in the form of higher prices particularly for home heating oil. Shoaling is currently affecting ships transiting Boston Harbor due to the need for maintenance dredging in the Mystic River and Chelsea Creek.

An Environmental Impact Statement is being prepared for the Providence River maintenance dredging project. The U.S. Coast Guard has determined that restrictions on vessel drafts, one way traffic and communication does not impose an economic impact for the Providence port. The EIS will perform a needs analysis to determine if the Coast Guard rule has an impact. No maintenance dredging will be performed if there is no need. Future conditions will also be evaluated to assess when dredging may need to occur if there is no maintenance dredging now. It also needs to be recognized that the Providence River Harbor is used mostly by oil tankers while Boston Harbor is used by container ships and oil vessels. The benefit to cost ratio for Boston Harbor has determined that their is an economic benefit to deepen the port. This analysis implies that the current navigation channels are not optimal for Boston Harbor.

F3-5

The final EIR/S evaluates disposal sites for future maintenance in Section 4.

F3-6

The No Action alternative was discussed in Section 2.1 in the DEIR/S as well as the environmental impacts and benefits. A No Action alternative is not possible for disposal site selection if a project alternative is considered. The navigation improvement project can not go forward without a disposal site. This would bring the project back to a No Action alternative. The Final EIR/S does use the MBDS as a disposal site for the parent material. However, other uses for the material, such as landfill cover, have been pursued and are discussed in the FEIR/S. The MBDS is no longer used as the standard of comparison for the silty material.

F3-7

The selection of disposal sites was based on available information. The number of upland vs. aquatic sites is based on what is available for disposal site alternatives. While there may be disagreements over the designation of fatal flaws in the DEIR disposal site selection process, socioeconomic impacts are a consideration, and Massport remains reluctant to acquire an active business (such as Rowes Quarry) through eminent domain. Additional issues have been identified which make Rowes Quarry and other upland disposal sites impracticable, including compliance with the current waste disposal facility siting requirements and permitting process, and the cost and technical difficulty of dewatering the sediments sufficiently for transport. In addition the site would need to be lined to prevent groundwater contamination. These costs and engineering considerations were not discussed in the Record of Decision for the MWRA Residuals Management EIS. In addition the site would need to be lined to prevent groundwater contamination. These costs and engineering considerations were not discussed in the Record of Decision for the MWRA Residuals Management EIS.

F3-8

The shoreline sites were evaluated for two different disposal scenarios: partial fill, in which the site would continue to be tidally submerged; and fill to fastland, in which the site would be filled above the tideline. While recognizing the historical loss of aquatic habitat in Boston Harbor, the project feels that these scenarios fit within the definition of Designated Port Area, as provided by the state in its Wetlands Protection Act. Therefore, both scenarios were reexamined in the FEIR/S (Section 4). The partial-fill scenario was found to be among the least environmentally damaging alternatives. Because of the permanent loss of aquatic habitat that would be caused by the fastland scenario, however, this option was not found to be among the least environmentally damaging alternatives.

F3-9

Additional investigations on biological resources at all the potential aquatic disposal sites were undertaken in fall 1994. This information was reported in separate technical documents and in Attachment 1 of the FEIR/S. These data were used to reevaluate the selection of the proposed preferred alternative site for the disposal of silt from the BHNIP. There were data available on benthic resources for many of the potential disposal sites from other surveys, including a survey conducted by Massport in April 1993. These results were reported in the DEIR/S and were used for comparisons to the fall 1994 data.

F3-10

Disposal of contaminated sediment at MBDS will not occur for the navigation improvement project. A demonstration at the MBDS may occur to illustrate the effectiveness of capping. Coordination with other agencies would occur before a demonstration project was initiated. Many of the issues discussed in this comment will be addressed during the pre-demonstration meetings.

F3-11

The BHNIP team has investigated the potential use of geotextile bags for sequestering contaminated silts. While it appears that this technology might have some promise for the future, tests to date have indicated that large-scale use would be problematic. The physical integrity of high-volume bags, as would be necessary for a project the size of the BHNIP, has not been proven.

F3-12

As indicated in response to comment F3-9, additional biological investigations have been conducted. No response to SEIR/S request.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Field Offices
22 Bridge Street, Unit #1
Concord, New Hampshire 03301-4986

REF: 1992-00844

June 17, 1994

LTC Dwight Durham
Acting Division Engineer
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254

F4

Dear Colonel Durham:

This is in response to Colonel Miller's April 20, 1994 Public Notice requesting comments on the draft permit and environmental report for the Boston Harbor Navigation Improvement and Berth Dredging Project. These comments are submitted in accordance with the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.) and Clean Water Act [33 U.S.C. 1344(m)].

General Comments:

The draft environmental report does not contain sufficient information on the physical, chemical and biological resources of the identified aquatic disposal sites to differentiate the environmentally acceptable sites from the unacceptable sites. Additional information is needed on most aquatic sites before informed decisions can be made about environmental acceptability. In addition, the least environmentally damaging practicable alternative cannot be identified nor selected based on the information contained in the draft report. A supplemental report is necessary to provide an adequate administrative record for permit decisions. F4-1

Specific Comments:

The purpose and need section of the EIR/S provides a historical perspective on the development of the -40 foot MLW main ship channel in Boston. The existing -40 foot main ship channel was authorized and constructed by the Federal Government to serve the commercial terminals then located along the main ship channel waterfront. Active port terminals are now located on -35 foot MLW tributary channels and the -40 foot main ship channel waterfront is not being utilized for its Congressionally intended purpose. The EIR/S should evaluate relocation of appropriate active port terminals to the main ship channel waterfront as an alternative to the additional expense and environmental disruption associated with deepening the tributary channels and dredge material disposal. F4-2

The no action alternative, with and without maintenance dredging, was evaluated as part of the project design analysis. This section in Chapter 2 of the EIR/S provides a brief discussion of some of the consequences of not dredging Boston Harbor in the present context. The analysis does not attempt to quantify the no action analysis, nor is the analysis broken down by future target year scenarios such as 2005, 2015, 2025, etc. Likewise, the actions by port users and regulators in response to continued channel shoaling are not evaluated under similar target years. We note that the Coast Guard recently promulgated a final rule establishing a Regulated Navigation Area for the Port of Providence (59 FR 18488). The Providence Harbor rule imposed restrictions on vessel drafts, one way traffic and communications. Interestingly, the Coast Guard concluded that the economic impact of its rule imposing draft limitations and one way traffic was minimal. This is in sharp contrast to a statement on page 2-1 of the EIR/S which states "Not maintaining the channels to authorized depths would reduce Boston Harbor to a minor port unable to accommodate deeper draft container ships and petroleum tankers." These contrasting views from agencies with navigation responsibilities help demonstrate the shortcomings in the evaluation of the no action alternative. F4-3

The build alternatives (Full Project, Reduced Project and Delayed Action) do not evaluate maintenance dredging as an alternative action in the same fashion as is done for No Action. This is an important issue because future maintenance dredging and disposal could have major consequences for the identification, evaluation and selection of alternative disposal sites as well as overall project viability. The maintenance dredge material in Boston Harbor channels and berths is contaminated with toxic metals and organics and is not acceptable for unrestricted open water disposal. The EIR/S should adopt a consistent approach to the evaluation of future maintenance dredging. Since future maintenance dredging was considered with the No Action alternative, it should be considered with the build alternatives also. An evaluation of the build alternatives with future maintenance dredging and disposal would provide a more realistic projection of the environmental consequences of implementing the Congressionally authorized project. Of the 376 disposal sites evaluated, only MBDS and Boston Lightship Disposal Site (BLDS) have excess capacity to handle improvement and 50-year maintenance dredging needs (EIR/S Table 3-22a). F4-4

The disposal site screening process described in Chapter 3 was an effective method of eliminating potential disposal sites from further consideration. A universe of 376 potential sites in Phase I were pared down to a short list of 24 sites and one treatment technique (solidification) in Phase III. While we are in general agreement with the Corps and MassPort that many of the sites were not reasonable, we also believe that some reasonable sites were dropped from further consideration and that several sites carried as reasonable alternatives, should have been dropped in Phase I or II screening. We also believe that all reasonable disposal sites have not been identified nor evaluated. This is especially true for the aquatic sites which cannot be identified nor evaluated as conveniently as terrestrial sites. The universe of 376 disposal sites only contained 21 aquatic sites which demonstrates the inherent numerical inequity in the site selection and evaluation process. F4-5

The Rowes Quarry site was dropped from further consideration during Phase II screening. Rowes Quarry and other quarries received considerable discussion as the DEIR/S intimates on page 3-5. Unfortunately, the document fails to divulge that the EPA found the Rowes Quarry site to be an environmentally satisfactory disposal site for residuals from the MWRA facility at Deer Island. This finding was published in the March 30, 1990 Record of Decision for the MWRA Residuals Management EIS. This EIR/S does not provide a convincing argument to demonstrate that Rowes Quarry or other similar quarries are not reasonable containment sites for the contaminated maintenance dredge material. The information on pages 3-5 and E-14 indicates that the quarries were dropped as reasonable sites because Massport did not want to disrupt existing businesses or use Eminent Domain authority to acquire the property. None of these reasons would appear to be fatal flaws eliminating these or other sites from the list of reasonable alternatives because these same impediments existed during the MWRA process.

Several shoreline landfill sites such as Reserved Channel and Little Mystic Channel were carried forward as reasonable alternatives despite the fact that Boston Harbor estuary has long ago exceeded the significant degradation threshold for filling and creating fastland in intertidal and subtidal habitat. Over 3,000 acres of intertidal and subtidal habitat have been filled to create fastland and several hundred additional acres have been degraded by dredging. Against this background of environmental degradation, additional shoreline landfill projects should not be considered reasonable alternatives since they would likely be precluded by Clean Water Act and other regulations. It appears that several of these in harbor shoreline sites were chosen because they are depositional areas containing Category II or III sediments and, if filled above MHW, could be used for future commercial purposes. Most depositional areas in Boston Harbor contain Category II or III sediments, hence this is not a valid reason for filling these sites. Additionally, as Boston Harbor water quality improves in the future, the natural sedimentation patterns will sequester these Class II and III sediments with cleaner material. **F4-6**

The list of preferred alternatives was ultimately pared down from the short list of alternatives by capacity and cost constraints. Economics (cost) was the major determinative factor for developing the final list of preferred disposal alternatives (DEIR/S pg. 3-25). These five preferred disposal sites—MBDS, BLDS, Meisberger 2 or 7, and Spectacle Island CAD—all have similar cost estimates.

Unfortunately, spatial and temporal information on living resources at the preferred sites and the other reasonable aquatic sites was not used to develop and refine the list of potential sites nor the list of preferred sites. This critical information simply does not exist except possibly for the MBDS. Therefore, the environmental acceptability of Spectacle Island CAD, Meisberger 2 or 7, Boston Lightship, and other reasonable aquatic sites has not been demonstrated. Additional data is needed to identify what the spatial and temporal characteristics of living resources are at each of these sites on a seasonal basis before any determination can be made that these are environmentally acceptable as disposal sites. Existing uses need to be determined at the Section 404 sites to insure that these uses can and will be protected in accordance with the State antidegradation policy if used for disposal purposes. The full disclosure provisions of NEPA cannot be complied with in the absence of the spatial and temporal data on living resources at these preferred and other reasonable sites. **F4-7**

During the planning process for this project and the formal designation process for the MBDS, considerable attention was focused on dredging, transport, and disposal of contaminated sediments at offshore disposal sites. Many of these concerns about contaminated sediments were expressed in scoping comments provided by FWS for this EIR/S. The questions raised about mass balance, chemical and physical changes to contaminants in sediments from the undisturbed state until disposal, percentage of fine grained material and contaminant load dispersed during disposal, ability of cohesive parent material (blue clay) to cap fine grained unconsolidated material, details of dredge management plans and other scoping issues remain unanswered and unresolved in this DEIR/S. F4-8

Recent research by the Waterways Experiment Station with the use of large, barge size, geotextile containers may provide the Corps/Massport with an additional treatment technology alternative for the disposal of the contaminated maintenance material. However, the DEIR/S eliminated all treatment technologies except solidification from the short list of alternatives. If the Corps/Massport intend to pursue the use of geotextile containers as a treatment technology option at one or more of the listed sites, a supplemental EIR/S will need to be prepared which evaluates this technology and the expected environmental effects at the various disposal sites. This new technology appears to have the potential to address many of the longstanding concerns identified in the preceding paragraph about open water disposal of contaminated material. F4-9

Conclusions

We recommend that the Corps and MassPort initiate biological investigations of the preferred and other reasonable disposal sites to identify the temporal and spatial characteristics of the living resources at each site. This should include data for all seasons for at least a one-year period. While the biological investigators are underway, the Corps should address each of the other outstanding issues raised by the FWS during the scoping and review process, including new innovative treatment technologies. After the requested data has been collected, demonstrations conducted, and other information gaps have been filled, the Corps should publish all of the information in a supplemental DEIR/S so that interested parties have the opportunity to review and comment on the substantive issues identified during the review of the draft statement. We believe this information and process is necessary before the least environmentally damaging practicable alternative can be identified and selected. F4-10

Questions concerning these comments should be directed to Mr. Vern Lang of this office at 603-225-1411.

Sincerely yours,

Gordon E. Beckett

Gordon E. Beckett
Supervisor
New England Field Offices

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P. Jackson, NED
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N. Faramelli, MassPort
L. Bridges, MA DMF
ES: VLang:jd:6-17-94:603-225-1411

F4-1

Additional investigations on biological resources at all the potential aquatic disposal sites were undertaken in fall 1994. This information was reported in separate technical documents and in Attachment 1 of the FEIR/S. These data were used to re-evaluate the selection of the proposed preferred alternative site for disposal of silt from the BHNIP.

F4-2

The Department of Interior notes that some of the land abutting deep channels in Boston's Inner Harbor has been converted to uses unrelated to Port operations. The Department suggests that converting these parcels back to port terminal use might be more cost-effective than the proposed dredging. It is true that some of the former port terminal locations served by deep channels have been converted to other land uses. However, relocation of active port terminals to these sites is not readily achievable because of the rigorous regulatory process that such relocation would trigger. There are environmental regulations in place which protect the residents and businesses near those deep water facilities. In addition, relocation of place which protect the residents and businesses near those deep water facilities. In addition, relocation of port terminals would require infrastructure including backland and roadway connections to the regional highway system. This would entail years for permitting, land assembly, and right-of-way takings alone.

The controversy generated by the proposed land use change could entail litigation delaying project implementation indefinitely. Further, several communities along Boston Harbor have carefully developed plans to enable the general public to enjoy the waterfront as a precious recreational resource. While these plans, such as the Municipal Harbor Plan of the City of Boston, recognize the importance of preserving portions of the coastline for maritime industry, they also have zoning in place that would require change to support the relocation of port facilities. This would require months, if not years, to accomplish. The combined effect of environmental regulations, infrastructure requirements and the rezoning process will likely preclude relocation to port facilities as a viable alternative to the dredging currently proposed.

F4-3

If maintenance dredging does not occur within ten years, ship traffic in Boston Harbor will continue to be forced to account for tidal delays. This will be happening concurrently with regulations effecting vessel design such as the double hull requirement for tankers. The combination of delays and cost of constructing vessels capable of use in 33 - 35 foot channels will undoubtedly be passed on to consumers in the

form of higher prices particularly for home heating oil. Shoaling is currently affecting ships transiting Boston Harbor due to the need for maintenance dredging in the Mystic River and Chelsea Creek.

An Environmental Impact Statement is being prepared for the Providence River maintenance dredging project. The U.S. Coast Guard has determined that restrictions on vessel drafts, one way traffic and communication does not impose an economic impact for the Providence port. The EIS will perform a needs analysis to determine if the Coast Guard rule has an impact. No maintenance dredging will be performed if there is no need. Future conditions will also be evaluated to assess when dredging may need to occur if there is no maintenance dredging now. It also needs to be recognized that the Providence River Harbor is used mostly by oil tankers while Boston Harbor is used by container ships and oil vessels. The benefit to cost ratio for Boston Harbor has determined that their is an economic benefit to deepen the port. This analysis implies that the current navigation channels are not optimal for Boston Harbor.

F4-4

The final EIR/S evaluates disposal sites for future maintenance in Section 4.

F4-5

The site screening process was reviewed for the FEIR/S and it was concluded that the criteria used were appropriate for defining the shortlist of potential disposal sites that was described in the DEIR/S. The Working Group process that took place during the preparation of the DEIR/S was one mechanism used to identify sites that should be examined. Every site that was suggested during this process was given due consideration by the project. The difference in the numbers of aquatic versus terrestrial sites that were initially examined reflects the difficulty in procuring basic site information, not a prejudice on the part of the project. We believe that the sites identified are reflective of what could be available and are a suitable representation of the impacts that could be experienced under the proposed project.

The status of Rowes Quarry was reevaluated for the FEIR/S. While there may be disagreements over the designation of fatal flaws in the DEIR/S disposal site selection process, socioeconomic impacts are a consideration, and Massport remains reluctant to acquire an active business (such as Rowes Quarry) through eminent domain.Although it is recognized that it is technically feasible to use Rowes Quarry, or other quarries, for disposal of contaminated materials, it is not a permitable activity under the state solid waste regulations. Therefore, this disposal option is not a practicable solution for the BHNIP.

F4-6

The shoreline sites were evaluated for two different disposal scenarios: partial fill, in which the site would continue to be tidally submerged; and fill to fastland, in which the site would be filled above the tideline. While recognizing the historical loss of aquatic habitat in Boston Harbor, the project feels that these scenarios fit within the definition of Designated Port Area, as provided by the state in its Wetlands Protection Act. Therefore, both scenarios were reexamined in the FEIR/S (Section 4). The partial-fill scenario was found to be among the least environmentally damaging alternatives. Because of the permanent loss of aquatic habitat that would be caused by the fastland scenario, however, this option was not found to be among the least environmentally damaging alternatives.

F4-7

Additional investigations on biological resources at all the potential aquatic disposal sites were undertaken in fall 1994. This information was reported in separate technical documents and in Attachment 1 of the FEIR/S. These data were used to reevaluate the selection of the proposed preferred alternative site for the disposal of silt from the BHNIP. There were data available on benthic resources for many of the potential disposal sites from other surveys, including a survey conducted by Massport in April 1993. These results were reported in the DEIR/S and were used for comparisons to the fall 1994 data.

F4-8

Disposal of contaminated sediment at MBDS will not occur for the navigation improvement project. A demonstration at the MBDS may occur to illustrate the effectiveness of capping. Coordination with other agencies would occur before a demonstration project was initiated. Many of the issues discussed in this comment will be addressed during the pre-demonstration meetings.

F4-9

The BHNIP team has investigated the potential use of geotextile bags for sequestering contaminated silts. While it appears that this technology might have some promise for the future, tests to date have indicated that large-scale use would be problematic. The physical integrity of high-volume bags, as would be necessary for a project the size of the BHNIP, has not been proven.

F4-10

As indicated in response to comments F4-1 and F4-7, additional site investigations were conducted in fall 1994. Results were used to augment the disposal site selection analysis (Section 4).

To Col. Miller

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northeast Region
One Blackburn Drive
Gloucester, MA 01930

APR 19 1994

Colonel Brink P. Miller
Division Engineer
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254-9149

F5

Dear Col. Miller:

We have reviewed the Corps' Biological Assessment of potential impacts to threatened and endangered species from the disposal of dredged material from the Boston Harbor Navigation Improvement Project. The National Marine Fisheries Service has determined, pursuant to 50 CFR Part 402.14(f), that additional information is needed for us to formulate a Biological Opinion under Section 7(a)(2) of the Endangered Species Act. F5-1

The Corps' Biological Assessment includes a discussion of the disposal of contaminated sediments at the Massachusetts Bay Disposal Site (MBDS) and three additional offshore sites. The dredged material in question, silty sediment from future maintenance dredging of Boston Harbor, is considered unsuitable for unconfined ocean disposal. MBDS is designated for disposal of "clean" material (suitable for unconfined ocean disposal) only. However, the Corps proposes to dispose of the silty Boston Harbor material at MBDS with capping, the rationale being that disposal of contaminated material with capping may be allowed in the future if capping can be proven to be viable at MBDS. F5-2

The Biological Assessment provides scant justification for its conclusion that capping can be used successfully at MBDS or other offshore sites, and therefore that disposal of contaminated materials with capping would not jeopardize the continued existence of listed species. The document states that "the Corps has technical evidence that capping can work at MBDS, based on previous experience," yet it does not discuss or cite this evidence. Similarly, the Biological Assessment does not discuss the efficacy of capping under the environmental conditions present at MBDS, including waters up to 100 meters deep. The document also does not address the possible cumulative effects of specific contaminants from this and other projects (e.g., the MWRA sewage outfall) on listed species, nor does it substantiate the conclusion that capping at MBDS or other offshore sites would eliminate the potential for contaminants to bioaccumulate or transfer through the food chain. Finally, the Biological Assessment does not specify the anticipated volume of material (clean or contaminated) proposed for future maintenance dredging. F5-3 F5-4

Because of the deficiencies in the Biological Assessment, we request that the Corps provide additional data and analysis to help us determine the extent of potential impacts from the project to listed species. Specifically, NMFS, the Environmental Protection Agency, the U.S. Fish and Wildlife Service, and the Commonwealth of Massachusetts have all recommended in the past that the Corps conduct a capping demonstration project at MBDS using clean materials marked with a distinct signature to allow analysis of the entire disposal process, including cap placement and integrity over time. Without this type of in situ study using clean material, the environmental feasibility of confined ocean disposal at MBDS will likely remain in question. F5-5 F5-6

We recommend that the Corps either agree to extend formal consultation until this data is available, or drop capping at offshore sites from further consideration (and revise the Biological Assessment accordingly) until the questions surrounding the feasibility of capping are resolved. Extension of the consultation period for more than 60 days would require the consent of the applicant for the non-federal portion of the project. Alternatively, if the Corps elects not to extend consultation or modify the proposed project, NMFS will issue a Biological Opinion using the best scientific and commercial data available, including a conservative presumption that capping at MBDS would not be successful. F5-7

Please inform us at your earliest convenience as to how the Corps would like to proceed with this consultation. If you have any questions in the interim, please contact me, or your staff may contact Chris Mantzaris, Acting Chief of my Habitat and Protected Resources Division, at 508/281-9346.

Sincerely,

Allen E. Peterson, Jr.
Acting Regional Director

cc: John DeVillars, EPA Regional Administrator
Ron Lambertson, USFWS Regional Director
Trudy Coxe, Massachusetts Secretary of Environmental Affairs
Janeen Hansen, Massachusetts Port Authority

F5-1

Additional information has been sent to the National Marine Fisheries Service to help formulate a Biological Opinion.

F5-2

Capping silty material at the MBDS for the navigation improvement project has been eliminated as an alternative for BHNIP.

F5-3

Refer to comment F5-2.

F5-4

Refer to comment F5-2.

F5-5

These figures are in the EIR/S. They will be included in the Biological Assessment.

F5-6

Refer to comment F5-2.

F5-7

The Corps will send a Biological Assessment which eliminates the disposal of contaminated material at the MBDS.

STATE AGENCIES

COMMENTS AND RESPONSES

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S1

June 30, 1994

CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS ON THE DRAFT ENVIRONMENTAL IMPACT REPORT

PROJECT NAME	: Boston Harbor Navigation Improvement Project and Berth Dredging Project
PROJECT LOCATION	: Boston
EOEA NUMBER	: 8695
PROJECT PROPONENT	: Massport
DATE NOTICED IN MONITOR	: April 25, 1994

The Secretary of Environmental Affairs hereby determines that the Draft Environmental Impact Report submitted on the above project adequately and properly complies with the Massachusetts Environmental Policy Act (G. L. c. 30, s. 61-62H) and with its implementing regulations (301 CMR 11.00).

Introduction

The Boston Harbor Navigation Improvement and Berth Dredging project (BHNIP) is a major infrastructure betterment project that has been linked to this region's economic vitality. The proposed dredging project will help facilitate the movement of goods by improving navigational efficiency and safety, and minimizing double-hauling of cargos in the 47 square mile Port of Boston, which handles more than 25 million tons of cargo, worth more than seven billion dollars annually.

The BHNIP includes deepening of two areas in the Main Ship Channel (the Inner Confluence and the mouth of the Reserved Channel) and dredging of three tributary channels (the Reserved Channel, the Mystic River Channel, and the Chelsea Creek Channel). Approximately 3.4 million cubic yards (c.y.) of marine sediment needs to be dredged, including 1.32 million c.y. of unconsolidated silty material that lies above 2.02 million c.y.

of uncontaminated clay material and 0.132 million c.y. of rock.[1] Boston Harbor was last dredged in 1983. The project has two proponents: Massport and the U.S. Army Corps of Engineers (USACOE). Accordingly, the documents reviewed are both a federal Draft Environmental Impact Statement (DEIS) and a state Draft Environmental Impact Report (DEIR). The project is scheduled to begin early in 1996.

The DEIR points out an overriding problem with dredging projects, including the BHNIP: "(t)he lack of suitable disposal alternatives have (sic) delayed port improvements not only in New England but nationwide." Recognizing this, I have made dredging issues a priority within the Executive Office of Environmental Affairs and my staff are developing a long-term management plan for dredging, dredged material reuse and disposal in the Commonwealth. There is a concerted and ongoing effort among the EOEA sister agencies to work with Massport and the USACOE by providing guidance and technical support on the BHNIP dredging project during the MEPA review.

Finding acceptable reuse opportunities and disposal areas for 3.4 million c.y. of marine sediments from the BHNIP - plus the 50 year maintenance dredging requirement for an additional 1.8 million from the tributaries and 4.4 million c.y. from the improvement project - is an enormous undertaking.[2] This is illustrated by the fact that the volumes of the BHNIP alone would fill a football field to the height of about 1725 feet, or the equivalent of a 120 story building. The problem is compounded because a significant portion of the sediment is considered contaminated and will require special handling and disposal to ensure that the potential to damage the environment during the dredging operations and at the disposal site is minimized.[3]

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[1] The actual volumes are lower than the expansion volumes, which have been described; they are as follows: 1.1 million c.y. of contaminated silt, 1.68 million c.y. of parent or uncontaminated material, 88,000 c.y. of rock.

[2] No estimates were provided for the future dredge volumes from the berthing areas.

[3] To simplify the magnitude of the problem somewhat, the scope requirements have assumed, and this Certificate still assumes, that it is acceptable to dispose of uncontaminated dredged material not earmarked for beneficial use at the Massachusetts Bay Disposal Site (MBDS). The 2 million c.y. of clay material meets the existing

The Draft Environmental Impact Report (DEIR)/Draft Environmental Impact Statement (DEIS) has already proved to be a useful resource document and has facilitated many thoughtful comments from agencies and the public. The report has fostered a high level of cooperation among the divergent interests represented in the comments, which has yielded a productive dialogue that will enhance sound decision-making concerning the reuse and disposal alternatives. The DEIR also helps to define the direction of the FEIR/FEIS, the Section 61 Finding, and permitting processes. Although this first review step has taken three years, significant progress has been made.

The Working Group (WG) participation process established by Massport has contributed to the success of the DEIR/DEIS. Through the efforts of the WG participants, the site identification and selection process has proceeded in an open and balanced forum. I commend Massport and the USACOE for this process and ask that the Working Group be reengaged during the preparation of the FEIR. This group will provide valuable technical assistance and guidance with permitting issues. Overall, the WG will continue to be a useful resource in answering questions, and developing and reviewing information and possibly scopes for potential pilot or demonstration projects. S1-1

FEIR Review Process

The goals for the FEIR are twofold. First, the report must provide additional information to describe the practicable disposal alternatives and their potential impacts more completely and at a consistent level of detail. Second, it will be necessary to expand upon the analysis of the environmental impacts of the preferred disposal alternative(s). These goals can be divided into four discrete tasks, including: (1) reconsideration of certain criteria used to identify practicable alternatives and, depending on the result, revisions to the list of disposal option alternatives; (2) comparative analysis of environmental impacts of the disposal option alternatives; (3) more detailed analysis of the preferred alternative(s), contingency alternative, and least impact alternative; and (4) development of a Dredging Management and Monitoring Plan. Later sections of this Certificate provide specific guidance on these tasks. S1-2 S1-3 S1-4 S1-5

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standards for disposal at the MBDS.

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The DEIR/DEIS indicates that the final selection of a preferred disposal option(s) will be made based upon agency and public comments. The comments, however, indicate that there is not yet sufficient analysis of the potential environmental impacts of all of the disposal option alternatives at this point to support selection of disposal options and demonstrate that they are both environmentally sound and consistent with the other project requirements. Moreover, reconsidering and reapplying the screening criteria could result in an expansion of the list of practicable sites. Consequently, the FEIR must provide additional information about several of the disposal option alternatives (See "Practicable Alternatives" and "Potentially Practicable Alternatives" below) to ensure a truly comparative analysis of impacts at as consistent a level of detail as possible. S1-6 S1-7

The Final EIR must explain clearly how the final site selection process was accomplished. The criteria applied and the site selection process should be discussed in sufficient detail to allow the reviewer to independently confirm that the selection has been based on the established criteria and that the criteria used are defensible. S1-8

The report must also provide a more in-depth analysis of the potential impacts of the preferred alternative(s), and possibly other alternatives, which are described in the Preferred Disposal Option section of this Certificate. It must be shown that environmentally acceptable solutions for the reuse and disposal of contaminated sediments are being proposed. Lastly, the FEIR needs to address the outstanding issues identified in the comments and in this Certificate concerning a Dredging Management and Monitoring Plan. S1-9 S1-10 S-11

Taking into consideration the breadth of the requirements for the FEIR, it may become necessary to divide the remaining impact analysis and review in two phases. For example, the FEIR could provide information about all of the disposal option alternatives, the final screening analysis, and identification of a preferred disposal alternative. A Supplemental FEIR (SFEIR)/Section 61 Finding could then evaluate the preferred alternative in greater detail and a Dredging Management and Monitoring Plan could be developed as part of this second installment (or afterwards). The comment from the Massachusetts Coastal Zone Management Agency (MCZM) explains how issues could be treated in the FEIR and SFEIR, respectively. S1-12

While this two step final review process is not an absolute requirement, it may be the best way to ensure that a more complete understanding of the alternatives and their environmental impacts will be developed before the preferred alternatives are selected, and also to help the agencies reach consensus sooner, rather than later. This approach may also minimize the possibility of proceeding too far with an alternative that may ultimately be unacceptable or infeasible. In short, I believe this approach will provide the most predictability and efficiency.

Project Description

Characterization and quantification of the sediments is an essential requirement of the proposed dredging project. Understanding what this project is will establish basic requirements of the disposal site. According to the DEIR, the quantities of sediment affect the duration of dredging, the duration of the turbidity plume, the amount of habitat affected, and the duration of interference with navigation. As part of the comparative analysis of the alternatives, the FEIR should provide a better understanding of the impacts and explain the differences between the alternatives. S1-13

Through the EIR review it will be important to keep track of the changes in volumes of contaminated materials or those considered to be unsuitable for open ocean disposal, because of the critical balance that must be achieved between environmental impacts and project cost in the disposal site selection process. S1-14

The larger issue of finding a disposal site for this project and the future maintenance dredging required by this project has been confronted in the DEIR. Future maintenance dredging over the 50 year life of the project has been estimated at 6.2 million c.y. of silt, exclusive of dredging that will be required for the berthing areas. While the proponent agencies have not made it a goal of this project to find a disposal alternative(s) that will accommodate both present and future dredging volumes, the DEIR has identified and considered potentially practicable alternatives for the future dredge disposal requirements. To the extent that it is possible, the future maintenance dredging and disposal needs should be taken into account in the FEIR analysis of disposal alternatives. S1-15

According to Massport and the USACOE, the estimated volumes of dredged materials should not change significantly from the estimates in the DEIR. Even so, the proposed project has been

modified somewhat from the project described in the Environmental Notification Form (ENF) and, according to the DEIR, "It is anticipated that a number of these minor reductions and possible enlargements to the project will occur as the design is finalized." Originally, about 29 berths were to be dredged (about 0.8 million c.y.) In Appendix C, Table 1, 18 berths are now listed for dredging, with a total of about 570,796 c.y. of material.[4] Has the DEIR accounted for the maximum volumes of sediments from the berthing areas? S1-16

Furthermore, the DEM, Division of Waterways has recommended that the channel modifications identified in Appendix D should be incorporated into the project. What increase in volumes would result? There is also a possibility that the dredge profile in the Chelsea Creek could be expanded if the Chelsea Street Bridge is replaced by the City of Boston. According to the DEIR, "There is an interest in reviewing the navigation channel to consider widening and deepening to accommodate larger vessels." If possible, estimates of the increase in dredged sediment volume should be provided in the FEIR. By providing this information, it may be possible to avoid a separate Notice of Project Change review. Would it be necessary to retest the sediments for an expansion of the Chelsea Creek dredge?

The project proposal includes a 0.5 foot overdredge, while many other projects plan for a 1 foot overdredge. The FEIR must demonstrate why a lesser depth is acceptable. If this is not possible, the FEIR must evaluate the implications of increasing overdredge in terms of project volumes and impacts. S1-17

Lastly, according to the DEIR, the project description could be changed to maintenance dredging only (excluding the deepening of the navigation channels in the Mystic River, Chelsea Creek and Reserved Channel), if for some reason it was decided not to proceed with the improvement dredging. The DEIR has not considered this alternative in any detail, however. Consequently, many questions are left open relating to matching the reduced project to a disposal site. Because this is not the primary plan, further analysis can be deferred at this time. Should this alternative be pursued at a later date, it will require the filing of a Notice of Project Change, in accordance with 301 CMR 11.17. S1-18

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[4] The DEIR reports both 15 and 18 berth areas. It is not clear which number of berths is accurate. However, testing appears to cover 15 sites.

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Sediment Characterization

The marine sediment characterization was based on a three tiered evaluation of the materials to determine the acceptability of the dredged materials for open water disposal. Regulatory thresholds, based on sediment criteria, have not been established for in-harbor or coastal containment. Therefore, in the absence of separate, scientifically-based sediment criteria for disposal in coastal areas (including borrow pits, in-channel trench-and-cover, and filling and bulkheading for the creation of new (fast) land, the testing protocols for open water disposal have been used. These protocols, as more fully described in the DEIR and MCZM comment, are acceptable for the purposes of this MEPA review. However, throughout the planning and decision-making, a conservative approach should be taken with respect to environmental protection to provide for the possibility that, at some point, more stringent sediment quality standards could be established for nearshore locations.[5] Consistent with that approach, and with the recommendations of MCZM, EPA and others, all of the silt material should be considered contaminated sediment, particularly for in-harbor and coastal containment disposal site alternatives. Moreover, for these alternatives it must be shown clearly that the disposed materials will be isolated from the ambient environment, that water quality would be acceptable, and that these conditions can be maintained over time.[6]

S1-19

Disposal Site Screening

Overall, the initial phase of the screening analysis has accomplished its objectives, the screening criteria appear to have been applied evenly and there is no apparent bias for or against any of the practicable disposal alternatives in the text. Moreover, the universe of sites evaluated was broad and representative; land-based sites including inland, coastal and landfill sites were considered as well as aquatic sites, which

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[5] The DEP comment indicates that maximum contaminant limits will be considered in the development of the Comprehensive Dredging Regulations in order to keep risks of containment failure at a minimum.

[6] For upland reuse disposal, DEP regulations and policies may require additional analysis.

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include shoreline facilities, subaqueous depressions, borrow pits, in-channel trenches, and open water disposal sites. The DEIR has thus provided a useful model that may be applicable to other dredging projects. That being said, this review would be less than rigorous if it did not raise questions about the criteria, the process of selecting among options, and the results of that process.

Potentially practicable sites, evaluated against the screening criteria, were eliminated based on either a failure to meet the minimum of 200,000 c.y. capacity and/or the comparative cost exceeding 4 times the cost per cubic yard as compared to ocean disposal (ES-7). Based on comments received, these screening criteria need to be reconsidered. S1-20

In the selection of the preferred disposal alternatives, sites with capacities less than 200,000 c.y. were dropped. However, as the DEP and the MCZM comments point out, some of the shoreline filling and bulkheading alternatives could possibly meet this criterion when the volume between mean low water and mean high water or fast land is included. These alternatives also appear to be promising because the wetlands resource performance standards are less restrictive in a Designated Port Area, in which a number of these sites are located. Therefore, the FEIR should reconsider those alternatives that would meet the minimal volume requirements by the creation of new land. Alternatively, the FEIR should reconsider whether this is the appropriate lower limit for the disposal needs of the project.

Cost is a key screening criterion in the disposal site screening analysis. Sites with disposal costs greater than four times the cost of capping at the Massachusetts Bay Disposal Site (MBDS) were considered excessive (p. 3-26). However, as has been pointed out in the DEP comment, there may be a more appropriate basis for establishing baseline costs. Specifically, the DEP recommends that the cost standard should be based on a potentially acceptable disposal option (rather than the unacceptable unconfined ocean disposal option used in the chart or confined ocean disposal option used in the text). This could result in a significantly different conclusion as to which options are practicable. The FEIR must address this issue. S1-21

To address these issues, the potentially practicable sites must be reconsidered in the FEIR. S1-22

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Disposal Site Alternatives

The disposal site screening steps outlined in the DEIR have yielded a short list of "practicable" alternatives, which have been defined as alternatives that, "(a)re available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes" (CFR 230.10 (a)(2)).

The key objective of the EIR review process is to ensure that the environmental impacts of the project will be avoided or minimized to the greatest degree possible. So as the FEIR proceeds, the focus should be on a comparative analysis of potential environmental damage among the practicable alternatives (including alternatives that may yet be deemed practicable in accordance with comments) that yields a preferred disposal alternative which will have minimal effects on the environment.

S1-23

Several clear directives have emerged from the public comments with respect to the disposal options under consideration for contaminated sediments. Overall, these comments offer guidance in developing goals for arriving at an environmentally acceptable solution for the disposal of the sediments from this project.

The public has generally ranked highly the disposal options that will return the contaminated sediments to less pristine environments, near the point of origin, most notably the in-channel trench and cover option. There is also an interest in pursuing the alternative of using dredged sediments to cover benthic areas that have been impacted by the disposal of oil and hazardous materials and/or radioactive waste. However, the commenters have expressed caution about the Boston Lightship alternative, a known site for waste disposal, because of the difficulty in locating the barrels or clusters of barrels. Regarding open ocean areas supporting rich commercial fisheries and undisturbed marine habitats, commenters ranged from being unsure about the viability of those alternatives to outright opposition. It can reasonably be concluded that the public has rated those alternatives low. Regarding the Massachusetts Bay Disposal Site (MBDS), the only designated disposal site, there was strong sentiment that this alternative should not be pursued further.

The discussion that follows summarizes the concerns of the EOEA agencies with respect to the practicable alternatives identified in the Draft EIR, including: the Meisburger #2 and #7

sites, the in-channel trench and cover options, the Spectacle Island CAD, the Boston Lightship site, the MBDS with capping, and the bulkheading options.

Generally, the FEIR analysis of the site specific impacts at the disposal site alternatives should expand the understanding of the potential for habitat loss or alteration, water quality degradation, migration of contaminants from the disposal site, and land based impacts on traffic, the built environment, and land use. S1-2

Practicable Alternatives

The six practicable alternatives identified in the DEIR all have sufficient capacity to accept the total volume of dredged material, except for the in-channel, trench and cover alternative. This alternative was not carried forward as a preferred alternative because it was determined to have insufficient capacity. However, there is sufficient public interest in this alternative to warrant further consideration. S1-2

All of the disposal alternatives propose to release the contaminated silts from barges and then cover those sediments with uncontaminated parent material which is primarily Boston Blue Clay. The difference in properties between these two classes of sediments raises questions relating to the technical feasibility of covering adequately the finer-grained and less consolidated silt materials with cohesive, dense clays. In addition, what period is required to ensure that the silts have settled and how will that be factored into the project design? To what extent will the crude operation of dumping clay destabilize and displace the silts? How will this be addressed in the project design? The FEIR should provide documentation to deal with these questions and to support the plan that is proposed. S1-2

Massachusetts Bay Disposal Site

Although this is the only officially designated dredged material disposal site under consideration, there are certain conditions for dredged material at the MBDS that will affect the BHNIP proposal to dispose of the contaminated materials at this site. Specifically, contaminated materials must be capped or covered with suitable dredged materials and, before that can be S1-2

approved, a pilot project must be undertaken to demonstrate the feasibility of the capping technique at the MBDS.

The comments indicate that this alternative is widely disfavored, and many have suggested that it be dropped altogether. Although I am not making that recommendation at this point, because of the potential utility of a pilot study in addressing some of the more difficult, generic, and unanswered questions about dredged material disposal, this alternative does not appear to be promising.

If Massport and the USACOE pursue a pilot or demonstration study of capping at the MBDS, a proposed scope for that effort must be prepared and circulated for comment to those who participated in the Working Group and also to the commenters listed at the close of this Certificate. S1-28

Boston Lightship

Capping has been proposed at the Lightship, as well as the MBDS. However, the feasibility of capping at the Boston Lightship site, with depths of about 50 meters appears to be questionable and needs to be demonstrated, if this alternative is pursued. There is evidence that the rate of sediment transport may be significant during severe storm events, with a 1-5 year frequency, in the vicinity of the Boston Lightship site.[7] This raises questions about the long term effectiveness of capping due to erosion impacts. S1-29

If this alternative is pursued, the FEIR must, at a minimum, provide documentation and data from comparable capping projects to support the proposed plan (see also the MCZM comment) and expand on the analysis in the referenced study to provide more information about the effects and feasibility of capping at the Lightship site. The FEIR should also consider whether there are ways to design the project so as to ensure that the contaminated sediments would be isolated. Mitigation measures, contingencies, and monitoring could also be considered to demonstrate long term stability of the capped dredged material. An assessment of potential impacts should be provided, assuming (1) that the project succeeds as proposed and, (2) conversely, that the

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7 Chimin Chian, Open-Water Disposal and Capping of Contaminated Dredged Material at the Boston Lightship Site (n.p.:n.p.,n.d.)

project is not successful, i.e. contaminants are not isolated at the disposal site. What contingencies can be incorporated in the project design for scenario (2)?

While the Boston Lightship site may hold some promise because of the potential to use the dredged materials as a cover over contaminated areas where hazardous materials or radioactive wastes were disposed decades ago, this opportunity is off-set by concerns about impacts to the marine environment; these concerns will need to be dealt with in the FEIR. Specifically, the area supports commercially important fisheries resources, which would be adversely impacted by the selection of this disposal alternative. If this alternative is pursued, a thorough analysis of potential impacts to these resources will be required. Comments from MCZM and others can be of assistance in providing scoping guidance. In addition, a detailed scope of work must be developed by the proponents in consultation with the WG and EOEA agencies. Such a scope should include a bathymetric survey of the existing waste materials, in order to optimize the environmental benefits of capping waste materials at the proposed site. It will also be necessary to pinpoint a specific location where it will be possible to minimize harm to marine resources. The comment from the Division of Marine Fisheries indicates that comprehensive benthic and contaminant studies should also be done.

S1-3

In-Channel, Trench and Cover

The option to dispose of contaminated materials within channels that have been overdredged and then backfilled and capped with uncontaminated parent materials has been well received, in concept. However, the logistics and technical feasibility of accomplishing this alternative are quite complex, and there appears to be significant opportunity for damage to the environment.

The multiple steps, which include dredging of contaminated and parent materials, stockpiling of those sediments in order to sequentially dispose of the contaminated silts to ensure isolation of these sediments will require exacting precision in the dredging operations and careful timing to avoid environmental impacts. Realistically, the analysis of this alternative should probably factor in a certain degree of environmental damage in acknowledgement that this alternative will be difficult to accomplish without impacts. Is there a point at which the

S1-3

potential impacts of this alternative would be unacceptable? How will potential impacts be mitigated?

Impacts of barge traffic on existing boat traffic in the harbor also need to be considered. Opportunities to manage the project so as to minimize navigation conflicts should be explored. S1-32

If this alternative is pursued, a more detailed scope of work, including a more in-depth assessment of impacts will need to be developed. The WG would be a reasonable forum for addressing the scope issues. State agencies will assist by providing guidance as well. S1-33

Spectacle Island CAD

This disposal alternative is a shallow subtidal borrow pit. Based on the comments from EOEA agencies, this alternative should not be carried forward. Due to the shallow depths of the site, storm-wave impacts to harbor resources is a significant concern. There is also a potential for impacts to the seawall and dike being constructed as part of the Central Artery landfill closure project at Spectacle Island. The artificial reef project could also be impacted by this disposal alternative. S1-34

Meisburger Sites #2 and #7

Two areas off Deer Island have been proposed as borrow pit disposal sites. This alternative would require dredging at the site to create the borrow pit, reuse or disposal of the silts, sand and gravel from the site, disposal of contaminated materials in the pit, and covering of those materials with uncontaminated parent material. Based on the preliminary information, this alternative is considered promising. A borrow pit appears to offer an effective way of isolating contaminated sediments. Moreover, the sites are shallow enough to allow controlled placement of the materials, but deep enough to reduce erosional effects. This option would provide sand and gravel materials that could be used to renourish beaches, and ultimately the site would be restored to pre-existing conditions.

However, the Division of Marine Fisheries has serious concerns about the acceptability of these alternatives because of likely impacts on fisheries. That agency is concerned that these

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alternatives have been carried forward because of the lack of fisheries sampling data in the area. Therefore, impacts on marine resources must be evaluated in the FEIR, including the effects on ground fish and commercial lobstering. More detailed information will be required if this alternative is pursued, as explained in the Division of Marine Fisheries comment. What mitigation options are available to minimize damage to fisheries resources? S1-3

The comment from the MCZM also lays out the issues that will need to be addressed more fully in the FEIR, if this alternative is selected. Existing information on borrow pits, additional site data, and borrow pit design criteria should be developed to better assess the feasibility of this alternative. Environmental impacts should be assessed. Furthermore, the scoping guidance given above for analyzing impacts to resource areas at the Boston Lightship site should also be used for the borrow pit sites. The FEIR must also consider the potential effects on the MWRA ocean outfall system and the monitoring program for that system. S1-3

Potentially Practicable Alternatives
(for future maintenance dredging)

As explained earlier in this Certificate, the screening criteria need to be reconsidered. As a result, certain alternatives may have to be reclassified from potentially practicable to practicable. The FEIR should address this issue fully. S1-3

Landfills

It is the opinion of the DEP that the landfill alternative scenario which involves use of dredged material for grading, daily cover, and/or capping (in accordance with approved closure plans) should be carried forward. As indicated in the DEP comment, "Contaminated sediments going for ocean disposal are not necessarily "contaminated" when put on the land" under current DEP guidelines. S1-3

The DEIR also acknowledges that the benefits of using marine sediments at landfills are relatively high. However, it also indicates that the dredged material would only be suitable as daily cover if mixed with clean materials (p. 3-7). Based on the DEP comment, the FEIR should reconsider whether, and under what S1-3

conditions, the dredged materials would be acceptable for specific uses.[8] The requirements for daily cover material were only provided for the Fitchburg/Westminster and Plainville/Laidlaw landfills.[9] Are there other landfills that could accept this material?

The GCR landfill site was screened out. Given that recent Notice of Project Change filings with MEPA indicate that there are plans to extend the life of the landfill, this alternative may be worth reconsidering. More information is needed on the Wrentham site, as well. S1-40

Dewatering options and dewatering sites must be studied in greater detail in the FEIR. Details on a dewatering facility at Mystic Pier or the North Jetty should be provided. An assessment of dewatering technologies should focus on demonstrating that the material will be acceptable for reuse in landfills. The impacts of increased truck traffic in the traffic corridor serving the dewater site should be analyzed also. In addition, the FEIR should address how the applicable water quality standards (314 CMR 3.00) will be met. S1-41

Lastly, if monofills or landfill cover alternatives are to be pursued further, more site specific information will be required and a scope of work will need to be developed. The NG and EOEA agencies should be included in that scoping process. S1-42

Bulkheading and Filling of Shoreline Sites

The alternative of filling and bulkheading to create new (fast) land may be promising. Although yet to be confirmed in a revised screening, it appears that if the total fill alternative was considered for the Little Mystic and Reserved Channel, these disposal alternatives would have sufficient capacity to accommodate significant volumes of dredged material and the costs associated with these sites could potentially be offset. These alternatives should, therefore, be reconsidered and compared with others in the FEIR. S1-43

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[8] The DEP comment indicates that there is uncertainty whether sediments with PCB levels greater than 2 ppm would be approved for daily cover.

[9] The estimate for the Plainville/Laidlaw landfill should be 500 c.y./day according to the DEP comment.

The DEP regulatory requirements for construction and use of this type of site are being reconsidered and will probably be changed in the Comprehensive Dredging Regulations that are being developed by DEP. Until that time, however, as the DEP comment points out, off-site disposal of dredged materials not at a 21E site or an existing solid waste landfill would be regulated under Beneficial Use Determination procedures and the Division of Solid Waste Management siting and plan approval process. With respect to the latter, siting requirements are quite rigorous. S1-4

The potential impacts of disposal of contaminated materials nearshore must be addressed. In addition, neighborhood impacts, including odor, noise, and traffic, must also be assessed. In areas outside DPAs, consideration should be given to land use opportunities for created land that would improve the quality of life in affected neighborhoods. The environmental equity issue must be addressed, where applicable. S1-4

An analysis of the potential impacts to fisheries, including anadromous fish runs in the Mystic River, and benthic environment due to changes in the tidal prism, flushing and water quality should also be provided in the FEIR. Further, as noted in the DEIR, inshore alternatives such as this will require mitigation to minimize the turbidity plume. An analysis of the plume before and after mitigation should be supplied in the next report. S1-4

If this alternative is selected, more detailed study will be required as indicated in the comments. Again, a scope for that study must be developed with agency guidance. S1-4

Two alternatives were not identified in the DEIR under the category of nearshore filling and bulkheading. They are: Fort Point Channel, the upper reach, which may become a more attractive alternative as a result of potential changes to the Third Harbor Tunnel project in this area; and Conley Terminal, in areas where work may be proposed under the pier decking. These two alternatives appear to warrant further consideration and analysis of impacts for the disposal of contaminated dredged materials. S1-4

Innovative Treatment Technologies

While significant questions need to be answered, innovative technologies hold promise, especially for highly contaminated sediments, for stabilization of contaminants, and for volume

reduction of dredged materials. Thus, potentially practicable treatment technologies should be pursued further in the FEIR and the following recommendation from the MCZM should be advanced, "The FEIR should identify a practicable remedial technology that can be implemented as at least a demonstration project. The USACOE and Massport should work closely with Commonwealth agencies to identify a funding mechanism to support this element of the BHNIP." S1-48

Disposal Option Alternatives

In developing the disposal options, volume, sediment quality, environmental impact, and practicability were considered. Many of the disposal options described (p. 3-11 through 3-17) included more than one disposal site alternative. However, as it turned out, when the disposal options were screened further, based on capacity, environmental benefits, and cost, only one disposal option with multiple disposal sites was deemed to be a "practicable alternative".

There is considerable support among the EOEA agencies for reuse of the materials in landfills, new land creation, and innovative technologies. These additional disposal option alternatives must be reconsidered in the FEIR to determine whether they meet the criteria established for "practicable alternatives." Specifically, the information provided in the DEP comment about potential landfill capacity and additional reuse opportunities should be used in the reconsideration of Option A1. The shoreline containment areas in Option B1, and possibly Option B5, should also be reconsidered because evidence has been provided that there may be sufficient capacity at the shoreline sites for disposal of significant volumes of dredged material. With respect to the Land-Based Aquatic Combinations under option category 'C', it is unclear whether a combination of landfills and aquatic shoreline sites would now meet the criteria established for "practicable sites." While I am not advocating the inclusion of many additional sites, I believe that various combinations of disposal alternatives may offer flexibility and new disposal option combinations may present themselves, which achieve the necessary cost benefit requirements while satisfying environmental protection standards. For this reason, it may ultimately be wiser to carry forward an alternative(s) in this category into at least the final screening step. The FEIR should address this issue. S1-49

Preferred Disposal Option

If the preferred disposal option selected has not been ranked as having the "least environmental impacts" from among the final list of "practicable alternatives", then the FEIR must carry forward, for comparative analysis purposes, both the preferred and the "least environmental impact alternative." To the extent possible, the FEIR must also show that the impacts of the preferred option will not be greater than the impacts of the "least environmental impact alternative," taking into account mitigation measures and any potential environmental benefits of the chosen plan. S1-5

It may also be prudent to carry forward a back up alternative disposal option plan. To a great extent, the decision to do so would be based on the significance of the outstanding issues following further assessment of the disposal option alternatives.

For the disposal option plan selected, a Draft Section 61 Finding should be provided to show that the impacts of the chosen alternative(s) will be addressed in the project design, in dredge management, or through mitigation, and damage to the environment will be minimized to the greatest extent feasible. S1-5

Dredging Management and Monitoring Plan

The DEIR indicates (ES-5) that procedures will be developed in greater detail for the preferred disposal alternative once the type and location of the preferred site(s) is identified. The Plan must demonstrate that impacts to the environment from the dredging project will be avoided and minimized. The comment from the MCZM should provide guidance for addressing this issue. That comment also considers the requirements of a monitoring plan that should be included in the FEIR. S1-5

Dredging Impacts on Water Quality

The following issues should be considered in the FEIR in order to demonstrate that the project design, and dredge management techniques will be utilized to minimize water quality impacts: S1-5

o The rigorous turbidity controls identified for the Meisburger borrow pit sites should be explained in greater detail.

o Consideration should be given to a clamshell dredge bucket (Cable Arm 100E) that has been shown to control turbidity during dredging effectively.

Dredging Impacts on Marine Environment

The FEIR should examine the timing of the dredge more closely with respect to sensitive fish reproductive and juvenile growth periods. Is dredging of the Mystic Channel the only area that will be subject to restricted time periods? What problems cause scheduling delays, and what is the likelihood that these delays could cause the dredge operations to be pushed into the restriction period? Are there contingencies available? S1-54

To minimize the blasting impacts on fisheries resources, consideration should be given to the "startle system" which has been used successfully in Boston Harbor. S1-55

Dewatering and Handling Issues

The following issues need to be addressed as part of the dredging management plan:

o The potential odor problems during excavation, dewatering, handling/transporting, and disposal; and S1-56

o The opportunity to reduce the volume of material for reuse/disposal by means of mechanical dewatering techniques; if the volumes can be reduced as indicated in the DEP comment, it is possible that some disposal alternatives could become more viable or attractive. S1-57

<u>Cost</u>

The cost data for the disposal option alternatives should be expanded in the FEIR to include environmental costs. Consideration should be given to, at least, the cost associated S1-58

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with a loss or temporary loss of resource areas, mitigation costs, and monitoring costs. The environmental costs associated with the preferred disposal option plan(s), any back-up plan, and the "least environmental impact alternative" should be compared in the FEIR.

Supplemental Comments

The following is item-by-item commentary.

Figure 2-2. The text (2-3) states that the southern channel limit would be relocated inward by 32 feet from the confluence along Conley Terminal. However, the figure seems to show this area as part of the dredge. This figure could be clearer. S1-59

page 2-10. The Tier II, Federal Channel Sediment Testing Program results found total Hepta-cholorodibenzo dioxins and total Octa-chlorodibenzo dioxins above detection limits. Although dioxins are known carcinogens, the only conclusion drawn was that these compounds are not considered "as toxic" as other dioxin compounds. Relative toxicity without background data on the range of toxic effects is meaningless. This concern should be addressed in the FEIR. S1-60

page 2-11. There appears to be some discrepancy between the number of berthing sites that were tested (15) and the number of berthing sites identified as part of the proposed dredging project (18). If the plan is to dredge 18 berths, why wasn't sampling and testing done at all of the berthing sites? S1-61

Table 2-4. The table should include a legend to explain that the superscripts 2 and 3, which are given with bulk sediment data, refer to Category II and III sediments. S1-62

Table 2-6. Likewise, the prefix 'J' to the PAH data should have been in the legend for lay persons reviewing the document. S1-63

page 3-12. How is the "cost for mobilization" defined? S1-64

page 4-9. There appears to be an error because silt or clay fractions are measured at less than .06 mm and so are sand particles.

June 30, 1994
DATE

Trudy Coxe, Secretary

Comments received:

5/17/94	International Longshoremen's Association
5/12/94	North Shore Recycled Fibers
5/16/94	Rexham
5/17/94	City of Everett, Office of the Mayor
5/18/94	Cape Cod Commission
5/17/94	Frank Mirarchi
5/19/94	Containership Agency, Inc.
5/19/94	I.T.O. Corporation of New England
5/23/94	Boston Water and Sewer Commission
5/26/94	Jeffrey Hopkins
5/19/94	Dr. Paul F. Murray
5/26/94	Decorative Specialties International Inc.
6/1/94	Marine Fisheries Commission
6/13/94	C. H. Powell Company
6/13/94	Boston Harbor Docking Pilots
6/14/94	Boston Towing and Transportation Company
6/14/94	Maersk Inc
6/15/94	Nedlloyd Lines
6/15/94	P&O Containers
6/15/94	Bev Carney
6/16/94	Patterson, Wylde & Co., Inc.
6/17/94	Sea-Land
6/17/94	Town of Swampscott, Conservation Commission
6/17/94	Nahant SWIM, Inc.
6/20/94	Town of Nahant, Board of Selectmen
6/20/94	LADS System, Inc.
6/20/94	Boston Redevelopment Authority
6/20/94	Massachusetts Highway Department, CA/T
6/21/94	GreenWorld Inc.
6/21/94	Massachusetts Bays Program
6/21/94	S.T.O.P.
6/21/94	Massachusetts Sierra Club
6/21/94	Center for Marine Conservation
6/21/94	Coastal Advocacy Network
6/21/94	CLF
6/21/94	Save the Harbor/Save the Bay
6/21/94	COASTAL ZONE MANAGEMENT

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Late Comments:

6/20/94 John T. Clark and Son
6/11/94 Cetacean Research Unit

P:bosdredg.dei
TC/NB/nb

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S1-1

The BHNIP DEIR/S team appreciates the EOEA commendation for the Working Group process utilized for this project.

S1-2

The criteria used to identify practicable alternatives were reexamined for the FEIR/S.

S1-3

The comparison of environmental impacts of the potential disposal sites was separated, in the alternatives analysis (Section 4.0), from the practicability analysis to emphasize more clearly the logic behind the site selection process. Additional data on environmental conditions at these sites was collected and incorporated into the analysis.

S1-4

The preferred alternative is the same as the least impact alternative and is fully described in the FEIR/S.

S1-5

A detailed Dredge Management and Monitoring Plan, specific to the preferred alternative, is presented in Section 5.0 of the FEIR/S.

S1-6

The comparison of environmental impacts associated with the use of each of the potential disposal sites has been expanded in the FEIR/S and provides sufficient grounds for making the determination of the least environmentally damaging alternative.

S1-7

The screening criteria used to develop the shortlist of sites in the DEIR/S were reconsidered and found to be appropriate for this purpose. The analysis of the shortlisted sites was altered by separating consideration of environmental impacts and practicability factors. The least environmentally damaging alternatives were identified before practicability criteria were applied.

S1-8

The alternatives analysis, Section 4 of the FEIR/S, provides sufficient detail to follow the logic of and reach the same conclusion as the site selection process.

S1-9

The restructuring of the alternatives analysis provides more detail on the environmental impacts of each of the disposal alternatives.

S1-10

No alternatives for reuse of contaminated sediments have been found to be environmentally acceptable.

S1-11

A detailed Dredge Management and Monitoring Plan is presented in Section 5 of the FEIR/S.

S1-12

The BHNIP consulted extensively with the federal and state resource and regulatory agencies during the development of the FEIR/S. The team believes that this process was successful in clarifying questions that the agencies had regarding the project and enabled us to develop a document that provides sufficient information for the selection of the preferred alternative. We believe that it will not be necessary to conduct additional environmental regulatory review after the FEIR/S.

S1-13

Alternative project designs are discussed in the FEIR/S.

S1-14

The FEIR/S has assumed that all silts to be dredged during the BHNIP are unsuitable for open ocean disposal. The schedule for completion of the FEIR/S has resulted in an approximately one-year delay in projected startup. As a result, we anticipate that natural sedimentation patterns will accumulate additional material (contaminated) in the channels. This additional volume has been accounted for in the

designed disposal site capacity. It is not expected that this additional volume would have a detectable effect on the environmental impacts of dredging or disposal.

S1-15

The volume of material that could be maintenance dredged from the berthing areas over the 50 years following the BHNIP can be estimated by the historic maintenance dredging frequency for Boston Harbor. The volume of maintenance dredging estimated to be required from the berth areas during the next 50 years is approximately 1.2 m cy.

S1-16

The volume of sediments (combined parent and maintenance material) expected to be dredged from the 18 berth areas was calculated based on existing hydrographic surveys available during the DEIS development period. These estimates assumed the silt material would be entirely removed along with an overdredge of 0.5 feet into the underlying parent material. Therefore, the silt portion may have been a slight overestimation at the time this data was calculated. However, due to continuing siltation in the dredge areas until the time when actual dredging occurs, there will be some additional material; the resultant quantities should be fairly close to the estimates provided in the DEIR.

An additional factor the DEIR does not account for is the reduced dredge volumes of berth areas that may be dredged before the BHNIP. For example, the recent Moran terminal dredging (approximately 10,000 cubic yards) and possible dredging at Eastern Minerals and Gulf Oil would reduce the total estimated silt volume for the BHNIP slightly.

The volume of parent material to be dredged from the berth areas will not change over time and is felt to be an accurate estimate.

The amount of silty material to be dredged from the project includes the berth areas. Berths to be dredged are described in Section 2.2.3 and summarized in Table 2-7. The volumes shown in the DEIR/S for the Federal channel were based on 1983 surveys. These volumes accounted for the changes in channel layout at the Inner Confluence. This includes the extra dredging at the south end of the Inner Confluence and the deletion of dredging near the McArdle Bridge on the East Boston side; shortening of the Mystic Channel by Boston Edison and easing the transition into the narrower channel by Exxon, and reducing the size of the area being dredged in front of the Army Pier and increasing the size of the notch across the Reserved Channel mouth.

S1-17

The 0.5 foot over dredge should not be confused with the standard practice of overdepth dredging. The meaning of the 0.5 foot was to allow a volume of parent material that may inadvertently be included in the bucket as the silt is being removed. This parent material will be mixed in with the silt and deposited with the silt. Silt disposal alternatives must allow capacity for this extra material. The traditional allowable overdepth of two feet in parent material and three feet in rock are included in the proposed project quantities.

S1-18

Section 4.0 of the final EIR/S discusses the disposal option for maintenance dredging only.

S1-19

All of the silty material has been considered unacceptable for unconfined open water disposal. Disposal of the silty material would only occur if it can be isolated from more pristine areas.

S1-20

The alternatives analysis in the FEIR/S has been restructured to evaluate the shortlisted sites on the basis of environmental impacts to select the least environmentally damaging alternatives. After this process, practicability criteria were applied to the sites. All sites were evaluated not only for their suitability for disposal of BHNIP sediments, but also for unidentified future projects. While capacity has an effect on the suitability of sites for the BHNIP, it may be less of a factor for other projects. Therefore, the use of this criterion was modified for the analysis in the FEIR/S.

The suitability of the shoreline sites, as well as all other shortlisted sites, was reconsidered. While each of the shoreline sites evaluated lies within or directly adjacent to the State's Designated Port Areas, federal agencies do not agree that this designation enables them to make an exemption to the "no net loss" agreement established relative to the 404(b)(1) guidelines. The alternatives analysis rated permanent losses of aquatic habitat as more severe than temporary losses. Coupled with other, indirect, impacts, the fill-to-fastland scenarios were found not to be among the least environmentally damaging alternatives. In addition to the environmental effects, the costs of this scenario would be higher than many other alternatives, and the period of time required to realize productive real estate value of the newly created land would be lengthy.

S1-21

Section 4.0 evaluates the potential disposal sites based on numerous environmental and practicability criteria. Cost was one criterion, but it was not used alone to determine the preferred alternative.

S1-22

As indicated in previous responses, the disposal site alternatives analysis has been restructured in the FEIR/S (Section 4).

S1-23

In accordance with this comment, the disposal site alternatives analysis has been restructured to provide a clear separation between environmental and practicability criteria.

S1-24

The referenced issues are covered in Attachment 1 and Section 4 (Disposal Site Alternatives Analysis) in the FEIR/S.

S1-25

The in-channel disposal alternative has been redesigned, based on information on subbottom conditions, so that it can accommodate the entire volume of silt proposed for dredging from the BHNIP.

S1-26

The in-channel disposal site will use a sand cap. This will eliminate concerns expressed by agencies over the use of a clay cap on silty material.

S1-27

Disposal of future maintenance material with capping at MBDS will be considered. Discussion is underway to determine if clean silty material from another project would be suitable for a demonstration project. Appropriate agencies would be contacted for comment prior to demonstration.

S1-28

A demonstration project would not necessarily be tied to this project. All appropriate agencies would be contacted for comment on the proposed demonstration project.

S1-29

This alternative has been dropped as a preferred alternative based on review of environmental and practicability criteria.

S1-30

Additional biological investigations were conducted at the Boston Lightship site during the fall of 1994. The project did not do additional work locating and quantifying existing waste material at the site because the EPA is in the process of doing that. This information was used to reanalyze the suitability of this site for disposal of dredged materials.

S1-31

Reevaluation of the potential aquatic disposal sites indicates that the in-channel disposal option would be among the least environmentally damaging alternatives. The description of this alternative has been clarified in the FEIR/S. MEPA's expressed concern regarding stockpiling of sediments during this process appears to be a misunderstanding. Careful coordination of the construction will be required, but it is readily possible to minimize the duration of stockpiling. In particular, stockpiling would not occur landside, but would be restricted to barge storage. The FEIR/S describes the impacts associated with this disposal option.

The reader should refer to the Dredged Material Management Plan for a detailed analysis of the operational procedures for in-channel disposal. All dredging and disposal activities will have some impact to the environment. However impacts to the environment will be temporary and cease when construction is completed. Disposal impacts for the in-channel alternative would be minimized as the dredged material would be returned to the environment it was taken from. No significant biological resources are expected to be impacted with this alternative. An environmental window has been established to minimize impacts to anadromous finfish in the Mystic River. Mitigation may be required if water quality impacts are anticipated. The Dredged Material Management Plan discusses potential operational mitigation techniques.

S1-32

Dredge production rates are expected to generate two barges per day per dredge transiting the harbor channels. The tug captains will be in radio contact with the larger vessels entering or leaving the harbor and little impact is expected from the movement of barges.

S1-33

Additional biological investigations were conducted at the in-channel locations during the fall of 1994. This information was used in the reevaluation of disposal site alternatives.

S1-34

The issues raised in this comment on the Spectacle Island CAD site have been thoroughly addressed in the FEIR/S.

S1-35

Additional biological investigations were conducted at the Meisburger sites during the fall of 1994. Results were used in the reevaluation of the disposal site alternatives analysis. These sites were determined not to be among the least environmentally damaging alternatives. The project considers the avoidance of impact to Massachusetts' fishing industry to be a high priority.

S1-36

The issues raised in this comment have been addressed in the FEIR/S (Section 4 and Attachment 1).

S1-37

The disposal site alternatives analysis (Section 4) has been restructured to separate the evaluation of environmental impacts from practicability issues.

S1-38

The chemical and physical characteristics of the dredged material samples have been compared to the DEP requirements for soil reuse at lined landfills (Bureau of Waste Prevention Interim Policy #BWP-94-037 - *Reuse and Disposal of Contaminated*

Soils at Landfills) and for capping materials (310CMR 19.000 *Solid Waste Management Regulations and Landfill Technical Guidance Manual*). While silt samples from some of the dredge sites may meet the chemical criteria for reuse at landfills, other samples exceed the allowable limits for PCBs, Arsenic, and/or TPH and dewatering sediments to meet the standard of no free draining liquid is currently impracticable. Landfills have been dropped from consideration for disposal or reuse of silt material in the Alternatives analysis (Section 4.0). Clay is better suited to beneficial uses as landfill capping material, and this option is discussed in the FEIS. Several planned demonstration projects may provide a wider variety of disposal options for future maintenance dredging. These are discussed in the FEIS.

S1-39

See response to comment S1-38.

S1-40

The reuse or disposal of dredged silt from the BHNIP at landfills for daily cover, contouring material, or disposal has been eliminated from consideration due primarily to the impracticability of dewatering the quantities of material expected to be generated. Dewatering issues along with current site permitting requirements have led to the elimination of other upland sites, including Wrentham-495 from further consideration as practicable alternatives for the BHNIP.

S1-41

The dewatering of the dredged materials would only be required if upland disposal or if the treatment of the dredged materials is required prior to it's disposal. The dewatering would be performed on land depending upon the volume of dredged material produced daily and the availability of land and/or barges. Section 4.0 and Appendix I discuss proposed dewatering operations.

S1-42

See response to comment S1-40.

S1-43

The alternative of filling shoreline sites to fastland has been reconsidered in the FEIR/S (Section 4). Under the Clean Water Act 404 (b)(1) guidelines, impacts must be avoided first, then minimized. As there are other available alternatives, creating

fast land has been determined not to be among the least environmentally damaging alternatives.

S1-44

Thank you for your guidance on regulatory procedures for evaluating the shoreline sites.

S1-45

Section 4.0 and Attachment 1 of the EIR/S addresses these impacts. Dewatering would occur in areas closest to the harbor. Port areas would be considered first.

S1-46

The issues raised in this comment have been addressed in Section 4 and Attachment 1 of the FEIR/S. Biological resources of the shoreline sites were investigated in fall 1994, in response to this and similar comments. An environmental window has been established to minimize impacts to anadromous finfish in the Mystic River.

S1-47

Thank you for suggesting additional potential disposal sites. Fort Point Channel was evaluated and eliminated during the preparation of the DEIR/S, partially because of its inaccessibility for barges. Despite changes in the Central Artery project, this area continues to be inaccessible. In addition, there are concerns about the effect this disposal would have on the structural integrity of the area. The area on Conley Terminal was found to be unsuitable for the proposed operation.

S1-48

In response to several of the comments on the DEIR, MASSPORT and the Army Corps of Engineers developed a survey questionnaire to send to treatment technology and disposal companies which could be contracted to handle, treat and or dispose of the contaminated dredged materials (Appendix D). The survey utilized a format originally developed by the USEPA and the Army Corps of Engineers as part of the Assessment and Remediation of Contaminated Sediments (ARCS) Program (Averitt 1990). The survey included questions on the effectiveness, implementability and the cost of the technology for the treatment or disposal of contaminated dredged materials.

Thirteen completed questionnaires were received in response to the 37 sent. Results of this survey are detailed in Appendix D and summarized in Section 3. In the future Massport and the Corps will, where feasible, implement new technology that is practicable for dredged material. There is no new technology that can be applied to the BHNIP that is practicable.

S1-49

Landfills, new land creation and innovative technologies were re-evaluated in the FEIR/S (Sections 3.0 and 4.0).

S1-50

The least environmental damaging alternative is the preferred alternative.

S1-51

A Draft Section 61 Finding addressing the issues raised in this comment is included with the FEIR/S.

S1-52

Refer to Section 5.0 of the final EIR/S for the Dredged Material Management Plan.

S1-53

The Dredged Material Management Plan in Section 5.0 of the final EIR/S describes the turbidity controls during dredging and disposal. The Cable Arm is a brand name. Corps contracting procedures make it difficult to specify a brand name product when other options are available. We can, however, specify certain performance standards to be met by any equipment used in the dredging of silty material.

S1-54

No other significant resources in the harbor warrant timing considerations. No delays which would cause the dredging to occur during the environmental restriction is anticipated. If this were to occur, then coordination with the appropriate agencies would occur.

A scenario for dredge sequencing has been prepared to demonstrate the complexity of scheduling demands such as environmental restrictions will have on the proposed project. Both the Mystic River and the Inner Confluence are anticipated to be associated with dredging restrictions. The likelihood of delays causing dredge operations to be pushed into the restricted period is open to chance. However, since dredging will be taking place for about 18 months it is more likely the dredge will be relocated to the Chelsea or Reserved Channel if more than about a week of extension was required. A possible contingency for work required during the time restriction would be to confine work limits to only one side of the Mystic River or Inner Confluence.

S1-55

There are several systems available that could be used to reduce fisheries impacts. This issue is discussed in the Dredging Management Plan (Section 5.0).

S1-56

Impacts from odor are discussed in Section 5.0 and Attachment 1 of the final EIR/S. Dewatering is not required for the preferred plan. Temporary barge storage will be of a short duration (5 days) and will occur infrequently.

S1-57

Mechanical dewatering of the dredged sediments has been considered for at least a portion of the material. Volume reduction and dewatering is effective when the material can be disposed at upland facilities or has a commercial or beneficial upland use. Upland disposal has not been identified as the preferred and least environmentally damaging alternative. As a result, mechanical dewatering and subsequent upland disposal has been considered as a contingency for sediments which could not be placed at the in-water sites.

S1-58

The preferred alternative, in-channel, would have minimal damage to the environment.

S1-59

The proposed dredging project is described in Section 2 of the FEIR/S.

S1-60

TCDD, the most toxic congener, was not detected in any of the Boston Harbor sediment samples analyzed for this project. The congeners that were foundin detectable concentrations are not considered to occur at levels of concern to the marine environment.

S1-61

Three berth areas were not included in the sediment testing program along with the 15 berths described in the DEIR. Those three locations are figured into the benefit/cost analyses since it has been determined that those facilities could benefit from the Federal channel deepening if it occurs. However, the three areas either don't require dredging at this time or the facility operators did not wish to be part of the BHNIP program. Therefore it was not deemed necessary or feasible to characterize those locations.

S1-62

The superscripts 2 and 3 indicate that the concentration of the indicated parameter was in category II or III under the Massachusetts classification of sediments for open-water disposal.

S1-63

The prefix "J" means that the compound was present in trace amounts. The concentration listed is an estimated value.

S1-64

Cost for mobilization includes getting the necessary equipment and materials to the disposal site and finalizing site preparation plans.

MASSACHUSETTS WATER RESOURCES AUTHORITY
Charlestown Navy Yard
100 First Avenue
Boston, Massachusetts 02129

Telephone [illegible]
Facsimile [illegible]

S2

June 21, 1994

Colonel Brink P. Miller
Division Engineer
Department of the Army
New England Division, Corps of Engineers
424 Trapelo Road
Waltham, Massachusetts 02254-9149

Re: Boston Harbor Navigation Improvement Project
Draft Environmental Impact Report/Statement

Dear Colonel Miller,

The Massachusetts Water Resources Authority (MWRA) has reviewed the above referenced draft document, and offers the following comments. Comments are presented by location, and pertain to both the dredging and disposal aspects of the project.

Chelsea River

Please note that the MWRA Waterworks Division maintains the following pipelines in the Chelsea River, between the McArdle Bridge and the Chelsea Street Bridge:

Facility	Grade	Location
Section 8, LSPL, 42" pipe in tunnel	Top of Tunnel 39' below MLW	About 800' east of McArdle Bridge
Section 38, LSPL, 36" pipe in tunnel	Top of Tunnel 35' below MLW	About 100' west of Chelsea Street Bridge
Section 38, LSPL, 36" pipe encased in concrete	Top of concrete encasement, 43' below MLW	About 200 feet west of Chelsea Street Bridge

S2-1

Massport and/or the ACOE must submit to the MWRA any dredging plans for work which may impact these structures. Plans should be submitted to James Gillis, MWRA Waterworks Division.

In addition, note that any work within MWRA easements requires a Section 8M Permit. Inquiries regarding permitting requirements may be made to Owen McGarrahan, MWRA Waterworks

S2-2

Division, at (617) 242-6000, ext. 4626.

Chelsea Creek

The MWRA maintains a number of sewer siphons in a relatively small area of Chelsea Creek. Two 60-inch siphons connect the I.N. Caruso Pump Station with the Chelsea Screen House and the Chelsea Headworks. The siphons are located 60 feet below the low water mark (MDC datum 38.47). One siphon carries dry weather flow from the Revere Extension and Chelsea Branch Sewer; the other carries storm overflow from the Headworks to the Caruso Station.

S2-

The Caruso Station has no gates to shut down the siphons, which enter directly into the station's wet well. Therefore, if for any reason a siphon breaks, there is no way to stop sea water from entering the station.

Meisburger 2 & Meisburger 7

As the *DEIR/S* states, Meisburger 2 is located at 42° 23.7′ N, 70° 50.2′ W., and Meisburger 7 is located at 42° 20.7′ N, 70° 47.7′ W. The coordinates for the diffuser area for the MWRA's Deer Island Outfall are as follows:

R2 Diffuser: 42° 23.3′ N, 70° 46.8′ W

R55 diffuser: 42° 23.1′ N, 70° 48.2′ W

S2-

The Meisburger 2 site is therefore located approximately 1.2 miles west of the diffuser area, and the Meisburger 7 site 1.2 miles to the south.

Because of this proximity to the outfall diffuser area, the Authority is concerned that the use of these sites will impact the MWRA's monitoring program near the outfall. The sites are within the nearfield depositional zone of the outfall, and it will be very difficult to distinguish between outfall impacts and dredge disposal impacts. In addition, the Meisburger sites are reasonably clean, and it does not appear to be good environmental policy to perturb them. The Authority recommends using in-harbor sites for borrow pits so that existing dirty sites could be cleaned up.

Little Mystic Channel and Reserved Channel

In compliance with the court-ordered schedule for Boston Harbor, the Authority is currently developing Combined Sewer Overflow (CSO) Control Alternatives as part of an overall Wastewater System Master Plan. Based on extensive data collection and system characterization in conjunction with development of a detailed system model, the Authority has developed a number of alternatives for CSO Control. A recommended plan for CSO Control will be submitted to the court in draft form in September 1994, and will be finalized by December, 1994.

Two of the potential disposal areas identified in the draft EIR/S (Little Mystic Channel and the Reserved Channel) are the sites of active CSOs. Accordingly, any work proposed within the Little Mystic Channel or the Reserved Channel should be closely coordinated with the Authority's CSO Control planning for those areas. However, since a number of the CSO Control alternatives are being addressed on a very site specific basis, coordination with the MWRA should be maintained regarding any in-channel disposal locations. S2-5

Revere Sugar and Amstar

The Amstar site is adjacent to the Revere Sugar site, which is currently leased by the MWRA for the transportation of workers to Deer Island for the Boston Harbor Project. The Authority is aware of the potential conflict between this use and its possible use as a disposal site, and is in negotiations with Massport to reevaluate the lease termination date. S2-6

Everett Site

Note that the Everett Site is immediately adjacent to the MWRA's New Charlestown Pump Station, which is a contaminated site being investigated under Chapter 21E. In order to ensure that possible disposal activities do not result in a release from the site or in any way impede future remediation, any use of this location must be closely coordinated with MWRA and DEP. S2-7

Subaq E

Although the Subaq E site lies near the path of ferries carrying MWRA construction personnel to Deer Island, it appears S2-8

to be located outside of the channel, and so will not impact ferry traffic.

Thank you for the opportunity to comment on the DEIR/S. If I can be of any assistance in clarifying these comments, please call me at (617) 242-0230, ext. 4335.

Very Truly Yours,

M. Radville

Mark Radville
Project Manager,
Environmental Management

cc: M. Debbie
L. Lataille
N. Kurtz
R. Trubiano
M. Connor
J. Gillis
M. White
M. Connolly
T. Coxe, MEPA
J. Hansen, Massport
S. Lipman, DEP/DWPC

S2-1

The Corps will continue to work closely with MWRA on plans to dredge the channel on Chelsea River. Close coordination should be maintained with the City of Boston, Public Works Department, regarding their replacement of the Chelsea Street Bridge - which may impact the utilities in that area.

S2-2

During preparation of plans and specifications for the project, MWRA will be informed of progress. Permit inquires will be made with the MWRA to keep all parties aware of proposed plans. However, it is understood that if utilities are to be relocated then a Section 8M permit is moot.

S2-3

The two 60-inch sewer siphons appear to be outside of the proposed dredging. Coordination with MWRA should alert specification writers to any potential problems.

S2-4

The potential use of the Meisburger sites for the disposal of dredged materials has been reevaluated in the FEIR/S (Section 4). Compared to other sites being considered for this project, these sites are not among the least environmentally damaging alternatives for the BNHIP. Their use may be reconsidered in the future at which point further coordination with MWRA would be appropriate.

S2-5

In-channel disposal is not being proposed for either the Little Mystic Channel or Reserved Channel. Continued coordination with MWRA regarding in-channel disposal locations will consist of providing the FEIR/S for comment.

S2-6

Because of its limited capacity, costs for partially filling the Amstar site are higher than other, more preferred shoreline sites (e.g. Little Mystic Channel). It is unlikely that the Amstar site will be used for disposal of sediments in the near future.

S2-7

The Everett site was not selected as a preferred alternative for disposal of silts from the BHNIP.

S2-8

The Subaqueous E site is currently used as a local channel. Use of the site would cause the MWRA ferry to deviate to the south from its existing route; bypassing the lower middle shoal and then turning into the western edge of the President Roads Anchorage.

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

William F. Weld
Governor
Trudy Coxe
Secretary, EOEA
Thomas B. Powers
Acting Commissioner

S3

June 21, 1994

Trudy Coxe, Secretary
Massachusetts Executive Office of
Environmental Affairs
100 Cambridge Street
Boston, MA 02202

and

Brink P. Miller
Colonel, Corps of Engineers
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254

Re: Massport/ACOE
Draft EIR/S, EOEA No. 8695
Boston Harbor Navigation
Improvement and Berth
Dredging Project

Dear Ms. Coxe and Mr. Miller:

The Massachusetts Department of Environmental Protection (DEP) has reviewed the Draft Environmental Impact Report/Statement for the Boston Harbor, Massachusetts, Navigation Improvement Project and Berth Dredging Project (EOEA File Number 8695) and this correspondence includes DEP's consolidated comments on the two volume April 1994 document. This correspondence consists of four sections: the first section (1) includes regulatory and policy comments; section (2) includes a listing of major comments; section (3) includes supplemental page-by-page comments; and section (4) includes miscellaneous comments.

Initially, DEP would like to indicate that it fully supports the project goal of deepening and then maintaining the various channels throughout Boston Harbor and also increasing the depth of various berth in the harbor. The ability of the Port of Boston to handle the larger cargo and fuel vessels is critical to the overall economic well being of the entire Metropolitan Boston area and the standard of living of its residents. In this regard DEP, in cooperation with its sister agencies within the Massachusetts Executive Office of Environmental Affairs (EOEA), has embarked on

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a regulatory development process to prepare and issue comprehensive dredging regulations, with specific emphasis on reuse and disposal of contaminated dredged materials. Unfortunately, this process has only recently been actively initiated and DEP does not expect to have final regulations in-place before early/mid 1995. It is DEP's understanding that Massport's proposed schedule for the EIR/S is for the Final EIR/S to be filed with MEPA by the end of 1994, but that actual initiation of dredging activities may not begin until 1996. Assuming this schedule is correct, DEP will not have its new regulations promulgated before submission of the Final EIR/S, but they should be in-place during project permitting and will certainly be in-place prior to actual dredging operations. In this regard, DEP will not be able to definitely indicate during the project EIR/S phase all of the regulatory requirements for dredged materials reuse/disposal but we will provide Massport, ACOE and MEPA with as much guidance as possible regarding the likely path(s) that the regulations will travel. DEP will provide periodic updates to the parties and will be requesting that Massport and ACOE actively participate in the regulatory development process. As indicated earlier, section (1) of this correspondence will deal with regulatory/policy issues and in this section we will attempt to provide information regarding both the existing regulatory framework and possible future procedures.

Section 1, Regulatory and Policy Issues

During the past six months a number of regulatory and policy actions have been taken by DEP which directly affect the reuse/disposal of dredged sediments. On October 1, 1993, the Revised Massachusetts Contingency Plan (MCP) at 310 CMR 40.000 took effect which resulted in major changes to how sites contaminated with Oil and Hazardous Materials (OHM) are assessed and cleaned-up. One major element was the development of Reportable Concentrations (RC) and Cleanup Standards. These regulations are implemented by DEP's Bureau of Waste Site Cleanup (BWSC) and under the current regulations BWSC would be the lead DEP agency for regulating all activities related to contaminated sediments if deemed to be part of a 21E spill/release or at an existing 21E site. In addition, under the existing regulations the placement of contaminated dredged materials on an upland area might result in the upland area being deemed a potential 21E site if relevant RC's or Cleanup Standards are exceeded. This regulatory situation is expected to be rectified in 1994 when DEP issues additional revisions to 310 CMR 40.0000, since it is DEP's intention to include an exemption to the 21E regulations for dredged spoils reuse/disposal which are adequately regulated by another section of DEP. The Comprehensive Dredging Regulations currently being developed would be that alternative regulatory procedure. This would not affect BWSC's regulatory control over dredged spoils taken from or placed onto an existing 21E designated site. Under this situation there would be joint reviews and coordination by both BWSC and DEP's Bureau of Resource Protection (BRP), which will implement the Comprehensive

Dredging Regulations. Appended as Attachment No. 1 is an excerpt from 310 CMR 40.0000 which describes soil categories, and Cleanup Standards.

In addition, on April 21, 1994, DEP issued Interim Remediation Waste Management Policy for Petroleum Contaminated Soils, #WSC-94-400 (Attachment No. 2) which delineates the management practices for reuse, recycling, disposal, storage, and transport of petroleum contaminated soils. At the same time, DEP issued Interim Policy #BWP-94-037 (attachment No. 3) titled Reuse and Disposal of Contaminated Soils at Landfills. This Policy is enforced by DEP's Division of Solid Waste Management (DSWM) which would regulate dredged sediments proposed to be reused or disposed at Massachusetts permitted solid waste landfills. Policy #BWP-94-037 provides guidance on DEP's requirements, standards and approvals for testing, transport and reuse or disposal of contaminated soils or dredged sediments at permitted landfills.

The following activities will require prior approval from the DSWM:

- Reuse at lined landfills of contaminated soils and sediments that exceed the Table 1 (next page) contaminant levels or do not meet the Landfill Operation Requirements, delineated in Section 6.0 of the Policy. S3-1
- Reuse of contaminated soils and sediments at unlined landfills.
- Disposal of contaminated soils and sediments at lined or unlined landfills.

The transportation of contaminated sediments not handled under 21E through the use of a Bill of Lading must be transported via a Material Shipping Record (MSR) signed by a Qualified Environmental Professional, if the materials are going to a DEP-regulated landfill for reuse or disposal.

For use/disposal at landfills, sediments cannot have any "free draining liquid" as determined by EPA Method 9095 (a.k.a. Paint Filter Test). S3-2

The policy also sets up a hierarchy of reuse/disposal alternatives, and in this regard contaminated sediments cannot be disposed of in a DSWM regulated landfill if a "feasible alternative exists that involves reuse, recycle, destruction, and/or detoxification of such soils". It is incumbent upon the project applicant to submit acceptable documentation to DEP.

A Landfill - Minor Modification, BWP SW 22 permit or other approval by DSWM must be obtained prior to landfill reuse of any contaminated soils or sediments which:

BUREAU OF WASTE PREVENTION
POLICY # BWP-94-037

TABLE 1
ALLOWABLE CONTAMINANT LEVELS FOR SOIL REUSE AT LINED LANDFILLS[a]

CONTAMINANT[b]	Reuse Levels (mg/kg)[c]
Total Arsenic	40
Total Cadmium	80
Total Chromium	1,000
Total Lead	2,000
Total Mercury	10
Total Petroleum Hydrocarbons (TPH)	5,000
Total PCBs[d]	< 2
Total PAHs[e]	100
Total VOCs[f]	10
Conductivity[g] (μmhos/cm)	4,000
Listed or Characteristic Hazardous Waste (TCLP[h])	none

NOTES:

a Table 1 is reproduced in policy #WSC-94-400.

b Contaminant concentrations are in mg/kg, dry weight. Other contaminants are as noted.

c Lined landfills have a DEP approved, functioning liner with leachate collection and are operated in compliance with Massachusetts DEP regulations and policies. The criteria apply to reuse of soils at lined landfills as daily cover, intermediate cover, and pre-cap contouring material.

Please note that the methods specified in footnotes d, e, and f indicate the universe of chemicals to be added up in calculating the total concentrations for these classes of contaminants. This Policy does not specify what method should be used to quantify these contaminants. For example, Method 8100 defines the list of chemicals to be considered in calculating total PAHs. However, Methods 8270 or 8250 may be used to quantify PAH levels.

d Total concentrations of polychlorinated biphenyls listed in EPA Method 8080.

e Total concentrations of polynuclear aromatic hydrocarbons listed in EPA Method 8100.

f Total concentration of volatile organic compounds listed in EPA Method 8240 or equivalent.

g For soils or sediments which may be expected to be contain elevated NaCl (e.g. sediments from marine environments or road-salt stockpile affected soils).

h TCLP testing should be performed for metals or organic compounds when the total concentrations in the soil are above the theoretical levels at which the TCLP criteria may be met or exceeded. For guidance parties should consult United States Environmental Protection Agency, Memorandum #36, "Notes on RCRA Methods and QA Activities", pp. 19-21, Gail Hanson, January 12, 1993.

1) fail to meet criteria in Table 1; or

2) fail to meet the requirements in Section 6,0, Landfill Operation Requirements, of Policy BWP-94-037; or

3) contain concentrations of oil or hazardous materials for which no threshold is specified in Table 1.

S3-3

Only uncontaminated soils will be allowed for cover and grading purposes at unlined landfills, unless the landfill owner or operator requests and DEP approves an application for Landfill - Minor Modification, BWP SW22 or other DEP approval is granted. Such an application would need to be submitted to the applicable DEP Regional Office with analytical soils data and landfill site data sufficient for DEP to make a determination.

S3-4

A Special Waste Determination (BWP SW 14 or BWP SW 31) or other approval by DSWM must be obtained prior to disposal of contaminated soils.

S3-5

DEP's Division of Hazardous Materials (DHM) would regulate under c.21C and 310 CMR 30.000 any sediments deemed to be a hazardous waste, unless the sediments are elements of the work being performed by BWSC as part of a 21E regulated action. Sediment could be deemed a hazardous waste by either being a Characteristic Waste (exceeds Toxicity Characteristic Leaching Procedure (TCLP) criteria) or being a Listed Hazardous Waste.

S3-6

The determination that sediments are a Hazardous Waste would substantially complicate removal/disposal and would result in major increases in project costs, since there are currently no hazardous waste disposal facilities in Massachusetts.

Disposal off-the-site of the dredging operations, but not at a 21E site or DSWM landfill is the activity for which there currently is no well defined DEP jurisdiction. Historically, DSWM has processed proposals for reuse of mildly contaminated sediments utilizing its Beneficial Use Determination procedures at 310 CMR 19.060, if the reuse plan conforms to the requirements included in these regulations. In addition, by default, it was assumed that any other proposal would require siting and plan approval under DSWM at 310 CMR 16.000 and 19.000. DEP does not believe that this current practice is the appropriate regulatory solution and as a result the Comprehensive Dredging Regulations will specifically delineate the siting and permit procedures for such disposal.

S3-7

Section 2, Major Comments

(1) The document discussed the possibility of disposal of dredged materials at solid waste landfills. Please be aware that DEP Interim Policy # BWP-94-037 states that before DEP will

consider allowing disposal of soil/sediments, the options of reuse, recycle, destruction, and/or detoxication must have been considered and determined to be infeasible. In the past, large quantities of contaminated dredged spoils have not been disposed of at landfills, with the majority being utilized as grading material or intermediate cover. This is not only due to DEP's requirements that reuse options are preferable, but due to the limited amount of landfill capacity in the Commonwealth and the need to maintain this available capacity for disposal of municipal solid waste and resource recovery ash. DEP's most recent solid waste master plan and related planning documents indicate that during the project's anticipated dredging period, there would not be available capacity for even a substantial portions of the 1.3± MCY of sediments without significant negative impacts on capacity for landfill disposal of Municipal Solid Waste. S3-8

(2) Page 2-5, Section 2.1.4: DEP concurs with the statement, "Each tributary channel can therefore be treated as a separate project or any combination with other project tributaries." In this regard, DEP believes it is appropriate for the Final EIR/S to consider in greater detail the options of spoils disposal from a particular area into the adjacent bulkhead/nearshore alternative. An example is to dispose of all of the spoils from the Inner Confluence/Mystic River area (approximately 500,000 c.y.) into the Little Mystic Channel Site. If this site is filled to form "fast" land, it may be capable of handling the entire 500,000 c.y. of spoils. S3-9

(3) Page 2.9, Section 2.2.2.1: The DEIR/S refers to data from a 1983 Sasaki Associates report which indicates that in several areas to be dredged there are considerable quantities of gas, predominately CO_2, CH_4 and H_2S. This could result in considerable odor problems during excavation, dewatering (if necessary), and transportation/disposal to upland sites. If dewatering or upland disposal are to be recommended, the Final EIR/S will need to address potential odor problems. S3-1

(4) Page 3-12, Section 3.4.1: The report assumed as part of the disposal assessment that dewatering and compaction would only reduce the 1.3 MCY of as-excavated spoils to its 1.1 MCY in-situ volume. The assumptions of dewatering efficiency are not indicated in the report but DEP questions the 1.1 MCY estimate. DEP would anticipate that mechanical dewatering (see DEIR/S, page 3-17, Section 3.5.1) could result in significantly better solids production, thereby reducing the volume of sediments requiring final disposal to well below 1.1 MCY. This issue has major implications for the efficacy of certain reuse/disposal options, particularly nearshore bulkheading or upland landfilling. The Final EIR/S must fully address this issue. S3-1

A related issue which also needs to be more fully addressed in the FEIR/S is an assessment of dredged spoils dewatering technologies. This assessment should not only review the basic technologies but analyze the siting and operation of such facilities. Issues of concern include: how to get the dredged spoils to the dewatering facilities (on land or possibly a barge); how to deal with sidestreams (i.e. pressate/centrate); and nature and extent of conditioning chemicals required to obtain proper solids capture. S3-12

It would be useful for the FEIR/S to refer to and discuss the results of full scale projects at which a dewatering technology was utilized.

(5) Page 3-24, 1st column: Massport should indicate its rationale for choosing a site cutoff of 200,000 c.y. The determination of site capacity is based on filling to MLW without taking into account the potential for additional capacity if a site is filled to MHW or to form "fast" land. This entire issue should be discussed in greater detail in the Final EIR/S. S3-13

(6) Page 3-24 and 3-25: DEP is concerned about the determination that options with a benefit to cost ratio less than 1:1 are not feasible and should not be assessed further. DEP understands that ACOE may be required to meet such specific ratios, whether or not they are realistic or feasible, but we question whether the options analysis should be based on such an arbitrary criteria. If it is determined that an option with a 1 to 1.3 ratio has significant environmental and public health benefits over a 1 to 1 option, there should be a process to allow for such an option to continue to be assessed while financial alternatives are considered (i.e. option of obtaining an exemption to the ratio or have non-federal participating agency, such as Massport, pay an additional share of the project costs to bring the federally eligible costs ratio up to 1:1). S3-14

(7) Page 3-25, 1st column, 1st full paragraph: DEP questions the screening process criteria whereby options with costs in excess of four times that of ocean disposal at the MBDS are deemed "prohibitive", particularly since the MBDS option used as the base case appears to be for unconfined ocean disposal (see Figure ES-3), a situation everyone agrees is not legal. At a minimum, confined ocean disposal should be used as the base case. S3-15

Using the unconfined disposal costs results in all of the shoreline sites being deemed "limited by cost", and placed on the lower level "potentially practicable alternative" list. DEP believes that at a minimum, costs alone should not be utilized to place these sites on a lower tier list.

(8) Page 3-28, Proposed Use/Impacts: The report states that capping has occurred at a depth of 50 meters at a Portland, Maine site. The technical feasibility of such actions is a critical issue and the Final EIR/S should include detailed documentation relative to the Portland, Maine Project. If this information is not provided to DEP during the EIR process, DEP will not be able to assess and indicate to MEPA the technical feasibility of such options. DEP will require the submission of this information during its permitting phase, but it would be beneficial to all concerned if this data is submitted now and not wait until the permitting phase. S3-1

(9) Page 4-6, Section 4.3.2:

a) The Final EIR/S should provide more documentation to support the statement, "Disposal of parent material at these sites [subaqueous depressions and borrow pits] does not require containment." S3-1

b) The report states that material dredged from the borrow pits may have commercial value or would be disposed at an ocean disposal site. This assumes all excavate is uncontaminated. Applicant would need to assess the surficial sediments to verify this assumption. If material is not acceptable for ocean disposal, the disposal of this sediment could result in a significant cost increase for the option and timing impacts. Is there any information currently available relative to the contaminant concentrations in these surficial sediments? If yes, this information should be included in Final EIR/S. If not, at some point in time (prior to permit issuance), this information will need to be obtained. S3-1

(10) Page 4-8, Section 4.3.5: The report states that at open water sites, a three foot clay cap can be placed over the mound of silty material. DEP questions the technical feasibility of such a procedure. How will a "highly cohesive" clay be placed on top of a more fluid silt material without the denser clay sinking through the silt? Additional documentation should be included in the Final EIR/S showing how unconfined silt mounds can be capped with clay dropped from a barge. S3-1

(11) It is DEP's understanding that the CA/T Project will be filing a Project Change with MEPA relative to the activities MHD expects to perform within the Fort Point Channel as part of the installation of its tunnel box. DEP anticipates that this Project Change will include additional temporary and possibly permanent filling within the channel, which may make the option of spoils disposal into Fort Point Channel more attractive and cost effective. DEP believes that once MHD files its Project Change Massport should reassess the S3-2

feasibility of spoils disposal in Fort Point Channel, based upon that new plan, and report the results of that reassessment in the FEIR/S.

(12) a) Relative to the use of the two Meisburger Sites, DEP is concerned about the adverse impact to the current baseline development and future operational monitoring for the MWRA ocean outfall, the sites being a couple of miles off either side of the outfall diffuser. MWRA, in coordination with an Interagency Effluent Outfall Monitoring Task Force, developed a multi-year monitoring plan, the collection of data starting in 1992. It appears that a number of the existing nearfield benthic, clostridium sewage traces, and nutrient/hydrography stations are located in, or directly adjacent to the Meisburger sites (Attachment No. 4), and use of either of the sites could result in impacts to the monitoring plan, the extent of that impact not being possible to determine at this time. It is DEP's understanding that MWRA will be providing MEPA with comments which will address this issue in greater detail. If either of these sites are carried forward into the FEIR/S stage, Massport should be required to assess the likely and potential impacts to MWRA's monitoring program and develop mitigation measures if appropriate. S3-21

b) Another issue of concern to DEP, which also relates to MWRA activities, is how the use of various sites, such as Little Mystic River, might impact MWRA's Combined Sewer Overflows (CSO) Program activities; both its Short-term System Optimization Plan and Long-term CSO Control Strategy. Filling of a number of the potential sites would result in impacts to existing CSO discharge pipes (i.e. may need to extent discharge line or redirect flow). This is not to say that all interactions would necessarily result in adverse impacts. It is possible that filling of an area might fit well into a specific CSO recommendation for removal or redirection of the CSO discharge. Again, it will be important for Massport to maintain close coordination with MWRA and report its findings in the FEIR/S. S3-22

Section 3, Specific Comments

(1) Page 2-8, Section 2.2: The current Water Quality Classification for those portions of Boston Harbor in this project area is SB and not SC (revised in 1990). S3-23

(2) Page 2-10, right column: The report indicates that acetone was found in all samples at relatively high concentrations and that one possible reason was due to lab contamination. The report does not indicate whether acetone was also found in S3-24

trip or lab blanks, yet this type of information was utilized later to explain the presence of the pesticide endrin aldehyde. Both the acetone and endrin aldehyde issues need to be discussed in greater detail.

(3) Tables 2-4 and 2-6: Units need to be added. S3-25

(4) Table 2-8: The table heading states that it includes "Mass DEP Classification Levels", yet the information was not included. Either the information should be included or the heading revised. S3-26

(5) Table 2-10: The table indicates than mean values of PCB's for Berth Sediments at Distrigas, North Jetty, Prolerized and Revere Sugar are all greater than 2.0 mg/Kg. This is important in that DEP's recently released Interim Policy #BWP-94-037 (attachment No. 3) includes a maximum concentration for PCB's of 2.0 for use as daily cover at lined landfill, unless the landfill obtains a "Minor Modification" from DEP. Based upon recent determinations by EPA (appended as attachment No.5) regarding reuse/disposal of PCB contaminated materials relative to TSCA requirements [Section 6(e)(2)], it is questionable whether approval could be obtained to reuse or dispose of spoils with PCB concentrations greater than 2.0 mg/Kg. S3-27

(6) Page 2-10, Section 2.2.2.2:

a) Discussion mentions "Level III", as "a concentration similar to the MA DEP Category III (Table 2-5)". MA DEP has not yet designated "Level III Concentrations for PAHs". In the future, DEP is likely to include PAHs at this level into its regulations, but to date this has not taken place. S3-28

b) Discussions of pesticides says concentrations of x,y, and z were below detection limits. It would be useful to relate this to toxicity (i.e., does this mean there is no risk of benthic toxicity at these detection levels?) S3-29

(7) Page 3-6, top of page: In the sediment/site matching section, the report states, "It was assumed that there were no sediment quality thresholds necessary for in-harbor containment...". Please be aware that DEP intends to consider inclusion of maximum contaminant limits into its Comprehensive Dredging Regulations if it is determined necessary to keep risks of containment failure acceptable. S3-30

(8) Page 3-6, paragraph 3: The report assumes that contaminated sites could not accept other waste materials prior to remediation. It is possible that placement of the sediments on these sites could be an element of the remediation process. S3-31

There seemed to be too little differentiation of contamination types in these sections (i.e. physical vs. chemical and levels of chemical contamination). Contaminated sediments going for ocean disposal are not necessarily "contaminated" when put on the land.

(9) Page 3-7, Landfills:

(a) The option of use of the spoils as grading material was not included, nor was intermediate cover. Final cover would be the most valuable use if the clay sediments can be segregated from other material. It is stated that 114 of the 122 landfills open in 1993 will be closed by 1996. Based on information generated as a result of the Hynes Bill since 1993, more landfills may remain open into the 1996 to 1998 time-span. Some of these landfills may be looking for material to get to grade prior to the time that they do close and this option should be considered in the FEIR/S. S3-32

(b) The first paragraph discusses the need for spoils to be mixed with clean material to comply with DEP's regulatory thresholds for daily cover (as indicated in Table 3-3). The information included in Table 3-3 is actually outdated and should be replaced with the information included in Table 1 of DEP's Interim Policy #BWP-94-037 (attachment No. 3). The numbers in Table 3-3 are the criteria which were developed by DEP in 1992 specifically for excavate for the Central Artery/Tunnel Project. You will notice that Interim Policy #BWP-94-037 does not include any specific criteria for unlined landfills but the criteria for use at lined landfills is significantly higher for a number of contaminants. S3-33

(c) DEP believes that the option of reuse of mildly contaminated spoils as daily or intermediate cover and grading material at landfills in Massachusetts should be continued forward into the FEIR/S. The efficacy of such an option will depend in part on the assessment of dewatering technologies. S3-34

(10) Page 3-7 and 3-8: TCLP regulatory levels is the incorrect terminology to utilize. The levels relate to total bulk concentrations, and not TCLP results. S3-35

In addition, the 50 c.y./day figure for Plainville/Laidlaw should in fact be 500 c.y./day (please see Table 3-7). S3-36

(11) Page 3-8: Discussion regarding the amount of material which could be accepted by a landfill is confusing. This is the amount which can be used at a landfill on any given day. The material must be used within 90 days of coming to a site; S3-37

therefore, it appears that the total volume which can be brought to a site for daily cover could be up to 90 times the stated amount. This issue needs clarification.

(12) Page 3-8, Landfills: The benefit of using landfills for disposal of marine sediments is said to be "...weighted against the constraint of competing uses for a limited resource". It is unclear what is meant by "limited resource". Are the landfills the resource or the marine sediments? S3-38

(13) Page 3.8, Section 3.3.2 and Page 3-9, 2nd full paragraph: DEP agrees with the statement that disposal of sediment at shoreline sites would result in an environmental benefit by capping the existing contaminated sediments at those sites. DEP would consider this a significant secondary project benefit, and will take this into account in its overall project review. S3-39

(14) Page 3-9, Section 3.3.2:

a) It would be helpful to present areas and depths for the Subaqueous B and E sites. S3-40

b) There needs to be a better plan showing Winthrop Site location. S3-41

c) Discussions of ADDAMS model results for Winthrop Site should mention if it is chronic or acute criterion that plume contaminants exceed by two times. S3-4

d) The report should explain what the federal standard is with respect to using ADDAMS model results, i.e., what water quality values are considered acceptable within what area and time.

e) It would also be helpful to the reader for the information from the biological assessment (Appendix A-4, p.8) concerning the conservative assumptions made running the ADDAMS model, to be included in the body of the report to put the findings into perspective. S3-4

(15) Page 3-10:

a) The report states that modeling results for the Spectacle Island CAD Site indicate that water quality criteria will be reached in approximately four hours. The report should indicate with isoplaths this area within which water quality criteria would be exceeded. S3-4

b) The report states that the Meisburger sites both "support high benthic productivity and fisheries resources are relatively abundant." In the Final EIR/S Massport should

attempt to quantify this situation and indicate whether either site has unusual or unique resources that would differentiate it from other "productive fishery resources" within Massachusetts Bay. S3-45

c) Based upon recent comments from fishery agencies, it is unclear whether the CA/T artificial fish reef will actually be placed in this vicinity. S3-46

d) Relative to In-channel and Borrow Pits, where will the sediments dredged to create these disposal sites be stored? Will it be possible to keep clean and dirty sediments segregated if the plan is to alternately dig a cell and bury the contaminated sediments repeatedly? S3-47

(16) Page 3-12, Section 3.4.1: The report should not refer to TCLP results, but total bulk contaminants.

(17) Page 3-12, Land-Based Options (A): Here, as in other places in the report, TCLP is used incorrectly. In addition, mixing is not likely to be needed in most cases. Again, the 1,000 cy/day does not include any stockpile ability at the landfill. On page 3-13, the figure of 8,000 cy/day for each of two dredges over a 100 day period does not appear to account for the time it will take to dewater the sediments. S3-48

(18) Page 3-13: The tipping fee of $28-$70/cy in Table 3-13 does not seem to differentiate between disposal and use as daily cover, grading material, intermediate cover or capping material. Also, use of the dewatering costs based on the Moran Terminal project alone may not be typical. S3-49

(19) Page 3-21, 2nd column: The figure of 50 c.y. for shortlisted sites is incorrect and should be 500. S3-50

(20) Page 3-23: The estimated 108 landfill closings prior to 1995 is extremely high. For example, in the past 3½ years less than 10 landfills per year have closed on average. S3-51

(21) Page 3-28 Section 3.6.2, Description of Possible Disposal Sites - Boston Light Ship:

a) Does more recent benthic assessment information exist than the 1977-79 data included in the report? S3-52

b) Was the ADDAMS model run using parameters for bottom water (below the thermocline)? S3-53

(22) Page 3-29: Early assessment by the Board of Underwater Archeological Resources of the sensitivity of the Boston Lightship Site is critical to determining the potential use of S3-54

this site. Massport should attempt to obtain an initial determination for inclusion into the FEIR/S.

(23) Page 3-33, Section 3.6.2.3, Meisburger-2:

a) Does ACOE experience include placing a cap on silty contaminated sediment in 98 (ave) to 105 (max) feet of water as exists at Meisburger-2? If yes, documentation should be included in Final EIR/S. S3-55

b) How could Meisburger-2 sand/gravel be used beneficially as beach nourishment if it has a one foot cover of silt on it? Is silt contaminated and how would it be separated? S3-56

(24) Page 3-37, Section 3.6.2.4, Meisburger-7:

a) A description of the use of "rigorous turbidity controls" indicated in the report during disposal of contaminated sediment at this site should be included in document. S3-57

b) Does this site also presently have a one foot layer of silt as does Meisburger-2? S3-58

(25) Page 3-55, Section 3.10, Mitigation:

a) DEP has information about a very clean environmental dredge bucket used in Great Lakes Cleanup by Canada (Cable Arm 100E). Use of this unit should be discussed in FEIR. S3-59

b) Will dredging not be halted for winter flounder spawning? S3-6

(26) Table 3-3: Revise landfill category criteria per prior comments. S3-6

(27) Page 4-2:

a) Report states that a 15 cy bucket was assumed to be utilized. This sounds reasonable for removal of parent material, but DEP questions whether such a large "environmental bucket" for removal of the contaminated silts is available. S3-6

b) For rock blasting mitigation may be required, as was used by MHD during blasting for the Third Harbor Tunnel. S3-6

(28) Page 4-4, 2nd column, top paragraph: DEP questions the approveability of "holding the environmental bucket above the water surface to decant water off the top of the load." This S3-6

issue should be discussed further in the Final EIR/S.

(29) Page 4-10: DEP does not consider a COD of 80,509 ppm a "moderate value". S3-65

(30) Page 4-14: Is the assumption that dredging work will proceed 24 hours a day reasonable? S3-66

(31) Page 5-1, Regulatory Compliance:

(a) The initial item is incorrect. The main solid waste statutes and regulations are c.111 §150A and 310 CMR 16.000 and 19.000,and not 21H. S3-67

(b) Relative to the Waterways Regulation Program, c.91, c.21A, s.14 and 310 CMR 9.00, certain activities within the port of Boston undertaken by the Massachusetts Port Authority do not require individual written approvals from the Waterways Program. The transport or disposal of dredged materials outside the port would require the review and approval of the program. In addition, should a disposal option be ultimately selected that would fill presently flowed tidelands and confine the material behind bulkheads, the future use of the site must be dedicated to a water-dependent-industrial use for Massport to qualify for the exemption from licensing as provided by 310 CMR 9.03(3). S3-68

(32) Page 5-2:

a) Relative to the Mass. Wetlands Protection Act, this statute is regulated jointly by local conservation commissions and DEP's Division of Wetlands and Waterways Regulation. S3-69

b) Relative to Safe Drinking Water Act, the concern for adverse impacts to water supplies includes more than just Sole Source Aquifers. The other major regulatory issue is that landfills are not allowed to be placed in Zone 1 or II's of public water supplies, jurisdiction being with DEP. S3-70

(33) Page A1-30: Plainville Sanitary Landfill, etc. - The TPH levels and the liquid levels need to be updated as per Policy #BWP-94-037 for all landfills considered. The chloride considerations are addressed in the policy by testing for conductivity on the extract of the dredged sediments. S3-71

Section (4) Miscellaneous Comments

(1) Relative to the ability of the ADDAMS Model to correctly

predict water quality impacts, if this model was used to predict impacts from the Black Rock Harbor, Connecticut sediment disposal at the Central Long Island Sound Disposal Site, this information should be included as an appendix to the Final EIR/S. DEP is particularly interested in this project, due to the fact that actual measured results during this dumping operation concluded that 20 to 30% of the solids and 40 to 70% of the contaminants were dispersed to the water column. S3-72

(2) In general it was unclear to DEP why only 3 lined landfills and one unlined landfill were chosen out of the hundreds of active and inactive landfills in the Commonwealth. When the report narrows the selection down to these 4 landfills and then states that there isn't adequate capacity, the reasoning is confusing. The report also states that long term maintenance of clay caps is a reason to reject using the dredged clay as capping material, yet this would not likely be a responsibility of the Project, as the responsibility goes to the landfill owner. S3-73

(3) Relative to the option of construction and operation of a new lined sediment monofill at the Wrentham-495 Site, substantial additional site specific information would need to be obtained and provided to DEP before the agency could determine whether such a facility at this specific site would be acceptable to the agency. This additional information would include at a minimum: (1) a thorough hydrogeologic assessment of the site; (2) an analysis of whether the facility could be constructed and operated without filling or adversely impacting wetland resources on or adjacent to the site; (3) an assessment of potential impacts to residential areas near the site or along the truck route(s); (4) analysis of public and private water supplies in the impact area, etc. S3-74

If Massport decides to proceed forward with on-site assessment of the Wrentham Site, a draft scope of services should be prepared by Massport's consultant and submitted to DEP for review and comment prior to any on-site activities being initiated.

(4) Modeling experts from DEP's Division of Water Pollution Control and Office of Watershed Management have been requested to review the ADDAMS Model developed and utilized by ACOE to assess water quality impacts due to in-water disposal of contaminated sediments. Unfortunately, this review has not yet been completed by DEP to allow for comments to be incorporated into DEIR/S review. As soon as this review is completed, and if any questions or concerns are raised, DEP will provide this information to Massport and ACOE so that they can be addressed in the Final EIR/S. Copies of any such comments will also be provided to MEPA and other relevant S3-75

agencies.

Conclusion

Staff from DEP will be available to work with Massport, ACOE and their various consultants to not only review and discuss DEP procedural and technical comments, but would be willing to participate on a working group to discuss how DEP's regulations, policies and procedures interface with those of other applicable federal, state and local agencies.

Feel free to contact me if you have any questions regarding this correspondence.

Very truly yours,

Steven G. Lipman, P.E.
Boston Harbor Coordinator

SGL/wp: miller.2

cc: Norm Farrameli, Massport
Joel Hartley, DEP/DSWM
Carl Dierker, John Simpson, Mitch Ziencina
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Judy Perry, Marcia Sherman, Dave Ferris, DWP/DWPC
Beth Nicklas, Pam Harvey, DEP/OGC
Nancy Baker, EOEA/MEPA
Scott Cassel, EOEA
Leigh Bridges and Brad Chase, DMF
Margaret Brady and Deerin Babb-Brott (CZM)
Peter Smith, Leslie Lewis, Eugene Cavanaugh, and Richard Thibedeau (DEM)

S3-1

The need for permitting these activities has been considered in evaluating various disposal options for the BHNIP.

S3-2

These regulatory requirements have been included in the evaluation of these disposal options.

S3-3

Please see response to comment S3-2.

S3-4

Please see response to comment S3-2.

S3-5

Please see response to comment S3-2.

S3-6

Bulk sediment analyses and TCLP testing indicate that the dredged materials do not meet the criteria for classification of hazardous waste.

S3-7

Options for the upland disposal of the contaminated dredge materials would include the construction of disposal facilities (inland or coastal) or the utilization of existing landfills. The construction of a monofill for the disposal of the contaminated dredge material would require the permitting of the facility through the DSWM. As the DSWM has commented, current solid and hazardous waste regulations may not address the concerns associated with dredged material. It is our understanding that the DSWM is currently developing the Comprehensive Dredging Regulations which would establish the siting and plan approval process for upland disposal of these materials. The anticipated date of the promulgation of these regulations is the Summer of 1996. The BNHIP, therefore, has had to depend on existing regulations to evaluate upland options.

S3-8

Thank you for your guidance on this issue. The options of reuse, recycle, destruction and detoxification have been investigated. None of the landfill disposal/reuse options for silt are practicable relative to the alternative disposal options which have been carried forward in the FEIS.

S3-9

The FEIR/S has developed the concept that sediments from a particular tributary be disposed as close as possible to the source. In the preferred alternative, in-channel disposal, all sediments dredged from the Mystic Channel and berths would be disposed in the Mystic; all sediments from the Chelsea Channel and berths would be disposed in the Chelsea; and, all sediments from the Inner Confluence would be disposed in the Inner Confluence. The sediments from the Reserved Channel and berths would be the only ones transported away from the dredging site. They would be disposed in the Chelsea. Although still considered to be too contaminated for unconfined open water disposal, the Reserved Channel sediments have lower contaminant loads than the Chelsea, so they will not compromise the environmental conditions at that site. Use of the in-channel trench alternative would avoid the loss of aquatic habitat that would be incurred with creation of fastland at Little Mystic Channel.

S3-10

The preferred disposal alternative does not include upland sites; therefore, dewatering will not be needed for the BNHIP.

S3-11

See response to Comment S5-2 regarding reduced sediment volume with upland dewatering.It may be possible to reduce the dewatered sediment volume by a factor of greater than 20%.However,the DEIR assumed a conservative volume to ensure that there would be no question of the adequacy of disposal capacity for the disposal alternatives remaining for consideration.

Dewatering as envisioned at the time the DEIR/S was written was to use air drying rather than mechanical means. Comments from the Central Artery/Third Harbor Tunnel staff have indicated that a greater volume reduction should be expected. Appendix I of the FEIR/S addresses both air drying and mechanical means of dewatering.

S3-12

Dewatering techniques are discussed in Appendix I of the FEIR/S.

S3-13

In the DEIR/S, the project team sought to avoid the permanent loss of any aquatic habitat through disposal of dredged materials. Therefore, the fastland scenarios were found not be among the most promising alternatives, regardless of their capacity. Site capacity has been eliminated as a practicability criterion.

S3-14

The benefit to cost ratio is necessary to determine the feasibility of the navigation improvement project. This ratio refers to the dredging and disposal of the parent material. Silt material disposal follows the operation and maintenance regulations, which does not follow a strict benefit to cost ratio. Maintenance material (silt) is to be disposed of in the least costly manner that meets environmental regulations and engineering requirements.

S3-15

The base cost against which disposal options are measured has been revised to that of the least environmentally damaging practicable alternative. The FEIR/S section describing the selection of the preferred alternative has been restructured to separate environmental and practicability considerations. In Section 4, the least environmentally damaging alternatives are identified prior to application of criteria related to cost, logistics and capacity.

S3-16

The Corps may, at a later date, demonstrate capping at the MBDS.

S3-17

The DEIR/S statement about disposal of parent material for subaqueous depression and borrow pit disposal needs clarification. Since the parent material is considered to be clean and suitable for "unconfined" open water disposal there is little concern about its affects on the surrounding environment. However, disposal of the parent material must still be conducted in a manner that does not physically affect ecologically sensitive areas outside of the disposal site. The FEIR/S concluded that parent material not designated for beneficial use would be disposed at the MBDS.

S3-18

The offshore borrow pit option has currently been eliminated from further consideration due to significant resources (shellfish and finfish). Therefore, it is not considered to be necessary to develop a sediment chemistry database for those areas at this time. If this option becomes feasible in the future for the BHNIP the chemical composition of proposed borrow material will be determined and evaluated regarding its disposal.

S3-19

Capping over a disposal mound is not proposed in the FEIR/S.

S3-20

Accessibility for barges would continue to be a problem with the Fort Point Channel.

S3-21

The Meisburger sites, along with all of the DEIR/S shortlisted sites were reevaluated in the FEIR/S. In addition to concerns about interference with the MWRA monitoring program, biological data collected in fall 1994 confirms the fact that these areas support productive benthic communities and high densities of lobsters. It was determined that the Meisburger sites would not be among the least environmentally damaging alternatives for disposal of silts from the BHNIP.

S3-22

Massport received a letter dated June 21, 1994 commenting on the DEIR/S from MWRA. Mr. Mark Radville (Project Manager, Environmental Management) indicated that a final CSO control plan would be completed in December of 1994. Mr. Radville noted specifically which MWRA facilities would be affected by dredging and disposal activities, and noted that coordination between Massport and MWRA was important, since some CSO alternatives are being addressed on a site-specific basis. MWRA will be informed of project plans but as currently envisioned dredging and disposal operations should not impact CSO's.

S3-23

The text of the FEIR/S has been revised to reflect the correct Water Quality Classification of Boston Inner Harbor.

S3-24

Acetone was also found in the MBDS reference sample.

S3-25

The units for parameter concentrations for Table 2-4 is ppm, and for Table 2-6 is ppb as noted at the beginning of each table.

S3-26

The Massachusetts DEP Classification Levels are provided on Table 2-8 as stated on the header. The levels are provided just to the right of each parameter as I,II or III.

S3-27

Based upon a review of the USEPA letter dated December 22, 1993, no sediments having detectable concentrations of PCBs could be transported to asphalt batch plants for thermal processing and commercial use. If insufficient volume exists for the in channel disposal of all of the contaminated sediments, alternative disposal options will have to be considered. Potentially, sediments having PCB concentrations less than 2.0 mg/Kg could be reused at lined landfills. Sediments having PCB concentrations greater than 2.0 mg/Kg could be treated to remove the PCBs for disposal (burial for stabilized waste or incineration) or separated (solvent extraction) from the highly contaminated sediments and disposed of in bulk at a hazardous waste disposal facility.

S3-28

It is acknowledged that MADEP has not yet officially designated PAH levels into its regulations. This is the primary reason for the DEIR/S in stating that the levels established for the BHNIP are similar to the Massachusetts categories, the only difference being the PAH levels that were established for the BHNIP.

S3-29

Concentrations below detectionlimits are considered to be below levels that would be of concern regarding toxicity to benthic life.

S3-30

At the time of publication of the FEIR/S, the DEP's Comprehensive Dredging Regulations have not been completed and were not available for review by this project.

S3-31

The referenced paragraph states that "...areas that have received other waste materials are not always suitable for disposal facility development without remediation first" (emphasis added). The Woburn site is, in fact, a discontinued landfill where disposal of silts from the BHNIP would facilitate the final closure. Table 3-4 in the DEIR/S applies the regulatory criteria (Table 3-3, DEIR/S) for contaminant levels suitable for disposal in different environments.

S3-32

The potential use of dredge spoils as landfill grading material or final cover has been evaluated in the FEIS. Please see response to comment S3-27.

S3-33

Thank you for this guidance. Please see the response to comment S3-27.

S3-34

Please see the response to comment S3-27. The dewatering issue is discussed further in the FEIR/S.

S3-35

The text has been modified to include the current soil contaminant levels for reuse at landfills and the correct terminology.

S3-36

The error has been noted. The text and tables describing landfill capacity and impact analysis in the DEIR/S have been replaced in the FEIR/S with a new discussion describing the rationale for eliminating landfills from further consideration.

S3-37

See response to comment S3-36.

S3-38

The "limited responses" statement in the DEIS refers to landfill disposal capacity.

S3-39

The FEIR/S continues to consider capping existing contaminated sediments at shoreline sites to be a benefit.

S3-40

Areas and depths for Subaqueous B and E are referenced in Section 4 and Attachment 1.

S3-41

The Winthrop Harbor site has been dropped from the evaluation because of the likelihood of significant environmental impacts associated with its use for disposal.

S3-42

The ADDAMS model used the chronic criterion of 2.9 ppb for estimating the plume for copper in the vicinity of the Winthrop Harbor site.

S3-43

The structure of the ADDAMS model used for all sites modeled in the DEIR/S was based on its historical application to the Massachusetts Bay Disposal Site (MBDS). Since the MBDS lies beyond the three mile limit, disposal activities are regulated by the Marine Protection, Research, and Sanctuaries Act (MPRSA) of 1972. Under the MPRSA, water column impacts due to disposal operations are evaluated according to EPA water quality and toxicity criteria, with allowances made for initial mixing. The mixing zone is defined in 40 CFR 227.29, as follows:

(a) Initial mixing is defined to be that dispersion or diffusion of liquid, suspended particulate, and solid phases of a waste which occurs within four hours after

dumping. The limiting permissible concentration shall not exceed beyond the boundaries of the disposal site during initial mixing, and shall not be exceeded at any point in the marine environment after initial mixing.

The "limiting permissible concentration" of the liquid phase is defined, according to 40 CFR 227.27(a)(1), as

That concentration of a constituent which, after allowance for initial mixing as provided in Section 227.29, does not exceed applicable marine water quality criteria.

"Applicable marine water quality criteria" are defined in Section 227.31 as

... the criteria given for marine waters in the EPA publication "Quality Criteria for Water" as published in 1976 and amended by subsequent supplements or addition.

Therefore, water column impacts at Subaqueous E were evaluated by comparing the predicted concentration of copper (the most conservative parameter) in the water column, over the disposal site footprint and beyond, over the four hour initial mixing period following a 1000 cy disposal event to the EPA criterion for copper. Since the Subaqueous sites are within the three mile limit, they fall under the jurisdiction of Section 401 of the Clean Water Act. Should these sites be selected in the final analysis, the Massachusetts DEP would have to determine the standards to be met in order to obtain water quality certification. Additional water quality modelling was conducted for the FEIR/S (Appendix F) using additional parameters. At this time, however, the Subaqueous sites are no longer under consideration as the project's LEDPA choice.

S3-44

Appendix F on water quality modeling provides graphics depicting isopleths showing where water quality violations would occur during disposal activities at Spectacle Island.

S3-45

Data have been provided in the FEIR/S that quantify fisheries and benthic resources at the Meisburger sites.

S3-46

Because it has not yet been determined where the CA/T artificial reef will be deployed, the BHNIP FEIR/S assumed that it would be located in Sculpin Ledge Channel, the most recent site under discussion.

S3-47

Refer to the Dredged Material Management Plan in Section 5.0 of the final EIR/S. The dredging and disposal operations are described in Section 5.4.1, *Dredging and Disposal Sequencing*, of the FEIR/S. Silts will be temporarily stored in scows while the in-channel cells are being excavated. Once a cell is available to receive dredged silts, the material stored in the scows will be dumped. "Clean" and "dirty" sediments will be segregated by loads. Loading of scows will not typically alternate from silt to parent material. Typically, scows used for silts will be maintained for that purpose and scows used for parent material will be dedicated to that material.

S3-48

Based upon a review of Interim Policy #BWP-94-037, the reuse and disposal of contaminated soils at landfills is limited by the concentration of several organic and inorganic contaminants. Bulk (total) concentration standards have been established for arsenic, cadmium, chromium, lead, mercury, petroleum hydrocarbons (TPH), polychlorinated biphenyls (PCBs), polynuclear aromatic hydrocarbons (PAH), volatile organic compounds (VOCs) and conductivity. In addition, no listed or characteristic hazardous wastes may be present in the material. The presence of characteristic hazardous waste in the contaminated material must be tested for using the Toxic Characteristic Leaching Procedure (TCLP). For the sediment samples collected by Normandeau Associates in 1993, only chromium and lead were detected in concentrations which exceed the bulk soil limits. These samples were further analyzed using the TCLP. Neither chromium or lead were found in the leachate at concentrations which exceeded the standards. Thus, mixing of the contaminated sediments with clean material to meet the regulatory standard for characteristic hazardous wastes would not be required.

The proposed production value of 8,000 cy/d over a 100 day period (total of 800,000 cy) does not include the time required for dewatering. The time required for dewatering will be dependent upon the dewatering method selected. Mechanical dewatering may require hours while passive dewatering may require a day to several days. If passive dewatering is selected the production schedule would be lengthened and may allow for the use of a greater amount of the dredge materials as cover or grading materials at landfills.

S3-49

Tipping fees are no longer directly factored into disposal alternative costs. The current project plan is to make clay available for landfills at one or more stockpiling locations located beyond the expected Central Artery/Tunnel project clay distribution radius. The estimated costs to landfills of loading, transport, stockpiling, and grading clay from the source were weighed against the costs of obtaining cover material

elsewhere to determine a market radius for this clay. Dewatering costs were assessed for an alternative dewatering technology and considered in the alternatives analysis.

S3-50

See response to comment S3-36.

S3-51

The number of landfills potentially willing to obtain final cover material generated by the BHNIP has been reevaluated based on information provided by the DEP. The quantity of clay generated by in-channel disposal is estimated to be approximately 1.3 to 2.0 million cubic yards, depending on disposal option, an increase over other disposal options.

S3-52

The DEIR/S describes the only known available benthic information for the BLS area. Recognizing the limited data for this area,the BHNIP recently conducted a benthic reconnaissance of the area in fall 1994 to evaluate the existing conditions and proposed impacts. Results are reported in Appendix E.

S3-53

The ADDAMS model was run on average conditions.

S3-54

Although BLS is not currently considered a preferred disposal site, BHNIP has followed up with the Board of Underwater Archeological Resources (BUAR) to identify potentially sensitive historic resources.

In summary, BUAR identified 48 site which they consider to be potential sub-merged Cultural resources within the study site which fully encompassed the BLS site. The vessel types and their percent representation on the list include:

Vessel Type	Percentage of List
Mud scow	2
Barge	21
Schooner	15
Tug	17

Dredge	4
Yacht	2
Lighter	4
Trawler	6
Gasoline Boat	4
Brig	2
Freighter	6
Eagle Boat	2
Cargo	2
Passenger (small)	2
Patrol	2
Bark	2
Steamer (passenger)	2
Unknown	2

BUAR also stated that the database search may not have uncovered all losses or purposeful abandonments in the area, and that BHNIP should conduct a more intensive literature search to further identify significant resources, should Boston Lightship be reconsidered as a BHNIP disposal site.

S3-55

Capping has occurred in approximately 240 feet of water at the Portland Disposal Site. Silty material has been capped with silt/clay and sand at this disposal site.

S3-56

Section 2.4.3.1 of Attachment 1 in the DEIR/S, describes the sediments as being made up of coarse sand and gravel (42%); boulder covered drumlins (23%); fine grained sediments (6%); and mud, sand, and gravel (29%). Information collected on the surface substrate conditions using sediment profile imagery at all the potential aquatic disposal sites in fall 1994 indicates that there are many areas of exposed sand and gravel at the Meisburger sites.

314 CMR 9.03 identifies only Category One, Type A materials suitable for beach replenishment. Category One, Type A materials are low in levels of metals, silts and clays, water, volatile constituents and oils and greases. No chemical analyses have been conducted on this material to date.

Further analyses would need to be conducted to clearly establish what percentage of the Meisburger 2 materials, and also which specific areas of borrow materials may be suited for future beneficial uses. At this time, beach nourishment is only considered as a potential use. As also stated in this FEIR/S, Meisburger 2 is not

presently considered a preferred disposal site for the currently proposed BHNIP activities.

S3-57

Refer to the Dredged Material Management Plan (Section 5.0).

"Rigorous turbidity controls" refer to the deployment of silt curtains and/or other equipment around the disposal site. Silt curtains, used as turbidity barriers, can be used to physically control fine-grained materials that are suspended in the water column during the disposal activities. These curtains are impervious, floating barriers that extend vertically from the water surface to a specified depth. The depth of the curtain can be varied. The primary purpose of the curtain is to reduce turbidity in the water column outside of the area bounded by the curtain. It is not intended to retain fluidized sediments or to contain the suspended solids, but to influence local flow patterns so that sediment laden flows are restricted to the near channel bottom and forced to exit under the curtain or settle on the bottom.

S3-58

See response to comment S3-56.

S3-59

The BHNIP EIR/S team appreciates the information on the Cable Arm 100E "environmental" bucket. The FEIR/S includes a discussion of this and other similar devices and its potential suitability in controlling sediment suspension during dredging. It is beyond the control of the ACOE to specify any particular make of equipment such as that mentioned by DEP. However, it is planned to require the dredging contractor to utilize an environmental bucket of similar capabilities for the BHNIP.

S3-60

Dredging will not occur in the Mystic River and Inner Confluence to avoid the anadromous finfish spawning period. This time frame overlaps the winter flounder spawning period.

S3-61

The landfill discussion and tables have been revised.

S3-62

The "environmental" bucket is available in a broad range of sizes. A number of dredging contractors currently have buckets of 15-CY capacity or greater. Projects have been performed, utilizing 15-CY Cable Arm(TM) buckets, by Powers Marine in Bremerton, WA, Dutra Dredging Co. in Oakland, CA, Wood-Hawkins Dredging in Jacksonville, FL, and Norfolk Dredging Co. of Chesapeake, VA recently added a 15-CY "environmental" bucket to its fleet. These buckets are readily available.

A 15 cy bucket was assumed to estimate production rates. Recent experience with an environmental bucket at Moran Terminal indicates contractors may modify an existing bucket to meet performance standards. Additionally, large (22-26 cy) buckets are being manufactured by the Cable Arm Clamshell company.

S3-63

The BHNIP will consider utilization of techniques to minimize impacts on fish during blasting operations. The mitigation required by the MHD for the Third Harbor Tunnel consisted of a startle-system.

S3-64

Decanting of free water from the top of the loaded bucket should be minimized. The "environmental" bucket is most effective by filling the bucket during the cut and minimizing the volume of free-water that is captured in the bucket.

Decanting the bucket prior to placing its load into a scow is not required for the proposed in-channel disposal alternative. The concern of excess water in the scow was related to a dewatering operation.

S3-65

We concur.

S3-66

Most contractors with dredge plants of the size necessary for the Boston Harbor Navigation Improvement project will work 24 hours/day unless specifications indicate otherwise. At the present time, no known reason exists to limit the contractor's hours of operation.

S3-67

Thank your for the information.

S3-68

The BHNIP team will discuss this issue with the Division of Wetlands and Waterways during the permitting process.

S3-69

The text has been revised to clarify this point.

S3-70

This information was taken into account during the revised alternatives analysis.

S3-71

Please see response to S3-27. Conductivity was not measured in sediment samples. Conductivity and water content may be limiting parameters for sediment transport and/or reuse at any landfill.

S3-72

There are no known published studies that conclude that 20 to 30% of solids are lost to the water column during dredged material disposal activities at the Central Long Island Sound Disposal Site. The study cited by DEP relates to differences in sediment chemistry between the dredge and disposal areas and are not relevant to water quality impacts.

S3-73

The landfill disposal/beneficial use options were re-evaluated for the FEIS.. The text includes an assessment of the clay characteristics important to landfill capping.

S3-74

The difficulty of dewatering sediments adequately for upland transport and disposal, as well as current disposal siting requirements were among the factors resulting in the selection of in-channel disposal, rather than an upland disposal site (including Wrentham-495) as the preferred alternative.

S3-75

The BHNIP team has met with the state and federal resource and regulatory agencies to discuss water quality modelling and other issues since the DEIR/S. The assumptions and results of preliminary water quality models have been presented to these agencies and the team has received guidance from them on additional models to prepare. The information presented in Appendix F reflects these discussions.

The Commonwealth of Massachusetts

Division of Marine Fisheries
Leverett Saltonstall State Office Building
100 Cambridge Street
Boston, Massachusetts 02202

PHILIP G. COATES
DIRECTOR

727-3193

June 20, 1994

S4

Colonel Brink P. Miller
U.S. Army Corps of Engineers
Northeast Division
424 Trapelo Road
Waltham, MA 02254

RE: EOEA File #8695

Dear Colonel Miller,

The following are the Division's comments on the Boston Harbor Navigation Improvement Project. These comments center on the potential adverse impacts on marine fishery resources.

First, it should be noted that the Division does not oppose the Navigation Improvement dredging, but we are concerned about the marine disposal of contaminated sediments and their potential for adversely affecting the fishery resources and fishing operations. We have no objection to clean spoil disposal at the Mass Bay Disposal Site and we would support contaminated and clean spoil disposal at landfill sites.

We are strongly opposed to spoil disposal at the Boston Lightship Ground and at Meisburger Sites #2 and #7 because of fishery impacts. It should be noted that the only reason that the two Meisburger sites were carried forward into final site selection was because there was no existing fish or shellfish sampling data in either of these two locations. In discussing these sites with the fishing industry all three sites are heavily fished for groundfish and lobster. The EIR provides no assurance that materials will be contained at any of these three offshore disposal sites. Similarly, there is likely to be considerable uptake of contaminants by the fishery resources during the one and one half year period that spoils are left exposed and open to the environment. There will be interference with fishing operations at all three sites. S4-1

It is the Division's strong recommendation that if any or all of the sites are carried forward to a final EIR, a separate supplemental EIR should be required to fully examine the physical oceanography, hydrography, contamination and biology of the sites. Physical oceanography and hydrography studies should at a minimum S4-2

examine at least one annual cycle of bottom and mid-water currents at the site for speed and direction. Supplemental oceanographic studies may be necessary if information currently being collected by the MWRA is not sufficient for these locations. Comprhensive benthic and contaminant studies at all offshore sites should be requisite prior to any site selection. Similarly, detailed fish sampling inventories should be done at all three sites seasonally for at least two years. Further, if either the Meisburger sites are the preferred alternatives it is our recommendation that a formal site designation process be required from both the state and federal perspective before the sites could be utilized for contaminated spoil disposal. This process would be similar to the process by which the Cape Cod Disposal Site was designated. S4-3

Based on information developed by the Central Artery it would appear that the Spectacle Island CAD would not be suitable for spoil disposal because it is both an erosional and dispersal site. The Division is strongly opposed to Spectacle Island CAD. S4-4

The in-channel sites at the confluence of the Mystic River and Chelsea Creek has been suggested for disposal through the process of over dredging. These sites however, are not without problems. First, there is no assurance that the cover material would not displace some of the contaminated spoils. Secondly, the stockpiling of contaminated spoils during the dredging process on either side of the Channel would present contamination problems to anadromous fish runs in the Mystic River and possibly the Charles River. Both the Mystic and Charles Rivers support large runs of alewives, blueback herring, and rainbow smelt. The Charles River blueback herring run is one of the largest in Massachusetts Bay. There are no known anadromous fish runs in the Chelsea River. We recommend that if the in-channel sites are carried forward into a final EIR that silt curtains be required as a mitigating measure at all times and that the period for dredging be restricted so as not to interfere with these important anadromous fish runs. This period of restriction should run from February 15th to June 30th. S4-5

Similarly, the proposed blasting of rock should not be conducted upstream of the MBTA Tunnel from February 15th to June 30th. The fish startle device employed by the Central Artery/Third Harbor Tunnel blasting operations should be deployed routinely for all blasting events connected with this dredging project. It should also be noted that blasting during the summer period could affect menhaden and striped bass. The fish startle device should be utilized to avoid mortality of these species. These problems have to be addressed in either the final or supplemental EIR if the site is to be carried forward. S4-6

The Division has no objections at this time based on existing information to disposal of contaminated spoil in the Little Mystic Channel, the Reserve Channel and possibly, although not mentioned, the upper end of the Fort Point Channel. Like the Little Mystic S4-7

Channel and the Reserve Channel, the Fort Point Channel should be investigated for possible disposal of contaminated spoils. The Little Mystic Channel and Reserve Channel sites were proposed to be filled only to mean low water. Because of existing contamination at these sites it would be far preferable if these sites could be bulkheaded and filled to grade to make fast land for marine industrial purposes rather than just filling to mean low water.

The Amstar, Mystic Piers, and Revere Sugar are all highly contaminated and the Division would have no objections to filling these sites based on current information as long as they were bulkheaded and the contamination could not escape. The subaquaeous sites B and E and the Winthrop Harbor burrow pit site are not in the Division's view suitable for disposal of either clean or contaminated spoils. Winthrop Harbor has been shown to be a highly productive nursery and spawning area for winter flounder, lobster and smelt (Chase, 1993). The subaquaeous sites B and E are highly utilized by lobster fishermen and are exposed to severe storm action and are highly productive marine resource areas. S4-8

It should be noted that the Foul Area and Mass Bay Disposal Site were closed to the disposal of contaminated spoils because of a possibility of contamination, uptake and dispersal affecting marine resources. If this deep water site is closed for this purpose, it makes less sense to dispose of contaminated spoil in shallow water sites where marine productivity is much greater and the interference from fishing operations is also much greater than would occur at the Foul Area. Moreover, there could be greater dispersal problems with shallow water inshore sites than would occur at the offshore deeper water sites. Massport has done little in the EIR to provide any specific impact information on either the fishery resources or the fishing industry in any of the shallow water sites proposed. There has been no discussion in the EIR of the possibility or the potential for a public health fishery closure at any of these offshore sites which might be required if the fishery resources were contaminated to the extent where FDA action levels were met or exceeded. This potential for any fishery closure and mitigation for such closure should be fully documented in the final EIR. S4-9 S4-10 S4-11

The Division is pleased to have the opportunity to comment on the Draft EIR and we hope that the project can be accomplished with minimal or no impact on the marine fishery resources of the Commonwealth.

Sincerely yours,

Philip G. Coates
Director

S4-1

Additional data on biological resources at the offshore sites were developed in fall 1994. The results confirm that there are significant fisheries resources (primarily lobsters) and productive benthic communities at these sites. These sites were found not to be among the least environmentally damaging alternatives in Section 4 of the FEIR/S.

S4-2

Additional investigations on biological resources and substrate conditions at all the potential aquatic disposal sites were undertaken in fall 1994. This information was reported in separate technical documents that were distributed to the agencies for review. The results are also reported in Attachment 1 of the FEIR/S and were used in the reevaluation of alternative disposal site selection.

Disposal will occur in Boston Inner Harbor which is protected from storms. Adequate current and tidal information is currently available to determine that disposal of dredged material in-channel will stay in the same area. No supplemental EIR/S is needed.

S4-3

Neither of the Meisburger sites was found to be among the least environmentally damaging alternatives.

S4-4

The Spectacle Island CAD site was not found to be among the least environmentally damaging alternatives.

S4-5

While it is agreed that handling the dredged silt has the potential to impact biological resources in the inner harbor, it is important to remember that the sediments proposed for disposal have been residing in this environment. Passage of ships causes resuspension of silts on a daily basis.

The Dredge Management Plan (Section 5) provides details on the disposal operation. Apparently the DEIR/S was unclear on the necessity to stockpile sediments while the disposal cells are prepared. Under the in-channel scenario, silts would be stored on barges not the shoreline or underwater and the lag time between initial dredging and disposal would be on the order of a week. Once the initial cells were

constructed, the silts usually would be disposed immediately. The Dredged Management Plan also discusses the merits of various methods for containing the disposal operations.

A sand cap would be used to isolate the silty material from the surrounding silty material. Research and State and Federal agencies have concurred that a sand cap would not displace the silty material. An environmental window has been proposed for anadromous fish in the draft and final EIR/S.

S4-6

The methods to prevent fish mortalities from blasting are presented in the Dredge Management Plan (Section 5).

S4-7

The shoreline sites cited in this comment have been included in the FEIR/S, with the exception of the Fort Point Channel. Fort Point Channel is not easily accessible by barge and, therefore, unsuitable for this use. The disposal site alternatives analysis concluded that partial filling of shoreline sites was among the least environmentally damaging alternatives.

S4-8

The disposal site alternatives analysis (Section 4) concluded that the Subaqueous B and E sites were not among the least environmentally damaging alternatives.

S4-9

The effects on existing biological resources at and near the potential aquatic disposal sites are described in Attachment 1 and used to compare the environmental risks of silt disposal at these sites in Section 4.

The Massachusetts Bay Disposal Site has been designated by EPA as a dredged material disposal site. Until capping or other management technique has been shown to sequester contaminants, no disposal of dredged material can occur at the MBDS. We agree that disposal of dredged material in an area designated for dredged material disposal and where previous disposal has occurred would minimize impacts from dredged material disposal.

S4-10

Biological data, including fisheries resources, on each of the potential aquatic disposal sites are presented in Attachment 1.

S4-11

None of the offshore sites was found to be among the least environmentally damaging alternatives.

Massachusetts Highway Department
Central Artery/Tunnel

S5

June 20, 1994

Colonel Miller
U.S. Army Corps of Engineers, New England Division
424 Trapelo Road
Waltham, Massachusetts 02254

RE: Draft Environmental Impact Statement/Report for Boston Harbor Navigation Improvement and Berth Dredging Projects

Dear Colonel Miller:

Enclosed are the Massachusetts Highway Department's Central Artery/Tunnel (CA/T) Project comments on the US Army Corps of Engineers and Massachusetts Port Authority (joint proponents) Draft Environmental Impact Statement/Report (DEIS/R) for proposed Navigation Improvement and Berth Dredging Projects (BHNIP). The CA/T Project and the BHNIP team have benefitted from ongoing close coordination over the past year. We expect to continue to work with the BHNIP team in relationship to the CA/T Project immersed tube tunnel, Spectacle Island, and artificial reef construction activities.

The DEIS/R briefly discusses interfaces with these CA/T Project activities in various sections of the document. Continued close coordination of the proposed BHNIP work with the CA/T Project will be required to ensure that CA/T Project costs are not increased, construction schedules are not delayed, and the Project's ability to meet Project commitments is not adversely affected by the BHNIP. S5-1

If you have any questions, please call Mr. Ronald Killian, CA/T Project Manager of Environmental Procedures and Permits, at 951-6467.

Sincerely,

MASSACHUSETTS HIGHWAY DEPARTMENT

for Peter M. Zuk
Project Director

PMZ/EWI/nmm

AL-1.3
094-1970
Attachment
cc: R. Killian
Massachusetts Port Authority, Maritime Department, Boston, MA
G. Kelly, U.S. Army Corps of Engineers, Waltham, MA

One South Station • Boston • Massachusetts • 02110 • Phone 617-951-6000 • Fax 617-951-0897

Colonel Miller
094-1970

ATTACHMENT

Massachusetts Highway Department's Central Artery/Tunnel Project comments on EOEA #8695 Massachusetts Port Authority and US Army Corps of Engineers Draft Environmental Impact Report/Statement for proposed Boston Harbor Navigation Improvement and Berth Dredging Projects

Interface of Central Artery/Tunnel Project and Boston Harbor Navigation Improvement and Berth Dredging Projects

The proposed Boston Harbor Navigation Improvement and Berth Dredging Projects (BHNIP) would deepen two areas in Boston Harbor's Main Ship Channel, the Inner Confluence and the mouth of the Reserved Channel, and three tributary channels, the Reserved Channel, the Mystic River, and the Chelsea Creek Channel. The deepening would improve the channels and berthing facilities with the aim of allowing the Boston region to remain competitive in a global market. The Draft Environmental Impact Report/Statement (Draft EIR/S) estimates that the BHNIP will have a duration of 18 months and recommends commencement of the work in 1996 with completion in 1998.

The Massachusetts Highway Department's (MHD) Central Artery/Tunnel (CA/T) Project is, in part, being constructed in Boston Harbor. Construction activities in the Harbor include the Project's Third Harbor Tunnel (an immersed tube tunnel) and materials disposal and mitigation measures at Spectacle Island. While the Third Harbor Tunnel has been placed and backfilled, barging of material to Spectacle Island is expected to continue through 1996. Construction activities on Spectacle Island will continue for some time after that, which include capping the landfill and developing a park. In connection with this work, a seawall and dike will be constructed, utility lines will be located between Spectacle and Long Islands, and an artificial reef is proposed to be constructed (in 1996) in the Sculpin Ledge Channel between Spectacle and Long Islands.

Executive Summary

1. Page ES-2, Sediment Characterization

Page ES-2 states that the BHNIP will result in approximately 1.3 million cubic yards (cy) of silt requiring disposal, and that this quantity includes a post-dredging estimated expansion factor of

20%. This statement should be clarified to indicate as set out in Section 3.4, that the expansion factor is expected for aquatic disposal options. Page 3-12 states that for land-based options, it was assumed that dewatering and compaction would reduce the silt volume nearly to its in-situ estimate of approximately 1.1 million cy. As an informational note, the CA/T Project's experience with construction of the Third Harbor Tunnel found silt material, when deposited on land, to have a shrinkage factor of approximately 20%. S5-2

2. Page ES-5 and ES-6, Other Actions

Draft EIR/S pages ES-5 and ES-6 indicate that the MHD expects that placement of the Third Harbor Tunnel excavate at Spectacle Island will be complete in 1995. As indicated above, barging of material to Spectacle Island is expected to continue through 1996, and construction activities will continue for some time after that. S5-3

Section 3.0, Disposal Site Alternatives Analysis

The Draft EIR/S identifies as one of the preferred disposal alternatives, a Controlled Area Disposal (CAD) site in the area immediately east of Spectacle Island. The Spectacle Island CAD would be created by dredging a 22- to 50-acre disposal pit in a shallow, subtidal flat area along the eastern side of the island, then filling the pit with silty sediments from the harbor dredging project, and finally capping it with some of the removed native material. Excess native material will be disposed of at the Massachusetts Bay Disposal Site or transported elsewhere for beneficial reuse.

At the time the Spectacle Island CAD work is anticipated, the CA/T Project site preparation work for landfill closure on Spectacle Island will be nearing completion, including the seawall and dike construction. Any excavation activities in the Spectacle Island CAD must be carried out to minimize impact to the stability of these structures. An evaluation should be done of the changes in wave run-up on Spectacle Island due to the excavation of the Spectacle Island CAD. In particular, the effects of wave run-up on the CA/T Project's seawall and Spectacle Island beach nourishment work should be evaluated. In addition, the health effects of Spectacle Island CAD sediment washing up on the Spectacle Island's southern beach (a planned bathing beach) should be evaluated. S5-4

Utility lines will be located between Spectacle Island and Long Island in the vicinity of the Spectacle Island CAD (see attached Figure A). Care must be taken not to disturb these facilities.

<u>Potential Impacts on the Artificial Reef</u>

The artificial reef to be constructed by the CA/T Project as part of Spectacle Island mitigation will be located in the Sculpin Ledge Channel between Spectacle Island and Long Island, in the same

general area as the Spectacle Island CAD (see attached Figure A). As currently planned, the closest point within the area sited for the artificial reef would be approximately 100 to 200 yards from the Spectacle Island CAD. Any activity at the Spectacle Island CAD, including excavation, placement of dredged material, or capping, must be performed in a manner that will not impact the structural integrity or performance of the artificial reef modules, or decrease its potential as a fisheries resource area. S5-5

Based on the Draft EIR/S, we are particularly concerned with the potential impacts of total suspended solids (TSS) from the Spectacle Island CAD, which could affect the reef performance. High concentrations of TSS in the water column could affect the development of the desired blue mussel fouling community on the artificial reef, by interfering with the spawning and filter feeding processes of these organisms.

Page 3-39 of the Draft EIR/S states that, based on disposal silt plume modeling, suspended solids concentrations generated by the CAD activities should be low (<30 mg/L). The historic range of TSS levels in Boston Harbor has been 8-188 mg/L. If TSS levels from the Spectacle Island CAD can be maintained below 30 mg/L, then we would anticipate no significant impacts to the artificial reef. S5-6

TSS Sources and Control Measures

Our concerns with regard to minimizing TSS impacts to the artificial reef from the Spectacle Island CAD center on: 1) the timing of CAD construction and operations; and 2) the BHNIP materials handling techniques.

Construction of the Spectacle Island CAD could affect the proposed artificial reef if the construction dredging takes place during (or shortly after) deployment of the reef modules, and if the dredging creates heavy TSS plumes. Use of silt curtains and a closed dredge bucket during CAD construction may help to minimize the TSS plumes; however, it is not known how effective these control measures could be should there be a minimum of 100- to 200-yards between the two projects.

Operation (and closure) of the Spectacle Island CAD also could affect the proposed artificial reef. We therefore request that the BHNIP team be required to conduct a siting study which addresses possible impacts of the CAD operations to the Project's artificial reef and the Spectacle Island dike and seawalls. Disposal of fine-grained sediments from the BHNIP over a 1-1/2 year period could create high TSS levels in the water column.

We request that the BHNIP minimize TSS impacts in Sculpin Ledge Channel through the use of adequate control measures during construction and operation of the Spectacle Island CAD. TSS control measures during operation and closure of the CAD could

include use of silt curtains and restrictions on the timing of disposal operations to avoid periods of maximum ebb and flood tides. To further ensure protection of the reef and of other aquatic resources in Sculpin Ledge Channel, the BHNIP should include a TSS monitoring program, with specified exceedance criteria, reporting requirements, and contingency plans.

Section 4.0, Dredging Management Plan

1. Noise Impacts

Section 4.0 gives an overview of the potential environmental impacts of the dredging operations and likely mitigation measures to be employed (Page 4-1). Potential noise impacts and likely mitigation measures are not discussed. Dredging areas will be in close proximity to buildings, especially dredging areas in the Reserve Channel, Mystic River, Chelsea River, and along the East Boston waterfront. Residential housing areas and a school (sensitive noise receptors) are located along the East Boston waterfront. In addition, the Squantum Point Disposal Site is adjacent to a large condominium complex and recreational area. Potential noise impacts need to be identified, and mitigation measures committed to for any expected significant noise impacts. S5-7

2. Subsection 4.1.1, Mechanical Dredge Plant

Subsection 4.1.1 of the Draft EIR/S states that a modified, or environmental, bucket is planned to be used when dredging the silt sediments. The subsection also indicates that a scow size range of 2-3,000 cy is assumed. While scows range between 4 and 5,000 ton capacity (4,000 tons roughly correlates to 2-3,000 cy), depending on the disposal option, bin barges may be required. Bin barges are used when mechanical removal of material from the barge is expected, and a typical bin barge holds only approximately 1,200 cy. Thus, if bin barges are used, there would be more barge traffic than indicated, which should be considered. S5-8

BHNIP barging operations that overlap the CA/T Project barging operations must be carefully coordinated to minimize impacts on commercial and recreational traffic in the area.

3. Rock Blasting

According to the Draft EIR/S (Page 4-4), rock is expected to be encountered at the mouth of the Reserved Channel, in the Inner Confluence and in the Mystic River Channel. Rock blasting is expected to be required to remove the rock. The blasting, in particular any such activity planned at the mouth of the Reserved Channel, should be reviewed by the CA/T Project to ensure that the integrity of the Third Harbor Tunnel is maintained. S5-9

S5-1

The preferred disposal alternative, in-channel, will not interfere with CA/T operations.

S5-2

A 20% expansion factor was used to accommodate dredged material placed in upland sites. Additional analysis of dewatering has led to the conclusion that it is possible to reduce the volume capacity at upland sites to the in-situ volumes at the expense of time or mechanical dewatering. The FEIR/S discusses the dewatering process and costs in Section 4.0 and Appendix I.

S5-3

The references to MHD's construction schedule at Spectacle Island have been revised to reflect this information.

S5-4

Modification of typical wave run-up at the Spectacle Island site would not be anticipated because the plan calls for pre-construction depths to be recreated following placement of the dredged materials. A relatively broad reach between the upland side of the proposed CAD facility and the existing shoreline of Spectacle Island would be maintained. During construction of the CAD, it would be possible for waves which would normally break at or seaward of the offshore edge of the CAD to propagate towards the Island in an unbroken state; the deeper water within the excavation would support longer period waves which would normally break offshore of the site. However, these waves would clearly break as they passed over the restricted existing depths shoreward of the proposed site. Some modest increase in wave run-up could be expected, but no serious threat would be posed to a properly designed seawall. A modest and temporary change to the local wave climatology could impact the beach nourishment work, depending upon the depth to which this nourishment will be extended.

The Spectacle Island CAD was not selected as the preferred disposal alternative for the BHNIP, although it may be reconsidered for future maintenance.

S5-5

The likelihood of interfering with the CA/T's artificial reef in Sculpin Ledge Channel was evaluated for both the Spectacle Island and Subaqueous B alternatives.

S5-6

The Massachusetts Highway Department, Central Artery/Tunnel recommendations for TSS control measures will be taken under advisement and considered fully should the associated construction and disposal activities go forward at Spectacle Island. Please keep in mind, however, that "closed" dredge buckets do not necessarily assure that low TSS levels will result. Experience has shown that properly vented "environmental" buckets, operated by an experienced and skilled dredge operator can be much more effective than a closed bucket.

See response to Comment S5-5. Predicted water quality effects are described in Appendix F. Note, however, that the Spectacle Island CAD was not selected as the preferred alternative (Section 4.0) for the BHNIP silt.

S5-7

Noise impacts are discussed in Section 5.0 of the final EIR/S. No significant noise impacts are expected from the dredging and disposal of dredged material.

S5-8

It is not anticipated that bin barges will be typically used at this site. Bottom dump scows will be the preferred method of disposal.

The DEIR (subsection 4.1.1) recognizes the potential need for barge sizes smaller than the 2-3,000 cy scow which would be used for ocean disposal. Smaller barges such as 1,200 cy bin barges will most likely be used if mechanical removal of the dredged material is expected. The number of trips using barges this size would increase proportionally. While barging operations currently envisioned are on the order of four barges per day, they will be coordinated among the harbor's commercial users via marine radio. Negative impacts on recreational traffic will be minimized as much as possible but cannot be prevented entirely.

The BHNIP will involve rock blasting in the vicinity of the Main Ship Channel near the mouth of the Reserve Channel, based on the current dredging plan. Due to the close proximity of this area to the Third Harbor Tunnel the blasting plan will be coordinated with the CA/T Project to ensure the integrity of the tunnel is maintained.

S5-9

Review of blasting plans by CA/T staff is welcomed due to their recent experience in the harbor.

The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, Massachusetts 02202

COASTAL ZONE
MANAGEMENT

S6

MEMORANDUM

To: Jan Reitsma, Director, MEPA Unit
From: Margaret M. Brady, Director, MCZM
Date: June 7, 1994
Re: EOEA # 8695 Boston Harbor Navigation Improvement Dredging (BHNIP); Boston

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The Massachusetts Coastal Zone Management (MCZM) Office has completed its review of the above-referenced Draft Environmental Impact Report (DEIR), noticed in the *Environmental Monitor* dated May 10, 1994, and has the following comments.

Project Description

The BHNIP proposes to improvement dredge approximately 3,300,000 cubic yards (cy) of material from three tributary channels (Mystic River, Chelsea Creek and the Reserved Channel) and twelve berth areas (see DEIR p. ES-1) in Boston Harbor. The Mystic River and Reserved Channel will be dredged to -40 mean low water (mlw), Chelsea Creek to -38 mlw; the berth areas will be dredged to the depth of the channel on which they rely for access. The US Army Corps of Engineers (USACE) is the project proponent for the improvement work in the channels; the Massachusetts Port Authority (Massport) is the local sponsor for the improvement work, the sole proponent for Massport berths, and the project coordinator for the private berths. The purpose of the project is to increase the controlling depths in the harbor to accommodate the container ships, bulk carriers and tankers that service the New England region through the port of Boston.

Of the total project volume, 1,300,000 cy is silty, unconsolidated material that overlies approximately 2,000,000 cy of cohesive Boston blue clay. An additional 132,000 cy of rock will be blasted from the main ship channel. Notwithstanding their potential beneficial use, the clay and rock are suitable for unconfined disposal at the Massachusetts Bay Disposal Site (MBDS). Because the silts are predominantly anthropogenic, they contain moderate to high levels of contaminants typical of an urban port, and are not suitable for unconfined ocean disposal. (It is important to note that the disposal of dredged material is governed *not* by the numerical value of a given contaminant in a sample, but rather by

an evaluation of the potential biological effects of that material as evidenced by test organisms. Biological testing of Boston Harbor sediments indicates that the potential bioeffects of the material on marine organisms vary by site; that is, the levels of contaminants in Boston Harbor are not distributed evenly. See *Sediment Characterization,* below, for further discussion.)

In addition to the volumes of material to be dredged by the immediate project, an estimated 5,800,000 cy of silts will need to be removed over the fifty-year life of the project, including 4,400,000 cy from the main ship channel and 1,800,000 cy from the tributaries. The DEIR has properly incorporated these volumes into the evaluation of potential disposal sites, and review of the DEIR and the selection of a preferred alternative should be based on the total volume of 7,100,000 cy of material unsuitable for unconfined ocean disposal.[1] S6-

The disposal of the contaminated sediments from this project present numerous challenges at both the policy and regulatory levels. While the EOEA agencies have agreed *conceptually* on the utility of alternative disposal methods, for this and previous projects, the BHNIP represents the first major application of these alternative disposal methods in Commonwealth waters.

It is therefore possible that the disposal alternative(s) preferable to MCZM and/or the EOEA line agencies will not agree with the "preferred alternative" as identified by the USACE. To determine the preferred alternative the USACE applies the "federal standard," which identifies the most appropriate disposal site as that which is the least costly alternative consistent with sound engineering practices and which meets the environmental standards of either the Clean Water Act or the Ocean Dumping Act. The costs associated with disposal of material at the USACE preferred alternative set a ceiling of funding above which the non-federal participant (Massport) must bear all additional costs. Depending on the outcome of the MEPA process, disposal expenses above the USACE ceiling may be significant.

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[1]Regulatory revision and/or advances in the development or application of alternative disposal technologies may modify or obviate contemporary disposal techniques. However, planning efforts cannot reasonably anticipate the potential reduction or elimination of the need for disposal sites as identified in the DEIR. MCZM review of the DEIR is therefore based on the application of the "best available technology" standard.

To encourage the continued technical evolution of that standard MCZM recommends that the BHNIP incorporate a demonstration of innovative disposal technology. See *Innovative Technology,* below for further discussion. S6-2

Given the potential emergence in this project of what has, in the past, proved to be a divisive situation, we encourage both the USACE and the regulatory agencies to approach the comments and direction resulting from MEPA review of this preliminary document with an appreciation that both the regulatory oversight of natural resources and the technology of dredged material disposal are in transition, moving towards better identification of resources and potential impacts and more precise methods of handling dredged material. A project of this magnitude offers significant potential as a laboratory of sorts with benefits to regional and perhaps national resource management efforts, and warrants some latitude in the application of traditional formulae.

Comments

MCZM offers the following comments on several elements of the DEIR, including the MEPA process, MCZM jurisdiction, sediment characterization, the alternatives analysis, innovative technologies, the dredging management plan, and management and monitoring of the disposal sites.

MEPA Process

While the DEIR presents sufficient information to generally identify preferable disposal alternatives, additional information that more accurately and consistently characterizes the resources present at the proposed disposal sites and the potential impacts to them, is necessary. MCZM therefore recommends that the FEIR provide sufficient information for reviewers to make a quantitative distinction among the proposed disposal site alternatives identified in the DEIR as "practicable," as well as those additional sites identified in our comments, below. S6-3

In addition, MCZM requires detailed information to evaluate the potential impacts to the coastal zone of disposal of contaminated sediments at the specific site(s) to be identified by the proponent as the preferred alternative. While it has been proposed that the evaluation of a disposal site for the BHNIP silts should proceed under the assumption that disposal at that site will be a one-time activity and should thus be subject to less conservative standards than those applicable to a site that will experience continual use, *e.g.*, the Cape Cod Disposal Site, MCZM does not agree. The preferred alternatives identified in the DEIR have been selected largely because they will accommodate material from future maintenance work in Boston harbor; the site ultimately selected will, in other words, experience continual use. Furthermore, it is entirely possible that once a site has been permitted for use by the BHNIP, it may prove to be the most practicable site for the disposal of material from unrelated projects. S6-4

MCZM has consistently required a minimum of one year of baseline data by which to evaluate the proposed ocean disposal of dredged material, in the interest of evaluating seasonal variations in community structures, fisheries resources, wave and current regimes, and the long-term depositional nature of the site.[2] MCZM will therefore require that the proponent produce a Supplemental EIR (SEIR) to address the issues specific to the site(s) ultimately selected, *e.g.*, one year baseline data, discussion of impacts to resources at a specific site, and a plan for management and monitoring of operations, in order to complete our federal consistency review. S6-4

MCZM believes that this approach serves the purposes of both the EOEA agencies and the proponent: An SEIR based on one year of data (see Attachment 1) should provide sufficient information for the agencies to evaluate the potential impacts to immediate and regional resources given a specific project configuration, and will also allow the proponent to address significant regulatory concerns prior to permitting.

MCZM Jurisdiction

The DEIR states in Section 5.1, *Regulatory Compliance,* that under the provisions of the Coastal Zone Management Act (CZMA),

> the Massachusetts Coastal Zone Management Program conducts reviews of all proposed federal projects, and other projects requiring federal permits, *within the coastal zone* to determine their consistency with applicable CZM regulatory (13) and non-regulatory (14) policies. [DEIR p.5-1; emphasis added]

That statement is inaccurate. The CZMA, as amended in 1990, states at Section 307 (c)(1)(A) that S6-

> [e]ach Federal agency activity *within or outside the coastal zone* that affects any land or water use or natural resource of the coastal zone shall be carried out in a manner which is consistent to the maximum extent practicable with the enforceable program policies of approved State management programs. *** [16 U.S.C. 1451

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[2]See the MEPA Scope, EOEA #3692, May 1, 1980 (initial scope for the designation of the Cape Cod Disposal Site for which MCZM was the proponent); MCZM comments on the Gurnet Point site (proposed disposal site for dredged material from Duxbury harbor), November 9, 1988; and MCZM comments on the proposed USACE maintenance and improvement dredging of the approaches to Hyannis harbor, dated March 22, 1994.

et seq.; emphasis added]

The USACE and Massport should therefore be aware that they are required to file a federal consistency determination that addresses the impacts of both the dredging and the disposal of dredged material at any marine site(s) ultimately selected for this project *irrespective of the relationship of the disposal site to the territorial waters of the Commonwealth.*[3] Please note that federal action on the BHNIP is contingent upon receipt of a concurrence from this office.

S6-5

MCZM will review the BHNIP for consistency with Policies 3, 4, 5, 13 and 19. Policy 6 will apply if the Meisburger sites are selected. (See Attachment 3 for MCZM Policies.)

Sediment Characterization

MCZM commends Massport on their commitment to obtaining scientifically valid data regarding sediment characterization and biological testing to determine suitability. The historical data sheets on the use of each berthing area were of value in evaluating and interpreting data subsequently collected for sediment analyses.

MCZM concurs with Massport and the USACE that the Boston blue clay and rock material are suitable for ocean disposal at the Massachusetts Bay Disposal Site. Massport and the USACE propose that while the majority of the silts (approximately 1.1 million cy) are unsuitable for unconfined ocean disposal, 360,000 cy of material from the Reserved Channel, Gulf Oil, Army Base and Conley Terminal **is** suitable for unconfined ocean disposal. MCZM does not agree and concurs with the US Environmental Protection Agency (USEPA) that the total 360,000 cy from these areas **are not** suitable for unconfined ocean disposal.

S6-6

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[3]See the MCZM consistency certification of the US Environmental Protection Agency's site designation of the MBDS, dated November 13, 1992. See *MBDS*, page 7, for further discussion.

The upland disposal of dredged material outside the inland delineation of the coastal zone generally does not fall under MCZM jurisdiction, providing it does not affect land uses or resources of the coastal zone. MCZM will assert jurisdiction over activities related to the upland disposal of dredged material that take place within the coastal zone *e.g.*, dewatering facilities, staging areas, transportation routing. MCZM jurisdiction over the upland disposal of dredged material within the coastal zone is contingent upon the nature of the federal permits required for the activity.

S6-5

The basis for determining suitability is prescribed by the federal protocols, Green Book, *(Evaluation of Dredged Material Proposed for Ocean Disposal (Testing Manual)*, USEPA/USACE, 1991, Washington, D.C.). The Green Book establishes several criteria by which to evaluate the results of the tests that measure toxicity or mortality and/or bioaccumulation of contaminants in selected organism tissues. These criteria include applying traditionally accepted methods for statistically determining differences in tissue residues of metals and organic chemicals such as polynuclear aromatic hydrocarbons (PAH) and polychlorinated biphenyls (PCB), evaluation of the degree of response (e.g. magnitudes of toxicity, number of species involved, magnitude of difference, numbers of contaminants demonstrating significant differences, toxicity of compounds and the propensity for biomagnification within food webs). Based on the results of the tests, one or more of these criteria have been demonstrated for the silty portion of the Reserved Channel and berthing areas.

Specifically, the berthing area toxicity test results demonstrated mortality of amphipods at all sites exceeded mortality to amphipods exposed to reference (clean) sediments by more than 20%, the end point determined by Green Book protocol (Tables 6 and 7 and 12, EIR, 1994). Similarly, at each site one or more metals and one or more PAHs and/or PCBs showed significant bioaccumulation in one or both species in bioaccumulation tests at the 95% or higher level of certainty. In other words, more than one category of chemicals measured in tissues (metal or organic compound) were statistically significantly higher than tissue residue levels of organisms exposed to reference sediments in the two species used for the tests.

Interpreting data from the Reserved Channel is more difficult because early chemical analyses did not meet the appropriate detection limits. The presentation of information in the EIR/S is indecipherable. However, from other USACE documents, one of the two toxicity tests showed significant toxicity whereas the other test was inconclusive. In addition, significant bioaccumulation of chromium and lead in tissue residues from organisms exposed to sediments from two locations in the Reserved Channel showed significant uptake. Organic chemical analyses cannot be interpreted because the detection limits were not acceptable. Based on the application of the Green Book criteria to the results of the toxicity tests and the significant bioaccumulation of two metals, these sediments are not suitable for unconfined ocean disposal.

S6-

Alternatives Analysis

The following comments are presented in four sections: The first is MCZM's comments on the sufficiency of the alternatives

analysis/site screening process; the second is our analysis of the "potentially practicable" sites [Table ES-1b] and the "alternatives not found practicable" [Table ES-1c]; the third is our analysis of the "practicable" sites [Table ES-1a]; and the fourth discusses MCZM's preferred alternatives for the disposal of the silts.

Alternatives Analysis/Site Screening Process

The USACE and Massport, with input from an advisory group representing a broad spectrum of interests, have engaged in an exhaustive screening process to identify potentially suitable disposal sites for the dredged material not suitable for unconfined ocean disposal. For the purposes of examining a sizable universe of potential sites and screening them down to a manageable number, MCZM believes that the criteria applied to, and the conclusions reached by, the site screening process articulated in the DEIR reasonably narrow the universe of alternatives to those sites that can most practically provide for the environmentally responsible disposal of contaminated sediments.

However, MCZM believes that the DEIR, in determining the final allocation of sites as either "practicable," "potentially practicable," or "not...practicable," has in some cases either ignored or arbitrarily applied criteria that are discussed in the DEIR. It should be further noted that the DEIR **does** identify the proponent's preferred alternatives outright, and with greater specificity than in Table ES-1a: At page 3-25 the statement is made that

> [in compliance with the National Environmental Policy Act the proponents] "select the...[MBDS], the Boston Lightship, Meisburger sites 2 or 7, and Spectacle Island CAD as their preferred alternatives."

S6-7

Thus we are presented a DEIR which on the one hand goes to great lengths to justify or eliminate potentially practicable sites, while it simultaneously identifies the preferred alternative(s) as a foregone conclusion. Further review of the alternatives in the FEIR as discussed below should therefore be predicated on a more careful and accurate representation of costs and environmental impacts than those presented in the DEIR.[4]

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[4]If the proponents take the concluding language of the Executive Summary seriously, and the statement that the "[f]inal selection of a preferred disposal option will be made based upon public comments received on this DEIR/S" does indeed control, the identification of preferred alternatives in the FEIR must be expanded from those identified for the purposes of NEPA on page 3-25 to include those that are recommended by the Commonwealth and/or which meet the proponents' own screening criteria at page 3-26. Otherwise, the evaluation/screening process is a moot concern and

Tables ES-1b & 1c

Page 3-26 of the DEIR presents a six-step "practicability screening" for the final twenty-four sites under consideration. In summary, the steps include an analysis of:

1. Habitat loss/impact to resource function;
2. Water quality impacts;
3. Socioeconomic impacts;
4. 200,000 cubic yard minimum capacity;
5. Cost greater than four times capping at the MBDS deemed excessive [4 x $18 = $72]; and
6. Potential to accommodate future maintenance material.

MCZM believes that the 200,000 cy minimum capacity is an arbitrary figure: Neither Amstar, the Mystic Piers, nor Revere Sugar would qualify individually under that threshold, but they offer a cumulative capacity of at least 311,000 cy and may thus provide one element of a disposal site "mix."

Similarly, the cost and capacity criteria appear to be applied arbitrarily: Three of the six least expensive alternatives fail the total-volume capacity test (in-channel, Meisburger 2 and Spectacle Island CAD), while, conversely, Tables ES-1b and 1c contain sites that meet the 200,000 cy capacity test and the $72/cy test, but which are not elevated to the final list.

S6-8

No rationale is given, for example, for the exclusion from the final list of the Little Mystic site, which, at $33/cy, a capacity of 303,000 cy, and the benefit of Designated Port Area (DPA)[5] status appears to meet the criteria by which, say, the in-channel alternative was judged. If the Little Mystic were filled to a greater depth than proposed in the DEIR, it could offer significant potential as an in-harbor disposal site.[6]

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we ought to have been evaluating the USACE preferred alternatives, exclusively, from the outset.

S6-7

[5]Regulations governing DPAs under that Wetlands Protection Act (WPA) at 310 CMR 10.26 lower the performance standards to which the project will be held for some resource areas.

[6]The DEIR states at page 3-27 that the bulkheading and filling of

> [a]ll aquatic shoreline sites [will mean] that existing sub-tidal habitat is lost to fast land if the sites are filled to capacity. Due to the permanent loss of sub-tidal habitat in the total fill option only the partial fill option, which provide for the establishment of intertidal habitat, was selected as potentially practicable.

Additionally, the Wrentham site, with a capacity of almost 800,000 cy and an estimated cost well below the $72/cy threshold, warrants further consideration. Siting issues aside, the logistics of dewatering and transporting that volume of material for the immediate project may prove too onerous in light of other alternatives. However, a site with that potential capacity could provide a cost-effective disposal site for two or three or more future maintenance cycles: As volume per cycle decreases, dewatering and transportation effort decreases and capital costs are amortized over a greater period.

S6-8

Carrying a monofill site forward is important to address two uncertainties: First, it is possible--unlikely, but possible--that testing for a future maintenance or improvement project in the metro-Boston area could identify contamination so egregious that a permitted monofill would be the *only* disposal alternative. (See, for example, the National Park Service site at the Charlestown Navy Yard with PAH counts in the thousands of parts per million.) More likely is a scenario in which the regulations governing the disposal of dredged material are revised to more narrowly proscribe the disposal alternatives available; in that case, having the groundwork already complete for an upland site would be of enormous benefit to a project proponent facing any kind of timeline.

- The FEIR should carry forward the filling of piers and secondary waterways as practicable alternatives. If the FEIR selects an aquatic site as the preferred alternative, it should demonstrate that the environmental impacts of such disposal are not greater than those associated with filling in-harbor areas.

- The FEIR should therefore discuss the potential impacts of filling piers and secondary waterways on the Boston Harbor environment, under both a partial and total build-out scenario. The analysis should include impacts to the tidal prism/flushing/water quality, impacts to fisheries/benthos, and impacts to land use (see next).

S6-9

- The FEIR should address Designated Port Area (DPA)/Chapter 91 issues with greater specificity in regard to these areas. If, for example, filling the Little Mystic was to be seriously pursued, and given the requirement under the DPA regulations that fast land would be available only for waterdependent industrial uses, could Massport benefit by having land available on which to expand Moran terminal operations? How do the proposed revisions to the DPA

However, note that the permanent loss of sub-tidal habitat in a DPA is not necessarily precluded under the WPA regulations, *ibid*. Further, benefits accrued from, or mitigation for impacts to, in-harbor fill may render these sites practicable from a regulatory perspective.

regulations affect this alternative?

• The FEIR should address the benefits and costs of the Wrentham monofill site as one element of the disposal mix for future maintenance needs. S6-

• The FEIR should assess the potential use of the silts as landfill closure and/or daily cover material within the Commonwealth. This should include an evaluation of total potential capacity and the timing of landfill closures vis a vis the BHNIP schedule. The proponent should work closely with the MA Department of Environmental Protection to assess the utility of upland disposal for this project. S6-

Practicable Sites

MBDS

The unconfined or confined disposal of sediments that fail biological testing at the MBDS is prohibited under the terms of the USEPA's site designation, which imposes the restriction that

> Disposal shall be limited to dredged material which meets the requirements of the [Marine Protection, Research and Sanctuaries Act] and its accompanying regulations. Disposal-and-capping [is] prohibited at the MBDS until its efficacy can be effectively demonstrated. [58 FR 42496]

Additionally, as noted above, the Commonwealth concurred with the prohibition on capping through the MCZM consistency determination on the final site designation. Under the CZMA, modifying the site designation to permit a demonstration project or to remove the prohibition on capping would constitute a federal activity subject to federal consistency.

• The FEIR should discuss the regulatory framework that governs disposal of contaminated sediments in MPRSA waters under the Ocean Dumping Act, with particular emphasis on 40 CFR 227.6(f) and (g) as it applies to this site. S6-

• If the FEIR identifies this site as the preferred alternative, MCZM will request that an SEIR be developed that identifies and addresses USEPA and MCZM criteria for a demonstration project. S6-

Boston Lightship

The Lightship site is shallower than the MBDS (~150 feet v. ~300 feet) but it has not been demonstrated to MCZM that capping has been successfully carried out at these depths. Anecdotal evidence suggests that the site is susceptible to winter storms which result in the movement of large volumes of surficial sediments. [MWRA,

pers. comm.] The MA Division of Marine Fisheries has stated that the Lightship site is an important fisheries resource.

While the Lightship is not currently permitted as a disposal site, it is a historical disposal site for dredged material, construction debris, industrial material and low-level radioactive waste. [USEPA, 1990] The remedial effect of disposal at this site (capping, in effect, the existing sources of contamination) has been discussed as a potential benefit that may balance the short-term impact of disposal on the fisheries resource. In order to make such a management decision, the agencies need a survey of the Lightship area that is detailed to the point of providing the number and contents of units of anthropogenic waste, *e.g.*, canisters or coffins, per given area. With that information some general criteria could be established: for example, at 10 units per acre the environmental benefits might outweigh the costs, but at 4 units per acre they might not. S6-14

• The FEIR should provide a bathymetric survey of the Lightship site at a level of detail sufficient to identify the location and general nature of anthropogenic waste. S6-15

• MCZM will require the proponent to provide one year of baseline data for the Lightship site, to be evaluated in a Draft SEIR (see Attachment 1).

• If the FEIR does identify the Lightship as the preferred alternative, the SEIR should address, in addition to the baseline data, technical issues specific to capping at the site. On review of the FEIR MCZM may, following discussion with the state and federal agencies, require that the SEIR incorporate a demonstration project. S6-16

• The FEIR should include data from the USACE that substantiates that the USACE has the technical proficiency to cap material at these depths. Documentation of capping at shallower depths that is applicable to this site and this depth is not accessible. Peer review of USACE data will assist in the definition and interpretation of "successful" capping.

• The FEIR should discuss the regulatory framework that governs disposal of contaminated sediments in MPRSA waters under the Ocean Dumping Act, with particular emphasis on 40 CFR 227.6(f) and (g) as it applies to this site. S6-17

• The FEIR should assess the potential for, or conditions required to induce, catastrophic failure of the disposal site after project completion. Include an assessment of projected impacts to the local and regional environment. S6-18

Borrow Pits (Meisburger 2 & 7)

The prospective borrow pits (#2 and #7) are located approximately 7 and 8 miles off Deer Island, respectively, roughly bracketing the MWRA outfall pipe in 80 to 100 feet of water. (Note that the borrow pits do not yet exist. They have been identified as areas that potentially contain significant and recoverable volumes of sand and gravel.) Silty material overlying sand and gravel resources would be removed and either stockpiled or disposed at the MBDS, the sand and gravel would be removed and put to beneficial use, the BHNIP silts would be placed in the pit and capped with clay and sand. On completion of the project the artificial substrate would resemble original conditions. The borrow pits are characterized in the DEIR as having capacities of between 780,000 cy and 4,600,000 cy for #2 and 6,100,000+ cy for #7.

- MCZM will require the proponent to provide one year of baseline data for the Meisburger sites, to be evaluated in a Draft SEIR (see Attachment 1). S6-1

- The USACE has done a fair amount of conceptual work with borrow pits and some field testing. The FEIR should collate existing information on this disposal alternative and discuss both borrow pit technology in general and the literature's application to this project in particular in greater technical detail. S6-2

- The FEIR should include a technical evaluation of geotextile encapsulation of dredged material prior to disposal, as has been recently evaluated by the USACE Waterways Experiment Station. S6-2

- If the FEIR does identify the borrow pits as the preferred alternative, the SEIR should address technical issues specific to borrow pit disposal. On review of the FEIR MCZM may, following discussion with the state and federal agencies, require that the SEIR incorporate a demonstration project. S6-2

- The FEIR should determine, through physical sampling of the proposed sites, first, whether the areas are predominantly characterized by a sand or sand/gravel substrate; and second, what the areal and volumetric dimensions of the proposed borrow pits actually are.

- Once those dimensions are established, the FEIR should address the impacts of the proposed borrow pit to the physical resources of the area in which it will be located. For example, will the borrow pit encompass the total area identified as containing recoverable sand and gravel resources? What amount of the resource will be rendered unavailable by siting a borrow pit in that resource? What will be the dimensions of an exclusion zone around the borrow pit itself? S6-2

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ocean surface-------------------------------------------------------
                  ← exclusion distance from pit? →

ocean bottom------|-------  borrow pit  ------|----------------
                  |        |                  |
                  |   volume of resource lost?|
                  |_________________________|
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• The FEIR should assess the potential for, or conditions required to induce, catastrophic failure of the disposal site after project completion. Include an assessment of projected impacts to the local and regional environment. S6-24

In-channel Trench and Cover

Under this alternative the tributary channels themselves serve as the disposal site. The silts would be dredged from the channels and be stockpiled in reserve. The underlying clay would then be dredged deeper than required for navigation, and a portion of that material would be stockpiled. The silts would then be replaced in the depression and capped with the clay held in reserve. Trench and cover would provide approximately 60% of the capacity of the current project and no capacity for future maintenance work.

This alternative is conceptually attractive because it has the benefit of localizing impacts in the area already most heavily affected by contamination, and of not transporting those impacts to another area. However, MCZM has serious concerns about the practicability of this alternative given the logistics it would entail. It appears to MCZM that further evaluation of this alternative relies on the answer to the question: Given the multiple opportunities for impacts (double handling the material, relying on the close coordination of dredging and disposal, an operational area the footprint, by definition, of the working watersheet, the high potential for transport of sediments off-site given current speed and the volumetric exchange of water at each tidal cycle) are the sum of the potential impacts from this disposal technique mitigated by the location in which they occur? S6-25

MCZM does not believe that this alternative merits further consideration as a disposal option for the current project. It may be appropriate to consider as one element of a disposal mix for future maintenance work.

• The FEIR should discuss this alternative in greater detail if it is carried forward as a potential site for future maintenance material. S6-26

Spectacle Island CAD

This alternative would entail the removal of between 600,000 cy and 1,450,000 cy of material from a shallow subtidal flat immediately east of Spectacle Island. The site is located in depths of -4 to -15 feet mlw, with average depths of -9 mlw. In all other respects it is similar to the borrow pit alternative discussed above.

MCZM has serious concerns about the viability of this alternative. While the shallow water location does give it a decided advantage in terms of accurately placing the dredged material and the cap, it also appears to combine the worst aspects of borrow pits and capping by its susceptibility to storm-wave activity and the resultant heightened potential for impacts to outer harbor resources. In addition, information provided by the MA Department of Environmental Protection indicates that the site may not be geologically suited to a major excavate-and-fill operation. S6-

MCZM does not believe that the CAD alternative merits further consideration as a disposal option for either the current project or for future maintenance work.

MCZM Preferred Alternatives

MCZM presents these alternatives as a preliminary ranking of alternatives based on information from the pre-MEPA workgroups, review of existing literature, discussions with the proponent, and review of the DEIR. MCZM's preferred alternatives as here identified are likely to be influenced in degree, if not in substance, by information developed by the FEIR. (For example, if information developed on the cumulative environmental impacts of filling piers and secondary waterways indicates unacceptable impacts not compensated for by benefits or mitigation, MCZM would recommend that these alternatives be dropped from consideration.)

Based on our program plan and enforceable program policies, MCZM's preferred alternative for the disposal of contaminated sediments is upland disposal, because this approach minimizes the impacts of dredging and disposal on the resources of the coastal zone to the greatest degree possible. MCZM's analysis of the practicability of this alternative will rely on information developed by, and for, the MADEP Bureau of Solid Waste Management. Please see MADEP's comments for guidance. We recognize that the volume--and concomitant expense--of material to be generated from the immediate project and from future maintenance work may preclude upland disposal for at least the 1,300,000 cy at immediate issue. S6-2

MCZM's second preferred alternative is a combination of filled piers and fill of the Little Mystic and/or the Reserved Channel. As noted above, we request that the proponents investigate the feasibility of these sites and the impacts of their use on the Boston Harbor environment in greater detail. We recognize that S6-2

this alternative may also be realistically precluded by logistics, cost, and/or environmental impacts.

MCZM's third preferred alternative are the Meisburger borrow pits #2 and #7. Borrow pit disposal potentially offers a range of management benefits. Depths at the sites are shallow enough to allow for the accurate placement of material, and deep enough to minimize the erosional potential of storm-wave currents; borrow pit configuration conceptually provides an effective physical means of sequestering both the dredged material and the contaminants therein; impacts to ambient resources are (relatively) temporary; and post-disposal site conditions can be designed to replicate original conditions. As an additional benefit, the Meisburger sites potentially afford the communities along the North and South shore with a source of much needed material for shore enhancement/protection projects currently under design. MCZM believes that the Meisburger sites potentially represent the most practicable alternative for disposal of sediments from the BHNIP. S6-30

Innovative Technologies

• The FEIR should identify a practicable remedial technology that can be implemented as at least a demonstration project. A demonstration of remedial disposal technology may be an appropriate element of a mitigation package, and should be included in that discussion at the appropriate time. The USACE and Massport should work closely with Commonwealth agencies to identify a funding mechanism to support this element of the BHNIP. S6-31

Dredging Management Plan

As required by the MEPA scope, the DEIR presents a management plan for the dredging and disposal of dredged material. Because the DEIR cannot, before a final disposal site(s) has been selected, address the technical relationships between dredging and disposal, the plan as presented is necessarily generic.

Note: The management plan may be more appropriately incorporated in the SEIR, where it can be crafted to reflect the specific elements of site conditions and design. See Attachment 1, #5 and #6.

• The management plan in the FEIR should be very specific, and should address, as appropriate to the site ultimately selected: 1) the technical and operational relationships between the dredging and the disposal site; 2) a discussion of the criteria by which to determine the need for interim capping; 3) a detailed calendar schedule that illustrates how long it will take to accomplish given tasks; 4) what resource protection windows will control operations and how they will be met; 5) how the selected alternatives address future maintenance needs, and any operational requirements that S6-32

future use of a given site will impose on use of that site for the immediate project (sequential use of a borrow pit, over multiple maintenance cycles, for example); 6) how disposal will be monitored to ensure the integrity of the disposal capability of the site, with contingency plans sufficient to address unexpected problems encountered with disposal (evidence of significant volumes of material outside disposal site boundaries, for example).

• The FEIR should address, in consultation with the USEPA, the regulatory status of the disposal site. If an aquatic site is selected--and particularly if it is selected for the express purpose of accommodating all future maintenance material--will the site be required to be formally designated as an active disposal site? Will projects not related to the BHNIP have access to the site? S6-3

Monitoring Plan

A monitoring plan for the disposal site constitutes an integral aspect of the project.

• The FEIR should identify a technical protocol for monitoring the disposal site(s). The FEIR should identify a monitoring committee composed of representatives from the state and federal agencies and user groups to evaluate monitoring data and advise the USACE on management issues. S6-3

• The FEIR should identify the source of funding for ongoing monitoring and remedial actions at the disposal site(s), if necessary.

The proposed project is subject to MCZM federal consistency review; the issues identified above will be evaluated during that review. For further information on this process, please contact Jane W. Mead, MCZM Project Review Coordinator, at 617-727-9530 x.418.

MMB/DBB

cc: Patricia Scott, OCRM
Peter Jackson, USACE
Cathy Demos, USACE
Karen Kirk-Adams, USACE
Janeen Hansen, Massport
Norman Faramelli, Massport
John Simpson, MADEP Waterways
Steve Lipman, MADEP Commissioner's Office
Judy Perry, DEP/DWPC
Eugene Cavanaugh, DEM/Waterways
Leigh Bridges, MADMF
Brad Chase, MADMF
Chris Mantzeris, NMFS

Jon Kurland, NMFS
Ed Woo, USEPA
Kymberlee Keckler, USEPA
Phil Colorusso, USEPA
Ed Reiner, USEPA
Vernon Lang, US Fish & Wildlife
Brad Barr, Stellwagen Bank National Marine Sanctuary
City of Boston Environmental Department
Towns of Chelsea, Charlestown, Nahant, Hull, Winthrop, Revere, Lynn
Conservation Law Foundation
Save the Harbor/Save the Bay
Cape Cod Commission
Diane Gould, Massachusetts Bays Program

Attachment 1

Baseline Data Required for SEIR

• For coastal or ocean sites, MCZM requires that the proponent provide one year of baseline data, to include:

1. Physical and geological oceanography

   -Currents, surface and bottom, both ambient and storm-induced;
   -Hydrography, including water column characteristics;
   -Wave regime, particularly considering the potential for sediment reworking under storm conditions; and
   -Regional geology and sediment characteristics.

2. Chemical oceanography

   -Chemical analysis of the sediments;
   -bioaccumulation analysis of resident species, *e.g.*, polychaetes.

3. Biological environment

   -Community structure within the area to be affected
   -General discussion of planktonic community
   -Fish and other nektonic species
   -Coastal birds
   -Marine mammals and turtles
   -Rare or endangered species

4. Socioeconomic information

   -Impacts to fisheries
   -Impacts to human health
   -Beneficial use of existing resources, *e.g.*, sand and gravel; remedial benefits of sequestering existing contaminants, *e.g.*, canisters at the Lightship.

5. Dredging and disposal management information

   -Technical and operational relationships between the dredging and disposal site;
   -Detailed calendar schedule that illustrates how long it will take to accomplish given tasks;
   -What resource protection windows will control operations and how they will be met;
   -How the selected alternatives address future maintenance needs, and any operational requirements that future use of a given site will impose on that site for the immediate

project, e.g., sequential use of a borrow pit, over multiple maintenance cycles;
-Monitoring and contingency planning for disposal operations.[7]

6. Disposal site monitoring plan
   -Transport of contaminants off site;
   -Transport of material off site;
   -Stability of cap or mound.

S6-39

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[7]The *Draft Supplemental Environmental Impact Statement (DSEIS) for the Use of Subaqueous Borrow Pits...[in] New York - New Jersey,* USACE NYD, 1988, draws on the work of Irish and Bokuniewicz (1988) and Bokuniewicz et. al. (1986) to provide management guidelines for borrow pit disposal. See Attachment 2 for an example of a disposal management process that integrates disposal monitoring and contingency planning.

While not directly applicable, this could also serve as a model for monitoring/management of a capping operation.

Attachment 2

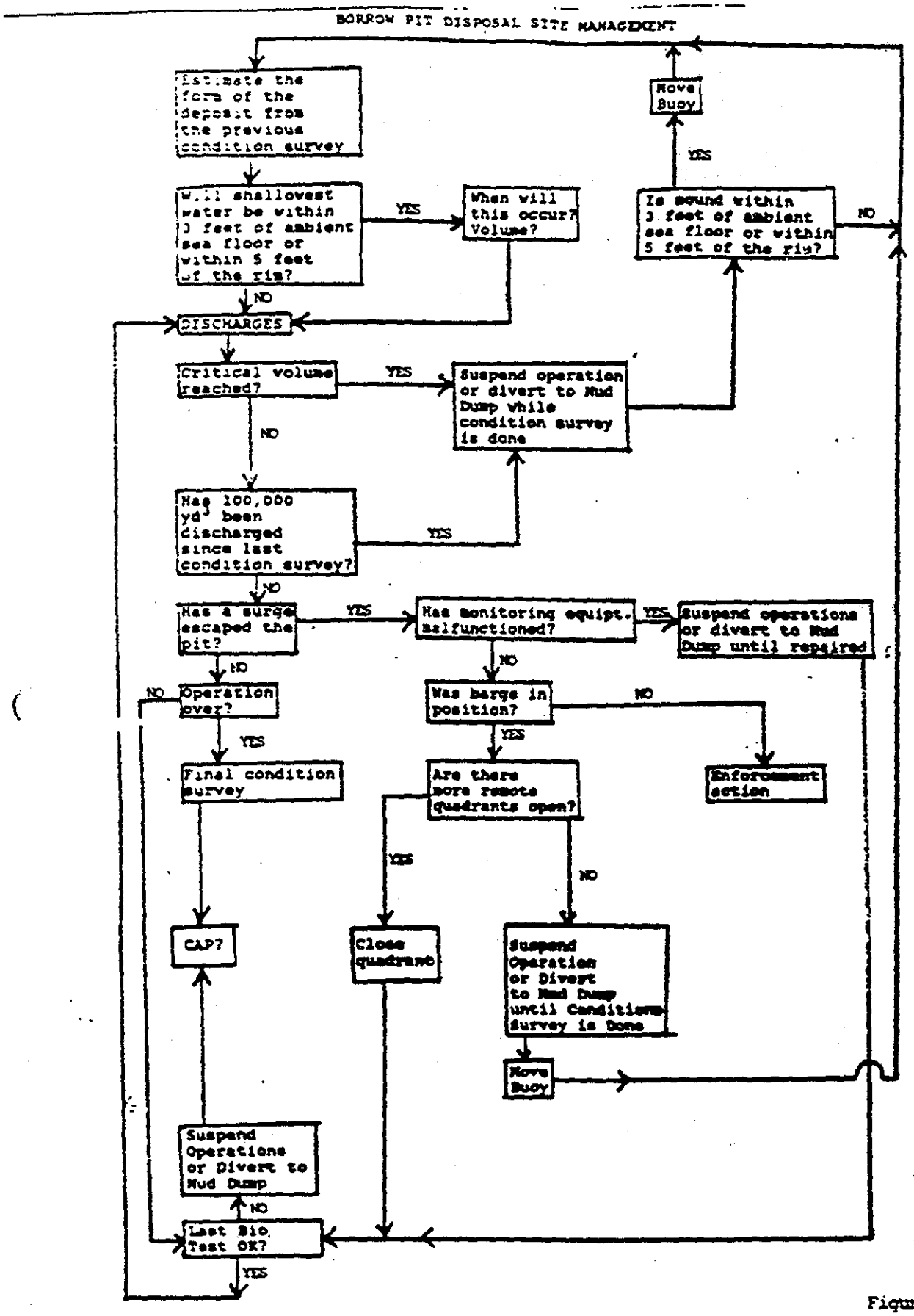

Figure 1

Attachment 3

MCZM Program Policies

Regulatory Policies

Policy 1.
Protect ecologically significant resources areas (salt marshes, shellfish beds, dunes, beaches barrier beaches, and salt ponds) for their contributions to marine productivity and value as natural habitats and storm buffers.

Policy 2.
Protect complexes of marine resource areas of unique productivity (Areas of Preservation of Restoration (APRs)/Areas of Critical Environmental Concern (ACECs)); ensure that activities in or impacting such complexes are designed and carried out to minimize adverse effects on marine productivity, habitat values, water quality. and storm buffering of the entire complex.

Policy 3.
Support attainment of the national water quality goals for all waters of the coastal zone through coordination with existing water quality planning and management agencies. Ensure that all activities endorsed by CZM in its policies are consistent with federal and state effluent limitations and water quality standards.

Policy 4.
Condition construction in water bodies and contiguous land areas to minimize interference with water circulation and sediment transport and to preserve water quality and marine productivity. Approve permits for flood or erosion control projects only when it has been determined that there will be no significant adverse effects on the project site or adjacent or downcoast areas.

Policy 5.
Ensure that dredging and disposal of dredged material minimize adverse effects on water quality, physical processes. marine productivity and public health.

Policy 6.
Accommodate off-shore sand and gravel mining needs in areas and in ways that will not adversely affect marine resources and navigation.

Policy 7.
Encourage the location of maritime commerce and development in segments of urban waterfronts designated as port areas. Within these areas, prevent the exclusion of maritime-dependent industrial uses that require the use of lands subject to tidelands licenses.

Policy 8.

For coastally-dependent energy facilities, consider siting in alternative coastal location. For non-coastally-dependent energy facilities, consider siting in areas outside of the coastal zones. Weigh the environmental and safety impacts of locating proposed energy facilities at alternative sites.

Policy 9(a).

Accommodate exploration, development and production of offshore oil and gas resources while minimizing impacts on the marine environment, especially on fisheries, water quality and wildlife, and on the recreational values of the coast, and minimize conflicts with other maritime dependent uses of coastal waters and lands. Encourage maritime-dependent facilities serving supply, support or transfer functions to locate in existing developed ports.

Policy 9(b).

Evaluate indigenous or alternative sources of energy (coal, wind, solar and tidal power) and offshore mining to minimize adverse impacts on the marine environment, especially with respect to fisheries, water quality, and wildlife, and on the recreational values of the coast.

Policy 10.

All development must conform to existing applicable state and federal requirements governing subsurface waster discharges, sources of air and water pollution and protection of inland wetlands.

Policy 11.

Protect designated scenic rivers in the coastal zone. Support designation of areas for preservation or restoration as "sign free areas."

Policy 12.

Review proposed developments in or near designated or registered historic districts or sites to ensure that federal, state, and private actions requiring a state permit respect their preservation intent and minimize potential adverse impacts.

Policy 13.

Review developments proposed near existing public recreation sites in order to minimize their adverse impacts.

<u>Non-Regulatory Policies</u>

Policy 14.

Encourage and assist commercial fisheries research and development, restoration and management of fishery resources, development of extensive and intensive aquaculture, and

enhancement of anadromous fisheries, initiated at local, state and federal levels.

Policy 15.
Ensure that state and federally funded public works projects proposed for location within the 100 year coastal flood plan will:

(a) not exacerbate existing hazards or damage natural buffers;
(b) be reasonable safe from flood and erosion related damage; and
(c) not promote growth and development in damage prone or buffer areas, especially in undeveloped areas of APRs.

Policy 16.
Encourage acquisition of undeveloped hazard prone areas conservation or recreation use, and provide technical assistance for hazard area zoning and mitigation of erosion problems.

Policy 17.
Provide funding for protection from tidal flooding and erosion, emphasizing the use of non-structural measures where feasible.

Policy 18.
Encourage, through technical assistance and review of publicly funded development, compatibility of proposed development with local community character and scenic resources.

Policy 19.
Promote the widest possible public benefit from channel dredging, ensuring that designated ports and developed harbors are given highest priority in the allocation of federal and state dredging funds. Ensure that this dredging is consistent with marine environmental policies.

Policy 20.
Encourage, through technical and financial assistance, expansion of water-dependent uses in designated ports and developed harbors, redevelopment of urban waterfronts, and expansion of visual access.

Policy 21.
Improve public access to coastal recreation facilities, and alleviate auto traffic and parking problems through improvements in public transportation. Link existing coastal recreation sites to each other or to nearby coastal inland facilities via trails for bicyclists, hikers and equestrians and via rivers for boaters.

Policy 22.
Increase capacity of existing recreation areas by facilitating multiple use and by improving management, maintenance and

public support facilities. Resolve conflicting uses whenever possible through improved management rather than through exclusion of uses.

Policy 23.
Provide technical assistance to developers of private recreational facilities and sties that increase public access to the shoreline.

Policy 24.
Expand existing recreational facilities and acquire and develop new public areas for coastal recreational activities. Give highest priority to expansion or new acquisitions in regions of high need or where site availability is now limited. Assure that both transportation access and the recreational facilities are compatible with social and environmental characteristics of surrounding communities.

Policy 25.
Encourage energy conservation and the use of alternative sources such as solar and wind power in order to assist in meeting the energy needs of the Commonwealth.

Policy 26.
Ensure that state and federally funded transportation and wastewater projects primarily serve existing developed areas, assigning highest priority to projects which meet the needs of urban community development centers.

Policy 27.
Encourage the revitalization and enhancement of existing development centers in the coastal zone through technical assistance and federal and state financial support for residential, commercial and industrial development.

S6-1

Future maintenance dredging needs were considered in the evaluation of potential disposal sites.

S6-2

The Army Corps is continuing testing of the suitability of geotextile bags for disposal of contaminated sediments.

S6-3

Additional data on biological resources at the potential aquatic disposal sites were collected in fall 1994 and incorporated into the revised disposal site alternatives analysis. This analysis was restructured to separate the environmental impacts and practicability components. Section 4 of the FEIR/S provides a logical comparison of the potential disposal sites that will enable the reviewer to identify the least environmentally damaging practicable alternative readily.

S6-4

Reevaluation of potential disposal sites includes the issue of repeated future use.

S6-5

We apologize for the unintentionally misleading statement regarding MCZM's jurisdiction in the DEIR/S and we fully understand that MCZM concurrence is required for both the dredging and aquatic disposal of sediments from this project. We also understand that activities in terrestrial areas within the coastal zone (e.g. dewatering, stockpiling, disposal) would also be subject to MCZM's review.

S6-6

The DEIR/S team acknowledges CZM's response that the Boston blue clay and rock material are suitable for disposal at the Massachusetts Bay Disposal Site (MBDS). As discussed in the DEIR/S, parent material not utilized for beneficial purposes would be disposed at the MBDS.

The DEIR/S team acknowledges the difference of opinion between EPA and the Corps on the suitability of disposal of silt material from certain areas (Reserved Channel (Conley, Army Base and Federal Channel) and Chelsea River (Gulf Oil) for

disposal at MBDS. This difference of opinion is beyond the scope of this document and as such cannot be resolved at this level. However, the DEIR does evaluate the option of disposal of the above described sediments at sites other than MBDS; this ensures there will be suitable location for disposal of all project material.

S6-7

The disposal site alternatives analysis has been restructured to separate environmental and practicability issues (Section 4). This presentation more clearly distinguishes the application of the selection criteria than in the DEIR/S.

S6-8

The revised disposal site alternatives analysis eliminates the 200,000 cy minimum capacity. Sites are compared on numerous environmental and practicability issues.

The state regulations regarding Designated Port Areas and the "no net loss" policy of the 404(b)(1) guidelines are in conflict with each other when applied to the fastland scenario for the shoreline sites. The benefits of capping existing contaminated sediments within the disposal sites would be accrued by either the partial-fill or the fastland scenario. The partial-fill scenario would avoid the permanent loss of aquatic habitat although it could be more susceptible to structural failure than the fastland scenario. It was determined that the environmental impacts associated with the fastland scenario would be greater than with the partial fill scenario, when the individual sites are evaluated. The unit costs would be lower and the capacity higher for the fastland scenario, thereby making the fastland scenario more practicable. Because federal regulations focus on selection of the least environmentally damaging alternative, the project believes that the fastland scenario would not be permittable at this level since other alternatives are available.

S6-9

The partial-fill and fastland scenarios were thoroughly analyzed in the FEIR/S disposal site alternatives analysis(Section 4), including evaluation of the impacts listed in this comment. The regulations governing Designated Port Areas were reviewed in regard to this application. A severe limitation on the suitability of the fastland scenario is the fact that these areas would not be available as useable land for years following their closure as disposal sites unless they were decked over, with appropriate structural support for the proposed use. This would add substantial costs to the project (or future site user) that would be unrealistic without considering other options for increasing port facilities or making existing layouts more efficient.

Clean Water Act 404 guidelines require avoidance of aquatic impacts if other practicable alternatives are available.

S6-10

See response to comment S6-8.

S6-11

The chemical and physical characteristics of the dredged material samples have been compared to the DEP requirements for soil reuse at lined landfills (Bureau of Waste Prevention Interim Policy #BWP-94-037 - *Reuse and Disposal of Contaminated Soils at Landfills*) and for capping materials (310CMR 19.000 *Solid Waste Management Regulations and Landfill Technical Guidance Manual*). While silt samples from some of the dredge sites may meet the chemical criteria for reuse at landfills, other samples exceed the allowable limits for PCBs, Arsenic, and/or TPH and dewatering sediments to meet the standard of no free draining liquid is currently impracticable. Clay is better suited to beneficial uses as landfill capping material, and this option is discussed in the FEIR/S. Several planned demonstration projects may provide a wider variety of disposal options for future maintenance dredging. These are discussed in the FEIR/S.

S6-12

The MBDS is not considered for disposal of BHNIP silts in the FEIR/S.

S6-13

The MBDS has not been identified as the preferred alternative for disposal of silt from the BHNIP. However, it is considered to be the preferred alternative for disposal of parent material that is not used beneficially.

S6-14

The USEPA has been funding efforts to locate and characterize the previously disposed materials at the Boston Lightship. Biological investigations in the fall of 1994 by the BHNIP team indicated that this site supports a diverse and abundant fauna in its current conditions. The disposal site alternatives analysis concluded that this site is not among the least environmentally damaging alternatives.

S6-15

See response to comment S6-14.

S6-16

See response to Comment S6-14.

S6-17

See response to Comment S6-14.

S6-18

The likelihood and effects of failure of the Boston Lightship site (and all other aquatic sites considered for this project) has been evaluated in Section 4 and Attachment 1 of the FEIR/S.

S6-19

Biological investigations were carried out at the Meisburger sites during fall of 1994. Results from these surveys were included in the reevaluation of the suitability of the potential aquatic disposal sites for disposal of silts from the BHNIP.

S6-20

The Corps of Engineers, in particular the New York Division, has studies and experience with borrow pit engineering. This information would be used if a borrow pit site were to be selected for disposal of dredged material.

S6-21

The current status of the investigations on the suitability of geotextile bags for disposal of silts sediments is presented in the FEIR/S.

S6-22

The reevaluation of the alternative aquatic disposal sites concluded that the Meisburger sites were not among the least environmentally damaging alternatives.

Borrow pits may be used as disposal site for future maintenance disposal sites. If these sites are selected, then coordination with appropriate agencies will be initiated.

S6-23

The physical character of the surficial material at the Meisburger sites was characterized in the fall of 1994 using sediment profile imagery. Because of the potential severity of the environmental consequences of using these sites, no addition effort has been made to quantify the recoverable sand and gravel resources.

S6-24

The likelihood and effects of failure of the Meisburger disposal sites has been discussed in Section 4 and Attachment 1 of the FEIR/S.

S6-25

The MCZM recommendation not to pursue the In-channel Trench and Cover alternative is acknowledged. The concerns expressed by MCZM on impacts during sediment handling and disposal have been examined in more detail for the FEIR/S. Particular emphasis has been placed on evaluating the potential environmental risks of the various activities that will occur (i.e. contaminant impacts during the time of dredging, material handling, rehandling and subsequent disposal and covering operations). The estimated impacts are discussed in detail in Section 4.0 and Attachment 1 of the FEIR/S.

The BHNIP team believes that the potential shortcomings of the in-channel disposal alternative have been thoroughly documented in the FEIR/S. Although this alternative would require extensive coordination in order to minimize environmental damage, is can be accomplished using proven techniques, as is indicated in the Dredge Management Plan (Section 5). Several of the concerns that MCZM cites in this comment are of much lower magnitude than this comment suggests. The silts would not be double handled; storage (in barges) would be necessary for a short period at the beginning of the project until the first cells are constructed. After that, dredged silts would generally be disposed within a day of being dredged. It would be possible to isolate the disposal area using silt curtains or a pneumatic barrier, therefore, the risk of transport of sediments from the site is no greater than any other tidally-driven aquatic site. The reference to tidal exchange is unclear because all of the potential aquatic sites would be affected by tidal currents. These concerns are addressed in various sections of the FEIR/S.

It is felt that this disposal alternative has a great potential for implementation with minimal short and longterm impacts. Therefore, this alternative is being recommended for the BHNIP.

S6-26

See response to Comment S6-25.

S6-27

The suitability of the Spectacle Island CAD site was reevaluated in the FEIR/S. It was concluded that, due to its rich biological conditions and exposed physical condition, this site was not among the least environmentally damaging alternatives.

S6-28

The BHNIP team concurs that upland disposal of dredged materials could minimize environmental consequences to aquatic resources and the coastal zone. Several land-based sites were identified in the FEIR/S that could be developed for this purpose. However, it is difficult to compare and contrast environmental impacts of dissimilar environments (i.e., aquatic versus terrestrial). Therefore, differentiating between these types of sites must also rely on practicability considerations, including the need for dewatering and double handling. Both upland and aquatic sites were considered as among the least environmentally damaging alternatives.

S6-29

The partial fill and fastland scenarios for the shoreline sites have been reevaluated in the FEIR/S.

S6-30

The suitability of the Meisburger sites has been reevaluated in the disposal site alternatives analysis in the FEIR/S (Section 4).

S6-31

While significant questions need to be answered, innovative technologies hold promise, especially for highly contaminated sediments, for stabilization of contaminants, and for volume reduction of dredged materials. Thus, potentially practicable treatment technologies should be pursued further in the FEIR and the following recommendation from the MCZM should be advanced, "The FEIR should identify a practicable remedial technology that can be implemented as at least a demonstration project. The USACOE and Massport should work closely with Commonwealth agencies to identify a funding mechanism to support this element of the BHNIP".

In response to several of the comments on the DEIR, MASSPORT and the Army Corps of Engineers developed a survey questionnaire to send to treatment technology and disposal companies which could be contracted to handle, treat and or dispose of the contaminated dredged materials. The survey utilized a format originally developed by the USEPA and the Army Corps of Engineers as part of the Assessment and Remediation of Contaminated Sediments (ARCS) Program (Averitt 1990). The survey included questions on the effectiveness, implementability and the cost of the technology for the treatment or disposal of contaminated dredged materials.

Results are presented in Appendix D and Section 3.0 of the FEIR/S.

S6-32

The Dredging Management Plan is presented in Section 5.0 of the FEIR/S.

The FEIR/S includes as much specific information, relevant to the Dredging Management Plan and specific aspects of managing the project, as possible. The dredging and disposal inter-relationship is discussed in Sections 5.2 and 5.3. No discussion of interim capping is presented or anticipated. Capping of the disposed silts will be performed after each cell is filled with silt. The FEIR/S presents a proposed project schedule in Section 5.2.3.3. Dredging and blasting operations will be restricted as noted in Section 5.2.1.5. the capacity of the in-channel disposal cells will likely be fully utilized by the proposed activities. It is not anticipated that future maintenance dredging activities will be able to utilize these disposal cells. Monitoring issues are described in Section 5.2.2.1.

S6-33

All sites inside the territorial sea baseline are evaluated under Section 404 of the Clean Water Act. These sites are not required to be designated by U.S. EPA. Other project which may wish to use the site would have to do an independent evaluation.

S6-34

The FEIR/S dredged management plan establishes the basis for a technical protocol for monitoring the disposal site(s) that will be utilized for the BHNIP. The actual monitoring plan is expected to become fully developed during the permit application processes in cooperation with the regulatory agencies.

The Corps' DAMOS program provides a majority of the funding for monitoring open water dredged material disposal sites. Remedial actions would generally fall under the responsible party.

S6-35

Physical oceanographic issues of all aquatic disposal sites are discussed in Section 4.0, Attachment 1 and Appendix G of the FEIR/S.

S6-36

Chemical data on the sediments are presented, where available, in Attachment 1.

S6-37

Biological characteristics of the sites are discussed in Section 4.0, Attachment 1 and Appendix E of the FEIR/S.

S6-38

Socioeconomic impacts, were considered in evaluating potential disposal sites (Section 4.0; Attachment 1).

S6-39

See Section 5.0 of the FEIR/S.

S7

The Commonwealth of Massachusetts
Marine Fisheries Commission
Leverett Saltonstall State Office Building
100 Cambridge Street, Boston 02202

6/1/94

Colonel Miller
U. S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254

Dear Colonel Miller:

On behalf of the Massachusetts Marine Fisheries Commission, I would like to inform you of this Commission's concerns with the Boston Harbor Navigation Improvement Project (BHNIP). It should be stated that this Commission is well aware of the economic value of Boston Harbor as a viable shipping port. However, we are also aware of the immense value of healthy marine resources to the Commonwealth as a whole.

At two separate Commission meetings, there were unanimous votes taken to oppose the at sea disposal of contaminated BHNIP dredge materials. There is great concern that the disposal process will re-suspend toxic metals, PAH's and PCB's in Massachusetts Bay. The Draft Environmental Impact Statement on this project gives only cursory lip service to the impact of this disposal. At very least, there will be a noticeable impact to the lobster population surrounding the disposal site. It has been proven that even the disposal of relatively clean material causes an increase in chitinoclasia, which is normally fatal to these crustaceans. The re-suspension of heavy metals, PAH's and PCB's will likely result in the contamination of finfish which are in the path of the disposal site plume. The Commission also questions the extremely low estimates for material loss and re-suspension during the disposal process. S7-1

It is this Commission's strong feeling that there are too many potential negative impacts from the use of any at sea disposal site. It is also felt that the known and unknown possible costs to our marine resources from using an at sea disposal site have not been calculated into the cubic yard disposal costs. Given a possible worst-case

scenario, the actual cost of disposal at the Mass Bay Disposal Site could be far greater than other alternatives. The contamination of and loss of a valuable food source for the Commonwealth has an inestimable cost. s7-2

It is also our opinion that the process of capping the dredge material is basically ineffectual and unproved. The process itself may cause additional re-suspension of dredge material toxins. In water disposal and capping tests within Boston Harbor have already proven to be dismal failures. s7-3

This Commission has as its primary responsibility the regulatory authority to protect and enhance the all the finfish and shellfish resources of the Commonwealth. In our opinion the use of any Massachusetts at sea disposal site for the contaminated BHNIP dredge materials does not adequately protect the long term health of our already over stressed resources.

We strongly urge you to investigate other potential disposal methods. The risk of negatively impacting our valuable marine resources is too great to use any at sea disposal site.

Sincerely,

Colin M. Cunningham Jr.
Chairman

cc: Senator John Kerry
Senator Edward Kennedy
Congressman Gerry Studds
Congressman Peter Torkildsen
Mr. John DeVillars, EPA

S7-1

The disposal site alternatives analysis has been restructured in the FEIR/S so that environmental and practicability issues are more clearly distinguishable (Section 4). Potential for biological exposure to contaminants was one of the criteria used in this analysis. The conclusion of this analysis is that the in-channel and partial-fill shoreline scenarios are the least environmentally damaging aquatic alternatives. No sites in Massachusetts Bay are being proposed for disposal of BHNIP silts. In regard to the last sentence in this comment, the estimate for material loss is based on historical records of disposal operations and is accepted as accurate by the industry.

S7-2

The MBDS is not being considered for the disposal of sediments found to be unsuitable for unconfined open water disposal through chemical, physical or biological testing.

S7-3

There have not been any dredged material disposal and capping in Boston Harbor.

LOCAL AGENCIES AND OFFICES

COMMENTS AND RESPONSES

OC: 250, RMV

Boston

Thomas M. Menino, Mayor

February 15, 1994

L1

Mr Charles P. Buckley
Vice President, Engineering
Boston Gas Company
201 Rivermoor Street
West Roxbury, Massachusetts 02132

Dear Mr. Buckley:

RE: NEW CHELSEA STREET BRIDGE OVER CHELSEA CREEK

Over a number of years, discussions have taken place with government agencies, utility companies and abutters concerning the eventual replacement of the Chelsea St. Bridge and proposed dredging of Chelsea Creek. Since one of the key utilities which could be impacted is the gas line under Chelsea Creek, this letter is intended to provide you with current information on the project. **L1-1**

In 1992, the U.S. Coast Guard issued an Order To Alter the Chelsea St. bridge to the City of Boston to correct an unreasonable obstruction to navigation. The City was directed to provide a moveable span with an unobstructed horizontal clearance of 380 feet which is obviously predicated on a proposed widening of the present 95 foot Chelsea Creek channel. In early 1993, the City requested Qualifications for design services from engineering firms and short-listed three firms for further consideration pending funding availability. In late 1993, the U.S. Coast Guard notified the City that funding authorization for design was approved and the City is currently accepting proposals from the previously short-listed engineering firms. It is expected that design of the new Chelsea St. facility will be underway in 1994.

Should you have any questions on the above information or have any issues which you feel need to be addressed during the bridge design phase, please call Peter Scarpignato of my staff at 625-4968. Thank you for your cooperation.

Very Truly Yours,

JOSEPH F. CASAZZA
Commissioner of Public Works

JFC/PS/jjf

PUBLIC WORKS DEPARTMENT / Boston City Hall / City Hall Plaza 02201
Joseph F. Casazza, Commissioner, 635-4900
Robert P. Mehegan, Executive Secretary, 635-4901
FAX 635-7499

L1-1

Since February 15, 1994, the Corps and Massport have coordinated project activities with all involved utility owners and with the City of Boston and the U.S. Coast Guard on the proposed replacement of the Chelsea Street Bridge.

Boston Redevelopment Authority

Thomas M. Menino, Mayor
Clarence J. Jones, Chairman
Marisa Lago, Director

JUN 16 1994

L2

Secretary Trudy Coxe
Executive Office of
Environmental Affairs
MEPA Unit
100 Cambridge Street
Boston, MA 02202

Colonel Brink P. Miller
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254

Dear Secretary Coxe and Colonel Miller:

Re: Boston Harbor, Massachusetts Navigation Improvement and Berth Dredging Project (EOEA #8695)

Pursuant to regulations implementing the Massachusetts Environmental Policy Act (301 CMR 11.00) and the National Environmental Policy Act (42 USC 4321 et seq.), the Boston Redevelopment Authority (BRA) has reviewed the Draft Environmental Impact Report/Statement for the above-referenced project and would like to submit the following comments.

The proposed Boston Harbor Navigation Improvement and Berth Dredging Project encompasses the deepening of the tributary channels (Reserved Channel, Mystic River Channel, and Chelsea Creek Channel) and two areas in the Main Ship Channel (Inner Confluence and the mouth of the Reserved Channel) to provide sufficient ship maneuvering area for the deepened channels and the dredging of associated berthing areas along these channels. The channels will be deepened to -40 ft. MLW (except Chelsea Creek, to -38 ft. MLW) to allow greater use of the hitherto underutilized Entrance Channel and Main Ship Channel and to accommodate the newer generation of deeper draft ships. The project will be carried out by the U.S. Army Corps of Engineers and by Massport, the local sponsor of the project. Approximately 1.3 million cubic yards (cy) of silt, 2 million cy of parent material (primarily Boston Blue Clay), and 130,000 cy of rock will be removed.

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Affirmative Action Employer
Equal Housing Opportunity

Disposal of the underlying parent material is proposed at the Massachusetts Bay Disposal Site. For the overtopping, contaminated silt material, several disposal alternatives are identified, all of which involve aquatic sites within Boston Harbor or Massachusetts Bay, including in-channel locations. During the course of the study, a considerable number of additional disposal sites, both land-based and aquatic, were evaluated, but most were eliminated from consideration for environmental, cost, or other reasons.

Overview

The proposed navigation improvement and dredging project is essential in order to maintain the economic viability of Boston Harbor. The greatest challenge of this project is the proper disposal of the over one million cubic yards of silt which is substantially contaminated with high levels of heavy metals, PCBs, and PAHs, thus precluding unconfined ocean disposal, the traditional approach for the disposal of dredge spoils. Tests undertaken during the preparation of this Draft EIR/EIS to characterize the extent of contamination have revealed levels higher than those known to have an adverse effect on marine organisms. Therefore, the application of proper dredging techniques as well as the appropriate disposal of these polluted sediments is vital to ensure the protection of the harbor's marine resources and the preservation of the improving quality of the harbor's waters.

With respect to the extent of the proposed navigation improvements, it would appear that the recommendations of the Shiphandling Simulation Study (or at least most of them) have been incorporated into the project (one example is the expansion of the -40 foot MLW dredging in the Main Ship Channel just south of the Inner Confluence). This should be more specifically confirmed in the Final EIR/EIS. L2-1

Preferred Disposal Options

The six preferred practicable alternatives for the disposal of the contaminated silts include the Massachusetts Bay Disposal Site (with capping), Boston Lightship (also with capping), Meisburger 2 and 7, Spectacle Island CAD, and capping in-place in trenches within the tributary channels to be dredged.

Currently, the disposal of contaminated dredged material, with or without capping, is prohibited of the Massachusetts Bay Disposal Site (MBDS), until such time as capping can be shown to the effective. In spite of the fact that the Corps appears to believe that capping at the MBDS can be successful, too many uncertainties remain, including the feasibility of capping at the great depth of the MBDS. Another important consideration is the proximity of the MBDS to the Stellwagen Bank National Marine Sanctuary, which is visited by numerous endangered and threatened marine species. Therefore, until capping can be shown definitely to be effective, we are opposed to any disposal of unsuitable silt material at the MBDS. L2-2

Similarly, we are opposed at this time to the dumping of contaminated sediments at the Boston Lightship site, even with capping. The waters around this site are heavily used by commercial fishermen, and dumping activities could severely impact commercial fishing activities which already are suffering major economic pressures. Further, radioactive wastes previously were disposed of in the area, and the impact of dumping on these wastes is not known. Consequently, we do not feel that Boston Lightship would be an appropriate site for disposal. L2-3

Due to interpretation differences (Appendix G, pp G-2-G-3), the Corps believes that the silt material from a number of berthing areas to be suitable for unconfined open water disposal, whereas the EPA disagrees. To be conservative, the EPA determination should be followed and none of the silt material should be disposed of at the MBDS or at Boston Lightship. L2-4

We do believe that the best and most environmentally-beneficial option of the identified preferred alternatives would be in-channel disposal at the dredging sites. This would allow the sediment essentially to remain where it is found, but be capped by the underlying parent material. With this option, the impacts of dredging and disposal would be contained at the dredging site, and no impacts would need to occur at one or more off-site locations. Extra care would need to be taken to minimize to the maximum extent possible turbidity and the dispersion of sediment, since most of the dredging and disposal would take place at the same location. We recognize that in-channel disposal would accommodate only a little over half the 1.3 million cubic yards of silt material requiring disposal. For the residual, we recommend disposal at either Meisburger 2 or Meisburger 7, with capping with clean material. L2-5

We further recommend that whenever possible, and when not required for capping purposes, the project proponents use the clean dredged materials for beneficial reuse (e.g., landfill closure) rather than disposing them at the Massachusetts Bay Disposal Site. L2-6

New Technologies

We also encourage the investigation of new technologies for the remediation of contaminated sediments. Studies by the EPA and the Corps of Engineers in the Great Lakes region and elsewhere have demonstrated the technical effectiveness of some new technologies, some of which may be applicable to the Boston Harbor sediments. The feasibility of using any existing or new technologies developed abroad, in Europe or Asia, also should be explored. While the cost of treatment technologies may be higher than the selected disposal alternatives, they are comparable with some of the shoreline disposal options considered by Massport/Corps to be potentially practicable. Future costs could be considerably less as the technologies are further developed. Their applicability to future maintenance dredging needs, therefore, should be kept open for consideration and possible implementation. L2-7

Long-Term Maintenance Dredging

In addition to addressing the disposal needs of the navigation improvement and berth dredging project, the DEIR/DEIS also addressed the disposition of future maintenance material from the deepened channels over a 50-year project life. It is estimated that 4.4 million cy of material would be dredged and would consist primarily of silt. For purposes of the disposal alternatives analyses, it was assumed that the material could contain elevated levels of contaminants and thus would require disposition in a confined site. For the disposal of the maintenance dredging material, the project proponents determined that a number of additional sites (in addition to the six preferred alternatives) would be potentially practicable alternatives, including several shoreline sites in Charlestown and South Boston and lined landfills. Treatment technologies also were considered feasible.

The shoreline sites include the Amstar, Little Mystic Channel, Mystic Piers, and Revere Sugar sites in Charlestown and the Reserved Channel (on the inner side of the Summer Street Bridge) in South Boston. The sites would be either filled (with capping) to equal the elevation of the adjacent land or be converted into a subtidal salt marsh area. While these sites may be appropriate for consideration as disposal areas, we strongly feel that only clean sediments should be deposited at these sites. Because of the proximity of several of the sites to residential and other sensitive uses, as well as legitimate neighborhood concerns and perceptions, we would be opposed to the disposal of any contaminated sediments at these locations, even with capping. L2-8

Although the environmental impacts of disposal at these shoreline sites are evaluated in this DEIR/DEIS, actual disposal at one or more of these sites will require several permit reviews, including Chapter 91 Waterways License, CZM consistency review, and an Order of Conditions from the Boston Conservation Commission, among others. Notwithstanding, we would recommend that when a decision is made in the future to use a particular site (or sites) for disposal, a Notice of Project Change be filed with the MEPA Office (and any similar notification be filed by the Corps) to determine whether, in the light of any changes in environmental conditions or other factors, any further environmental review would be necessary. L2-9

With regard to specific sites under consideration, we note that in the discussion of the Little Mystic Channel (pp 3-41ff and Attachment 1, pp A1-51ff) there is no specific mention of the several sensitive receptors adjacent to the proposed disposal site, including the Charles Newtowne public housing project, a City of Boston playground, and the Charlestown High School recreational field. (The proposed future use of this site for the disposal of possibly contaminated sediments also raises the issue of environmental equity, since a low-income public housing development is located adjacent to the proposed disposal area.) L2-

Public Participation

We also feel that it is extremely important, and essential, that prior to the selection and use of any shoreline site, there be adequate notification to and review with the affected community. The Corps and Massport must ensure that there be full and comprehensive public participation in the selection process and that all affected parties, and particularly neighboring residents, have ample opportunity to express their concerns and that these concerns be properly addressed. This community review must be undertaken as early in the evaluation process as possible. To date, we are not aware that any contact has been made with any of the communities near any of these sites. L2-11

Cost/Benefit Analysis

Cost estimates of the various options may not be entirely valid or realistic, since certain non-Federal costs (e.g., acquisition costs of lands for disposal, costs of construction of disposal sites) are not included. Similarly, in-channel disposal does not include the disposal costs of the remaining parent material. While limiting costs of the Federal share may be necessary to determine the cost/benefit ratio for Federal funding purpose, the other costs must be borne by the local sponsor. For a realistic comparison of the options, total costs should be compared in the evaluation. L2-12

Furthermore, the costs of potential environmental harm and remediation, such as the contamination of seafood and clean-up expenses from the disposal of containments into the marine waters, and the likely effects of the dredging/disposal on other segments of the economy, such as recreation (e.g., whalewatching) and commercial fishing, also should be factored into the cost/benefit analysis. L2-13

One specific comment with regard to cost/site selection. The screening process of practicability determined that costs in excess of 4 times that of ocean disposal would be prohibitive. According to Figure ES-3, all of the Charlestown and South Boston shoreline sites have cost ratios greater than this threshold. However, these same sites also are listed in Table ES-1b as potentially practicable for future harbor maintenance disposal needs (and the Little Mystic Channel also for this dredging project). This apparent discrepancy should be clarified in the Final EIR/EIS. L2-14

Dredging Operations

The avoidance of adverse environmental impacts, particularly on marine resources, is of utmost importance in the implementation of this navigation improvement and berth dredging project. Extreme care will need to be taken to minimize environmental disruption, especially the resuspension and release of contaminants into the marine waters. Problems such as those which occurred at the recent dredging by Massport at the Moran Terminal must not be tolerated. The most environmentally effective equipment for dredging and disposal must be used and this equipment must be operated properly by project personnel with adequate training. Further, we believe L2-15

that it is essential that an independent observer be present at each work site to confirm that the work is being properly performed and that permit requirements are being met at all times. This observer should have the authority to stop further work if a violation is seen, until the violation is corrected.

The blasting of the bedrock has the potential for extensive mortality of fish and invertebrates. While this impact is identified (pg. 4-12), no mitigation measures are proposed to limit the potential extent of the kills. Means are available to keep fish from the blasting area (e.g., the use of behavioral stimuli such as strobe lights, electric fields; and bubble curtains, and physical barriers such as nets, steel mesh, and silt curtains). Appropriate mitigation measures should be described in the FEIR/FEIS and specific commitments made to employ such measures. L2-16

Noise and odor impacts also will occur from the dredging activities, and could adversely impact residential areas located near the dredging operations. Again, appropriate mitigation must be committed to by the project proponents. In addition, there is no recognition of the odor impacts from disposal at a shoreline site (such as Little Mystic Channel). The foul smell of the dredged material could adversely affect adjacent residences and other sensitive receptors and must be evaluated and mitigated. L2-17

Conclusion

The preparation of this Draft EIR/EIS has involved an extensive sediment sampling and testing program to characterize the material to be dredged as well as a comprehensive disposal alternatives analysis screening process to identify appropriate and practicable options for the disposal of the silt material, the parent material and rock, and the future maintenance material. To assist the Corps and Massport in the design and planning of these studies and the environmental evaluation, a public advisory process involving key agencies and interest groups (but lacking community representation) was established and meetings were held throughout the course of the study. Through this process, a considerable number of issues were reviewed and resolved prior to the submission of the Draft EIR/EIS. We believe that on the whole this has been a highly successful procedure. Nonetheless, a number of issues do remain for further resolution, which we have detailed above. We therefore anticipate continued cooperation with the Corps and Massport as this project further develops and look forward to reviewing the Final EIR/EIS document.

Sincerely,

Brian DeLorey

Brian DeLorey
Assistant Director for Economic Development

cc: Norman Faramelli, Massport (Environmental)
Janeen Hansen, Massport (Maritime)

SLTR/132/061594/6

L2-1

The preferred project design incorporates most of the recommendations from the ship handling simulation study.

L2-2

The MBDS is not being considered for the disposal of sediments found to be unsuitable for unconfined open water disposal through chemical, physical or biological testing. Because of the restriction placed on the MBDS, no disposal at the MBDS will occur until the efficacy of capping or other management technique has been demonstrated.

L2-3

The use of the Boston Lightship for disposal of contaminated sediments was reevaluated in the FEIR/S (Section 4). It was not found to be among the least environmentally damaging alternatives.

L2-4

Although the difference in interpretation regarding the suitability of certain sediments for unconfined open water disposal was discussed in the DEIR/S, <u>all</u> silt to be dredged for the BHNIP was considered in the DEIR/S to be unsuitable for the purposes of identifying sufficient disposal capacity. The FEIR/S continues to consider all silt from this project to be unsuitable for unconfined open water disposal.

L2-5

The reevaluation of aquatic disposal sites concluded that the in-channel disposal option was one of the least environmentally damaging alternatives. This alternative has been redesigned based on subbottom geological conditions so that it is capable of containing the entire quantity of silt to be dredged in the BHNIP. There is currently no proposal to dispose of BHNIP silt at either of the Meisburger sites.

L2-6

The BHNIP team agrees that beneficial use of the parent material is more desirable than disposal at the MBDS. The suitability of this material for landfill closure is discussed in Section 3.0.

L2-7

The BHNIP team is in agreement that innovative treatment and dredging technologies be considered to the fullest practicable extent (Section 3.0 and Appendix D). The future refinement of existing innovative treatment technologies and introduction of new concepts could be applied to future maintenance dredging activities in Boston Harbor. This would be particularly important if the costs for treatment become lower with further technological development. For this reason sediment remediation holds a promising future.

Exploitation of new dredging technologies will be a high priority in the planning and implementation of future maintenance dredging projects. The proposed current activities will employ the most effective, proven, and cost effective techniques available.

L2-8

The chemical quality of the shoreline sites under consideration for disposal of dredged silt is similar to that of the adjacent water body, the areas proposed for dredging. Partially filling these sites with silt from nearby areas and then capping them would not compromise the existing ecological conditions. The pier sites are surrounded by maritime uses. Although these sites were found to be among the least environmentally damaging, none were selected as the preferred alternative.

L2-9

Any future maintenance dredging would require an independent environmental review process. The purpose of discussing future maintenance activities in this document are to insure that foreseeable cumulative impacts are accounted for.

L2-10

While it is true that there are sensitive receptors including housing and recreational areas adjacent to Little Mystic Channel, this site was not found to be the Least Environmentally Damaging Practicable Alternative. Therefore, there is no impact on environmental equity.

L2-11

NAI, Several notices and public meetings were held during and after the release of the draft EIR/S for public comment. Section 1.0 of the final EIR/S describes the public process.

L2-12

Cost estimates for the various disposal sites include the cost of construction of disposal sites. Land acquisition costs are not included because their variability. Land acquisition costs would increase the unit cost of an upland disposal site from $1 to $10 or more. Parent material is anticipated to go to the MBDS for all alternatives so that would not alter the cost significantly between alternatives. Total costs were used for comparing alternatives.

L2-13

The Corps is required to follow strict policy guidelines on determining the cost/benefit ratio for a civil works project. Impacts to the environment (except for mitigation costs) and the recreational industry, if any, are not included. However the purpose of an EIR/S is to address those concerns and discuss the impacts from various alternatives, so that an informed decision is made regarding dredged material disposal. Proper management techniques would be employed to avoid losses to fishing and whale watching businesses.

L2-14

The cost analysis presented in the DEIR/S was based on comparison to disposal at the MBDS. The cost analysis in the FEIR/S is based on comparison to the cost of the least environmentally damaging alternative. This is further described in Section 4.

L2-15

The BHNIP preparation team agrees with this comment. The experience gained from the Moran Terminal dredging project (as well as from others) is valuable in recognizing potential problems that may be encountered during the BHNIP. This is particularly applicable to the dredging of contaminated silt where the risk of environmental impacts is greatest. Consequently, the BHNIP dredge management plan will include dredging contractor requirements relating to operator training. This training will emphasize appropriate dredging techniques involving contaminated sediments to minimize environmental impacts as well as compliance with permit conditions. The Dredge Management Plan is discussed in detail in Section 5.0.

However, due to legal liabilities, the Corps can not allow an independent observer on board a dredge with authority to stop dredging. Observers may inspect the dredging and disposal operations. If there is a concern during construction, it can be brought to the attention of the Corps inspector who will take the necessary action.

L2-16

The Dredge Management Plan discusses measures to protect fish during blasting.

L2-17

Odor issues are addressed in Section 5.8.3.3 of the FEIR/S.

Boston Water and Sewer Commission

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Boston, MA 02210-1700
617-330-9400
Fax 617-330-5167

L3

May 23, 1994

Secretary Trudy Coxe
Executive Office of Environmental Affairs
20th Floor
100 Cambridge Street
Boston, MA 02202

Attention: MEPA Unit

Re: Boston Harbor Navigation Improvement and Berth Dredging Project, DEIR, EOEA #8695

Dear Secretary Coxe:

The Boston Water and Sewer Commission has reviewed the Draft Environmental Impact Report for the proposed Boston Harbor Navigation Improvement and Berth Dredging Project. This project consists of dredging of three tributary channels (the Mystic River Channel, the Reserved Channel and the Chelsea Creek Channel) and two areas in the Main Ship Channel (Inner Confluence and the mouth of the Reserved Channel). Twelve berth areas and one intake structure will also be dredged as part of the project. Massport and the U.S. Army Corps of Engineers are undertaking this project to deepen the channels and berthing areas for improved navigation.

The project also involves the disposal of approximately 3.5 million cubic yards of sediments removed as part of the proposed Improvement Project, and the disposal of 4.4 million cubic yards of sediments which will be removed from the channels as part of ongoing maintenance over the next 50 years. Removal of sediments from the channels for maintenance purposes will be required regardless of whether the Boston Harbor Navigation Improvement Project is approved.

Of the total 7.9 million cubic yards of sediments to be removed for both projects, about 5.7 million cubic yards are believed to be contaminated.

Six alternatives for the disposal of the sediments are identified in the DEIR with the Massachusetts Bay Disposal Site (MBDS), the Boston Lightship, Meisburger sites 2 or 7, and Spectacle Island CAD identified as the preferred disposal alternatives.

The Commission has the following comments regarding the proposed Boston Harbor Navigation Improvement Project:

1. The pre-dredge utility survey should include an inventory of all the Commission's CSOs and storm drain outlets in the vicinity of the proposed dredging. Detailed plans which show the location of the proposed dredging and blasting in the vicinity of the Commission's CSO or storm drain outlets should be provided to the Commission. The proponent should also provide the Commission with a written discussion as to how the CSO and storm drain outlets will be protected from damage or obstruction during dredging and blasting. L3-1

2. Selection of any one of the preferred alternatives (Massachusetts Bay Disposal Site, the Boston Lightship, Meisburger sites 2 or 7, and Spectacle Island CAD) for the disposal of the dredged sediments will have no impact on BWSC facilities. However, should the Little Mystic Channel or Reserved Channel Aquatic Shoreline sediment disposal alternatives be selected, several CSOs and/or storm drains will have to be relocated or diverted. In the event that one or both of these alternatives is selected, the project proponent will be responsible for all aspects relating to the relocation and/or diversion of any Commission owned outlet. In addition, detailed construction plans for the relocation and/or diversion of any Commission owned outlet must be provided to the Commission for review and approval prior to construction. The relocation or diversion of any Commission outlet must be constructed in accordance with the Commission's Sewer Use and Site Plan requirements. L3-2

3. Relocation of MWRA facilities will be required as part of the proposed project. These include relocation of a water tunnel across the lower Chelsea River and relocation of two water tunnels and a sewer siphon across the upper Chelsea River. Copies of the proposed relocation/ construction plans should be provided to the Commission for review prior to construction. L3-3

4. The Final EIR should include a discussion of how and where the dewatering of the dredged sediments is to take place. L3-4

The information indicated above should be provided to the Commission before commencing work.

Thank you for the opportunity to comment on this project.

Yours truly,

John P. Sullivan, Jr., P.E.
Chief Engineer

JPS/AK/ak

cc: B. Miller, U.S. Army Corps of Engineers
L. Blank, BWSC
S. Shea, BWSC
J. Foley, BWSC
R. Mertens, BRA
R. Kobayashi, MWRA

L3-1

A coordination meeting with MWRA was held and correspondence was initiated to identify MWRA crossings, permit requirement schedules and construction activities. Close coordination between BWSC and Massport will ensure that the BWSC facilities will receive adequate protection during dredging, blasting and disposal operations.

L3-2

The preferred disposal alternative for the BHNIP, In-channel, will avoid filling shoreline areas and, so, will not impact CSOs or storm sewers.

L3-3

A coordination meeting with MWRA was held and correspondence was initiated to identify MWRA crossings, permit requirement schedules and construction activities.

L3-4

Dewatering is discussed in Section 4.0 and Appendix 1 of the DEIR/S.

CAPE COD COMMISSION

3225 MAIN STREET
P.O. Box 226
BARNSTABLE, MA 02630
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FAX: 508-362-3136

L4

May 18, 1994

Brink P. Miller, Colonel
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, Massachusetts 02254

Dear Colonel Miller:

The staff of the Cape Cod Commission, a regional landuse planning and regulatory agency serving the 15 towns of Barnstable County, have reviewed the Draft Environmental Impact Report/Statement (DIER/S) for the Boston Harbor Navigation Improvement and Berth Dredging Project, and offer the following comments for your consideration.

The Commission staff believes it is important to make navigational improvements to Boston Harbor that will help to ensure safe passage of marine vessel traffic. This is particularly important given the fact that much of New England's petroleum supply is shipped into and out of the Port of Boston. At the same time, the project should be conducted in an environmentally sound manner, and the disposal location for the dredged material should be chosen based primarily on the environmental costs and benefits.

The Commission staff believes that the dredged materials from the Boston Harbor project, almost one-half of which have been identified as being contaminated silts, should be disposed of in-harbor or as close to the harbor as possible. This will decrease the possibility of transporting contaminants into the larger Massachusetts and Cape Cod bays system. The bays support resources of national and state significance, not the least of which is the federally designated Stellwagen Bank National Marine Sanctuary. The conservation and management of these resources should not be compromised by the Boston Harbor project. L4-1

At the present time, neither the federal or state environmental agencies have factual information on the stability of capped contaminated sediments in oceanographically dynamic sites. For these reasons, the Commission staff recommends that the Massachusetts Bays Disposal Site (MBDS) and the Boston Lightship site be dropped from further consideration for disposal of dredged materials from the Boston Harbor project. L4-2

The Commission staff recommends that the Army Corps of Engineers and

MASSPORT more fully evaluate the in-harbor and near harbor disposal options. The staff recommends that the final EIR/S evaluate the options of contained nearshore disposal sites, as well as more fully evaluate the use of near harbor borrow pits as a disposal option for contaminated materials from Boston Harbor. The Commission staff recommends that the federal and state regulatory agencies work cooperatively on identifying the legal and policy issues which need to be addressed to allow one or more contained disposal sites within Boston Harbor. L4-3

Finally, the Cape Cod Commission staff recommends that the final EIR/S include an analysis of the management/monitoring needs for the preferred disposal sites. This information is needed to fully evaluate the environmental costs and benefits of each of the alternatives. L4-4

Thank you for the opportunity to comment at this public meeting. If you have any questions concerning these comments, please contact Commission staff member Patricia Hughes.

Sincerely,

Armando J. Carbonell
Executive Director

cc:
County Commissioners
Cape Cod Commission
Assembly of Delegates
Cape Cod Legislative Delegation
Congressman Gerry Studds
Senator Edward Kennedy
Senator John Kerry
Trudy Coxe, Secretary, EOEA
Kymberlee Keckler, EPA
Peg Brady, MCZM

L4-1

The alternative disposal locations that were found to be among the least environmentally damaging included upland locations and locations within Boston inner harbor in the FEIR/S (Section 4). In-channel disposal was identified as the preferred alternative.

L4-2

Neither the MBDS nor the Boston Lightship has been identified as the preferred alternative for disposal of silts dredged during the BHNIP. Either site could be reconsidered for future projects if capping is demonstrated to be effective in these water depths.

L4-3

In the reevaluation of potential disposal sites, the in-channel and the partial-fill shoreline scenarios were found to be the least environmentally damaging aquatic alternatives (Section 4) and the In-channel alternative was identified as the preferred alternative.

L4-4

Section 5.7, *Long Term Monitoring of Disposal Sites,* addresses the monitoring needs of the preferred disposal site.

CAPE COD COMMISSION

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L5

June 3, 1994

Brink P. Miller, Colonel
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, Massachusetts 02254

Dear Colonel Miller:

The Cape Cod Coastal Resources Committee, comprised of a representative from each of the 15 Cape Cod towns and from relevant county and federal resource management agencies, and advisory to the Barnstable County Commissioners and the Cape Cod Commission, would like to offer the following comments for your consideration regarding the Boston Harbor Navigational Improvement Project.

Two years ago, the Committee urged the Cape Cod Commission to oppose the designation of the Massachusetts Bays Disposal Site (MBDS) due to its potential use for the disposal of contaminated dredged materials. In an October 1992 letter to the Massachusetts Coastal Zone Management Office, the Commission said, " The combination of the number of Boston Harbor projects, political pressures to expedite permitting and reduce the costs for projects, and historic use and violations at the site provide no assurances, in our opinion, that contaminated materials will be prohibited from the MBDS." We are therefore very concerned that now, in 1994, the Army Corps of Engineers has proposed this offshore site as a preferred alternative for the disposal of contaminated dredged materials from the Boston Harbor project.

The Committee supports the proposal to make navigational improvements to Boston Harbor to ensure safe passage of marine traffic entering and exiting the harbor. The Committee recognizes the importance of environmental safety in the transport of materials, in particular chemicals and petroleum products. At the same time, the Committee believes this project should be conducted in an environmentally sound manner, and the disposal location for the dredged material should be chosen based primarily on the environmental costs and benefits.

The Committee opposes the disposal of dredged materials from the Boston Harbor project, almost one-half of which have been identified as being contaminated silts, at the Massachusetts Bays Disposal Site or the Boston Lightship. The Committee believes that the materials should be disposed of in-harbor or as close to the harbor as possible. Doing this will decrease the possibility of

L5-1

transporting contaminants into the larger Massachusetts and Cape Cod bays system. The bays support resources of national and state significance, in particular the Stellwagen Bank National Marine Sanctuary. The conservation and management of these resources should not be compromised by the Boston Harbor dredging project.

The Committee recommends that the Army Corps of Engineers and MASSPORT more fully evaluate the in-harbor and near harbor disposal options. The Committee recommends that the final EIR/S evaluate the options of contained nearshore disposal sites, as well as more fully evaluate the use of near harbor borrow pits as a disposal option for contaminated materials from Boston Harbor. L5-2

In addition, the Committee urges the mandated federal and state regulatory agencies to work cooperatively on identifying the legal and policy issues which need to be addressed to allow one or more contained disposal sites within Boston Harbor. These include the application of the Massachusetts Wetlands Protection Act and the state tidelands licensing authority under Chapter 91 of Massachusetts General Law. The Committe believes it is important to address this issues now, to avoid revisiting them in the future when considering either a new, or maintenance dredging project. L5-3

Thank you for considering these comments.

Sincerely,

Mark Zivan

Mark Zivan
Chair

cc:
County Commissioners
Cape Cod Commission
Assembly of Delegates
Cape Cod Legislative Delegation
Congressman Gerry Studds
Senator Edward Kennedy
Senator John Kerry
Trudy Coxe, Secretary, EOEA
Kymberlee Keckler, EPA
Peg Brady, MCZM
Center for Coastal Studies
Association for the Preservation of Cape Cod

L5-1

The alternative disposal locations that were found to be among the least environmentally damaging included upland locations and locations within Boston inner harbor in the FEIR/S (Section 4). The FEIR/S does not propose the disposal of silts at MBDS or BLS from the BHNIP.

L5-2

As stated in response to comment L5-1, the in-channel and shoreline (partial fill) sites were found to be the least environmentally damaging aquatic sites. The borrow pit sites were all found to support substantial biological resources and were, therefore, considered to be less desirable alternatives. Details regarding this analysis are included in Section 4.

L5-3

The BHNIP team has worked closely with regulatory agencies during the development of the FEIR/S to ensure that legal and policy issues were properly addressed.

The City of Chelsea, Massachusetts

L6

June 28, 1994

Brink P. Miller, Colonel
Corps of Engineers
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254

Re: DEIR/DEIS Boston Harbor, Massachusetts Navigation Improvement Project & Berth Dredging Project, EOEA 8695

Dear Ms Coxe,

The City of Chelsea is appreciative of the opportunity to comment on the Draft Environmental Report/Draft Environmental Impact Statement for the Boston Harbor and Berth Dredging Projects. The City is aware of the important role that Boston Harbor and shipping play in the region's economy and is pleased to play a role in planning for the proposed projects.

We have reviewed the DEIR and have comments relating to the public participation process, the potential blasting at the inner confluence, and the impact of the project on land based traffic. Our comments are as follows:

Public Participation Process

The City was not fully included in the public participation process. The DEIR indicates that an advisory committeee was established in 1992 to aid in the preparation of the report. A number of organizations were invited to participate, including the City of Boston; however, the City of Chelsea was not included on the invitation list. This oversight is confusing because it conflicts directly with Massport's stated reason for establishing the advisory committee, which is stated in the DEIR as follows: L6-1

Chelsea Department of Planning and Community Development
Robert J. Luongo, Executive Director
City Hall, 500 Broadway, Chelsea, Massachusetts 02150 • Telephone: (617) 889-8233, Fax: (617) 889-8357

"Massport recognized that large projects which may impact the public can no longer be accomplished unilaterally There was a consensus that the success of the project depended on involving key groups effectively. ... Key parties needed to be identified which either had a stake in the outcome (regulatory agencies, environmental groups, and harbor users), or could provide useful information to Massport, its consultants and the Corps. Effective involvement of these parties required that they be consulted early, that they be provided timely information on the progress of the project, and that they have the opportunity to present diverse points of view."

The report indicates that several sites in the City were considered for disposal of the dredged material, that dredging will occur within the City's boundaries, and that a permit will be required from the Chelsea Conservation Commission. It appears that Chelsea is very much a 'key party' in this project.

The City has a duty and an interest in participating in all projects that affects the community or its residents. We would very much like to be more fully involved in the advisory committee for this project.

Blasting

The DEIR indicates that there will be blasting in the Inner Confluence for rock removal; however, the impact of this blasting on shipping or land based structures is not analyzed. A water taxi operates out of Chelsea from O'Malley Park/Admiral's Hill with connections to Charlestown, the North End, Downtown Boston, Long Wharf and the airport. The impacts of the blasting on the water taxi, other shipping activities, and on land based structures should be addressed in the report, with appropriate mitigation measures described in detail. L6-

Chelsea Department of Planning and Community Development
Robert J. Luongo, Executive Director
City Hall, 500 Broadway, Chelsea, Massachusetts 02150 • Telephone: (617) 889-8233, Fax: (617) 889-8357

Impact on Land Based Traffic

The report addresses the impact of the dredging on water activities only. There is little discussion of the potential impacts on land side activities. For example, the DEIR indicates that the project will cause delays to shipping traffic; however, there is no assessment of the impact on land based traffic. There is no indication in the report if the movement of the dredging ships and barges will require opening of the Chelsea Street and McArdle Bridges. These bridges carry a significant amount of traffic between Chelsea, the North Shore and Logan Airport: frequent opening/closing of the bridges will have a significant impact on traffic in Chelsea and East Boston, causing traffic delays and negatively impacting the regional economy. This issue should be addressed in the report with appropriate mitigation measures discussed in detail. L6-3

The City also wishes to reiterate a statement made earlier in the review process that we would be opposed to movement of the dredged material by truck on the City's streets. Chelsea is a densely developed city that faces severe impacts from heavy vehicles. We wish to avoid any potential impacts from trucking of dredged material.

The City is eager to work with the Commonwealth and the Army Corps of Engineers on this project and to be involved with the environmental review. If you have any questions or seek clarification of the statements made in this letter, please feel free to contact me.

Sincerely,

John W. DePriest, AICP
Project Manager, Traffic & Transportation

Cy: Trudy Coxe

Chelsea Department of Planning and Community Development
Robert J. Luongo, Executive Director
City Hall, 500 Broadway, Chelsea, Massachusetts 02150 • Telephone: (617) 889-8233, Fax: (617) 889-8357

L6-1

The Advisory Committee, Working Group and public participation process for the BHNIP is discussed in Section 1.0 and Appendices B and C.

L6-2

Blasting would occur during a short period of time on an infrequent basis. Prior to blasting, warnings would be given to other boats in the area. Several minutes would be needed between the warnings and the blast when all boat traffic would be stopped in the area. The blasting schedule is anticipated to work around the ferry schedule. No impacts to land based structures is expected. However, a pre-blast and post-blast inventory will be conducted by the contractor who would be responsible for any damages.

L6-3

The following is an example of the anticipated opening and closing of the Chelsea Street and McArdle Bridges. Additional detail can be found in Appendix J. The Chelsea Street Bridge is anticipated to open and close four times a day for the first month of construction. The following month and 1/2 the bridge is anticipated to open and close eight times a day. No bridge activity is expected for the next six months. The following three months both the Chelsea Street and McArdle Bridges would open and close four times a day. The last two months only the McArdle Bridge is expected to open and close four times a day.

As the bridge openings can occur within a 24 hour period, impacts to traffic are expected to be minimal and temporary.

City of Everett, Massachusetts
Office of the Mayor

PATRICK R. SCHENA
ADMINISTRATIVE ASSISTANT

CITY HALL 02149
(617) 394-2270

John R. McCarthy
Mayor

L7

May 17, 1994

Brink P. Miller, Colonel, Corps of Engineers
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254

Dear Colonel Miller:

Having reviewed the Draft Environmental Impact Report/Statement including a draft evaluation of compliance with section 404 (b) (1) of the Clean Water Act, for the Boston Harbor, Massachusetts Navigation Improvement and Berth Dredging Project, I would like to make the following comments.

Given the alternatives presented in the study, it would appear the Everett site would be one of the least desirable. As stated the cost would be over 10 times the cost of using unconfined ocean space, in fact, only two land sites would be more costly, Plainville and Fitchburg/Westminster. The capacity which is only 55,000 cubic yards hardly makes a contribution to the overall cubic yardage needed. L7-

I am also concerned with the environmental impact on our shoreline and its affect on marine resources as indicated in table 3-7 and the significant and lasting impacts as projected in table 3-6. L7-

Lastly, I am concerned with the impact this project might have on several potential projects in that area. The rehabilitation of the Monsanto site for general development, proposed upgrading of the shoreline for recreation use by governmental agencies and the general development of that section of Everett for retail and light industry. L7-

L11

The Town of Swampscott
Conservation Commission
Elihu Thomson Administration Building
Swampscott, Massachusetts 01907

RECEIVED
JUN 21 1994
MEPA

June 17, 1994

Ms. Jansen Hansen, Project Manager-Maritime
Massachusetts Port Authority

Re: BOSTON HARBOR NAVIGATION IMPROVEMENT
AND BERTH DREDGING PROJECT #MEPA8695

Dear Ms. Hansen

This Commission has been alerted to the above-named project. By unanimous vote of the Commission we wish to be recorded as unalterably opposed to the use of site Meisburger 2 as a dumping area, as it is only about 5 miles off the coast of Swampscott.

L11-1

Scientific tests have shown that dredging material for Boston Harbor contains certain types of contaminants which would have a potential biological impact on these waters.

Please keep us informed of any further developments regarding this project.

Yours truly,

Lawrence Picariello, Chairman

cc. Swampscott Board of Selectmen
Swampscott Board of Public Works
Representative Douglas Petersen
Senator Walter Boverini
Ms. Trudy Coxe, Secretary
Executive Office Environmental Affairs

L7-1

The Everett site was not selected as the preferred alternative for disposal of silts from the BHNIP (Section 4.0).

L7-2

See response to comment L7-1.

L7-3

See response to comment L7-1.

CITY OF GLOUCESTER

GLOUCESTER · MASSACHUSETTS · 01930

L8

Office of the Mayor

Brink P. Miller
Colonel, Corps of Engineers
Division Engineer
424 Trapelo Road
Waltham, Massachusetts 02254-9149

June 3. 1994

Dear Colonel Miller,

I am writing relative to the Boston Harbor Navigation Improvement Project. I wish to be recorded in opposition to the proposed dump sites for the disposal of contaminated dredge spoil from Boston Harbor.

As the Mayor of a major fishing port, I am fully aware of the necessity of harbor dredging in order to facilitate the needs of the port in its day to day functions. My concerns however, are on the potential permanent damage to the resource and its habitat. The sites as proposed, MBDS. the Boston Lightship, Meisburger2, Meisburger 7, and Spectacle Island CAD, are in an area where a great many lobster traps are set and a great deal of harvesting for both fish and lobster is prosecuted.

L8-1

The ongoing effort to clean Boston Harbor and the ocean would indeed be set back by the proposed dumping of these contaminants. There is an urgent need to protect our environment and not expose our marine life to this danger that would have adverse effects on the echo system. There appears to be too little concern for the important fisheries in the Bay State. especially in view of all the recent happenings in the New England Fishery.

I would urge the powers to be, to reconsider the proposal and seek a better alternative.

Thank you for the opportunity to respond on the proposal.

Sincerely,

Bruce H. Tobey
Mayor

L8-1

The BHNIP team developed equivalent resource data for each of the potential aquatic disposal sites for evaluation in the FEIR/S. The results of these investigations concur with your observation for the Boston Lightship, Meisburger 2 and Meisburger 7. While there was little lobstering activity in the vicinity of Spectacle Island CAD, there was evidence of substantial biological activity. The reevaluation of potential aquatic disposal sites concluded that the in-channel and partial-fill shoreline scenarios were the least environmentally damaging aquatic alternatives (Section 4).

TOWN OF NAHANT, MASSACHUSETTS

OFFICE OF THE

Board of Selectmen

BOARD OF HEALTH – PUBLIC WORKS DEPARTMENT
CEMETERY COMMISSIONERS

ROBERT N. FORMAN CHAIRMAN
RICHARD J. LOMBARD VICE CHAIRMAN
Robert J. McIlveen

TELEPHONE (617) 581-0085
FAX (617) 593-0340

L9

June 3, 1994

Brink P. Miller, Colonel
Corps of Engineers
Division of Engineers
424 Trapelo Road
Waltham, MA 02254-9149

re: Impact Analysis Division
Planning Directorate
Boston Harbor Navigation
Improvement Project and
Berth Dredging Project

Dear Colonel Miller:

The Town of Nahant has received a copy of the Public Notice concerning the above-named project to dredge Boston Harbor. According to the notice, any person who has an interest that may be affected by this dredging and disposal may request a public hearing. On behalf of the Town of Nahant we are requesting a public hearing on the proposed project.

In particular, the Town is greatly concerned about the proposed dumping area for the dredged material. According to the Public Notice one of the proposed disposal sites is directly off the shores of Nahant, in particular, Meisburger 2. The Town is concerned that tidal movement and currents will carry the dredged material from Boston Harbor within the confines of Nahant's territorial waters. We are all aware that Boston Harbor is one to the most polluted harbors in the Northeast even though at the present time the harbor is undergoing a vast project to clear up the polluted waters. Nahant certainly does not want someone else's trash dumped on its doorstep which would affect the ecological balance of the fish and plant life of its waters.

L9-

Accordingly, Nahant requests a public hearing on this proposed project.

Town of Nahant
Board of Selectmen

Robert N Forman

Robert N. Forman, Chairman

RRR

L9-1

Environmental impacts and practicability of using the alternative disposal sites were re-evaluated in the FEIR/S (Section 4.0). The Meisburger sites are no longer being considered for disposal of silts from the BHNIP.

L9-2

A public hearing was held in the Town Hall in Nahant on July 28, 1994.

TOWN OF NAHANT, MASSACHUSETTS 01908

Office of the Town Administrator
Michael C. Wood
(617) 581-9927

L10

Certified Return Receipt

June 1, 1994

Brink P. Miller
Colonel, Army Corps of Engineers
Division Engineer
424 Trapelo Road
Waltham, MA 02254-9149

Dear Colonel Miller:

I am responding on behalf of the Nahant Board of Selectmen relative to the Public Notice dated May 13, 1994, entitled *"Boston Harbor, Boston, Massachusetts Navigation Improvement Project and Berth Dredging Project."*

The Town of Nahant requests a public hearing in accordance with this public notice. The Town was not directly notified of this project, and has not been advised of its impact. As such, we did not have appropriate notice to attend the scheduled public hearings of May 17 and 19. L10-1

The Town of Nahant requests to be directly notified, through its Board of Selectmen, of any and all projects involving Boston harbor and related waterways. Nahant is a community on the North Shore surrounded by water. Any project initiated in this vicinity may affect our community. L10-2

Obviously, the depositing of materials taken from Boston harbor or its related waterways as outlined in the aforementioned public notice may have an impact on our town, and we would like to learn what the project entails and its potential repercussions.

We look forward to your favorable response to our request for a presentation and public hearing.

Very truly yours,

Michael C. Wood

Michael C. Wood
Town Administrator

MCW/sev
cc: Board of Selectmen
SWIM
Conservation Commission

L10-1

A public hearing was held in the Town Hall in Nahant on July 28, 1994.

L10-2

The Corps will notify the Nahant Board of Selectmen of future dredging projects that could affect the community.

L11

The Town of Swampscott
Conservation Commission
Elihu Thomson Administration Building
Swampscott, Massachusetts 01907

RECEIVED
JUN 21 1994
MEPA

June 17, 1994

Ms. Jansen Hansen, Project Manager-Maritime
Massachusetts Port Authority

Re: BOSTON HARBOR NAVIGATION IMPROVEMENT
AND BERTH DREDGING PROJECT #MEPA8695

Dear Ms. Hansen

This Commission has been alerted to the above-named project. By unanimous vote of the Commission we wish to be recorded as unalterably opposed to the use of site Meisburger 2 as a dumping area, as it is only about 5 miles off the coast of Swampscott.

L11-1

Scientific tests have shown that dredging material for Boston Harbor contains certain types of contaminants which would have a potential biological impact on these waters.

Please keep us informed of any further developments regarding this project.

Yours truly,

Lawrence Picariello, Chairman

cc. Swampscott Board of Selectmen
Swampscott Board of Public Works
Representative Douglas Petersen
Senator Walter Boverini
Ms. Trudy Coxe, Secretary
Executive Office Environmental Affairs

L11-1

The reevaluation of the potential disposal sites in the FEIR/S concluded that the Meisburger 2 site would not be the preferred alternative for disposal of BHNIP silts (Section 4).

Town of Swampscott

OFFICE OF THE

Board of Selectmen

ELIHU THOMSON ADMINISTRATION BUILDING
SWAMPSCOTT, MASSACHUSETTS 01907

L12

Robert W. Murphy, Chairman
Daniel R. Santanello, Vice Chairman
Janet N. Baker
Douglas F. Allen
Peter J. Cassidy

June 20, 1994

Patricia E. George
Administrative Assistant
(617) 596-8850
FAX (617) 596-8851

Brink P. Miller, Colonel
Army Corps of Engineers
New England Division
424 Trapelo Road
Waltham, MA 02154

BPM

Dear Colonel Miller:

The Board of Selectmen is extremely concerned about the detrimental effect the Boston Harbor Dredging Project may have on the seaside community of Swampscott.

In order for us to understand every aspect of this project, particularly the possible dumping of hazardous waste at the proposed dump site referred to as "Meisburger Two", we must be provided with all pertinent information as soon as possible. L12-1

We believe that a public hearing on this matter is in order and wish to be directly notified of the date, time and location of the public hearing so that all interested parties may attend. L12-2

We look forward to receiving this important information from you and thank you for your attention to this matter.

Sincerely,

BOARD OF SELECTMEN

Robert W. Murphy
Chairman

RWM/pg
cc Representative Douglas W. Petersen
Congressman Peter Torkildsen
Harbor Advisory Committee
SWIM President William Coffey

L12-1

Environmental impacts and practicability of using the alternative disposal sites were re-evaluated in the FEIR/S (Section 4.0). The Meisburger 2 site is no longer being considered for disposal of silts from the BHNIP.

L12-2

Swampscott participated in the public hearing in Nahant on July 28, 1994.

ENVIRONMENTAL AND ADVOCACY GROUPS

COMMENTS AND RESPONSES

the boston harbor association
for a clean, alive and accessible Boston Harbor

374 Congress Street
Suite 609
Boston, MA 02210-1807
Telephone (617) 482-1722
Fax (617) 482-9750

21 June 1994

E1

Colonel Brink P. Miller
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254-9149

Dear Colonel Miller:

The Boston Harbor Association is a non-profit, public interest group founded in 1973 to promote a clean, alive, and accessible Boston Harbor. TBHA was the first public interest group in the early 1970s to call for the clean up of Boston Harbor, and has closely monitored the clean up project for many years.

TBHA supports an alive and accessible Boston Harbor: alive with people enjoying the harbor (hopefully in the not-too-distant future with thousands of people swimming in the Harbor) as well as an active working Port.

More than 17 million tons of cargo come through the Port of Boston each year. Eighty percent of the cargo which comes through the Port are petroleum products, and more than 30,000 cars move through the Port's terminals. Clearly, an active, viable working Port is key to the economic vitality of the region.

Given the size of modern tankers, the Boston Harbor Navigation Improvement Project and Berth Dredging Project is needed so that basic goods such as food, fuel, and transport can continue to come through the Port of Boston. In addition, the Navigation Improvement Project is needed to allow Boston to remain competitive with other ports in the country, and to continue as a source of jobs for the region.

TBHA has reviewed the Draft Environmental Impact Report/ Statement for the Boston Navigation Improvement and Berth Dredging Project and offers the following comments:

First, TBHA believes that this project can and must be done in an environmentally sensitive manner. Proper dredging techniques as well as the appropriate disposal of dredged materials need to be incorporated into the project.

Our reading of the Draft Environmental Impact Report/ Statement as well as our participation on the Dredging Advisory Committee and in the 17 May 1994 Public Meeting indicate that Massport and the Army Corps of Engineers, the project proponents, intend to incorporate environmental standards and controls into the project.

E1-1

Second, additional attention must be given to new disposal and remediation alternatives. In other parts of the country, alternative technologies have been developed which have been effective in the remediation of contaminated sediments. We commend Massport for its efforts to explore the possible use of these alternatives, and encourage them to continue to do so.

E1-2

Consistent with this, the "Green Ports" legislation recently filed in Congress provides funding for communities to incorporate alternative technologies into their dredging operations, and we urge continued support for passage of this legislation this session.

Moreover, the U.S. Environmental Protection Agency needs to provide leadership in helping to examine alternative technologies and in helping to develop regional solutions to dredge disposal.

Third, the Draft EIR/S lists several practicable alternatives for disposal. We make the following observations:

Unconfined ocean dumping of contaminated sediments, a historic practice for which we are paying the price environmentally, is no longer permitted. The Draft EIR/S recognizes this reality.

E1-3

Disposal of contaminated sediments at the Mass Bay Disposal Site, even with capping, may pose environmental problems, given the depth of the site. Additional analysis and monitoring would be needed before the permitting agencies would allow MBDS to be used for contaminated sediments. Realistically, this option appears more feasible for future harbor maintenance.

Based on the information we have reviewed, clean sediments appear appropriate for disposal at the Mass Bay Disposal Site.

The Boston Lightship site had previously been used for the disposal of radioactive wastes. TBHA urges further study of the radioactivity of the site before it is considered as a disposal site for this project. **E1-4**

TBHA urges that additional analysis occur of Meisburger 2 and 7, specifically of the impacts to fish and shellfish. The Final EIR/S should include additional information on impacts to the fishing and shellfish industries. **E1-5**

TBHA urges further study of the Combined In-Channel locations , such as Chelsea Creek, Inner Confluence, and Mystic River In-Channel. A major concern related to this option is how existing ship traffic will be accommodated at these tributaries, which are actively used by ships. The Final EIR/S needs to clearly explain how ship traffic will be maintained during disposal operations. **E1-6**

The Final EIR/S should address the land-based impacts of the preferred option, such as traffic impacts from bridge openings and closings, and land-based dredge material disposal. We urge that the Final EIR/S provide specific measures on how the project proponent will handle both land and water side impacts. **E1-7**

Fourth, Massport, one of the project proponents, has had recent experience with dredging at Moran Terminal. It found that the environmental clamshell bucket required by the Boston Conservation Commission was not as effective as hoped due to the large number of piles and amount of debris caught in the bucket, preventing it from closing tightly. We support Massport's efforts to develop a **E1-8**

contingency plan to deal with this problem. Also, the development of performance standards for dredging, rather than specifying dredge equipment type, may be more appropriate for incorporation in permits and orders of conditions.

Fifth, TBHA supports the concept of an independent observer to monitor the dredging operation. Other major project proponents such as the Central Artery Project and the MWRA contribute to the cost of hiring independent observers within the City of Boston's Environment Department to monitor compliance with permit conditions, and we urge Massport to do likewise.

E1-9

In closing, we reiterate our strong support for the Boston Harbor Navigational Project, and look forward to receiving the additional information requested above in the Final EIR/S.

Thank you for your consideration.

Sincerely,

Vivien Li
Executive Director

VL: pr

E1-1

A detailed Dredge Management and Monitoring Plan that identifies the procedures necessary to minimize environmental impacts during both dredging and disposal is presented in Section 5 of the FEIR/S.

E1-2

Treatment technologies are discussed in Section 3.0 and Appendix D of the FEIR/S. The Corps is willing to look into practicable technological alternatives for the disposal of contaminated dredged material, when appropriate funding is available. We will continue to work with the U.S. EPA on these new technologies.

E1-3

The BHNIP is not considering disposal of silts at MBDS to be feasible for the current project. Any future use of that site for such materials would require prior demonstration of successful capping. Where feasible, the Corps will investigate capping and other management techniques for the MBDS site.

E1-4

BLS has not been selected as the preferred alternative for the BHNIP. Any future proposals for using BLS for disposal would require coordination with EPA regarding the proported drums of industrial and radioactive waste at this site. Disposal of dredged material at this site to cover these drums may benefit the environment of this area. The EPA should play an active role in researching the locations and environmental status of any hazardous materials at the BLS to determine whether it would be best to leave as is, remove, or cover in place.

E1-5

The fisheries resources of the Meisburger sites were investigated and incorporated into the alternatives analysis. It was determined that other disposal alternatives exist that would have less environmental impact (Section 4).

E1-6

Please refer to the Dredged Material Management Plan in Section 5.0 of the final EIR/S. During the dredging and in-channel operations, normal harbor traffic will be maintained to the maximum extent possible. The proposed in-channel disposal operations will not obstruct the entire channel width at any location within the project. Partial obstruction will be unavoidable. Proper Notification to Mariners will be issued through the US Coast Guard and all construction equipment, including dredges, scows and tugs, will display internationally recognized signals. Vessels will be directed away from active dredging and disposal sites into unobstructed sections of the active channel. The dredges will likely be required to move to

allow larger vessels to pass regardless of the disposal alternative. In-channel disposal operations can be worked around vessel movements since it is not required that a scow remain on location for a lengthy period of time.

E1-7

The proposed disposal alternatives will have little impact on land based activities. However, bridge openings on the Chelsea River will increase to accommodate tug and scow cycles. The in-channel alternative would require additional scow traffic to transport of dredged material from the Reserved Channel to the Chelsea River and Mystic River.

E1-8

The FEIR/S, Section 5.0 Dredging Management Plan and paragraph 5.8.2.2, *Trash and Debris Management*, describe specific contingencies for trash and debris which may be encountered. It is anticipated that specific minimum performance criteria will be incorporated into the conditions of the permits.

E1-9

An independent observer present on board the dredge would not be allowed to control the contract work. However, there may be a measure of liability for the contractor by allowing an independent observer on board that is out of the control of the Corps. Any problems observed can be reported to the Corps inspector who will determine the proper action to be taken. A Corps inspector would be responsible for permit compliance.

CENTER FOR COASTAL STUDIES

A Private Non-Profit Organization for Research, Education and Conservation in the Coastal & Marine Environments

59 Commercial Street • P. O. Box 1036 • Provincetown, Massachusetts 02657 • Telephone: (508) 487-3622

18 May 1994

E2

William C. Scully
Deputy Division Engineer
US Army Corps of Engineers
New England Division
424 Trapelo Rd.
Waltham, MA 02254

Stephen P. Tocco
Executive Director &CEO
Massachusetts Port Authority
Maritime Department
Boston Fish Pier II
Boston, MA 02210

Statement for the May 19, 1994 Public Meeting
Hyannis, Ma

Gentlemen,

Thank you for holding this meeting on Cape Cod and for the opportunity to comment the Draft EIS/EIR for the Boston Harbor, MA Navigation Improvement Project and Berth Dredging Project. As I anticipate submitting a more complete letter of comment on this project, please accept the following brief observations from my initial review of the document.

I suppose I will echo the concerns of many here tonight by voicing opposition to the disposal of contaminated sediments derived from this project at the Massachusetts Bay Disposal Site. I would also caution against the disposal of <u>any</u> dredged materials within the Boston Lightship Area until the EPA and other federal agencies have completed the assessment of past disposal of hazardous and low-level radioactive wastes in Massachusetts Bay. As a member of the EPA's Advisory Committee on Waste Disposal in Massachusetts Bays, I am not satisfied that this effort was ever completed in a satisfactory manner.

ANALYSIS OF DISPOSAL SITE ALTERNATIVES (CHAPTER 3)

Massachusetts Bay Disposal Site (MBDS)
The final designation of the MBDS prohibited the disposal of contaminated sediments, due in part to the depths at the site and its close proximity to the Stellwagen Bank National Marine Sanctuary. Early on, the Stellwagen Bank Coalition Steering Committee, of which I am a member, supported giving NOAA oversight over all disposal activities and the authority to certify (condition or deny) permits to insure that there would be no destruction, loss, or injury to Sanctuary resources. Since the designation process resulted in a re-location of the MBDS, no portion of it falls within the Sanctuary boundaries. However, its close proximity has resulted in the MBDS being defined as an

Impact Category I Site (under ODA), which will require limitations on the use of the site, as necessary ɔ reduce the impacts to acceptable levels.

Thus, as a Category I site, NOAA has the authority to certify disposal permits in order to avoid potential harm to Sanctuary resources. We recommend that they use this authority to the fullest extent to review the current project.

According to the ESA Section 7 Consultation (November 7, 1991) on the designation of the MBDS, the National Marine Fisheries Service's (NMFS) determined that "the final designation of the MBDS will not jeopardize the continued existence of any endangered or threatened species ... However, disposal activities associated with the MBDS may adversely effect some of these species." Their conservation recommendations at the time included the placement of NMFS-approved observers on board disposal vessels and the collection of reliable ambient water quality data for the MBDS, determination of toxin tissue levels in live, free-ranging endangered species, and the evaluation of the long-term behavior of sediments disposed of at the MBDS. The Section 7 Consultation did not evaluate the issue of capping at the site, presumably because the designation prohibited the disposal of contaminated sediment at the MBDS.

Based on these conditions affecting the MBDS, it is my opinion that it does not qualify as feasible alternative for the disposal of contaminated dredged materials, and should not be considered as such in the EIS process. E2-1

Meisburber Sites

The borrow pits at both sites 2 and 7 appear to be attractive options for disposal of contaminated sediments, given the concerns at the MBDS and Boston Lightship sites. Both of the Meisburger sites appear to be located roughly three miles from the proposed MWRA outfall diffusers. I am concerned that their proximity to proposed outfall may influence the ability of these sites to be monitored properly in the future. The MWRA's current outfall monitoring program has shown some constituents of the current effluent discharges are detectable above expected background levels at the proposed outfall location, giving rise to the concern here that contamination of these two sites by the new outfall may make it difficult to determine the success of capping of contaminated sediments. The EIS should evaluate the potential degradation (cross-contamination?) of the sedimentary environment and benthic resources at these sites from the prosed outfall. E2-

OTHER COMMENTS ON THE DRAFT EIS/R

Note: The Gulf of Maine population of harbor porpoise, *Phocoena phocoena*, may be designated as threatened under the ESA by July, 1994. This species is common in in Massachusetts and Cape Cod Bays in late winter through early spring and is known to accumulate some synthetic organic contaminants. E2-3

The MBDS is an important feeding area for some species of endangered cetaceans, particular for juvenile humpback whales. E2-4

Confined ocean disposal, also called "capping", of contaminated materials is still under consideration by NMFS, USFWS, COE, EPA, and the Commonwealth of Massachusetts to determine its environmental feasibility as a management alternative at the MBDS. Until such time as E2-5

ıclusive tests prove the effectiveness of this technology at the site, it should not be considered as an alternative for the Boston Harbor Project.

Sincerely,

Russell A. DeConti
Director of Conservation

E2-1

MBDS is not being considered as a feasible alternative for disposal of silts from the improvement and berth dredging project. If capping is demonstrated to confine contaminated sediments successfully in the future, this site could be considered for future projects, including the maintenance of Boston Harbor.

E2-2

Biological investigations conducted at all potential aquatic disposal sites in fall 1994 demonstrated the high degree of biological activity at these sites. It was concluded that other sites could be used for disposal with less environmental damage (see Section 4).

E2-3

This species is also discussed in the Biological Assessment for this project.

E2-4

A Biological Assessment was prepared for this project to discuss any impacts that may occur to threatened and endangered species in the area of MBDS.

E2-5

MBDS is not considered to be a feasible alternative for the disposal of silts from the BHNIP in the FEIR/S.

Center for Marine Conservation

E3

June 27, 1994

Brink P. Miller
Colonel, Corps of Engineers
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254

Re: Comments of the Center for Marine Conservation on the Draft Environmental Impact Report/Statement (DEIR/S) for the Boston Harbor, Massachusetts Navigation Improvement and Berth Dredging Project (57 FR 27762, June 22, 1992)

Dear Colonel Miller:

The Center for Marine Conservation (CMC) submits the attached comments on the dredging and disposal of material from the three tributary channels in Boston Harbor and the associated berthing areas.

Although we do not oppose the project goal of improved navigation for Boston Harbor, CMC believes that the selection as a preferred alternative for disposal of dredged materials, including contaminated materials with capping, of the Massachusetts Bay Disposal Site (MBDS): (1) fails to adequately consider the potential serious threats to the adjoining Stellwagen Bank National Marine Sanctuary as required by the National Marine Sanctuaries Act (NMSA); (2) violates the consistency requirements of the Coastal Zone Management Act (CZMA) and is inconsistent with the designation of the site; (3) does not sufficiently develop alternatives to the MBDS for disposing of contaminated sediments as required by the National Environmental Policy Act (NEPA); (4) does not adequately protect threatened and endangered species and marine mammals as required by the Endangered Species Act (ESA); and (5) poses a danger to human health due to the potential contamination by toxins of commercial fishing stocks. CMC therefore requests that the DEIR/S be revised to comply with these requirements, indicate that the MBDS is not the preferred alternative for the disposal of contaminated sediments, and adequately develop less harmful alternatives. These concerns and requests are more fully discussed in the attached comments.

E3-1 E3-2 E3-3 E3-4 E3-5

Thank you for your consideration.

Jack Sobel /sy
Jack Sobel
Director, Habitat Conservation

Margaret M. Lytle
Margaret M. Lytle
Associate Counsel

cc: The Honorable Edward M. Kennedy
The Honorable John F. Kerry
The Honorable Gerry E. Studds
The Honorable Ron Brown
The Honorable Carol Browner
Judy Pederson, MCZM
Francesca Cava, NOAA
Trudy Coxe, Mass. OEA

1725 DeSales Street, NW, Ste. 500 Washington, D.C. 20036 (202) 429-5609 Telefax (202) 872-0619

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Comments on the Draft Environmental Impact Report/Statement (DEIR/S) for the Boston Harbor, Massachusetts Navigation Improvement and Berth Dredging Project (57 FR 27762, June 22, 1992)

Submitted by the

Center for Marine Conservation

June 21 , 1994

The Center for Marine Conservation (CMC) submits the following comments to the Massachusetts Port Authority (Massport) and the United States Army Corps of Engineers (COE) concerning the Draft Environmental Impact Report/Statement (DEIR/S) for the Boston Harbor, Massachusetts Navigation Improvement and Berth Dredging Project.

Massport and COE, in this DEIR/S, outline plans for dredging major shipping lanes and berths in Boston Harbor and options for disposing of 3.5 million cubic yards of clean and highly contaminated sediments from that dredging. They also identify potential disposal sites for about 4.4 million cubic yards of contaminated sediments from future maintenance dredging. Massport and COE have selected the Massachusetts Bay Disposal Site (MBDS) as a preferred disposal alternative for contaminated sediments from the proposed dredging project and the future maintenance dredging, with the intent of capping these sediments with clean sediments.

CMC believes that the selection as a preferred alternative for disposal of all dredged materials, including contaminated materials, of the Massachusetts Bay Disposal Site (MBDS): (1) fails to adequately consider the potential threats to the adjoining Stellwagen Bank National Marine Sanctuary as is required by the National Marine Sanctuaries Act (NMSA)[1]; (2) violates the consistency requirements of the Coastal Zone Management Act[2](CZMA) and is inconsistent with the designation of the site; (3) does not sufficiently develop alternatives to the MBDS for disposing of contaminated sediments as required by the National Environmental Policy Act (NEPA)[3]; (4) does not adequately protect threatened and endangered species and marine mammals as is required by the

[1]16 USC §§ 1431-1445.

[2]16 USC § 1456(c).

[3]42 USC §§ 4321-4335.

Endangered Species Act (ESA)[4]; and (5) poses a danger to human health due to the potential contamination by toxins of commercial fishing stocks. CMC therefore requests that the DEIR/S be revised to comply with these requirements, indicate that the MBDS is not the preferred alternative for the disposal of contaminated sediments, and adequately develop less harmful alternatives.

FAILURE TO CONSIDER POTENTIAL THREATS TO STELLWAGEN BANK NATIONAL MARINE SANCTUARY AS REQUIRED BY THE NATIONAL MARINE SANCTUARIES ACT

Stellwagen Bank was designated as a national marine sanctuary on November 4, 1992[5]. Stellwagen Bank is a uniquely configured, nutrient-rich area that supports a diverse fish, invertebrate, and whale population. Stellwagen Bank is one of three Atlantic areas critical to migrating humpback, minke, right, and fin whales. The area also contains rich commercial fisheries[6]. Unfortunately, of the five sites detailed in the DEIR/S, MBDS is the closest to Stellwagen Bank and its precious marine resources. Disposal of contaminated sediments at MBDS, no matter what technology is used, threatens the very rare and special characteristics that make Stellwagen Bank valuable as a Marine Sanctuary.

E3-1

The National Marine Sanctuaries Act requires formal consultation with the National Oceanic and Atmospheric Administration (NOAA) for federal agency actions which may effect marine sanctuaries, including the effect of dumping of contaminated sediment and capping it. Amendments to the Act adopted in 1992 require that "federal agency actions <u>internal or external</u> to a national marine sanctuary ... likely to destroy, cause the loss of, or injure any sanctuary resources are subject to consultation with the Secretary [of Commerce]."[7] The federal agency must provide to the Secretary of Commerce a written statement describing the potential effects of its action on sanctuary resources. If the Secretary finds that the action is likely to injure a sanctuary resource, the Secretary must recommend reasonable and prudent alternatives to which the agency must respond, and such alternatives may include conduct of the action elsewhere. The DEIR/S does not reflect that any such consultation with NOAA took place in regard to the decision to dump dredge material near Stellwagen Bank.

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[4]16 USC §§ 1531-1543.

[5]Pub. L. No. 102-587, § 2202(a), 106 Stat. 5048, Nov. 4, 1992, codified at 16 USC § 1433 note.

[6]Eldredge, Maureen. "Stellwagen Bank: New England's First Sanctuary", <u>Oceanus</u>, Vol. 36, No. 3, p.72, Fall 93.

[7]16 USC § 1433 note.

Furthermore, the National Marine Sanctuaries Act also authorizes NOAA to adopt management plans that prohibit the disposal of dredged material if deemed necessary to protect sanctuary resources[8]. In regard to Stellwagen Bank, NOAA has adopted regulations that prohibit the disposal of dredged material both within the sanctuary and outside it if the materials may "subsequently enter the sanctuary" and/or injure sanctuary resources or qualities[9]. NOAA has the authority to require terms and conditions necessary to protect sanctuary resources[10]. The failure of Massport and COE to consult on the record with NOAA on the proposed disposal of contaminated sediments in an area adjoining a national marine sanctuary circumvents the protection of these regulations, and violates the National Marine Sanctuary Act Title III, leaving Stellwagen Bank without adequate protection.

The need for consultation is manifest in this case. Dumping sediments that are contaminated with PCBs, PAHs, heavy metals and other toxic substances at MBDS could seriously damage water quality, and marine life at Stellwagen Bank. Toxic contaminants may cause undesirable biological effects to organisms in the environment. Further, toxic contaminants may also accumulate in living marine resources at levels that pose a threat to human consumers of these resources. These potential threats are not given adequate consideration in the DEIR/S.

E3-

Serious concerns over the disposal of contaminated sediments and the use of capping were expressed by the Massachusetts Coastal Zone Management Office (MCZM) and the U.S. Environmental Protection Agency (EPA) during the process of designating MBDS. Prior to selecting the MBDS as the preferred alternative Massport and the COE must conduct formal consultation with NOAA and the State of Massachusetts regarding the potentially dangerous effects of disposing of contaminated sediments at MBDS. The final rule designating MBDS states " ... EPA's EIS made clear that only materials that satisfied EPA's ocean dumping criteria could be disposed at the MBDS in accordance with Section 103(c) of the MPRSA, 33 U.S.C. 1413(c) .... based on current information EPA did not accept that the environment could effectively be protected from contaminated dredged material by trying to cap the material on the ocean floor at a site such as the MBDS." Important concerns by the EPA and others in regard to capping technology and feasibility are still unanswered.

While Massport and COE claim that the threats from contaminated sediments can be overcome by the use of capping, this

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[8]16 USC § 1434(b); 15 CFR § 922(a)(8).

[9]15 CFR § 940.5(a)(2).

[10]15 CFR §§ 940.5(f) & (g), and § 940.10.

is an unproven and controversial technology. We are especially concerned about the fate of the fine grained fraction of dumped sediments which are the most likely to miss the targeted site and to which contaminants readily adhere. We would like to see more analysis of the percentage of contaminants likely not to be covered by capping. E3-1

The final rule designating MBDS stated that disposal and capping of unsuitable materials at MBDS is prohibited until its efficacy can be effectively demonstrated. COE has failed to provide any convincing evidence of such effectiveness. The discussion of capping at Appendix G of the DEIR/S fails to adequately address concerns over the technology. It is admitted in the discussion that fine particles are the most likely to disperse widely, and are also the most likely to be contaminated. The issues of suspension and resuspension of sediments is "not resolved completely" (DEIR/S G-17). Another concern involves the statement that in cases where remediation of the capped area is necessary, it could take months to accomplish (DEIR/S G-16). Use of capping is particularly risky at MBDS because the depth of the water makes dispersal uncertain. Previous COE experience with capping involved shallower, calmer waters, with less rocky bottoms. These specific issues bring out only a few of the concerns regarding capping. Due to the lack of demonstrated safety and effectiveness of the technology, the DEIR/S must be revised to eliminate the MBDS as the preferred alternative for the disposal of contaminated sediments. E3-6

VIOLATION OF THE CONSISTENCY REQUIREMENTS OF THE COASTAL ZONE MANAGEMENT ACT

The MCZM stated during the designation of MBDS that the disposal of contaminated sediments, under any circumstances, would not be consistent with MCZM policies[11]. All federal agency activities, whether in or outside the coastal zone, are subject to the consistency requirements of the Coastal Zone Management Act. The Act provides: E3-2

> Each Federal agency activity within or outside the coastal zone that affects any land or water use or natural resource of the coastal zone shall be carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of approved State management programs[12].

In addition to these requirements, the Act also provides that "Any Federal agency which shall undertake any development project in the

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[11]Letter from Jeffrey R. Benoit, Director, MCZM, to Julie Belaga, Regional Administrator, EPA, dated November 13, 1992.

[12]16 USC § 1456(c)(1).

coastal zone of a state shall insure that the project is ... consistent with ... approved State management programs."[13] Federal agency activities and development projects are subject to state consistency review if they are located in or effect the coastal zone. COE and EPA activities under the Ocean Dumping Act[14] including the disposal of sediments from dredging activity at MBDS are definitely subject to the consistency requirements of the CZMA[15].

The Massachusetts Coastal Zone Management Office has determined that only the disposal of clean dredged material at MBDS is consistent with the state's program, and that disposal of contaminated material, even if capped, is prohibited[16]. Any action by COE contrary to this consistency determination, such as selection of MBDS for the disposal of contaminated sediments under any circumstances, including capping, would violate the CZMA[17]. As the disposal of contaminated materials and the use of capping at MBDS are clearly not consistent with the state's management plan, the DEIR/S must be revised to eliminate those options from the list of preferred alternatives.

DEVELOPMENT OF ALTERNATIVES FOR THE DISPOSAL OF CONTAMINATED SEDIMENTS AS REQUIRED BY NEPA

The object of NEPA is to incorporate conscientious consideration of environmental aspects of proposed actions in the decision-making processes of federal agencies. NEPA clearly requires that federal agencies discuss in detail alternatives to a proposed action in an EIS, so that a decision-maker can consider them along with the proposed action in determining a course of action[18]. Agencies are required to explore and evaluate all reasonable alternatives, and devote substantial treatment to each

E3-3

[13]16 USC § 1456(c)(2).

[14]33 USC §§ 1401 et seq. (1988).

[15]Howorth, Laura S. "U.S. Army Corps of Engineers' Ocean Dredging Policy and its Relationship with the Coastal Zone Management Act", Our Coastal Experience: Assessing the Past, Confronting the Future, The Coastal Society, 1993.

[16]Letter from Jeffrey R. Benoit, Director, MCZM, to Julie Belaga, Regional Administrator, EPA, dated November 13, 1992. [See also note 11].

[17]See note 11.

[18]42 USC § 4332(2)(c)(iii).

reasonable alternative[19]. The examination of alternatives must go beyond merely justifying decisions already made[20]. Massport and COE have failed to explore sufficient alternatives to dumping contaminated sediments at MBDS. All of the preferred alternatives involve ocean dumping within a fairly restricted area of Massachusetts Bay. Land disposal and other options were dismissed as preferred options solely on the basis of cost.

This undue emphasis on the costs of disposal constitutes an inadequate examination of alternatives. Economic arguments for open ocean disposal do not adequately consider the potential environmental damage and related costs of disposing of significant amounts of highly toxic contaminated sediments. The COE must adequately consider the cost of damage to marine habitat and resources; such as costs to the fishing industry, and to tourism (e.g. whale watching). E3-3

The DEIR/S inappropriately uses the cost of unconfined disposal of dredge material as the basis for their economic comparisons of alternatives, even though such disposal involving contaminated sediments is not permitted. Additionally, as the DEIR/S itself acknowledges, caps may have to be replaced every one to four years due to storm damage, entailing additional expense. The DEIR/S should be revised to consider the cost of confined disposal, in order to provide a more realistic and balanced picture of costs involved in disposing of material at MBDS. E3-7

PROTECTION OF THREATENED AND ENDANGERED SPECIES AS REQUIRED BY ESA

There are a number of species protected by the ESA which may occur in the disposal area. They include: humpback whale, fin whale, northern right whale, sei whale, blue whale, leatherback sea turtle (endangered), loggerhead sea turtle (threatened), and Gulf of Maine harbor porpoise (proposed as threatened.) In addition to the endangered/threatened species themselves, prey species for endangered whales have been spotted within the two mile circumference of MBDS, increasing the likelihood of the whales entering the area. Under Section 7 of the ESA, federal agencies are prohibited from taking actions that adversely impact endangered or threatened species. Specifically, federal agencies must "... insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such E3-4

[19] 40 CFR § 1502.14.

[20] 40 CFR § 1502.11

species ..."[21] The disposal of contaminated sediments in an area frequented by endangered and threatened species has an obvious potential to cause the species serious harm (e.g. direct exposure to contaminants, habitat degradation, decline in water quality, and entrainment of prey.) The DEIR/S reflects inadequate consideration by Massport and COE of the potential effect of their actions on such species.

The biological assessment conducted by the COE concluded that there would be no adverse impact on endangered and threatened species within MBDS from the disposal of contaminated material controlled by capping. However, it was admittedly based on the Biological Assessment and Technical Appendices prepared by Massachusetts Department of Public Works and the COE for the Federal Highway Administrations Central Artery/Third Harbor Tunnel Project (CA/T), which was alleged to have similar impacts. The CA/T assessment however, never discussed the potential effects of capping contaminated sediments. The failure to give sufficient consideration to the possible effects of capping is a serious deficiency in the COE biological assessment.

E3-4

Furthermore, the National Marine Fisheries Service (NMFS) did not concur with the COE determination. NMFS felt that the assessment left a number of concerns unanswered, including: the efficacy of capping under the environmental conditions present at MBDS (including waters up to 100 meters deep); the possible cumulative effects of specific contaminants from this and other projects on listed species; and the potential for contaminants to bioaccumulate or transfer through the food chain[22]. NMFS concluded that additional information was necessary for the formulation of a biological opinion under Section 7(a)(2) of the Endangered Species Act.

NMFS then recommended that COE either agree to extend formal consultation until sufficient data (including an in situ study of cap placement over time using clean material) is available, or drop capping at offshore sites from further consideration. Any action contrary to this recommendation would be a violation of the Endangered Species Act. This is an additional reason that disposal of contaminants at MBDS should be dropped as one of the preferred alternatives.

E3-5

CONTAMINATION OF COMMERCIAL FISHING STOCKS

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[21] 16 USC § 1536.

[22] Letter from Allen E. Peterson, Jr., Acting Regional Director, NMFS, to Colonel Brink P. Miller, Division Engineer, COE, dated April 19, 1994.

The DEIR/S does not give adequate consideration to the potential consequences of dumping contaminated materials in or near active fishing grounds. Red and silver hake are abundant, commercially important seasonal migrants in the MBDS area, along with flounder and grey sole. The transfer of contaminants through the food chain is an acknowledged health risk.

In expressing concerns over the Boston Harbor project, the Environmental Protection Agency (EPA) stated their assessment of the effects on human health from the consumption of seafood from MBDS exposed to contaminated sediments indicated that "disposal of the surface sediments ... could pose unacceptable cancer risks to human health."[23] EPA found that even incidental exposure of contaminated sediments to MBDS seafood could pose unacceptable health risks.[24] EPA's calculations for cancer risk associated with the consumption of seafood harvested from the MBDS if Massport sediments were to be disposed exceeds values within the acceptable range.[25] The DEIR/S must be revised to reflect consideration of the potential public health risk involved in disposing of contaminated sediments at MBDS.

For the foregoing reasons we request that the DEIR/S be revised to comply with the National Marine Sanctuaries Act, the Coastal Zone Management Act, the National Environmental Policy Act, and the Endangered Species Act and to reflect public health concerns; to indicate that the MBDS is not the preferred alternative for the disposal of contaminated sediments; and to adequately develop less harmful alternatives.

Respectfully Submitted.

Jack Sobel /mmz

Jack Sobel
Director, Habitat Conservation

Margaret M. Lytle

Margaret M. Lytle
Associate Counsel

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[23]Letter from Paul G. Keough, Acting Regional Administrator, Environmental Protection Agency to Colonel Brink Miller, Division Engineer, U.S. Army Corps of Engineers, dated September 9, 1993.

[24]Id., Appendix C.

[25]Ibid.

E3-1

The disposal site alternatives analysis has been reevaluated for the FEIR/S (Section 4). The MBDS is not considered to be a suitable site for the disposal of contaminated silts from the BHNIP. It could be considered for future maintenance material only if capping is successfully demonstrated to provide long-term isolation of these sediments from the environment in waters of similar depths.

The Corps has submitted a Biological Assessment to the NOAA, National Marine Fisheries Service regarding disposal of dredged material at the MBDS. The Biological Assessment does not anticipate significant impacts to threatened and endangered species at Stellwagen Bank. NMFS coordinates these activities with the manager of Stellwagen Bank National Marine Sanctuary. Any proposed capping demonstration at the MBDS would be coordinated with the appropriate agencies.

E3-2

Any proposed capping demonstration or project at the MBDS would be coordinated with the MCZM office to determine consistency with their policies on a case-by-case basis.

E3-3

Over 200 alternatives were initially examined for the disposal of dredged material. A systematic tiered system was used to narrow the list of alternatives to a reasonable number for analysis. MBDS was selected as one of several alternatives for the disposal of silty dredged material in the DEIR/S (although it was eliminated in the FEIR/S). This certainly complies with the intent of NEPA. In addition, cost (or practicability) is recognized in NEPA and other regulations affecting dredged material disposal as a means of comparing alternatives. An accurate environmental cost from disposal of silty dredged material, if any, is impossible to analyze. The purpose of an EIR/S is document environmental impacts from various alternatives so that managers can make an informed decision on selection of an alternative.

E3-4

The final Biological Assessment will drop capping contaminated sediments at MBDS as an alternative.

E3-5

The risk assessment conducted by U.S. EPA was based on very conservative estimates because of the lack of information needed to make a more accurate assessment. U.S. EPA's MBDS site designation EIS concluded that disposal of dredged material at the MBDS has not and is not likely to cause significant impact to aquatic resources. This is after many years of disposal of dredged material from Boston Harbor and other urban harbors.

E3-6

The MBDS is not being proposed for the disposal of silts from the BHNIP. Capping would not occur at the MBDS until a demonstration to prove its efficacy has been completed.

E3-7

The cost comparison for the disposal alternatives has been based on the cost for the least environmentally damaging alternative, in-channel disposal in the FEIR/S.

Cetacean Research Unit

E4

Col. Brink Miller
Division Engineer
Army Corps of Engineers
424 Trapelo Rd.
Waltham, MA 02254-9149

BM

June 11, 1994

Dear Col. Miller,

We are writing to comment on the Draft Environmental Impact Statement/Review (DEIS) for the Boston Harbor Navigation Improvement Project. We thank you for the opportunity to offer comment on the project.

The Cetacean Research Unit (CRU) is a non-profit organization emphasizing research and conservation on whales and marine life in New England. For the past 15 years, our work has centered on the Stellwagen Bank National Marine Sanctuary. We have one of the largest databases on the natural resources of that area in existence, and can clearly appreciate why the location is so special for endangered whales and a myriad of marine life. It is because of that unique nature that we feel extreme care must be taken in use of the Massachusetts Bay Disposal Site (MBDS), located in close proximity to the Bank and its marine resources.

Let me start by saying that we are not opposed to the dredging of the harbor per se. We realize and appreciate the importance of commercial traffic in Boston harbor to the area's economy. However, we also feel that it must be done in the safest way possible for the environment. For years the harbor's sediments have been contaminated from a myriad of abuses and much of the dredged material, especially the surface silts, contain toxic levels of certain pollutants. Because of this, extreme care must be taken when both dredging the harbor and, especially, disposing of those sediments.

The DEIS is inconsistent in its classification of the surface silts. In most places, they are classified as contaminated materials. We agree with this classification, but feel it needs to be extended throughout the document. As contaminated sediments, it would be illegal to dump them at the disposal site. When the EPA designated that site for open ocean disposal, they stipulated it was only for "clean" sediments.

E4

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A non-profit organization emphasizing whale research and education

In several cases in the DEIS there is a recognition that it would be impossible to dump the surface silts at the MBDS without a "cap" of clean spoils placed over them. Before this can be considered, a demonstration of effective capping at that site needs to take place. In order to be considered an "effective" cap, both the amount of coverage and the integrity of the cap would need to be shown in the short run and over a prolonged period of time (at least a number of years). Given that the schedule for the BHNIP calls for faster action than that, we feel that such a demonstration is unfeasible for this project.

E4-2

Further, there is little reason to believe that a cap can be effective in the deep waters of the MBDS, which are typically over 200 feet. In the one capping demonstration attempted in the early 1980's, no effective caps were created at the site. Given the swirling currents and mid-water turbulence at MBDS, one could only expect a wide spreading of any sediments dumped at that area. The suggestion in the DEIS that a cap would be maintained by careful positioning of the dumping barge is naive and laughable; daily variation in tidal states and wind conditions would obviously cause sediments dumped on the same spot to disperse in different directions.

We feel the most insidious suggestion contained in the DEIS is using the sediments from the BHNIP itself in order to test capping. A capping demonstration must take place using clean, marked sediments capped by other clean sediments with a different marker; the idea of using the surface silts as any part of a capping test only risks environmental disaster if and when the cap is shown to fail.

E4-3

Why do we need to worry so much about dumping contaminated sediments at the MBDS? Contaminants such as PCB's, which are prominent in the surface silts, have extremely long half-lives in the water. Further, as they go up the food chain, they bio-accumulate, potentially leading to dramatic exposure levels in the marine life of the area. According to one recent report, PCB levels at the MBDS have quadrupled since 1980. Since much marine life, including marine mammals, are particularly vulnerable to toxicant exposure, particular care must be taken to minimize this exposure. This exposure can take place through two means. Fin whales, humpbacks, and right whales are all shown to use the area near the MBDS in some frequency, as demonstrated by the plots from our data presented in the EPA's Section 7 consultation (Appendix in Volume 2). Further, prey exposed to the chemicals can leave the area and move to Stellwagen Bank, one of the most important areas for endangered whales in the northeast.

We strongly feel that dumping of contaminated surface silts, or any other contaminated sediments, should not be allowed or even considered at the MBDS. We encourage you to delete any and all reference to this possibility from the Final EIS.

E4-4

We also feel that the dumping of toxic sediments in the open ocean is a situation which is less than ideal. We support using upland disposal or disposing of the sediments in an already contaminated part of the inner harbor, where marine wildlife are not likely to be affected. While we realize these options cost more in the economic analysis of dumping presented in the DEIS, that analysis does not take into account the costs to fishermen or whale watchers of having reduced levels of marine life in the area, or the non-

quantifiable costs to the environment which could result from such actions.

While we are resigned to the dumping of non-toxic sediments at the MBDS (although we have felt all along that no dumping should take place at that site), we feel that rigorous testing of all dumping materials must take place. The ocean works in a series of fine-scale micro-habitats, and it is not safe to assume that even those sediments in close proximity to clean sediments are, themselves, clean. Further, even "clean" sediments can impact the ecosystem, since they are by no means pristine, and non-toxic levels can be accumulated through the food chain. E4

Finally, we feel that it is important that care be taken in the actual dredging process. Much material is spilled during the dredging process, resulting in re-suspension of toxins. Because tidal flushing of the harbor takes place on a regular basis, this also offers the opportunity for introduction of toxins to the Massachusetts Bay system. We would suggest that performance standards be set for dredging operations, especially in the percentage of dredged material landed in the barge. E4

In order to insure compliance with both disposal and dredging requirements, we ask that an independent contractor oversee and monitor all phases of the BHNIP. This contractor should also conduct training sessions for all dredge and barge operators, through which environmental requirements are detailed for operators. Inconsistencies in past disposal operations necessitate such independent review. E4

Finally, we note one omission from the DEIS. The designation of the Stellwagen Bank National Marine Sanctuary by Congress requires that all activities which have the potential to effect sanctuary resources take place in consultation with the sanctuary manager, in this case Mr. Brad Barr. We note that there is no reference to such consultation taking place, nor is there reference to them being sent a copy of the DEIS for comment. This consultation process should begin immediately. E4

We hope that you find these comments helpful. We look forward to insuring that the harbor is dredged to the point which insures a viable economy for the New England region, while insuring protection for New England's valuable marine resources.

Sincerely,

Mason Weinrich
Executive Director

E4-1

The FEIR/S considered all silts from the BHNIP to be unsuitable for unconfined open water disposal.

E4-2

Capping would not occur at the MBDS until a demonstration to prove its efficacy has been completed. MBDS was selected as a disposal site because of its deep depths and low energy level. Research (DAMOS) has shown that the material disposed at the MBDS forms a mound, currents have minimal effect on sediment as it falls through the water column. A capping demonstration would be discussed with appropriate agencies before it was initiated.

E4-3

DAMOS research has shown, as well as the U.S. EPA MBDS site designation EIS, that the site does not cause a significant affect to the marine environments. The EIS did not find significant PCB concern at the MBDS.

The disposal site alternatives analysis has been reevaluated for the FEIR/S (Section 4). The MBDS is not considered to be a suitable site for the disposal of contaminated silts from the BHNIP. It could be considered for future maintenance material if capping is successfully demonstrated to provide long-term isolation of these sediments from the environment in waters of similar depths.

E4-4

The silt portion of the dredged materials is considered unsuitable for unconfined ocean disposal. The preferred option is now in-channel disposal, which is considered the least environmentally damaging practicable alternative.

E4-5

We acknowledge that the CRU accepts the decision to allow the clean parent material to be dredged for the BHNIP with disposal at MBDS. This material has been tested and has lower concentrations of parameters of interest than ambient conditions in Massachusetts Bay. Therefore, its disposal at MBDS should pose no chemical threat to the surrounding ocean environment.

E4-6

Precautions will be used to minimize environmental impact to Boston Harbor. The proposed dredging and disposal activities will be performed in accordance with any conditions established by the permit documents. Please refer to the Dredged Material Management Plan

(Section 5.0) and the rest of the FEIR/S, including the model studies. Also, contaminants are attached to sediments and do not easily go into solution.

E4-7

Observers may be allowed on board but can not control the operation. The concern for the Corps is an issue of contract control. The Corps cannot allow dredging contractors to take orders from others without approval of the Contracting Officer. The Corps inspector on board can be made aware of any violations. Pre-construction meetings are held regularly with new dredging contractors. At these meetings environmental permit compliance will be emphasized.

The FEIR/S has recognized the importance of operator qualifications to the successful completion of the proposed work. Section 5.8.2.1, *Operator Qualifications,* addresses the specific environmentally sensitive procedures which will require exceptional operator skills.

E4-8

The manager of the Stellwagen Bank National Marine Sanctuary has received a copy of the DEIR/S. Coordination occurs through the National Marine Fisheries Service.

COASTAL ADVOCACY NETWORK
c/o Massachusetts Bays Program, 100 Cambridge Street, Room 2006,
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E5

June 21, 1994

Trudy Coxe, Secretary
Executive Office of Environmental Affairs
MEPA Unit
100 Cambridge Street
Boston, MA 02202

RECEIVED
JUN 21 1994
MEPA

Brink P. Miller, Colonel
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254

Dear Secretary Coxe and Colonel Miller,

The Coastal Advocacy Network, consisting of local or regional environmental advocacy and educational non-governmental organizations, is dedicated to the protection and celebration of the marine and coastal resources of Massachusetts and Cape Cod Bays. We are writing to express our common concerns about the draft environmental impact statement/report (DEIS/R) submitted by Massport and the Army Corps of Engineers for the Boston Harbor Navigation Improvement Project and Berth Dredging Project (BHNIP).

Our major issues regarding the BHNIP are around the dredging process itself, and the handling and disposal of sediments, many of which are contaminated with heavy metals, PCBs, PAHs and other toxic materials.

The Dredging Process

From experiences at Moran Terminal, we learned the dredging process can be very messy. When debris prevented the clamshell dredge from closing properly, sediments spilled into Boston Harbor. We would like to see the entire dredging process monitored by an impartial observer with the authority to halt dredging that is in violation of permit conditions or otherwise environmentally dangerous. Also, we would like contingency language placed in any contracts for dredging and disposal which would require work to halt should problems occur. Also, we would like to see performance standards for dredging put into the Dredging Management Plan (Section 4.0) rather than descriptions of equipment and methods. This would ensure a clean and safe dredging process. E5-1

Handling and Disposal of Contaminated Sediments

First, in regard to sediment characterization, the U.S. Army Corps of Engineers has found that all maintenance materials (silt), except 160,000 cy from Reserved Channel, and 200,000 cy from berth areas of Gulf Oil, Army Base, Conley terminal, and the Edison Barge berth, is unsuitable for unconfined open water disposal. The U.S. EPA has conversely found that <u>all</u> silt material is unsuitable for unconfined open water disposal. It is our opinion that the sediment chemistry and E5-2

The views of the Coastal Advocacy Network do not necessarily represent those of the Massachusetts Bays Program.

bioaccumulation test results indicate that none of the silts are suitable for open water disposal.

We are absolutely opposed to any open water disposal - including disposal in borrow pits - of contaminated sediments. We would like to see a portion of the contaminated dredge spoils set aside for a pilot project that would test the efficacy of alternative technologies in reducing toxicity of contaminated sediments. Generally, we would like to see clean sediment used beneficially to upgrade habitats and already contaminated areas, wherever possible. Our goal is to minimize damage to and exposure of contaminated sediments to the marine environment as much as possible. To that end, we cannot support any of the preferred disposal alternatives delineated by Massport and the Corps in the DEIS/R. **Therefore, we would like the final impact statement to reexamine the "potentially practicable" disposal alternatives, especially the "shoreline" and "in-channel" options.** E5-

In addition, we have the following specific comments:

- We absolutely will not support any disposal option which would require a waiver from Section 103(d) of the Marine Protection, Research, and Sanctuaries Act (MPRSA), or any other legal waiver. It is currently illegal to dump contaminated sediments at the Massachusetts Bay Disposal Site (MBDS) without a waiver. **The Coastal Advocacy Network is particularly concerned about this potential option and will not under any circumstances condone disposal of contaminated sediments at the MBDS - including capping with clean sediments.** We oppose any pilot project at this location. The MBDS is adjacent to the Stellwagen Bank National Marine Sanctuary, one of our most important natural resources in Massachusetts and Cape Cod Bays and must be protected. E5-

- At this point, the DEIS/R is unclear in its description of the MBDS as a disposal alternative. At some points it describes the MBDS as a preferred alternative for both clean and contaminated sediments and at other points it does not. The final impact statement must be very clear in its prohibition of disposal of contaminated sediments at the MBDS. E5-

- Disposal sites of both clean and contaminated sediments must be carefully monitored by an impartial observer(s) with contingency plans, should problems occur. The costs of this monitoring are not factored into the cost/benefits analysis of the disposal options. These costs must be considered in the final impact statement. E5

- In addition, the costs of using certain disposal alternatives to other resource users (i.e. fishermen, lobstermen) were not considered in the discussion of disposal alternatives. These costs should be considered in the final impact statement. E5-

- The disposal site(s) chosen for the Boston Harbor Navigation Improvement Project must not be used for future maintenance dredging and other regional dredging projects until the sediment quality and environmental impact of those projects are analyzed. E5-

Lastly, Massport and the U.S. Army Corps of Engineers should be conscious of the other projects and problems in Boston Harbor in their planning and in their preparation of the final impact statement. These include: the Harbor Clean-up and the proximity of the sewage outfall to the

proposed sites, the Central Artery Tunnel project, the recent designation of Stellwagen Bank as a National Marine Sanctuary, the existence of highly contaminated -- and sometimes radioactive -- "hot spots," and a very strained fisheries situation. All of these will affect, and be affected by, the dredging project. Massport and the Corps should work closely with other affected parties, and the organizations in the Coastal Advocacy Network, to devise creative solutions to deal with contaminated sediments that will benefit Boston Harbor as both a natural and an economic resource. E5-9

Thank you for the opportunity to make these comments. We look forward to reviewing the final impact statement.

Sincerely,

Mason Weinrich

Mason Weinrich, Chair
Coastal Advocacy Network

Coastal Advocacy Network

Susan Nickerson, Association for the Preservation of Cape Cod

Stephan Nofield, Bays Legal Fund

Mason Weinrich, Cetacean Research Unit

Robert Loring, Clean Water Action

Peter Shelley, Conservation Law Foundation

Mark Rasmussen, Coalition for Buzzards Bay

Roger Stern, Massachusetts Bay Marine Studies Consortium

Robert Murray, Massachusetts Toxics Campaign

Priscilla Chapman, New England Sierra Club

Polly Bradley, Safer Waters in Massachusetts

Jodi Sugerman, Save the Harbor/Save the Bay

E5-1

Observers may be allowed on board but can not control the operation. The concern for the Corps is an issue of contract control. The Corps cannot allow dredging contractors to take orders from others without approval of the Contracting Officer. The Corps inspector on board can be made aware of any violations. Pre-construction meetings are held regularly with new dredging contractors. At these meetings environmental permit compliance will be emphasized.

The FEIR/S has recognized the importance of operator qualifications to the successful completion of the proposed work. Section 5.8.2.1, *Operator Qualifications,* addresses the specific environmentally sensitive procedures which will require exceptional operator skills.

E5-2

The FEIR/S considered all silts from the BHNIP to be unsuitable for unconfined open water disposal.

E5-3

The silt portion of the dredged materials is considered unsuitable for unconfined ocean disposal. The preferred option is now in-channel disposal, which is considered the least environmentally damaging practicable alternative. Thank you for your comment. A dredge material disposal pilot project is addressed in the FEIS/S, and beneficial use of clean dredged material is also described.

E5-4

The disposal site alternatives analysis has been reevaluated for the FEIR/S (Section 4). The MBDS is not considered to be a suitable site for the disposal of contaminated silts from the BHNIP. It could be considered for future maintenance material if capping is successfully demonstrated to provide long-term isolation of these sediments from the environment in waters of similar depths.

E5-5

See response to comment E5-4. MBDS is being considered the preferred alternative for the disposal of any parent material (clay) that is not used for landfill closure.

E5-6

Observers may be allowed on board but can not control the operation. The concern for the Corps is an issue of contract control. The Corps cannot allow dredging contractors to take orders from others without approval of the Contracting Officer. The Corps inspector on board can be made aware of any violations. Pre-construction meetings are held regularly with

new dredging contractors. At these meetings environmental permit compliance will be emphasized.

E5-7

The impact to resource users was considered in the disposal site alternatives analysis (Section 4).

E5-8

All dredging projects are always analyzed for sediment quality and environmental impacts to ensure compliance with appropriate environmental regulations.

E5-9

The Corps has met with staff from the CA/T and MWRA projects. Massport and the Corps have also met with several resource groups after the release of the draft EIR/S. These included lobsterman and fisherman groups.

E6

CLF Conservation Law Foundation

22 June 1994

Brink P. Miller, Colonel
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254

RE: Draft Environmental Report/Statement for the Boston Harbor Navigation Improvement and Berth Dredging Project

Dear Colonel Miller:

The Conservation Law Foundation (CLF) would like to thank the U.S. Army Corps of Engineers (Corps) for the opportunity to comment on the above-referenced Draft Environmental Impact Report/Statement (EIR/S) for the proposed Boston Harbor Navigation Improvement and Berth Dredging Project (BHNIP).

Co-sponsored by the Corps and the state port authority (Massport), the BHNIP entails the maintenance and improvement dredging of nearly three million cubic yards of (cy) silt, clay and rock from federal navigation channels and non-federal berthing areas within Boston Harbor. Thirty-eight percent of the total material to be dredged is substantially contaminated with metals, PCBs and PAHs.

While CLF is not opposed to maintaining the commercial viability of Boston Harbor, we are concerned that a project of the scope of BHNIP could have serious deleterious effects not only on harbor biota, but also on the larger Massachusetts and Cape Cod Bays system. In addition, CLF believes that, improperly disposed, the large quantity of BHNIP contaminated sediments poses a human health threat, through the potential contamination of seafood.

We therefore request that the Corps ensure that all phases of this project be conducted in a manner that:

- is verifiably environmentally sound
- maximizes mitigation and beneficial use, and
- addresses the potential long-term effects of disposal

Before proceeding with our specific comments on the EIR/S, CLF would like to thank both the Corps and Massport for your efforts to maintain open channels of communication regarding this project with environmental advocacy and other non-governmental organizations. Including these groups on the Advisory Committee, and inviting Save the Harbor/Save the Bay and CLF to present our views "officially" at the public comment sessions, sends a positive message to the public about both of your organizations. Early involvement also enables questions and concerns to be heard earlier in the process, an obvious advantage when planning a major project such as this one.

Our specific comments appear below.

Extent of Contamination

It is our opinion that the sediment chemistry and bioaccumulation test results indicate **none** of the silts should be considered suitable for open ocean disposal under the Marine Protection, Research, and Sanctuaries Act (MPRSA) and accompanying regulations. We therefore support the U.S. Environmental Protection Agency's (EPA) findings on this issue. The high spatial variability of contamination within the harbor, as evidenced in this and previous testing, combined with the imprecise nature of the dredging process make it additionally imperative that attempts to differentiate levels of contamination in the silt be avoided. (Such attempts, by necessity, would need to be accompanied by additional testing at the time of dredging to verify that what is actually dredged does not exceed the expected contamination levels.) E6-1

The Boston Harbor silts are substantially more contaminated than the underlying clay. Again, since the proposed alternative dredging technologies are not "surgical" in nature, it is vital that any dredging of silts close to the clay parent material include overdredging of at least one to two feet of clay. The six inches recommended in the EIR/S (Sect. 3.4) is insufficient to ensure that all the silts are dredged and that none are mixed with the clay and subsequently disposed of inappropriately. E6-2

The EIR/S acknowledges that there is a difference of opinion between the Corps and EPA regarding the suitability for open ocean disposal of 360,000 cy of silt from the Reserved Channel and some berthing areas. In fact, the EIR/S contradicts itself on what is actually in dispute. (See Sections 2.2.4 and 3.2.)

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Both sections, as well as Appendix G, are in conflict with a letter from the EPA to the Corps, dated September 9, 1993, which states that:

- there was agreement among Corps and EPA staff that the Army Base Berths were unsuitable for unconfined ocean disposal, and,
- a total of 132,000 cy (including material from the Reserved Channel, Conley Terminal, Gulf Oil, and Boston Edison Barge Berth) were still in dispute regarding their suitability

E6-3

Discrepancies such as these should be explained and reconciled in the final EIR/S.

Training and Methodology

Recent experience at the Moran Terminal highlighted the need for improved training on the part of the dredging contractor(s), something that should be addressed in the EIR/S. Dredge operators and other project personnel will be dealing with contaminated materials. Permits should require that project personnel be properly trained and have a thorough understanding of the environmental permit requirements relevant to each employee's function prior to beginning work. Training and permits should also address specific practices, such as avoiding dragging a dredge over harbor sediments and reducing the speed at which the bucket is raised and lowered through the water column, that can lessen environmental disruption.

E6-4

Dredging Equipment

CLF finds Section 4.1 of the EIR/S, the rationale for the selection of the recommended dredging method, to be inadequate. Although some possible criteria for comparing different types of dredging equipment are listed, no detailed comparison is actually made. The selection of the mechanical dredge as the single solution for this project is apparently arrived at through an incomplete, qualitative analysis.

E6-5

CLF believes that within reasonable economic parameters, dredging equipment should be selected based on its ability to effectively minimize resuspension and release of contaminants into the marine environment, not simply on its easy availability. We urge the Corps to require a more in-depth analysis of the possible dredging technologies; and to include specific equipment requirements and explicit performance criteria in Corps permits.

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Even the EIR/S recommendation to use a "modified, environmental, bucket" is too generic. More specific performance specifications should be included in the document, including more thorough design and performance characteristics. The Cable Arm 100E, manufactured by L.B. Tanker Inc. of Pickering, Ontario, is one possible candidate for an environmental clamshell dredge. This dredge has been extensively studied by Environment Canada as part of its Great Lakes program, and was found to be not only useful for dealing with contaminated sediments, but also economical. A sensor on the Cable Arm 100E notifies the operator of incomplete bucket closure, and a compressible seal around the mouth can accommodate small debris without letting sediments escape. Furthermore, its basic shape and light weight are geared to minimize extraneous physical impact to the bottom and resulting sediment resuspension.

The existence of pneumatic dredges is not mentioned in Section 4 of the EIR/S. Yet, they have been extensively and successfully used in Europe and Japan to remove contaminated sediments. Pneumatic dredges have a major advantage over hydraulic dredges: the dredged material is much closer to the sediment's *in situ* density. (The high water content resulting from hydraulic dredging is listed in the EIR/S as a major reason for discounting this type of dredge.) Papers published by the Center for Dredging Studies at Texas A&M University classify "oozer"-type pneumatic pumps as having significantly higher productivity than a modified (environmental) clamshell dredge, while maintaining low sediment resuspension. A more thorough analysis of other dredging technologies, such as the "oozer" dredge, must be included in the Final EIR/S.

Verification

Past dredging projects, including but not limited to the Moran Terminal dredging, have encountered difficulties in successfully meeting permit conditions aimed at protecting environmental resources. For example, when testing different types of dredges in the mid-1980's, the Corps identified a tendency for dredge operators to overload the receiving scow in order to maximize economic benefits. In theory, this may be prohibited by permit requirements. In practice, due to lack of training, perceived need for expediency or other reasons, overloading has happened and has led to the release of contaminants back into the water column.

Another example is the practice known as "short-dumping," or releasing a load of dredged material from a barge before reaching the designated disposal site. In the past, this was regularly witnessed by area fishermen. The Corps inspector program, whereby a Corps-certified observer accompanies barges to a disposal site, has been a step in the right direction. However, it is our understanding that under this program, the observer is paid directly by the dredging contractor.

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CLF believes there should be a trained, **impartial** observer not only during all disposal operations, but also during dredging, blasting, dewatering, and other project activities. The observer must:

- be knowledgeable about dredging, disposal, threatened or endangered species and marine mammals that frequent the area, and navigation
- be familiar with all applicable local, state, and federal permits, orders of conditions, etc., especially environmental protection and mitigation requirements
- have the authority to halt dredging or disposal that is in violation of permit conditions or otherwise environmentally dangerous, and notify the relevant agency(ies)
- be the employee of an independent entity, i.e., one that is not a project proponent (the proponent may ultimately be responsible for observer costs, but the hiring and payroll of observers should be handled by a separate entity)

We also support the recommendation in Section 4.3.5 that in addition to an observer, an electronic recording device be employed to confirm the location of the scow at disposal time.

E6-6

Disposal Sites

CLF does not support the use of any of the five preferred disposal alternatives listed in the Executive Summary of the EIR/S. We urge that the Corps require the use of disposal options that best facilitate the confinement of contaminants and that are near-shore or upland, rather than in Massachusetts Bay.

E6-7

We believe the list of possible combinations of disposal sites in the document should include a more in-depth and quantitative description of the process and assumptions used to arrive at the set of combinations listed in Section 3.4 of the EIR/S. What other combinations were examined and why were they discarded, specifically? The brief description of the factors considered is inadequate. Other statements need to be more fully described as well. For example, how was the minimum additional $10 million cost for using multiple disposal sites rather than a single site arrived at?

E6-8

Any disposal site used as part of the BHNIP, whether it be land-based or aqueous, should be actively managed and monitored both short- and long-term to ensure that the contaminants remain confined. We believe that the cost of monitoring is far outweighed by

the potential for damage to the marine ecosystem, fishing, recreation, and public health, if monitoring and site management is inadequate.

CLF urges the Corps to require that a long-term monitoring plan, and contingency planning in case of contaminant release, be included as part of the Final EIR/S. An added benefit of monitoring is that providing valuable information on the performance of the site(s) may make it easier to choose sites and disposal methods in future dredging projects. E6-9

Use of sites that are already contaminated are of particular interest to CLF, as capping with clean sediments should have a positive effect on the locale. In addition, sites between piers or in small channels lend themselves not only to the confinement of dredged sediments, but also to the use of mitigation techniques such as silt curtains (assuming other factors, e.g., currents, are appropriate). It is unfortunate that shoreline facilities (such as Mystic Pier and Amstar) alone are insufficient to contain all the silty material. CLF nevertheless encourages the further study of these sites for a portion of the silty material. E6-10

In-Channel disposal (the only alternative besides the preferred disposal alternatives listed as "practicable"), and some of the "potentially practicable" options, such as subtidal disposal at Little Mystic Channel, are attractive disposal possibilities.

We have questions about these sites, however. For example, the EIR/S mentions the resuspension resulting from effects such as "prop wash" on existing contaminated sediments in the harbor. Yet, to what extent will ship traffic, currents and storms affect the capping material at the In-Channel site? This issue (and, indeed, a more in-depth characterization of all "potentially practicable" sites) should be more fully addressed prior to making the final disposal choices. The analysis and rationale should be included in the Final EIR/S. E6-11

The geotextile bags briefly mentioned in the EIR/S may be useful in reducing the dispersal of contaminants during aqueous disposal. We view these bags as a possible *additional* environmental safeguard, and suggest that this topic be further explored. E6-12

Due to the state's solid waste crisis, landfill use should be limited to daily cover or final closure material (see "Beneficial Use," below). In addition, the Moran Terminal dewatering problems need to be fully understood and appropriate steps should be taken to ensure that future dewatering efforts are not similarly hindered. E6-13

Although listed as a "potentially practicable alternative," the use of treatment technologies is discounted due mainly to the cost involved with treating the large volume of material in this project. We strongly suggest that the Corps and Massport demonstrate E6-14

national leadership in this area by using one or more of these technologies (some of which may not have been listed in the EIR/S) on a portion of the contaminated materials. Such a relatively small-scale experience would no doubt be useful in future dredging projects.

In general, disposal that will result in the mounding of sediments on the ocean bottom is not an acceptable solution. Maintaining the original bathymetry and restoring the native surficial materials should help keep capping material in place, if a site is depositional. Open ocean disposal implies some uncertainty about exactly where the sediments will end up. The wide area (referred to by the Corps as an "apron") of sediments common around a disposal mound can require unexpectedly large quantities of capping material for total coverage. Finally, this form of disposal has the highest potential for the cap and underlying contaminants to be eroded over time.

CLF is strongly opposed to the dumping of contaminated sediments at the Mass. Bay Disposal Site (MBDS), with or without capping. We would actively oppose a request by the Corps for a waiver under Section 103(d) of the Marine, Protection, Research, and Sanctuaries Act to proceed with disposal of contaminated sediments at the MBDS.

E6-1

Both the EPA and the Massachusetts Coastal Zone Management Office (CZM) have made it clear that contaminated sediments should not be disposed of at the MBDS. The EPA's formal site designation for MBDS clearly states that, until capping is adequately demonstrated at the site, no contaminated sediments are to be dumped there. (Any proposed demonstration program would have to be carefully planned and undergo extensive agency and public review; the length of time required to complete such a program precludes consideration for this project.)

There are many inconsistencies throughout the EIR/S regarding the MBDS and how it is being viewed by project proponents. One example: If there must be a demonstration of capping at MBDS prior to any disposal of contaminated materials, and the timeframe to accomplish this makes it essentially impossible to use the site for the BHNIP (Section 3.3.2), why is MBDS one of the "practicable" and preferred alternatives for BHNIP silt (See Table ES-1a)?

Capping, or covering contaminated sediments with a layer of clean sediments, has been used in the U.S. with mixed results. Although the Corps is very supportive of capping, some caps created in the early 1980's have not yet fully recolonized, indicating the possible long-term migration of contaminants. Recent experience at the Mud Dump Site in the New York/New Jersey area further confirms that Corps expectations and projections regarding the fate of ocean-disposed sediments, are unrealistic. Instead of the expected one million cubic

yards of capping material, a total of 2.5 million cy was actually required to cover the contaminated sediments, which were spread over a much wider area than the Corps had predicted.

The depth (approximately 100 meters) of the MBDS makes it a particularly poor candidate for capping. There is no substantial experience with capping at these depths. Successfully predicting where the sediments and capping material will end up will prove even more difficult than in New York. The large scale of the project means that, even under the best of circumstances, contaminated sediments would be exposed to the marine environment of Stellwagen Basin for long periods of time. This is not the sort of chance we are willing to take with Massachusetts Bay, especially given its location adjacent to the Stellwagen Bank National Marine Sanctuary, its importance to the region's fishermen, and the fact that the area is frequented by a number of threatened and endangered species.

In addition to capping, the Corps has stated that, generally, approximately 5% of ocean-disposed sediments will not reach the bottom, but will be dispersed in the water column. For the BHNIP, this amounts to an additional load to Massachusetts Bay waters of at least 65,000 cy of contaminated sediments if ocean disposal is used. We believe the atypical depths of the MBDS may result in an even higher load, as additional sediments remain in the water column. E6-16

One of the other "preferred alternatives" in the EIR/S is Boston Lightship (BL). BL is not currently a designated disposal site. Its waters are heavily used by commercial fishermen. In addition, radioactive and other wastes have previously been dumped in the area, although a thorough mapping of the wastes has not been completed. Use of the BL site for BHNIP disposal would be irresponsible, given the lack of data on the location and extent of present contamination. Once the area is better understood, disposal of sediments at BL may be a way to confine the contaminants already in place. E6-17

Like the other "preferred" sites (besides the Spectacle Island CAD), the Meisburger 2 and 7 sites are relatively far from shore. The disposal of contaminated sediments at these locations would pose a significant increase in the loading of contaminants to Massachusetts Bay should there be any problems with the cap, particularly since the surface areas involved are large. The sites are also very close to the MWRA outfall. Since the outfall location was chosen for its ability to disperse effluent, the selection of such nearby sites for dredged material disposal is questionable. In addition, both projects may find it more difficult to interpret the results of monitoring efforts. E6-18

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The Spectacle Island CAD area is also used by fishermen and lobstermen. According to a paper by Harley Knebel at USGS, Wood's Hole, the area immediately to the east of Spectacle Island, where disposal is proposed, appears to be erosional in nature. The shallow (~9-foot) waters at the site are also susceptible to tidal and storm activity. This is especially of concern because of the relatively large surface area proposed for disposal (probably ~45 acres). Should a problem occur with migration of contaminants, exposure of these substances to aquatic life could be substantial. E6-1

Mitigation

The BHNIP EIR/S does not adequately address mitigation and assumes that the only impacts of this project are short-term and ephemeral. We disagree. While the navigation improvement project is commercially critical to the Port of Boston, the project does preclude or compromise a number of uses of these waters that might flourish in the absence of commercial traffic. Moreover, continued utilization of Boston Harbor for commercial traffic, as well as spills and accidents associated with marine cargo shipment and distribution will result in new contaminant burdens for marine sediments in the harbor that will need to be managed in the future. Finally, there will be unavoidable short-term losses associated with the dredging process itself, including a potential for additional human exposure to resuspended pollutants through fish or direct skin contact. Besides the mitigation measures suggested elsewhere in these comments, we ask that the following points be considered. E6-2 E6-2

CLF supports the suggestion in the EIR/S that any existing tidal or subtidal habitat that is lost as a result of inshore filling associated with the project be replaced on a 2 to 1 basis and managed until it is reestablished. E6-2

We make two additional suggestions that should be incorporated into this project in order to mitigate the unavoidable short- and long-term impacts from the BHNIP.

First, the Commonwealth of Massachusetts, Massachusetts Port Authority, and Corps should investigate environmental dredging of contaminated sediments in areas that are outside the boundaries, but adjacent to, the BHNIP. The Corps is authorized under the Water Resources Development Act of 1992 to underwrite this work with a 50% federal cost share. E6-2

The upper reaches of the Chelsea River and some of the areas of the Mystic River receive extensive public use, both with direct contact from children using these waters for swimming and play and indirectly through fish consumption. An effort should be made to determine the extent of contamination in these areas, and a mitigation project should be developed and carried out that removes contamination and possibly even encourages

recreational use. Such an effort would be a meaningful exchange for the poor communities that are forced to find their recreational and fishing opportunities in these contaminated waters.

The second mitigation measure we suggest is also forward-looking and relates to source control. Massport is not only the port authority, but also one of the principal property owners in the harbor area. Massport should develop a non-point source control program that covers its properties as well as the private terminals that are being served by this project. E6-24

The control of pollutants from Deer Island will represent a substantial contribution to reducing future contamination problems but needs to be combined with a non-point source control program on pollution from port terminals and Massport properties. This mitigation measure will not only reduce the level of contamination that we experience in the future but also increase the life of the disposal facilities that are developed for this project.

Beneficial Use

CLF applauds the suggestion in the EIR/S to put dredged sediments to beneficial use. However, substantial work needs to be done to turn this theory into practice. We recommend that, if they have not already done so, the Corps, Massport and representatives from the state Executive Office for Environmental Affairs immediately begin formal discussions to help identify and contact communities and sites that could benefit from clean dredged materials. State agencies such as the Department of Environmental Protection and the CZM office are the best candidates for a much-needed beneficial use "clearinghouse," and this project is an excellent place to start. E6-25

With 114 out of 122 landfills in Massachusetts scheduled to close by 1996 (Section 3.3.1), one possibility that should be studied is the use of project clay and silts not only as daily cover, but also as final closure material.

Planning related to beneficial use should be completed prior to the release of the Final EIR/S, and specific recommendations should be included in the document.

Cost/Benefit Calculations

CLF believes that federal and local sponsor cost-benefit analyses undertaken as part of this project should be realistic, and should be included in the EIR/S. Costs such as reimbursement to fishermen for lost opportunity and equipment damage as well as potential

environmental harm including monitoring of disposal sites, clean-up expenses from leakage of contaminants into marine waters or the contamination of seafood, and its likely effects on other segments of the economy should be factored into the cost-benefit calculations.

E6-2

Current cost estimates in the EIR/S, especially for relatively distant sites such as MBDS, BL and the Meisburger 2 and 7, improperly underestimate the true cost associated with disposal at these sites by failing to include monitoring and management costs. (MBDS receives some monitoring under the DAMOS program, although these efforts may not be sufficient for the long term management of disposed BHNIP sediments.)

CLF is also interested in understanding on a more quantitative basis the benefits of this project for the regional economy and for the local sponsor. Section 4.5.5 of the EIR/S touches on this topic too briefly. A detailed analysis is essential when weighing the environmental versus economic factors of the project.

Massport officials have said that no additional vessel traffic will result from the BHNIP. The EIR/S states that the volume of cargo through the harbor is not expected to increase due to this project. In the past, when asked about the possible financial losses due to current harbor conditions, the "passing over" of Boston Harbor by an undetermined number of ships was mentioned. To our knowledge, however, details have not been made publicly available. How much additional revenue to the regional economy and to Massport will result from the project? Conversely, how many dollars will be lost yearly if BHNIP is not implemented, or is delayed? What are the costs of "lightering" and how often does it occur now? A large organization such as Massport must have produced an assessment of costs and benefits in order to justify the project internally. This information should be included in the EIR/S.

E6-2

Public Participation/Community Issues

The Corps and Massport must ensure that all stakeholders (e.g., fishermen, community representatives) are encouraged and have ample opportunity to state their concerns regarding the BHNIP-- and that their concerns are properly addressed during project planning and implementation.

E6-2

Conclusion

CLF sees the BHNIP not as an isolated project, but as part of a larger question that must be addressed at state, regional and federal levels: the management of contaminated sediments. The problem of how to safely dispose of dredged contaminated sediments has no easy solutions at the present time. This makes dredging projects such as BHNIP more

complicated than they might otherwise be. Nevertheless, until improved treatment technologies are in wide use, it will be the responsibility of state and federal agencies to ensure that existing environmental laws and regulations related to contaminated sediments are adhered to.

We thank you again for the opportunity to submit these comments.

Sincerely,

Grace I. Perez
Science Fellow

Peter Shelley
Senior Attorney

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E6-1

Massport and the Corps have taken the conservative approach that all of the silt will be treated as unsuitable for unconfined open water disposal.

E6-2

As discussed in the DEIR (pg 4-6) the silt dredging will be conducted with a modified (environmental) bucket having small or no teeth. This type of equipment is necessary to optimize the containment of silt during the dredging process. This equipment is very effective in removing silt and other unconsolidated material but is not capable of penetrating underlying clay to any appreciable depth. For this reason the DEIR states that the silt portion of the dredging will cut no more than approximately 6 inches into the underlying clay. This dredge method will effectively remove the more contaminated silt and expose the cleaner clay, sand and rock which will be removed by other equipment and methods more suitable to those materials. Overdredging the silt into clay by one to two feet (as suggested by CLF) will not be possible using a "silt" dredge bucket. Additionally, since the clay is uncontaminated, it would not be prudent to include any large amounts of clay to the silt volume due to the expected high costs of disposal of the silt fraction for the BHNIP.

E6-3

The FEIR/S considers all silt from the BHNIP to be unsuitable for unconfined open water disposal.

E6-4

The BHNIP EIR/S preparation team agrees with this comment. The experience gained from the Moran Terminal dredging project (as well as from others) is valuable in recognizing potential problems that may be encountered during the BHNIP. This is particularly applicable to the dredging of contaminated silt where the risk of environmental impacts is greatest. Please refer to the Dredged Material Management Plan (Section 5.0) for detail on the dredging and disposal operation. Experienced dredge contractors are likely to bid a large project such as the BHNIP. Environmental conditions will be discussed with the dredging contractor during the pre-construction meeting.

E6-5

See response to E6-4. The DEIR/S discusses the three commonly used type of dredges - hopper, hydraulic and mechanical. Other types of dredges, such as the pneumatic dredges, have limited production capacity and/or experimental and not proven for a large job such as the BHNIP. These types of dredged are unfamiliar to the majority of contractors and would not be considered the primary dredge.

E6-6

The use of a Corps inspector on board the dredge decreases the risk of overloading and "short-dumping". No known cases of "short-dumping" are known to have occurred in several years. As the preferred disposal alternative is in-channel, concerns about "short-dumping" are no longer a problem. A trained impartial observer would be allowed to notify the Corps inspector of a violation but would not have the authority to control dredging and disposal operations. The Corps can not fund observers other than a Corps inspector. Agencies or groups interested in having an independent observer would be required to hire the person or accept volunteers. All observers may be required to undergo training in order to board equipment. Electronic recording device would not be needed if the material is staying in-channel.

E6-7

The disposal site alternatives analysis presented in Section 4.0 of the FEIR/S concludes that In-channel disposal is the preferred alternative.

E6-8

The revised disposal site alternatives analysis is presented in Section 4.0 of the FEIR/S and includes a discussion of combinations of sites.

E6-9

The Corps's DAMOS program, would monitor the disposal site for physical, biological, and chemical parameters, as needed. Coordination with other agencies would occur, as appropriate. Contingency plans are part of the Dredged Material Disposal Plan in Section 5.0 of the final EIR/S.

E6-10

The revised disposal site alternatives analysis (FEIR/S Section 4) concludes that, of the aquatic sites, the in-channel and the partial-fill shoreline scenarios are the least environmentally damaging. The upland disposal alternatives are also among the least environmentally damaging.

E6-11

The potential for resuspension of sediments after disposal at each of the potential aquatic disposal sites has been analyzed (Appendices F and G, Attachment 1 and Section 4) for the FEIR/S.

E6-12

The BHNIP team has reviewed available information on the use of geotextile bags for disposal of contaminated sediments. At this time, there continue to be structural problems with the use of bags that are large enough to be used efficiently for a project of this magnitude. We have worked closely with regulatory agencies to identify other control methods that would minimize release of the silts to the environment during and after disposal. After further research, geotextile bags may prove to be effective for this purpose in the future.

E6-13

Policy BWP-94-037, *Reuse and Disposal of Contaminated Soils at Landfills*, makes disposal of dredged material in landfills unacceptable if reuse, recycling, destruction or detoxification are feasible alternatives. The impracticability of dewatering 1.32 million cubic yards of silty dredged material for reuse as daily cover or contouring material (or transport as waste) has resulted in the elimination of landfill reuse options. However, beneficial uses of the clean dredged material is presented in the FEIR/S.

E6-14

The Corps Boston Harbor project funds can not be used for a demonstration project. However the Corps is committed to moving forward in resolving issues surrounding the disposal of contaminated material. Refer to Section 3.0 of the FEIR/S for discussion of treatment technologies investigated.

E6-15

The disposal site alternatives analysis has been re-evaluated for the FEIR/S (Section 4). The MBDS is not considered to be a suitable site for the disposal of contaminated silts from the BHNIP. It could be considered for future maintenance material only if capping is successfully demonstrated to provide long-term isolation of these sediments from the environment in waters of similar depths.

E6-16

The U.S. EPA site designation study for the MBDS did not predict a level higher than 5% of the material leaving the site. Studies conducted for the MWRA and Mass Bays Program show that this material is minor component of the Mass Bays system. Since MBDS is not being considered for disposal of the silt to be dredged for the BHNIP, the amount of silt potentially lost to the water column during disposal is not an issue.

E6-17

Boston Lightship has not been selected as the preferred alternative for disposal of silt from the BHNIP (Section 4.0, FEIR/S). Any future use would require coordination with EPA regarding the proported drums of industrial and radioactive waste at this site. Disposal of

dredged material at this site to cover these drums may benefit the environment of this area. The EPA should play an active role in researching the locations and environmental status of any hazardous materials at the BLS to determine whether it would be best to leave as is, remove, or cover in place.

E6-18

The Meisburger sites are no longer under consideration as the project's LEDPA choice.

E6-19

The biological resources and the physical environment at the Spectacle Island CAD site were reexamined for the FEIR/S. The revised disposal site alternatives analysis (Section 4) concluded that this site was not the least environmentally damaging practicable alternative for disposal of the BHNIP silt.

E6-20

Mitigation is discussed in Sections 5 and 6 of the FEIR/S. The project is not anticipated to change the number of ships coming into the harbor.

CLF asserts that the continued commercial shipping in Boston Harbor will result in additional marine contamination because of spills and accidents. CLF further suggests that there are other uses of the Harbor that are compromised by the current commercial shipping. It is important to note that there have been no major spills in Boston Harbor in part because of the vigilance of the Coast Guard, harbor pilots, and Harbor advocacy groups. In addition in over five years, there has not been a spill resulting from collision (per USCG Boston-Marine Safety Office). It is also important to recognize that spills occur not just from tankers and container ships, but also smaller vessels including tugboats, barges and fishing boats and recreational craft. These latter vessels would continue to use the Harbor even if no BHNIP were undertaken. The region will continue to need petroleum products which are most shipped over the water. Lightering and use of barges will continue in Boston Harbor if there is no maintenance dredging. Thus, the Harbor is not necessarily saved from spills by virtue of closing it to larger vessels. Further, closing the Harbor to commercial shipping, other than petroleum products, could diminish the efforts of Harbor advocacy groups which currently benefit from the resources and ideas of port operators.

E6-21

Water quality models showing the distribution of contaminants during the dredging process are presented in Appendix F. It is unlikely that contaminants released from the operations will exceed chronic water quality criteria. Therefore, effects of exposure to biota would be undetectable.

E6-22

In-channel disposal has been identified (Section 4.0) as the Least Environmentally Damaging Practicable Alternative, as well as the preferred alternative.

The phrasing of this comment appears to exaggerate the DEIR/S commitment to mitigation. Nowhere in the DEIR/S does it suggest that BHNIP proposes to replace any lost tidal or subtidal habitat on a 2 to 1 basis. What is does state in Section 3.10 is "Loss of subtidal or intertidal habitat could be replaced with intertidal habitat, salt marsh or eelgrass plantings."

BHNIP commits to investigating compensatory mitigation , if required. However, as stated in Section 6.4.4, the BHNIP, as designed and with in-channel disposal, provides significant enhancement of project specific principal valuable functions (see Appendix K). As such, no compensatory resource mitigation should be required under either federal or state wetland regulations.

As local sponsor, Massport is willing to work with state resource agencies to identify resource enhancement opportunities in the Harbor area. As examples, these can include:

1. Assisting the Metropolitan District Commission (MDC) in their on-going efforts in coastal resource restoration in the Boston Harbor ACECs. The MDC is currently planning projects at the Rumney Marsh and Neponset River ACECs.

2. Massport is committed to increasing the number of vessel sewage pump-out facilities in the Harbor area and will work with the appropriate agencies on specific details.

3. Massport will also consider coordinating with the Department of Environmental Management (DEM) to identify potential areas of cooperation and assistance in DEM resource and facility enhancement projects on Harbor islands.

4. Massport will work with state and local resource agencies to identify potential resource enhancement options such as supporting the development of an "urban fishing park" through rehabilitation of water access structures (e.g., boat ramp in Little Mystic Channel) to enhance public use and access to functional recreational fishing areas.

E6-23

Although the Corps has the authority to participate in environmental dredging, this program has not been well funded. The Corps supports environmental dredging of contaminated sediments outside the channel limits. As there have been many concerns regarding the disposal of contaminated sediment from the dredging of Boston Harbor, it may be prudent to continue coordination with the Commonwealth agencies and other groups to resolve when, how, and where disposal of contaminated sediments can occur, considering the large amount of dredged material this would generate. Also the sources of pollution to the harbor would need to be reduced to make this program effective. This may be possible in the future when a containment site for contaminated sediments is available. In addition, this program would require a cost-sharing partner willing to provide the other 50% of the cost of this study.

E6-24

Source control is an important aspect of reducing the contaminant load to Boston Harbor. Several mechanisms are currently in place to address this issue. As noted by the CLF, the upgrade of the Deer Island facilities will continue to substantially improve water quality in Boston Harbor. The following table, summarizing information contained in Alber and Chan (1994; MWRA Report 94-1) indicates that even though discharge of the sludge has ceased, the MWRA outfall is still the major source of most of Boston Harbor's contaminant load:

PERCENT CONTRIBUTION OF VARIOUS SOURCES TO THE BOSTON HARBOR CONTAMINANT LOAD

Source	Flow	Cu	Pb	Zn	PAH 1	PAH 2	PAH 3	N	P	BOD_5	TSS
MWRA Effluent	39	84	63	78	94	31	29	89	94	91	88
CSO Flow	<1	1	7	2	<1	1	3	<1	<1	1	2
Stormwater	2	3	ND	11	<1	7	22	1	1	1	2
Logan Airport	<1	1	ND	1	1	ND	ND	<1	<1	1	<1
Tributaries*	48	7	23	4	5	59	36	7	4	7	9
Atmospheric	8	1	6	2	<1	2	11	2	<1	ND	ND
Groundwater	3	2	1	1	ND	ND	ND	1	<1	ND	ND
Other NPDES	<1	<1	ND	<1	ND	ND	ND	ND	ND	ND	<1

* Above the Charles River and Amelia Earhart Dams.
ND = No Data
PAH 1 = 2-methylnaphthalene
PAH 2 = pyrene
PAH 3 = benzo(a)pyrene

Alber and Chan (1994) conclude with the following comments:

Despite the above reductions, effluent discharged from MWRA plants are still a major source of all conventional contaminants, metals, and nutrients examined. The exception is individual PAH compounds, which have large runoff and non-point sources. The next big change in contaminant loading to the Harbor will come once the treatment plant outfall is moved. When the new effluent outfall tunnel is completed, the amount of contaminants entering the Harbor will decrease dramatically. This should result in a major improvement in the water quality of Boston Harbor.

Boston Edison, a project beneficiary, is the only other NPDES permitted discharge directly entering the Harbor. Massport and other project beneficiaries are presumably accounted for in the CSO estimates, since if they discharged stormwater directly to the Harbor they would have an NPDES permit. Plans currently underway by MWRA to address CSOs (Short-term System Optimization Plan and Long-term CSO Control Strategy) should also contribute to source reductions over time. Under the Clean Water Act (40 CFR 122.26), stormwater discharges to CSOs (or municipal sanitary systems) do not require a NPDES permit. However, these discharges may be subject to pretreatment requirements if the system operator (MWRA) requires them.

E6-25

The Department of Environmental Protection has been invaluable in providing regulatory information, technical data, and guidance to identify specific beneficial uses of dredged material generated by BHNIP and other projects. The practicable beneficial uses identified for this project are described in the FEIR/S.

E6-26

In-channel disposal should result in no loss of any fisherman's equipment or livelihood. As the material will be placed in the same area, no additional impact is anticipated, based on water quality modelling.

E6-27

CLF asks about the financial gains or losses sustained with and without dredging. There are assumptions which must be incorporated in any answer to this question. If one assumes that the dredging will be completed in 1998, and that the benefits of the dredging will be reflected after that date, then the starting point for calculating benefits is the cargo forecast to move through the Port in 1998. Massport projects cargo tonnage in 1998 to be 1,514,200 tons which yields about $1.73 billion in economic value to the region including 13,000 jobs. If one assumes that dredging facilitates ships' transit in the Harbor and that tonnage grows 3% per year, the total new cargo volume will be over 245,000 tons at the end of five years. Massport calculates that the value of each ton of cargo to the region is over $1120. At the end of five years, the economic benefit of the additional tonnage will be $275 million (dollars are not discounted).

Alternatively, if the BHNIP does not go forward, large container ships will have increasing difficulty transiting the Port of Boston. It is important to note that even barges will have difficulty transiting the Harbor under the No-Build option since barges are getting wider and deeper. Thus, barging is not the solution for bringing containerized cargo into a Harbor with insufficient draft. Further, the need to transfer cargo to barges and the slower travel time for barges is a deterrent to shipping containers in this manner. News of the No-Build decision in Boston Harbor will affect the decisions of shipping lines and shippers, and will likely decrease the volume of cargo coming into the Port. Once the decline in tonnage begins, it will continue to the detriment of Port operations. Using the 1998 base year with tonnage of 1,514,200 as a base, and assuming a tonnage decline of 5% annually, the total tonnage

reduction by 2003 would be 342,569. This represents $392 million in economic benefit lost to the region. Thus the decision to dredge, and allow today's fleet of container ships to transit Boston Harbor easily, or not to dredge and reduce the cargo moving through the Port of Boston has economic consequences ranging from a benefit of $275 million to a lost opportunity of $392 million over a five year period from 1999 through 2003. This is for containerized cargo alone.

CLF further asks about the cost of lightering. The latter is impossible to quantify because the information is privileged. Each company has its own method of assessing costs. Thus, Massport cannot total the figures given by individual companies to identify a "port" lightering cost, since the figure given by each company may include more than the pure cost to lighter.

Massport projects that the gross revenues accruing to the Authority from 245,000 additional tons of cargo moving through the Port over the same five year period will be approximately $3.5 million.

E6-28

Several meetings were held with lobsterman and fishermen to obtain their views on the project. These concerns are displayed in Appendix B of the final EIR/S.

E7

RECEIVED
JUN 21 1994
MEPA

GreenWorld Inc.

Suite 193
510 Commonwealth Avenue
Boston, MA 02215

REQUEST FOR A SUPPLEMENTAL EIR/EIS ON VESSEL IMPACT ON WHALES IN REGARDS TO THE MEPA REVIEW OF THE BOSTON HARBOR NAVIGATION PROJECT (EOEA #~~9865~~)
5695

TO: Trudy Coxe, Secretary
Executive Office Of Environmental Affairs
100 Cambridge Street
Boston, MA 02202

RE: COMMENTS ON DRAFT EIR/EIS — BOSTON HARBOR NAVIGATION PROJECT (EOEA # 9865)

DATE: June 20, 1994

Trudy,

Having reviewed the Draft EIR/EIS on the proposal by Massachusetts Port Authority and the Army Corps of Engineers to deepen the present ship channels in Boston Harbor, and to make other navigation improvements, I discovered a major error of omission in the scope of the review. The MPA/ACOE completely failed to review the environmental impact of the very thing that the project is being done to accommodate — ship traffic into and out of Boston Harbor.

Ship traffic has a devastating impact on the marine environment. Ship collisions routinely kill endangered marine wildlife. Pollution from the discharging of plastic material and debris from ships at sea is a major source of coastal pollution. The number one cause of death for the world's most endangered species of whale — the Northern Right whale — is ship strikes. Yet, the DEIR/DEIS fails completely to even attempt to address this issue.

E7-

A review of the environmental impact of any project can be divided into two areas of potential impact: the effects of the construction (or alteration) of a physical feature at a given site and then the long term consequence of the existence of that physical feature. Therefore, the environmental review of the construction of a dam consists of a review of the construction of not only the dam itself but also a review of the effects on the environment of the operation of the dam and the creation of a massive lake behind it.

Concerning the present DEIR/DEIS, the building of the "dam" (the dredging of ship channels) has been considered but no mention has been made of the long term impact of the dam's "lake" — the ship traffic in and out of Boston Harbor. This is a complete failure. Even the scoping sessions for the DEIR/DEIS failed to raise this issue even once. A representative of the consulting firm that prepared the DEIR/DEIS defended her firms performance by saying that, "no one ever told us that an analysis of ship traffic was to be included."

The survival of the Northern Right whale is now in question. The elimination of ship strikes on this species may be the only thing that can prevent an otherwise imminent extinction for this species of whales. All ship traffic into or out of Boston Harbor either crosses areas that have been proposed to be designated as critical habitat for the Northern Right whale (publication of the final rule in the *Federal Register* is imminent) by the National Marine Fisheries Service or other areas that are within the Stellwagon's Bank Marine Sanctuary. The United States is the world's number one whale killing nation, mostly because of kills caused by ship traffic in U. S. coastal waters.

There is no simple solution to the failure to include an analysis of the impact of ship traffic supported by this project on the marine environment and on species of endangered marine wildlife. A complete analysis — and consideration of mitigation measures — would be extensive and generate a document equal to the present DEIR/DEIS. The very subject would have to be scoped out to make sure it would be adequately addressed. Areas of impact should include strikes on marine wildlife, chemical pollution from vessels, adequacy of law enforcement, plastic pollution from ships, chances of accidents (e. g. oil spills in Massachusetts Bay), etc..

E7-2

Therefore, I request that a supplemental EIR/EIS be done of the impact on the marine environment of the vessel traffic resulting from this project. I request that you recall your scoping committee and have it prepare a scope on the effects of vessel impacts for a supplemental EIR/EIS. I requests that the MPA/ACOE be then given the scope and requested to prepare a draft supplemental EIR/EIS on the impact of vessel traffic resulting from the Boston Harbor Navigation Project.

The death of a single Northern Right whale has been determined by the federal Northern Right whale recovery team to be unacceptable. Unless the MPA/ACOE figure a way to insure that no ship going into or coming out of Boston Harbor will ever again kill a Northern Right whale, Northern Right whales will be absolutely threatened with extinction by this project. If the MPA/ACOE refuse to properly review and find a way to eliminate this threat, no federal court will allow them to hold any federal or state permit to conduct this project.

This request has been made under the provision of the Massachusetts *Administrative Procedures Act* and regulations adopted to implement it. Your formal reply in writing is expected and required by statute. We wish to be informed of every meeting conducted to review and make decisions on this petition.

I await your reply.

In Peace,

Max Strahan
National Campaign Director

E7-1

The proposed project is not expected to increase ship traffic into and out of Boston Harbor. The purpose of the project is to reduce tidal delays ships currently experience in Boston Harbor. Additional comments on ship traffic are discussed in the Biological Assessment for this project.

E7-2

The purpose of the project is not intended to increase ship traffic into and out of Boston Harbor. A scope to determine increased ship traffic would not be appropriate. A supplemental EIR/S is not needed for this purpose. The EIR/S and Biological Assessment do discuss impacts from the increased ship traffic out to the MBDS to dispose of clean parent material.

MASSACHUSETTS BAYS PROGRAM

100 Cambridge Street, Room 2006, Boston, Massachusetts 02202 (617) 727-9530 *fax (617) 727-2754*

E8

June 21, 1994

Brink P. Miller, Colonel
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254

Dear Colonel Miller,

The primary goal of the Massachusetts Bays Program (MBP) - a state, federal, and local partnership -is to maximize protection of the marine environment. Therefore, the MBP can only support those activities of the Boston Harbor Navigation Improvement Project (BHNIP) which meet that goal.

Since extensive dredging will disrupt water quality in the harbor through increased turbidity and by triggering the release of contaminants which have accumulated in marine sediments, the MBP can only support this project if appropriate technologies are used to minimize the impacts from those sources, e.g. silt curtains and sealed dredging buckets. The DEIR/S should adequately examine these and other technologies which would minimize the impacts E8-1 both the project area and at the preferred disposal sites on both water quality and the marine biota and habitat. ıe MBP also recommends that the project provide for monitoring of the bays ecosystem to ensure that there are no long term adverse impacts on the above resources.

Use of the Massachusetts Bay Disposal Site (MBDS) for the dredged spoil raises concerns, as well. The U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency have determined that at least 603,200 cubic yards of surface sediments in the project area are not acceptable for unconfined ocean disposal; and the estimated extent of contamination ranges from 25 to 40 percent. To date, evidence has not been presented to show that capping the E8-2 material will work at the depth of the MBDS. If a pilot project is to be conducted at the MBDS to demonstrate the feasibility of deep water capping, it must be done by capping clean sediment with clean sediment. The bays ecosystem is a fragile resource and must not be used as an experiment. If capping of clean sediment cannot be done, the MBP must oppose the MBDS as a disposal option.

Other specific recommendations relating to the BHNIP and to disposal options are being developed by our Management Committee as part of the Comprehensive Conservation and Management Plan (CCMP). We will submit them to you later this summer.

Thank you for your time and consideration of these concerns. If you have any questions, please feel free to call me at (617) 727-9530 x406.

Sincerely,

Diane M. Gould

ıane M. Gould, PhD
xecutive Director

cc: Carol Kilbride, USEPA
Cathy Demos, USACOE

E8-1

The FEIR/S has identified specific proven technologies which will effectively minimize impacts to the water quality and marine habitat. Section 5.0, Dredging Management Plan, of the FEIR/S describes specific equipment and operating techniques to minimize impacts to the aquatic environment. In addition, it is noted that the construction operations, specifically dredging and disposal, will be required to meet certain minimum environmental criteria which will be incorporated into the conditions of the project permits. Water quality modelling has indicated that there will not be significant water quality violations from the dredging and disposal of dredged material in Boston Harbor. Refer to Appendix F for additional water quality information.

E8-2

The MBDS is not considered in the FEIR/S to be a suitable location for disposal of silts from the BHNIP. If a capping demonstration is conducted, it will use clean silts.

MASSACHUSETTS SIERRA CLUB
3 Joy Street Boston Massachusetts 02108 (617) 227-5339 fax (617) 742-8646

E9

June 27, 1994

Brink P. Miller, Colonel
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254

Re: Draft Environmental Impact Report/Statement for the Boston Harbor Navigation Improvement Project

Dear Colonel Miller:

We are writing to submit our comments on the above referenced DEIR/S for the proposed Boston Harbor Navigation Improvement and Berth Dredging Project (BHNIP). We have divided our comments into several areas of concern for items covered in the Draft EIR/S. In addition, for reasons stated below, we are calling for a Supplemental EIR/S, to examine in more detail, specific late appearing options and other topics not adequately reviewed in the Draft EIR/S.

1. PURPOSE OF THE BHNIP

The Sierra Club questions whether the project purpose as stated in the Draft EIS will in fact be achieved by the proposed dredging.

The Draft EIS states that the purpose of the BHNIP project is "to increase the navigational efficiency and safety of Boston Harbor for present types of deep drafted vessel traffic that are currently transiting the project area." It identifies the need for a depth of 40 feet mean low water to accommodate deep draft navigation. It asserts that the use of larger vessels for shipping reduces transportation costs, but that under current conditions in the harbor, these cost reductions are not fully realized because the vessels "either incur tidal delay, have to be lightered or are light loaded" (p.1-3). According to the DEIS, these factors "discourage many ships from calling directly on the Port of Boston" (page 1-4). The document cites specific examples of ships that schedule arrivals around the tide, or which do not call on Boston loaded to the maximum capacity.

E9-1

The DEIS asserts that completion of the BHNIP will enable the utilization of "larger vessels which will transit the harbor during a wider range of tidal stages." The project is also designed to accommodate the use of double-hull tankers as required by the Oil Pollution Act of 1990 and to accommodate increase in the number of size and container ships which is projected for the Port of Boston in the future (p.1-3).

C20

REXHAM

REXHAM INC.
P. O. Box 811
South Hadley, MA 01075-0811
Fax 413 539-5221
Telephone 413 539-5210

May 16, 1994

Brink P. Miller, Colonel
Corps of Engineers
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, Ma 02254

BPM

Dear Colonel Miller,

I am writing in regards to the Boston Harbor Navigation Improvement and Berth Dredging Project. I represent a business who exports exclusively through the port of Boston. Annually we ship nearly 50 containers and at least 100 LCL shipments. This business represents nearly 15% of our $100MM+ gross sales and our committed growth is nearly all in our international markets. By the end of 1994 we will have a European Distribution Center to service our new markets on the continent and will be supplying inventory to that DC over Boston. My point being, Boston as a viable port is crucial to our business now and will be even more in the future.

I don't doubt that the environmentally concerned citizens of Massachusetts and the surrounding area should be conscious of the issues of the dredging project. The Massport and the Corps of Engineers are project partners and there is an obvious commitment to safely and cost effectively dispose of the contaminated portion of the sediment.

C20-1

New England has lost and seems to continue to be losing jobs and manufacturing businesses. We are attempting to dig ourselves out of the recession. To many of us the only untapped markets where we can increase our business is overseas. Please do not loss sight of the importance the port of Boston has to the entire New England economic health and future growth.

If the international shipping community is moving towards more deep draft vessels it is Boston's **OBLIGATION** to mandate what ever is required to accommodate those vessels. The over 9000 jobs directly or indirectly tied to the Port of Boston are a very small portion of the economic impact you may be risking in fighting or stopping this project.

I petition you to do the right thing for your state and region - protect our environment but do not lose sight of what will keep us economically strong. With proper procedures and guidance I am sure the project can be handled with care.

Respectfully,

Marge Patterson

Marge Patterson
Transportation Administrator

3. PREFERRED ALTERNATIVES

In the Draft EIS, the Army Corps of Engineers and Massport have identified several "Preferred Alternatives:" the Massachusetts Bay Disposal Site, the Boston Lightship site, an area off of Spectacle Island, and the Meisburger Sites 2 and 7. All of these are open water sites. Massport has indicated that it will consider a sixth alternative, disposal of the contaminated material in one of the inner channels. The open water sites have clearly been chosen as the "preferred alternatives" because they are among the least costly.

E9-3

The value of the resources that are jeopardized by the open water disposal option have been ignored. Sufficient information about the long term fate of contaminated material disposed of in open water is not available at this time to justify placing the aquatic resources of Massachusetts bay at further risk. The promise of long term monitoring does not insure that future commitment or ability will exist to take remedial action if problems are detected at these disposal sites. Therefore we strongly urge that the resources of Massachusetts Bay and Boston harbor not be jeopardized to begin with.

Massachusetts Bay Disposal Site:

It is bewildering that the Corps and Massport would even list the Massachusetts Bay site, since the Environmental Protection Agency has clearly prohibited disposal of contaminated material with capping unless and until it is shown that capping can isolate contaminated material from the benthic community. To address EPA's questions about the efficacy of capping, the DEIS cites the "Addam's Model Results" found in Appendix F. This model was used to "look at the short-term fate of dredged material." Model predictions about the short-term fate of dredged material do not satisfy concerns about what happens to capped disposal material over periods of many years. It should also be noted that capping has never occurred at the depth of 80 to 100 meters; the studies cited by the Corps of capping at the Portland site and in New York Harbor may have little relevance to disposal at the Massachusetts Bay site.

E9-4

We are further opposed to any disposal at the Massachusetts Bay Disposal Site because of its proximity to Stellwagen Bank. Marine mammals, including the endangered northern right whale, migrate annually to this sight to feed, and to nurse their young, and are therefore dependent on the ecological vitality of this region.

Use of the Massachusetts Bay disposal site for contaminated sediments is illegal without a waiver. We would vehemently oppose the issuance of such a waiver.

Boston Lightship

Boston Lightship is about 9 nautical miles from Stellwagen Bank. It is reported to be a productive fishery area inhabited by cod, sole, yellowtail, flounder and whiting, as well as lobster and quahogs. Endangered whales and possibly endangered turtles are believed to frequent the area as transients. The concerns about the fate of material disposed of in open water over long periods of time apply to this site as well. Because of the potential damage to fish, shellfish and endangered species the Sierra Club believes that choice of the Boston Lightship site would violate the Section 404 (b)(1) Guidelines under the Clean Water Act. Other less environmentally damaging alternatives exist which offer a practicable solution to disposal of the dredged material.

E9-5

Meisburger Sites 2 and 7

Flounder and cod fisheries also exist within the vicinity of the two Meisburger sites, as well as productive lobster beds. These valuable areas should not be placed at risk by the possibility of migration of contaminants from dredge disposal. Again, because other less environmentally damaging alternatives exist, use of either of the Meisburger sites would violate the 404(b)(1) Guidelines. E9-6

Spectacle Island

Lobster fishing occurs in the area between Spectacle and Long Islands. In addition it is critical to note that a containment facility is being constructed on the island to remediate the landfill and dispose of material from the Central Artery project. The integrity of the containment area is already plagued with problems of slumping and subsiding of waste materials, and nearby dredging could exacerbate this instability. Because of the potential damage to the lobster fishery and other aquatic resources in this area, this site does not qualify under the Section 404(b)(1) Guidelines. E9-7

The Sierra Club believes that none of these "preferred alternatives" are environmentally sound choices.

4. IN-CHANNEL DISPOSAL

The only dredge methodology considered is described as longitudinally segmented, as the channel is dredged, with some temporary initial storage of sediments in barges (Vol I, page 4-7). The alternative exists, but was not covered adequately in the DEIS, to dredge the channel deep enough to provide space for berth sediments as well as channel sediments. This only shows up in the document as a late appearing option (Vol II Table E-18). E9-8

Considering that the proposed Conditions/Impacts (Vol I, page 3-40) of in-channel dredging appears to have a more acceptable environmental impact analysis, we urge that the Corps and Massport should prepare a Supplemental Environmental Impact Statement which provides more in-depth analysis of options other than open water disposal including in-channel and shoreline disposal options.

The Sierra Club believes that this option merits more in depth analysis.

5. SEDIMENT CONTAMINATION

The U.S. Army Corps and the EPA have different findings for characterization of contaminated sediments. The Sierra Club supports the EPA's findings that all silt material is contaminated and must be disposed of properly. We urge Massport and the Corps to consider all silty material to be dredged as "unsuitable". The Sierra Club objects to any reclassification of contaminated material as suitable, by mixing, matching, or any other methods. E9-9

6. DREDGING PROCESSES

Based on past experiences, the Sierra Club feels the dredging process should be carefully monitored and methodology and techniques used should be covered more thoroughly in the SEIS. At the Moran Terminal dredging last winter, the environmental "bucket" often did not close properly on the way up due to debris on the bottom and trash in the sediments. We would like to see the entire dredging process monitored by an impartial observer and contingency language E9-10

placed in any contracts for dredging and disposal which would require work to halt should problems occur. Also, we would like to see performance standards for dredging put into the Dredging Management Plan in addition to the descriptions of equipment and methods. Also missing is pre-qualification of dredging contract bidders.

7. FUTURE RE-SEDIMENTATION

Silt from future Maintenance dredging will continue to be a problem. The SEIS should develop a 50 year plan that examines more thoroughly what causes re-sedimentation, and how it can be prevented. The source of most sediments MIGHT be the beaches found under many docks, and holes in bulkheads. These beaches and bulkheads are strongly washed by waves caused by wakes, which wash sediments into the berths and channels. The wakes are very intense during the boating season. Also, CSOs and various other drains into the harbor may have no grit retention chambers. We urge Massport and the Corps to work towards elimination of sources of contamination in Boston Harbor so that future dredge wastes can be disposed of more safely and economically. E9-11

8. CONCLUSIONS

Because of the reasons stated above the Sierra Club believes that a Supplemental Environmental Impact Statement must be prepared and circulated for public comment for this project. If conditions in the North Channel are not considered and addressed, millions of dollars of public money may be wasted on a project which does not even fulfill its stated goals. In addition, the project may result in significant environmental damage since none of the Preferred Alternatives identified by Massport represent environmentally sound solutions for disposal of dredge material. Circulation of a Supplemental EIS is necessary so that other alternatives can be reexamined and commented upon. We urge the Office of Environmental Affairs to reject all of the Preferred Alternatives, and to require a Supplemental EIS for the Boston Harbor Navigation Improvement Project.

Thank you for the opportunity to comment.

Respectfully submitted by the Massachusetts Sierra Club.

E9-1

Discussions with shippers during preparation of the Feasibility Report indicated that additional underkeel clearance was not required to transit the North Broad sound channel; project benefits are based on shippers actual operating practices. They represent the difference in transportation costs with and without improvements. The 1988 Feasibility Report found that improvements to the north Broad Sound channel were not economically justified. The North channel is maintained at -40 feet MLW. With the BHNIP, vessels will have safe 40 foot access from deep water to the terminals in the Mystic, and Reserved channels and 38 feet in the Chelsea River channel. For additional information, please refer to the 1988 Main Report and Appendix 1 of the Feasibility Report.

E9-2

The disposal site alternatives analysis (Section 4.0) has been revised to separate environmental and practicability issues more clearly. The selection of the preferred alternative focussed on the sites that had the lowest potential for environmental impacts. To determine the cost/benefit ratio, strict criteria are used to determine Federal participation in a navigation improvement project. This criteria does not include the environmental costs, except for mitigation costs. However, the purpose of the EIR/S is to discuss the environmental impacts for each disposal alternative so that an informed decision can be made in selecting the appropriate disposal site for the silty material. All of the impacts would be temporary. Also, the 1:1 ratio refers to the parent material (improvement project), the silty material is considered a maintenance project for a project already authorized. Benefit/cost ratios are not performed for maintenance projects.

E9-3

The disposal site alternatives analysis had been reevaluated for the FEIR/S (Section 4). The offshore sites were determined not to be among the least environmentally damaging alternatives and are no longer being considered as options for the current project.

E9-4

See response to comment E9-3.

E9-5

See response to comment E9-3.

E9-6

See response to comment E9-3.

E9-7

In the revised disposal site alternatives analysis, the Spectacle Island CAD site was not selected as the preferred alternative for the silts from the BHNIP.

E9-8

In-channel disposal was discussed in both the alternatives analysis (Vol. I) and Attachment 1 of the DEIR/S. It has been reexamined, along with all other potential disposal sites, in a revised alternatives analysis (Section 4 of the FEIR/S) and was determined to be the least environmentally damaging practicable alternative (LEDPA).

E9-9

Both the DEIR/S and the FEIR/S assessed the selection of appropriate disposal sites for the BHNIP silt assuming that **all** the silt was unsuitable for unconfined open water disposal.

E9-10

A Dredged Material Management Plan is discussed in Section 5.0 of the final EIR/S. *Pre-qualification is the "exception to the rule" in Corps contracting procedures. Typically* a project is open to bids from all contractors. Before a contract is awarded, the apparent low bidder is examined to determine his capability to be "responsive" to the specifications. This typical procedure is intended to allow more competition yet still provide scrutiny of a contractor prior to award.

The Massachusetts Sierra Club believes that there should be an impartial observer not only during all disposal operations, but also during dredging, blasting, dewatering, and other project activities. As noted in the FEIR/S, the Corps does not typically fund this type of activity although it does contract with a dredge inspection firm which verifies disposal locations. Independent observers can be accommodated, but the independent observer can only alert the Corps inspector of any perceived permit violations. However, only the Contracting Officer can modify or halt dredging and disposal operations.

The FEIR/S, Section 5.0, Dredging Management Plan, discusses specific equipment and operational contingencies. Section 5.8.2.2, *Trash and Debris,* discusses specific contingencies for potential problems related to those factors. In addition, it is noted that the construction operations, specifically dredging and disposal, will be required to meet certain minimum environmental criteria which will be incorporated into the conditions of the project permits.

E9-11

Future maintenance dredging disposal needs are discussed in Sections 2.0 and 4.0 of the FEIR/S.

Save the Harbor
Save the Bay

Founded 1986

E10

June 28, 1994

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Brink P. Miller
Colonel, Corps of Engineers
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254

Dear Colonel Miller:

Save the Harbor/Save the Bay (SHSB) is a non-profit, citizen-based organization dedicated to the protection and promotion of Boston Harbor and Massachusetts Bay. We are writing to express our concerns about the draft environmental impact statement/report (DEIS/R) submitted by Massport and the Army Corps of Engineers for the Boston Harbor Navigation Improvement Project and Berth Dredging Project (BHNIP).

Our major issues regarding the BHNIP concern the dredging process itself, and the handling and disposal of sediments, many of which are contaminated with heavy metals, PCBs, PAHs and other toxic materials.

The Dredging Process

From experiences at Moran Terminal, we learned the dredging process can be very messy. When debris prevented the clamshell dredge from closing properly, sediments spilled into Boston Harbor. We would like to see the entire dredging process monitored by an impartial observer with the authority to halt dredging that is in violation of permit conditions or otherwise environmentally dangerous. Also, we would like contingency language placed in any contracts for dredging and disposal which would require work to halt should problems occur. Finally, we would like to see performance standards for dredging put into the Dredging Management Plan (Section 4.0) rather than descriptions of equipment and methods. This would help ensure a cleaner and safer dredging process. E10-1

Disposal and Future Dredging Projects

On page 1-5 of the DEIS/R, one of the three interests associated with efficient port operations which this project is designed to serve is listed as, "Identify potential disposal options to serve future long-term maintenance requirements to meet regional needs including Boston Harbor." Page 3.1 states, "... future maintenance of the channels is closely linked to the BHNIP, therefore, the disposal alternative analysis also identified alternatives that could be useful for future dredging." Save the Harbor/Save the Bay wants to ensure that the disposal site(s) chosen for the Boston Harbor Navigation Improvement Project (approximately 2.9 million cubic yards of material - 1.1 cubic yards of which are contaminated) shall not be used for future maintenance dredging (according to this DEIS/R, future maintenance dredging could produce as E10-2

25 WEST STREET, FOURTH FLOOR • BOSTON, MASSACHUSETTS 02111 • TELEPHONE: (617) 451-2860 • FAX: (617) 451-0496

much as 6.2 million cubic yards of contaminated dredge spoil over the next fifty years) and other regional dredging projects until the sediment quality and environmental impact for those projects are analyzed with time for public comment. We would like this stipulation to be very clear in the final impact statement.

Sediment Characterization

First, the exact amount of material being dredged-up as a result of this project is unclear in DEIS/R. In some places the DEIS/R states that, in total, 2.9 million cubic yards will be dredged, in others, the document says 3.5 million cubic yards will be dredged. SHSB would like the final impact statement to be clear in regards to the amount of dredged material this project will produce. E10-3

The U.S. Army Corps of Engineers has found that all maintenance material (silt), except 160,000 cy from Reserved Channel, and 200,000 cy from the berth areas of Gulf Oil, Army Base, Conley terminal, and the Edison Barge berth is unsuitable for unconfined open water disposal. The U.S. EPA has conversely found that <u>all</u> silt material is unsuitable for unconfined open water disposal. We support the EPA's findings and oppose unconfined ocean disposal of any silt material. E10-4

Disposal Alternative Analysis

The MEPA scope for the DEIS/R identified ocean disposal at Massachusetts Bay Disposal Site (MBDS) as the preferred disposal option for marine sediments of acceptable quality from the dredging projects and the alternative against which other alternatives would be judged. We believe that using the MBDS as a basis for comparison of all disposal options, for both clean and contaminated sediments, skews the analysis as it is illegal, without a waiver, to dump contaminated sediments at this site. **We absolutely will not support any disposal option which would require a waiver from Section 103(d) of the Marine Protection, Research, and Sanctuaries Act (MPRSA), or any other legal waiver.** Therefore, disposal options suitable for contaminated sediments should be compared against each other in the final impact statement, not against the MBDS. E10-5

The DEIS/R does not provide a full costing of disposal alternatives. Environmental costs, such as habitat damage or contamination, are not included. Also, disposal sites of both clean and contaminated sediments must be carefully monitored by impartial observers with contingency plans should problems occur. This is particularly important at the MBDS, where it is likely that clean parent material will be disposed. The MBDS is adjacent to the Stellwagen Bank National Marine Sanctuary, one of our most important natural resources in Massachusetts Bay and must be protected. The costs of this monitoring are not factored into the cost/benefits analysis of the disposal options. These costs must be E10-6

considered in the final impact statement.

In addition, the costs to other resource users of using certain disposal alternatives (*i.e.* Fishermen, Lobstermen) were not considered in the discussion of disposal alternatives. These costs should be considered in the final impact statement.

Although cost/benefit analysis is not required in the EIR, the Certificate of the Secretary of Environmental Affairs on the Environmental Notification Form (EOEA #8695) for this project states, "... the cost/benefit issue appears to be germane to agencies' decisions with respect to this dredging and disposal project," and the regulations (301 CMR 11.01 (4)) provide for it.

Lastly, given the constantly increasing pressures on the resources of Massachusetts Bay, we would like the final impact statement to analyze cumulative impacts. In particular, higher levels of contaminants introduced into the system through dredging projects (both BHNIP and the Central Artery Third Tunnel Project), non-point sources of runoff, and the MWRA outfall, for instance, should be addressed in concert. E10-7

Disposal Options

We are absolutely opposed to any open ocean disposal of contaminated sediments. We would like to see a portion of the contaminated dredge spoils set aside for a pilot project that would test the efficacy of alternative technologies in reducing toxicity of contaminated sediments. Generally, we would like to see clean sediment used beneficially to upgrade habitats and already contaminated areas wherever possible. Our goal is to minimize damage to and exposure of contaminated sediments to the marine environment as much as possible. To that end, we have problems with each of the preferred disposal alternatives delineated by Massport and the Corps in the DEIS/R. Therefore, we would like the final impact statement to look more closely at the "potentially practicable" disposal alternatives. E10-8

In addition, we have specific comments about several of the "preferred alternatives":

- It is currently illegal to dump contaminated sediments at the Massachusetts Bay Disposal Site (MBDS) without a legal waiver. Save the Harbor/Save the Bay is particularly concerned about this potential option and **will not, under any circumstance, condone disposal of contaminated sediments at the MBDS** including capping with clean sediments. We oppose any pilot project at the MBDS which would test the efficacy of capping contaminated sediments at this location. At this point, the DEIS/R is unclear in its description of the MBDS as a disposal alternative. At some points it describes the MBDS as a preferred alternative for both clean and contaminated sediments and at other points it does not. The final impact statement must be very clear in its prohibition of E10-9

disposal of contaminated sediments at the MBDS. In addition, Massport and the Corps should be working closely with Brad Barr, manager of the Stellwagen Bank National Marine Sanctuary, regarding any disposal of clean sediment (parent material) that might occur at the MBDS.

- Save the Harbor/Save the Bay will not support disposal of clean or contaminated sediments at the Boston Lightship area until the U.S. Environmental Protection Agency completes a thorough study of the extent and location of radioactive barrels in the area. It is possible, once the location of radioactive barrels is known, that disposal of clean sediment at the site could prove beneficial. However, in addition to location of radioactive barrels, a study on how they will be affected by disposal of sediments must also be completed. E10-1

- Both of the Meisburger sites (#2 and #7) listed as preferred alternatives are adjacent to the MWRA outfall. That site was chosen for the outfall because of the strong cross-currents and potential for "mixing." It seems these sites would not be stable enough for disposal of contaminated sediments. In addition, using these sites might complicate the outfall monitoring. E10-1

Massport and the U.S. Army Corps of Engineers should be conscious of the other projects and problems in Boston Harbor in their planning and in their preparation of the final impact statement. These include: the Harbor Clean-up, the Central Artery Tunnel project, the recent designation of Stellwagen Bank as a National Marine Sanctuary, the existence of highly contaminated -- and sometimes radioactive -- "hot spots," and a very strained fisheries situation. All of these will affect, and be affected by, the dredging project. Massport and the Corps should continue to work closely with other affected parties to devise creative solutions to deal with contaminated sediments that will benefit Boston Harbor as both a natural and economic resource. Save the Harbor/Save the Bay is committed to working with Massport and the Corps throughout this process. E10-1

Lastly, although Save the Harbor/Save the Bay supports the maintenance dredging of Boston Harbor's shipping lanes and berths to perserve the port's economic vitality, we would not support any dredging that would open Boston Harbor to "super-tankers." E10-1

Thank you for the opportunity to make these comments. We look forward to reviewing the final impact statement.

Sincerely,

Jodi Sugerman
Policy Director

E10-1

Save the Harbor Save the Bay believes that there should be an impartial observer not only during all disposal operations, but also during dredging, blasting, dewatering, and other project activities. As noted in the FEIR/S, the Corps does not typically fund this type of activity although it does contract with a dredge inspection firm which verifies disposal locations. Independent observers can be accommodated, but the independent observer can only alert the Corps inspector of any perceived permit violations. However, only the Contracting Officer can modify or halt dredging and disposal operations.

The FEIR/S, Section 5.0, Dredging Management Plan, discusses specific equipment and operational contingencies. Section 5.8.2.2, *Trash and Debris,* discusses specific contingencies for potential problems related to those factors. In addition, it is noted that the construction operations, specifically dredging and disposal, will be required to meet certain minimum environmental criteria which will be incorporated into the conditions of the project permits.

E10-2

Although the FEIR/S identifies disposal sites that would potentially be suitable for disposal of contaminated sediments from future projects, future disposal could not take place without following appropriate permitting procedures, including testing of sediment quality.

E10-3

Inconsistencies in the DEIR stated amounts of material to be dredged have been corrected for the FEIR/S. The expected silt volume is approximately 1.1 million cubic yards (mcy) and parent material volume 2.1 mcy. Because the dredging process tends to expand the silt, the disposal site may need to accommodate up to 1.3 mcy. Table 2-6 in the FEIR/S shows the breakdown of these volumes.

E10-4

Both the DEIR/S and FEIR/S considered all BHNIP silt to be unsuitable for unconfined open water disposal for the purposes of identifying sufficient disposal capacity.

E10-5

The MBDS is not considered for the disposal of silts from the BHNIP in the FEIR/S.

E10-6

It is very difficult to estimate the environmental damage, if any, from a particular disposal option. Management plans to reduce or minimize costs to fisherman can be implemented, such as marking disposal traffic lanes. Disposal barges will be manned by a

Corps inspector familiar with NMFS guidelines for vessel traffic. A detailed Dredge Management Plan is included in the FEIR/S (Section 5.0).

E10-7

As the silty sediments will be staying within Boston Harbor, no cumulative impact to Massachusetts Bay is expected.

E10-8

The potential disposal sites were reevaluated in the FEIR/S. It was determined that the in-channel, partial-fill shoreline, and upland alternatives were the least environmentally damaging alternatives. Parent material will be made available for closure of municipal landfills. Rock will be used for armoring confined disposal sites.

E10-9

The MBDS is not being considered for disposal of silts from the BHNIP.

The Corps has not ruled out a demonstration project to test capping efficacy at the MBDS to evaluate potential future use of this site for silt disposal. Coordination with appropriate agencies would occur prior to initiation of a project.

E10-10

Boston Lightship is not proposed for disposal of BHNIP silt in the FEIR/S (Section 4.0). Should interest in this site arise in the future, its use will require coordination with EPA regarding the proported drums of industrial and radioactive waste at this site. Disposal of dredged material at this site to cover these drums may benefit the environment of this area. The EPA should play an active role in researching the locations and environmental status of any hazardous materials at the BLS to determine whether it would be best to leave as is, remove, or cover in place.

E10-11

Neither Meisburger site was selected as the preferred alternative for disposal of BHNIP silt in the FEIR/S (Section 4.0).

E10-12

Massport and the Corps are very much aware of other significant projects occurring in out proposed project area. We have been and continue to work closely with the staff of these agencies.

E10-13

The purpose of the proposed project is to reduce tidal delays for ships currently using Boston Harbor. Deepening the tributary channels may allow larger ships to transit Boston Harbor, but would not be deep enough for "super-tankers". Also the tunnel crossings and turns limit the use of "super-tankers" in Boston Harbor.

E11

S. T. O. P.
(Stop the Outfall Pipe)
530 Main Street
West Dennis, MA 02670
(508) 394-8964 • (508) 385-4209

Colonel Miller
U.S. Army Corps of Engineers
Impact Analysis Division
424 Trapelo Road
Waltham, Massachusetts 02254

Dear Colonel Miller:

Stop The Outfall Pipe welcomes the opportunity to comment on the DEIR/S for the Boston Harbor Dredging Project. Though we are not opposed to the dredging project, we are greatly concerned by a number of suggestions and proposals found throughout the DEIR/S, particularly concerning the disposal of dredge spoils. Below you will find a list of our concerns:

* Under no circumstances should the MBDS or the two Meisburger sites be considered suitable sites for <u>any</u> contaminated spoils, today or in the future. "Capping" should not be considered a mitigation measure as it is <u>not</u> a proven technology, <u>particularly</u> given the depth of these sites. E11-1

  The proximity of these sites to the many endangered species that live on Stellwagen Bank and Stellwagen's stature as a National Sanctuary are of particular concern to our organization. In addition, we have many concerns about the cumulative impacts the dredge spoils will have with all of the other uses, past and future, to which this area of the Bay is host. These include but are not limited to the proposed outfall discharge from the 43 municipalities surrounding Boston and the existence of the barrels found in and around the "foul area." E11-2

* Given their proximity to the many endangered species that live on Stellwagen Bank and Stellwagen's stature as a National Sanctuary, even disposal of clean sediments at these sites should require the strictest oversight by the State as well as the National Marine Fisheries Service and NOAA.

* Determination of the "cleanliness" of the sediments to be disposed of should be made by an outside, independent group of overseers who apply the strictest, most consistent standards possible. Based on past testing, it appears that none of the silty material to be dredged is suitable for unconfined ocean disposal. We would strongly oppose any attempt to reclassify these materials. **E11-3**

* Section 4.5.1 of this document dwells on studies which imply that various groups of pollutants are not as great a threat to biological systems as previously believed. We would suggest that much of this research was performed by those invested in current dredging technology and remind the State and the ACOE of the many studies which suggest that, to the contrary, these toxics seriously impair many biological functions in marine ecosystems. **E11-4**

One such study, "Pollution and Development Abnormalities of Atlantic Fishes," (released by the National Marine Fisheries Service in 1991) indicates that chromosomal abnormalities brought on by many of these toxics may account for significant amounts of larval mortalities in the fisheries which thrive in Massachusetts Bay.

* Throughout this document, reference is made to the "economic benefits" that will be derived from the dredging project and, in fact, maintaining the Harbor as a viable shipping port is important. But to consider only those immediate costs incurred by the dredging without considering its long-term impacts on natural resources, environmental integrity, and human health is to be "penny-wise and pound-foolish." **E11-5**

The cost of $18.00 per cubic yard for disposal of silt at the MBDS is one of the lowest costs cited in this document, yet it does not reflect the potential harm to other industries and ecosystems from the collection of bioaccumulative toxics at this site.

The ACOE and EPA should redraft the economic formulas upon which decisions of this nature are made to accurately reflect their long-term impacts on the marine environment.

* We would urge the State, the Army Corps, and the Environmental Protection Agency to consider upland areas of disposal where monitoring and oversight would be most easily and efficiently accomplished. Though the "cost" of this type of site appears quite high, it must be weighed against long term monitoring costs (much more easily done then any ocean site monitoring) and long term costs to other economies including that of the fishing and shellfishing industries through contamination, lost habitat, etc. **E11-6**

* If upland disposal is discarded, we would then urge the State, ACOE and EPA to consider those sites closest to shore and preferably within Boston Harbor. These areas are already subject to past and future accumulation of questionable sediments and due to their shallow nature are most easily monitored. E11-7

* It would seem imperative, with the valuable resources of Boston Harbor and Massachusetts Bay being placed at risk, that innovative treatment and dredging technologies would be the truly economical solution to the problems of dredging and disposal. Again, though the "cost" of these types of technologies appear quite high on the surface, they must be weighed against long term monitoring costs and long term costs to other economies including that of the fishing and shellfishing industries through contamination, lost habitat, etc. E11-8

* We urge that these agencies be compelled to implement a monitoring plan during disposal and afterward which would require strict and independent oversight. Regardless of disposal options and sites, these activities require continual management and possible remediation. E11-9

In conclusion, we would hope that the Army Corps applies the highest possible standards to this as well as other activities being proposed for Massachusetts Bay. We hope the Federal agencies in charge of the project recognize that the "least expensive" alternatives are often only least expensive in the short term: the potential for future expense and degradation should be of utmost consideration. Under the proposed formulas, a "cost-effective" solution today might mean an expensive remediation project or reduced economic benefit from the Bays in the future. We hope that the State and Federal overseers of this project will develop more effective cost analysis formulas which accurately reflect these concerns.

Sincerely,

Mary E. Loebig

Mary E. Loebig, Cochair
(508)385-4209 / (508)398-7632

E11-1

Capping has been proven in Long Island Sound in depths similar to the Meisburger sites. There are several reports published by the Corps on the success of these projects. Capping of silts at the MBDS will not be used for this project.

E11-2

Agencies have had the opportunity to comment on the proposed project. MBDS is an EPA designated dredged material disposal site. Only the clean parent material will be disposed at the MBDS.

E11-3

The sediment testing for the BHNIP was conducted as part of the Sediment Characterization Work Group. This group, involving most major regulatory agencies and many environmental interest groups who played a very active role in establishing high quality standards for all aspects of the sediment sampling and testing. The resultant data are felt to be of excellent quality and very representative of the material requiring dredging. Virtually every commenter to the DEIR/S agrees that the parent material to be dredged for this project is shown to be clean by the test results.

We acknowledge S.T.O.P.s opinion that none of the silt to be dredged is suitable for unconfined disposal. Both the DEIR/S and FEIR/S treated BHNIP silt as unsuitable for unconfined open water disposal for purposes of selecting a disposal site.

E11-4

The disposal site selection process considered impacts to biological resources.

E11-5

The Corps has specific guidelines in which to evaluate whether there is a Federal interest in participating in a navigation improvement project. The environmental impacts are evaluated in NEPA documents such as this EIS. All of the impacts from the proposed project are expected to be temporary. No significant long-term impacts are anticipated.

E11-6

Monitoring issues were considered during selection of the final preferred alternative. The "ease" of monitoring the integrity of landfill sediment disposal facilities may be outweighed by the difficulty of ascribing any "leakage" to one particular waste generator, thereby making all generators potentially responsible for any future landfill integrity problems. The monitoring plan associated with the preferred alternative is described in the FEIR/S.

E11-7

The revised alternatives analysis for disposal of silts from the BHNIP concluded that in-channel disposal was the least environmentally damaging practicable alternative (Section 4).

E11-8

Innovative treatment and dredging technologies are considered for the BHNIP in Section 3.0 and Appendix D of the FEIR/S.

E11-9

S.T.O.P.urges the sponsoring agencies to utilize an impartial observer during all disposal operations. As noted in the FEIR/S, the Corps does not typically fund this type of independent activity although it does contract with a dredge inspection firm which verifies disposal locations. Independent observers can be accommodated, but the independent observer can only alert the Corps inspector of any perceived permit violations. However, only the Contracting Officer can modify or halt dredging and disposal operations.

Section 5.7, *Long Term Monitoring of Disposal Sites,* addresses the monitoring needs of the preferred disposal site.

Nahant SWIM, Inc.
Safer Waters in Massachusetts

June 8, 1994

E12

Colonel Brink P. Miller
Division Engineer
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254-9149

Re: Boston Harbor, Boston Massachusetts
Navigation Improvement Project
and Berth Dredging Project

Dear Colonel Miller:

The worst possible place to dump contaminated sediments from the oily depths of Boston Harbor - laden with heavy metals, PCBs and PAHs - is the location between Nahant and the Massachusetts Water Resources Authority (MWRA) sewage outfall. The North Shore will soon be the recipient of wastewater from the entire MWRA area, and although we were promised secondary treatment, it is controversial and questionable whether full secondary treatment will actually occur, because of the economic situation. At best, even if secondary treatment is eventually provided, approximately 550 million gallons of partially treated sewage will be discharged from the outfall between 1995 and 1999, at the same time the dredging spoils would be disposed of. The synergistic effect of partially treated sewage plus dredging spoils needs to be addressed by the Corps. We are talking large quantities of waste: the MWRA sewage outfall is as big as the Callahan Tunnel, and the dredged material's bulk is as large as the Prudential Building. E12-

Nahant, Saugus, Lynn and Swampscott have already constructed our own secondary treatment plant, but we cannot protect our communities if both MWRA sewage and contaminated dredged material from Boston Harbor are dumped on the North Shore.

Both "Meisburger Two" (North Shore) and "Meisburger Seven" (South Shore) are outstanding fishing and lobstering locations, as is the area around the Boston Lightship. The Foul Area (Massachusetts Bay Disposal Site) is much too close both to the North Shore and to Stellwagen Bank National Marine Sanctuary. There should be no dumping at sea. SWIM objects vehemently to disposing of contaminated sediments in clean ocean. Massachusetts Bay is prime lobster habitat: according to the Massachusetts Lobstermen's Association, "Approximately 6.5 million of the 9.5 million pounds of lobsters harvested in the Massachusetts territorial waters and just beyond come from the general area from just below Gloucester, South through outer Boston Harbor and down along the Northern section of the South Shore." E12-

Your Draft Environmental Impact Report/Environmental Impact Statement (DEIR/S) says that no endangered species will be affected. Just because lobsters are not yet endangered does not mean that we should dump silt, especially contaminated silt, on their habitat. Finfish may not be endangered, but they are depleted, and their habitat should not be further harmed. The sediments to be dredged and dumped include "arsenic, chromium, lead and zinc...", "PCB's...", "PAH's...", and "acetone..." (DEIR/S, pp. 2-10).

SWIM, c/o Northeastern University Marine Science Center, East Point, Nahant, MA 01908
Phone: (617) 581-0075 or (617) 581-1424

The DEIR/S points out that at Meisburger Two, "Any discernible currents are tidal" (p 3-33). This means that the pollution from Chelsea Creek, Mystic River, and Boston Harbor will be brought towards shore. There is a multimillion dollar value both to the ocean front real estate and to the tourist industry on the North Shore. Moreover, millions of people (many of whom come by public transportation, which is readily available) use the beautiful beaches of Nahant, Lynn, Revere, Swampscott, and Marblehead. Also nearby are Egg Rock (the Henry Cabot Lodge bird sanctuary), and the new Lodge Park now being developed in Nahant. E12

The MWRA outfall and Meisburger Two are also close to the seawater intake of the Northeastern University Marine Science Center, a major marine biological research station. Clean seawater is vital to the experiments being performed along the coast, in the water, and in the seawater tanks in the laboratory. E12

The area of Meisburger Two is right in the middle of the lobster fisheries and is habitat not only for lobsters but for any migratory species, including bluefish, herring, and pollack; the area also is important for recruitment for fisheries (personal communication, Dr. Joseph Ayers, Director, Northeastern University Marine Science Center, Nahant). E12

Your biological assessment found that the survival of clams in the Mystic River was 44%, and there was an "exceedance of 20% threshold for amphipods at all proposed dredging locations." We are talking here adult animals that are relatively resistant to death from (though not contamination from) pollution. What about animals less resistant, that cannot live in Boston Harbor now? What about the increased concentration of pollutants in animals higher on the food chain? What about larval forms and juveniles, which are known to be more vulnerable to pollutants?

"The development of marine offspring generally takes place in seawater, " according to Dr. Jan Pechenik of the Tufts University Department of Biology (Hazardous Waste 1(2): 273-282, 1984). "Most species have free-living developmental stage, termed a larva, which spends up to several months swimming in the water prior to its metamorphosis to adult morphology and habitat. These developmental stages are particularly vulnerable to water-soluble pollutants, due to a high ratio of exposed surface area to body volume. Larvae are approximately ten times more sensitive to a given pollutant than are the juvenile and adult stages of the same species. Substantial developmental mortality results from low-level exposures in the range of parts per billion to parts per million for a variety of pollutants. E12

"Sublethal effects have also been well-documented for a number of developing marine animals. Low levels of pollutants interfere with cleavage and morphogenesis in echinoderms, arthropods, and fishes. Changes in developmental rate may be one of the most sensitive and reliable indicators of toxicity. Depression of growth rates by direct exposure in water-soluble pollutants has been documented for larvae of marine gastropods, bivalves, crustaceans, and fishes. Moreover, stressed adults may produce larvae which develop at abnormally slow rates."

Contaminating prime Massachusetts Bay fishing and lobstering area would also mean contaminating the people who eat fish and lobster. Silts that now pollute Boston Harbor would also harm pollute Massachusetts Bay. As for the possibilities of successfully dumping, then capping, the site in Massachusetts Bay, the technology is simply not that sophisticated, and the process of dredging would stir up contaminants in Boston Harbor. E12

The DEIR/S says, "...the volume of cargo would not be projected to increase due to this project..." (ES-4). The value of deepened the channels from 35 feet to 38 or 40 feet seems dubious. SWIM would prefer to see maintenance dredging, not dredging of three to five feet of highly contaminated Chelsea Creek, Mystic River, and Boston Harbor channel. Dredging projects have typically been unjustified in most of New England: an excellent example is the New Haven, Connecticut, harbor, which was dredged with no increased economic viability of the New Haven harbor. E12-

SWIM requests a public hearing to give us an opportunity to defend Massachusetts Bay and to inform you in more detail about the animals living off the Nahant Shore. Do not permit one environmental disaster to create another.

Sincerely yours,

Polly Bradley

Polly Bradley, SWIM

E12-1

The revised alternatives analysis for disposal of silts from the BHNIP concluded that the In-channel alternative was the least environmentally damaging practicable alternative (Section 4).

E12-2

See response to comment E12-1.

E12-3

The Meisburger 2 site will not be utilized as a disposal facility for this project.

E12-4

The Meisburger sites are not proposed for disposal of the BHNIP silts in the FEIR/S (Section 4.0).

E12-5

See response to comment E12-4.

E12-6

The bioassay and bioaccumulation testing for the BHNIP was conducted in accordance with procedures established by the U.S. Environmental Protection Agency and Army Corps of Engineers to evaluate suitability for disposal of dredged material in the ocean. These protocols were developed to standardize the specific testing and evaluation methods used for assessing disposal impacts. The protocol development took into consideration the various marine species available for testing, their sensitivity to contaminants, bioaccumulation ability, as well as other factors. The regulatory agencies have determined that the marine crustacean amphipod is an appropriate sensitive species for evaluating acute toxicity for ocean disposal.

It is important to understand that the Ocean Dumping testing procedures are intended to evaluate the impacts of disposal, not the dredging impacts. The bioaccumulation testing is used to evaluate acceptable body burden levels (sublethal) in the immediate disposal area for indigenous species as well as the various food chain consumers of the "impacted" organisms.

The bioassay testing conducted for the BHNIP used the whole sediment phase of the proposed dredged material since this phase represents the majority of material at the disposal site over the long term.

E12-7

See response to comment E12-4.

E12-8

The Corps has extensive experience with capping dredged material which is documented in several DAMOS reports.

E12-9

An economic analysis was conducted, and updated, to verify that there is a Federal interest in deepening Boston Harbor. As a matter of fact, it is the maintenance material (silt) that is contaminated which needs to be removed first before the deeper layer of clean parent material can be removed. Removing only the maintenance material will not solve the problem of silt (maintenance) material disposal. Your statement that most dredging projects in New England are not justified does not appear to have any substance. For the past 30 years, all navigation improvement projects are required to have a benefit:cost analysis to confirm that there is a Federal interest in building a particular project. Included in this analysis is an evaluation of the need and cost for maintenance dredging of the proposed project for the economic life of the project. Such is the example of New Haven Harbor which is a vital and critical harbor for New England.

E12-10

A public hearing was held in Nahant on July 28, 1994.

COMMERCIAL INTERESTS

COMMENTS AND RESPONSES

C1

Bostongas

Boston Gas Company
201 Rivermoor Street
Boston, Massachusetts 02132
Telephone (617) 323-9210

U. S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254-9149
Attn: Colonel Brink P. Miller

June 15, 1994

Dear Colonel Miller:

Boston Gas has reviewed your Public Notice dated May 13, 1994 concerning your proposed Boston Harbor Navigation Improvement Project.

We have a 24" steel, concrete encased gas line crossing the Chelsea River near and southwest of the Chelsea Street Bridge, that is the only feed to the 10,000 residents of East Boston and the Massachusetts Port Authority's Logan Airport.

The minimum elevation of our 24" line is - 40.3'

We have received a letter from the City of Boston dated February 15, 1994, copy enclosed, that they are planning to replace the existing Chelsea Street Bridge which has a 95' span with a new structure that has a 380' span. C1-1

Do you have any plans to widen the channel in this area?

Ensuring the safety and continued service of this line are of the utmost concern to Boston Gas.

I would appreciate it if you would keep me abreast of the progress and any changes to this project. I may be reached at (617) 723-5512 extension 4247.

Very truly yours,

Walter B. Landin
Operations Engineer

Bostongas

alter B. Landin
erations Engineer

201 Rivermoor Street
West Roxbury, MA 02132
(617) 723-5512 Ext. 4247
FAX: (617) 323-9808

C1-1

At this time the Corps of Engineers has no plans to widen the channel in the vicinity of the Chelsea Street Bridge. However, if the City of Boston proceeds to replace the bridge, the Federal channel will likely be widened to remove the current width restriction. The location and alignment of the new bridge will determine the geometry of the channel modifications.

C2

Boston Harbor Docking Pilots
36 New St.
East Boston, Ma. 02128

13 June, 1994

Col. Brink P. Miller
U.S. Army Corps of Engineers
424 Trapello Rd.
Waltham, Ma. 02254

Dear Col. Miller:

My colleagues and I would like to express strong support for the Boston Harbor Navigation Improvement and Berth Dredging Project. Swift approval is urgently needed in order for Boston to retain its ability to serve the needs of today's ocean-going ships.

Due to economies of scale and advances in technology, larger sized ships are becoming the standard.

Often sharing space among two or more shipping companies due to the tremendous investment required to build and operate, these vessels carry much more cargo, at significantly deeper drafts, than their smaller predecessors.

Such ships operate on tight schedules where timing is critical in terms of berth availability and longshore labor commitments.

Moreover, dependable on-time delivery is one of the prime inducements the containership lines offer in order to attract shippers to use their particular service. In the highly competitive world of liner shipping, these attributes are taken for granted by the customer.

If a port cannot accommodate the needs of the steamship companies to get in and out of port without any delay caused by waiting for sufficient tide to safely float their ships, the port will inevitably suffer the loss of this business with all of the attendant economic dislocations.

As docking pilots, our task is to guide these huge vessels into and out of their berths using the assistance of tugboats provided by the Boston Towing and Transportation Company.

C2

At the increasingly deeper drafts now common, we are being required to handle ships with less and less under-keel clearance in order to get them in and out without tidal delays.

At best, this makes the ships less maneuverable and reduces the margin of safety inherent in having more water between the bottom of the ship and the harbor floor. It also causes a great deal more turbulence due to increased pressure between the ship's hull and the bottom, resulting in widespread resuspension of bottom silts.

The worst case scenario is much less palatable.

There have been numerous instances where, faced with delays of up to nine or ten hours, made even less acceptable by the fact that resulting dockings may occur during hours when longshore labor must be hired at premium rates, the shipowner has opted to bypass the Port of Boston entirely, proceed to the next scheduled port and ship the Boston cargo by truck.

Neither the containership company nor the shipper or consignee of the cargo consider the resulting delays and increased costs acceptable. Both will soon find other, more dependable ways of meeting their goals of on-time, predictable shipment of goods.

Tankers are subject to similar delays and restrictions. They cope with the situation by lightering cargo to barges in the anchorage or unloading part of their cargo elsewhere before coming to Boston, in order to reduce their draft.

The result is increased transits of vessels along the coast and within the harbor and additional transfer of petroleum products, increasing the costs of these products to all of us who drive an automobile, heat our homes and offices, or turn on an electric light or appliance.

Additionally, we are required to accept the statistical inevitability that multiplying the number of such evolutions increases the risk of an accident.

All of the above considerations point to the not-so-subtle conclusion that there are some genuine benefits to the environment to be realized by going forward with the dredging of Boston Harbor.

Clearly, Boston's ability to continue as a legitimate port of call with the wherewithal to sustain the needs of modern ocean-borne commerce is at risk.

The threat to our economic survival is not several years down the road, but right now!

Without dredging, Boston will cease to exist as a viable commercial seaport.

Sincerely yours,
The Boston Harbor Docking Pilots

David P. Galman

Captain David P. Galman
Senior Docking Pilot

C2-1

Thank you for expressing your support of the BHNIP. The information you have included is useful in demonstrating the need for the project.

C3

BOSTON PILOTS, Pier 1, S. Bremen Street, East Boston, MA 02128, 617-569-4500

June 08, 1994

Colonel Brink P. Miller
U. S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254eet

Dear Colonel Miller:

Historically, the Port of Boston has been one of the major shipping ports on the East coast. It retains that prominence to this day.

However, as the vessels plying the oceans throughout the world get larger and deeper, Boston becomes less attractive as a deep water port. There are currently many vessels engaged in trade between Europe and the United State that can't call on Boston because of draft limitations.

It is absolutely imperative that if Boston wishes to remain a major East coast shipping port, the navigable channels and selected berths must be dredged to accommodate deeper draft vessels.

C3-1

To this end, the Boston Pilots wholeheartedly endorse the Boston Harbor Navigation Improvement and Berth Dredging Project as jointly proposed by the Massachusetts Port Authority and the U. S. Army Corps of Engineers.

Without this dredging, it is safe to say that the number of ships utilizing the port will decrease over the next few years. Obviously, with a decrease in the number of vessel movements comes a decrease in the number of people employed to service these ships, including the Boston Pilots and the pilot vessel crews.

We strongly urge you to support the dredging of Boston Harbor.

Sincerely,

A. G. Whittemore
Representative

C3-1

Thank you for expressing your support of the BHNIP.

The BOSTON SHIPPING ASSOCIATION, Inc.
Charlestown Navy Yard, 33 Third Avenue, Suite 1, Boston, MA 02129-4518
Telephone (617) 242-3303, FAX (617) 242-4546

A. ROSS POPE, President
ARTHUR J. BOYLE, Vice President
JOSEPH M. KEEFE, Treasurer
RALPH F. COX, Secretary & Assistant Treasurer

ALFRED E. FRIZELLE, General Manager

C4

JUL 1 1994

Ms. Trudy Coxe, Secretary
Executive Office of Environmental Affairs
Commonwealth of Massachusetts
100 Cambridge Street
Boston, MA 02202

Re: Boston Harbor Dredging Project

Dear Ms. Coxe:

The Boston Shipping Association submits this letter in support of the Boston Harbor Navigation Improvement Project and Berth Dredging project by the U. S. Army and as a supplement to its comments at the public hearing held in Boston at the O'Neill Building on May 17, 1994.

C4-1

The members of the Boston Shipping Association are steamship lines, marine terminal operators, stevedoring companies and agents whose daily business is deep water shipping through the Port of Boston.

It is absolutely essential that the harbor be dredged to allow shipping to continue in the Port. There have been recent occasions where vessels have had to wait or have bypassed the Port because of low water and inadequate draft.

The BSA believes that the project can be approved with reasonable environmental conditions which will enable the Port of Boston to maintain its position in world trade.

Sincerely,

THE BOSTON SHIPPING ASSOCIATION, INC.

Alfred E. Frizelle
General Manager

AEF/j

C4-1

Thank you for expressing your support of the BHNIP.

BOSTON TOWING & TRANSPORTATION COMPANY

C5

13

14 June, 1994

RECEIVED
JUN 16 1994
MEPA

Secretary Trudy Coxe
Mass. Executive Office
of Environmental Affairs
MEPA Unit
100 Cambridge St.
Boston, Ma. 02202

Dear Secretary Coxe:

Our company operates a fleet of tugboats and barges engaged in the transportation of petroleum products and docking and undocking assistance to ocean-going ships calling at Boston. Operating revenue derived from these sectors is roughly equal.

Currently, the future of the Port of Boston is in jeopardy due to the shallow depths in the main shipping channels, exacerbated by the fact that larger, more deeply laden ships are rapidly replacing their smaller predecessors.

These larger ships are currently being placed in service by all of the containership companies now calling at Boston, and are being adversely impacted right now by the limitations of channel depth.

Ocean liner shipping is an intensely competitive business requiring enormous capital investment, and the key to an operator's success is his ability to offer a reliable, predictable schedule of port calls to shippers whose customers demand punctual delivery of goods in order to contol the high cost of excessive inventories.

There is no slack factored into the operation of either the giant ships that carry these goods, or the shippers and consignees who depend on their services. They simply cannot, and will not tolerate significant delays in getting into port caused by the need to wait for high tide.

C5

In Boston, this type of delay is occurring with increasing frequency. In several instances, the imposition of such a delay has resulted in a decision to bypass this port altogether and truck the cargos from the ship's next port of call.

Given the business constraints described above, it is easy to see that such performance by the ocean carrier will quickly lead to the selection of alternatives to shipping through the port of Boston.

This would seriously impact our business. We employ over one hundred people who live and pay taxes in the metropolitan area, and conduct large amounts of business with our numerous vendors and suppliers.

36 NEW STREET EAST BOSTON, MASSACHUSETTS 02128 (617) 567-9100
TELEX 497-4146 Answerback: TUGBOATSBOSTON FAX. 617-567-2583

The same holds true for countless other businesses serving the port, including stevedores, repair services, fuel suppliers, steamship agencies, etc.

It is a certainty that any further delay in dredging will relegate Boston to the status of a backwater port as shipping lines abandon direct service through our ocean freight terminals in favor of more cost-effective and time-saving alternatives.

Dredging will have a number of benefits for the environment also.

Deepening the channels will reduce significantly the amount of silt disturbed by the passage of deeply laden ships travelling very close to the bottom. Also, removing the contaminated silt from the main channels throughout the harbor by dredging and safely disposing of it through capping or other methods, will remove, once and for all, the presence of these materials in areas where human activity and seafood harvesting are most adversely impacted. This is due to the fact that the upstream sources of the most harmful pollutants have already been eliminated, and new ones, thanks to our enhanced awareness of the dangers they present, will not be allowed to take their place. C5-2

We really are making progress in cleaning up the harbor, and the fact of the matter is that dredging will actually contribute to the furtherance of this goal.

Therefore,we hope your office will take a balanced view of the overall issue, and act in such a way as to support the timely approval of this long overdue project before it is too late to rescue the port from the effects of the commercial obsolescence that is already beginning to have a negative impact.

Sincerely yours,
Boston Towing & Transportation Company

Jonathan C. Wales

C5-1

Thank you for expressing your support of the BHNIP. The information you have included is useful in demonstrating the need for the project.

C5-2

The BHNIP team concurs that the removal of contaminated silts from portions of Boston Harbor will contribute to the cleanup of the harbor. Although input of contaminants has been decreased substantially, the dredging and sequestering of silts will result in "clean" harbor bottom only temporarily because the remaining silts present in the rest of the harbor would eventually be transported into the channels and berths (i.e., areas where there is ship activity that is capable of disturbing the bottom). However, the dredging and isolation of the contaminated sediments that is proposed for the BHNIP will result in a net reduction of the mass of contaminants that are in the harbor.

JOHN T. CLARK AND SON

Contract Stevedores and Marine Terminal Operators

BOSTON FISH PIER, WEST BUILDING, SUITE 301, BOSTON, MA 02210 • 617-330-7810 FAX 617-345-0574
555 MARKET STREET, PORTSMOUTH, NH 03801 • 603-431-8500 FAX 603-427-0771

June 20, 1994

C6

Colonel Miller
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, Mass. 02254

Re: Dredging Boston Harbor

Dear Colonel Miller:

Our company is engaged in maritime commerce and (a) (represents steamship lines that call at the Port of Boston) (calls at the Port of Boston) (b) (to ship goods) (for passenger cruises) to and from the Commonwealth of Massachusetts and New England.

For over twenty years the subject of dredging Boston Harbor has been studied by various Federal and State agencies and to date the channels have not been dredged.

The Massachusetts Port Authority and the U.S. Army corps of Engineers have filed a Draft Environmental Impact Report (DEIR) and a Draft Environmental Impact Statement (DEIS) for the Boston Harbor Navigation Improvement Project and Berth Dredging Project.

We urge you to approve a permit to allow the dredging project to begin as soon as possible. Recently container ships have bypassed the Port because the draft was insufficient at low water.

C6-1

Any further delays to the project will cause harm to the economic stability of the Port and affect our business and jobs.

Sincerely,

JOHN T. CLARK AND SON OF BOSTON, INC.

William P. Horohoe

William P. Horohoe
President

WPH/mf

C6-1

Thank you for expressing your support of the BHNIP.

Containership Agency, Inc.
420 Fifth Avenue, New York, NY 10018-2702
TEL (212) 764-4800 • FAX (212) 764-8592

C7

May 19, 1994

Brink P. Miller, Colonel
Corps of Engineers
U.S. Army Corps of Engineers
424 Trapelo Road
Whaltham, MA 02254

Dear Colonel Miller:

Containership Agency, Inc. through our subsidiary Peabody & Lane has maintained an agency representation for containerized shipping in the port of Boston since we were organized in 1971. For the past 23 years we have represented many major Principals in the liner trades connecting Boston with almost all the major trading areas of the world.

Our main Principal, Mediterranean Shipping Company (MSC), is one of the few lines continuing to service the port of Boston directly and we are most interested in continuing this service.

MSC originally commenced serving Boston with 600 teu size vessels on a twice monthly basis. The vessels now in service are 1500/2000 teu size and are calling Boston directly on a weekly basis. The trend in containerized shipping is toward ever larger vessels and naturally we have a strong interest regarding the depth of water available in the channel.

C7-1

We strongly urge the port of Boston the deepen the channel so that the Boston market can continue to be service by modern deep-draft vessels.

Sincerely yours,

Containership Agency, Inc.
As agents

N. Arena

Nicola Arena, President

C7-1

Thank you for expressing your support of the BHNIP. The information you have included is useful in demonstrating the need for the project.

Decorative
Specialties
International
Incorporated

C8

May 26, 1994

Colonel Brink P. Miller
Corps of Engineers
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254

Dear Colonel Miller:

I am writing in regards to the Boston Harbor Navigation Improvement and Berth Dredging Project. Our Company, Decorative Specialties International, Inc. (DSI) exports to numerous locations around the world via the port of Boston. We ship nearly 25 full shipments and at least 200 LCL shipments per year. At the present time, our export business represents in excess of 18% of our gross sales.

C8-1

I don't doubt that the environmentally concerned citizens of Massachusetts and the surrounding area should be conscious of the issues of the dredging project. The Massport and the Corps of Engineers are project partners and there is an obvious commitment to safely and cost effectively dispose of the contaminated portion of the sediment.

New England has lost and seems to continue to be losing jobs and manufacturing businesses. We are attempting to dig ourselves out of the recession. To many of us the only untapped markets where we can increase our business is overseas. Please do not lose sight of the importance the port of Boston has to the entire New England economic health and future growth.

If the international shipping community is moving towards more deep draft vessels it is Boston's OBLIGATION to mandate whatever is required to accommodate those vessels. The over 9000 jobs directly or indirectly tied to the Port of Boston are a very small portion of the economic impact you may be risking in fighting or stopping this project.

I petition you to do the right thing for your state and region - protect our environment but do not lose sight of what will keep us economically strong. With proper procedures and guidance, I am sure the project can be handled with care.

Sincerely,

Jeffrey A. Hopkins
Director of Sales & Marketing
Pacific Rim

DSI 1 Canal Street South Hadley, MA 01075 Tel: 413 533-0338 Fax: 413 535-2463 A REXHAM COMPANY

C8-1

Thank you for expressing your support of the BHNIP. The information you have included is useful in demonstrating the need for the project.

I.T.O. CORPORATION
OF NEW ENGLAND

P.O. BOX 65
SOUTH BOSTON, MA 02127
TEL. (617) 695-2920
FAX (617) 695-2919

C9

May 19, 1994

Brink P. Miller, Colonel
Corps of Engineers
U.S. Corps of Engineers
425 Trapelo Road
Waltham, MA 02254

Dear Colonel Miller,

I'm writing to express an opinion on behalf of the company that I represent, I.T.O. of New England and its employees in support of choosing a prudent dredging and disposal plan for Boston Harbor and Massachusetts Bay.

This company and its corporate ancestor have been providing stevedoring services for ocean carriers and jobs for local residents in Boston for more than seventy years. Unless the dredging dilemma can be solved soon, I believe that Boston will lose its status as a credible major seaport. As this happens I can foresee our business and its employment opportunities disappearing.

Vessels currently handling containers in the port are prevented from sailing at all stages of the tide. We need to provide a minimum depth of 40 feet in the main and tributary channels and at the container berths. Some vessel calls have already been aborted because the timetables of the modern containership fleet doesn't allow any slack for idle time while waiting for the tide to change. Draft limits will become more severe in the future as the harbor continues to silt up and larger vessels are built. Unless we put ourselves in position to handle the traffic that is moving, it is obvious that the traffic won't come our way. C9-1

These are conditions and facts that must be dealt with immediately. Ocean carriers which are current users of the port have already been forced to divert their ships. Unless we can provide the depth of water that vessels require we shall force them to plan their future calls elsewhere.

This deepwater harbor is a beneficial resource for every consumer in Massachusetts and New England. If we choose to close it down because of extravagant dredge disposal costs we will be ceding our advantage, our jobs, our industry and our tax revenue base to some other port area which will have proven itself more capable to cope with the reality of current civilization.

I plead for timely approval and implementation of the Harbor Navigation and Berth Dredging Project partnered by Massport and the Corps of Engineers which is committed to environmentally sound and cost effective disposal measures.

Very Truly Yours,

Arthur J. Boyle
Senior Vice President

C9-1

Thank you for expressing your support of the BHNIP. The information you have included is useful in demonstrating the need for the project.

C10

LADS SYSTEM, INC.

810 - 3rd Avenue, Suite 408
Seattle, WA 98104

(206) 382-0388
FAX (206) 382-0268

June 20, 1994

Colonel Brink P. Miller
Division Engineer
US Army Corps of Engineers
New England Division
424 Trapelo Road
Waltham, MA 02254-9149

Re: Draft Environmental Impact Report (DEIR) and
Draft Environmental Impact Statement (DEIS)
Navigation Improvement Project and Berth Dredging Project
Boston Harbor, Massachusetts
April 1994

Dear Colonel Miller:

Following are comments to the DEIR/DEIS referenced above and jointly issued by the U.S. Army Corps of Engineers and Massachusetts Port Authority. Our comments are focused on innovative treatment technologies and their assessment in the DEIR/DEIS.

We believe that overall handling of the alternatives analysis in the DEIR/DEIS is adequate provided the eventual decision is made to dispose of the sediment designated as contaminated in a confined aquatic disposal (CAD) site as identified by the preferred alternative. However, should a determination be made that the contaminated sediment cannot be disposed of in this manner, then many of the initial screening requirements, which eliminated a variety of treatment technologies and disposal options, need to be reevaluated. Effectively, unless this is done, the project as a whole may be in jeopardy. C10-

On page 2-7 of the DEIR/DEIS, it is indicated that the three major factors to differentiate the project alternatives are:

- quantities to be dredged
- areas to be maintained or improved
- timing

A fourth factor, also of great concern is cost.

The CAD alternative is able to efficiently handle the entire quantity of contaminated sediment, is the most time efficient of the alternatives, and is the least costly option short of open water unconfined disposal. All other options will take greater time and cost more to implement.

Assuming that all of the contaminated sediment will not be approved for CAD, the project needs to be evaluated in terms of higher costs, greater time periods to complete, and what is possible. Because of the difficulties associated with contaminated sediment disposal, alternatives to consider may include:

- Smaller overall project in contaminated sediment area.
- Greater length of time to process/treat contaminated sediment. The additional time period required to implement a treatment technology relative to not being able to dredge an area at all and the associated impact on ship traffic needs in that area need to be balanced.
- Use of control options and/or treatment technologies which will allow dredging operations during the fish closure periods, such as silt curtains.
- Reanalysis of the overall project costs and cost sharing among local authorities for treatment and disposal.

C10-2

The DEIR/DEIS currently has a construction schedule based upon dredging all the silt, placing it in the ocean, then dredging the native sediment under the silt and using that as capping material. Total time to complete the project is approximately 1.5 years. Removing the silt is the critical path to completing the dredging. However, if only a portion of the silt requires treatment, then that portion could be removed from the critical path and a longer construction period allowed for treatment.

In evaluating treatment technologies, a reasonable estimate of the volume needing treatment and the time available to complete the treatment should be the basis of the screening criteria. To effectively evaluate treatment technologies, a project specific request for proposals should be issued. Available data in the literature on most treatment technologies is not adequate to evaluate and select a procedure for a specific project. The information is too general in nature.

C10-3

A significant issue regarding implementing treatment technologies for contaminated sediment is the potential cost. The sediment characterization studies, to date, have been very general with a ratio of approximately 46,000 cubic yard (cy) per composite sample which was chemically analyzed. More definitive sampling, on the order of 4,000 cy per sample, evaluating depth and location of contaminated sediment has high potential to further reduce the volume of sediment treatment. Percentage reduction of the treatment volume of less than 5% would easily pay for any additional sampling and analysis efforts by the reduced treatment/disposal costs for those sediment determined to be suitable for open water disposal.

Finally, LADS System, Inc. is a thermal remediation process for contaminated silty sediment. LADS is very interested in being considered for this project if confined ocean disposal is politically or environmentally unacceptable for disposal of a portion of the Boston Harbor contaminated silty sediment.

Sincerely,

Nancy L. Case, PE
President

C10-1

The alternatives analysis presented in Section 4 of the FEIR/S concluded that it is feasible to isolate the silts dredged during the BHNIP by overdeepening several channel areas and capping the disposed material.

MASSPORT and the Army Corps of Engineers requested information on technologies for the handling, pre-treatment and treatment of the contaminated dredge materials from over thirty companies of which thirteen companies responded. The results of the treatment technology survey are presented in Section 3.0 and Appendix D.

C10-2

The contaminated silts will be placed at designated in-channel sites. It is currently projected that these facilities in the Mystic River, Chelsea River, and Inner Confluence channels will accept all of the silt material. Treatment of the silts is not anticipated. Section 5.0, Dredging Management Plan, of the FEIR/S describes specific control techniques which will be employed.

C10-3

The BHNIP EIR/S team appreciates this comment by LADS. In our interest in having the best possible information on the potential treatment technologies we recently conducted a survey of several known treatment companies. The responses were very helpful in refining the technologies and associated costs that would be applicable to the BHNIP.

At this time no further sediment sampling and testing is planned for the BHNIP. It is felt that sufficient sediment chemistry exists to evaluate the various treatment technologies still under consideration.

The BHNIP sediment test results show the proposed silts to be dredged from the berth areas are chemically heterogeneous. These sediments are affected by a variety of harborwide contaminant inputs, many of which are non-point sources. Our experience with sediments of this nature indicates that a moderate increase in the number of samples would not substantially reduce the amount of material that would require treatment. Furthermore, all silt material is considered to be unsuitable for unconfined open water disposal. Therefore, additional testing of the silt will not lead to any increase in the amount of sediment suitable for this disposal alternative.

Massachusetts Lobstermen's Association, Inc.
8 OTIS PLACE, P O BOX 600
SCITUATE MA 02066-0006
TEL (617) 545-6984
FAX (617) 545 7837

C11

May 18, 1994

Brink P. Miller
Colonel, Corps of Engineers
Division Engineer
424 Trapelo Road
Waltham, MA 02254-9149

Re: Boston Harbor, Boston Massachusetts
Navigation Improvement Project
and
Berth Dredging Project

BPM

Dear Colonel Miller:

The Massachusetts Lobstermen's Association, which represents the majority of lobster fishermen in this State, opposes the use of the proposed at sea dump sites for the disposal of the contaminated dredge spoil from inner Boston Harbor.

While we understand the need for the deepening of the waters of the Port, and we are not opposed to the project, we can not support disposal of this admittedly contaminated material into the waters where hundreds of fishermen earn their living. The sites as proposed, the MBDS, the Boston Lightship, Meisburger 2, Meisburger 7, and Spectacle Island CAD, are at or near where lobster fishermen set their traps.

Approximately 6.5 million of the 9.5 million pounds of lobsters harvested in the Massachusetts territorial waters and just beyond come from the general area from just below Gloucester, South through outer Boston Harbor and down along the Northern section of the South Shore. There is heavy fishing activity all through these areas and the proposed sites lie within these general perimeters. Should this material, once dumped, become exposed to the open ocean bottom or to current flows, it could adversely affect the quality of the marine environment in this whole area and possibly even further to the North and South. If this marine environment is in turn adulterated by the contaminates from these dredge spoils, it could damage the high quality product that these fishermen land. (Statistics based on 1992 Mass. Lobster Fishery - Division of Marine Fisheries) C11

Recently the lobsters from this general area were found to be of good quality and free of any harmful levels of contaminates. We need to protect this marine environment and the lobsters and other sea life from becoming exposed to harmful elements. We consider the contaminates in this particular dredged material to be harmful elements.

There has been an ongoing effort by everyone to clean up Boston Harbor and the ocean as well in order to provide clean waters, and a healthy habitat for the marine resources we have. We do not understand why, now in the heat of an admittedly desirable project, contaminated sludge which is buried under the surface of parts of the inner harbor should be excavated and dumped on our efforts to improve our environment. Even if it were to be C11

capped, or bagged for containment, the risks of its possible release are still too great.

The disruption of fishing activity in these areas as you have referred to on page ES-5, Column 2, Paragraph 1 of the Executive Summary is also unacceptable to the fishermen in the area. C11-3

Rather than taking a chance that this project could undo the efforts and expense already expended to clean the area of any contaminates, we would hope that a little more money might be spent to properly dispose of this dredged material.

We appreciate the opportunity to comment on this important issue and we stand ready to discuss this matter further with you.

Very truly yours,

William A. Adler
Executive Director

WAA/med

cc: Senator Edward M. Kennedy
Senator John Kerry
Congressman Gerry Studds
John DeVillas, EPA Regional Director

C11-1

The alternatives analysis presented in Section 4 of the FEIR/S concludes that the in-channel disposal is the least environmentally damaging practicable alternative for disposal of silts from the BHNIP.

C11-2

The contaminated sediments currently reside on the surface of the harbor bottom and are not buried. By capping these sediments in the Mystic, Chelsea and Inner Confluence portions of the channels, the BHNIP will keep the contaminated sediments as close to the source as possible and isolate them from potential future exposure to biota. The Dredge Management and Monitoring Plan (Section 5) describes the precautions that are being planned to ensure that risks to the environment are minimized.

C11-3

By restricting disposal activities to the inner harbor, the BHNIP will minimize interference with fishing activities. Disposal will occur in the same area where dredging occurs; the two processes will be simultaneous.

A. P. MOLLER INC.

MAERSK INC.

MAERSK

C12

June 14, 1994

Colonel Miller
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254

Re: Dredging Boston Harbor

Dear Colonel Miller:

Our company is engaged in maritime commerce and as an international transportation company has ships that call at the Port of Boston.

For over twenty years the subject of dredging Boston Harbor has been studied by various Federal and State agencies and to date the channels have not been dredged.

The Massachusetts Port Authority and the U.S. Army Corps of Engineers have filed a Draft Environmental Impact Report (DEIR) and a Draft Environmental Impact Statement (DEIS) for the Boston Harbor Navigation Improvement Project and Berth Dredging Project. C12-1

We urge you to approve a permit to allow the dredging project to begin as soon as possible. Recently container ships have bypassed the Port because the draft was insufficient at low water.

Any further delays to the project will cause harm to the economic stability of the Port and affect our business and jobs.

Sincerely,

Michael R Walsh

Michael R. Walsh
Regional General Manager

Suite 260, Edgewater Park, 401 Edgewater Place, Wakefield, MA 01880, USA
Telephone: 617-246-8211. Telex: Graphnet 3767534. Telecopier: 617-246-2906.

C12-1

Thank you for expressing your support of the BHNIP. The information you have included is useful in demonstrating the need for the project.

C13

Comments of Frank Mirarchi
Boston Harbor Dredging Project-Draft EIS
May 17, 1994

My name is Frank Mirarchi. I reside at 67 Creelman Drive, Scituate, MA, 02066.

I am a full time commercial fishermen. Presently I own and operate the F.V Christopher Andrew a 60 foot stern dragger out of Scituate Harbor. I have fished the waters of Massachusetts and Cape Cod Bays and Stellwagen Bank for over thirty years.

Let me begin by disavowing any hypocritical intent. As a commercial vessel operator I recognize the benefits of dredging and other harbor improvements. My objective is to support these projects but in doing so I must insist that they be conducted in an environmentally responsible fashion.

My specific comments comprise two categories: 1. Dispersal of toxic substances into the marine ecosystem and 2. Obstruction of fishing grounds by dredge spoil and other debris.

Recognize that the economic viability of my business- the fishing business- depends upon consumer confidence in the safety and wholesomeness of seafood. Boston Harbor shellfish and crustaceans are already the subject of advisories issued by the Mass. Dep't. of Public Health. The obvious basis for these advisories is the toxicity of the harbor sediments in which these animals dwell.

C13-1

Once toxic substances enter the food chain they are impossible to eradicate. For example, taking of lobsters, shellfish, and bottom fish from waters in and adjacent to New Bedford Harbor is still prohibited over twenty years after the disposal of PCB contaminated waste was stopped.

I am greatly concerned that the problems of Boston Harbor may be spread into the Mass Bay Ecosystem by the sediment suspension caused by dredging and by the unconfined ocean disposal of contaminated spoil. For this reason I urge employment of the best available technology in minimizing the suspension and dispersal of sediment during dredging. I oppose any unconfined disposal of contaminated sediment irrespective of location.

If a site for disposal of clean material is considered I urge you to work closely with commercial fishermen's associations in the process of final selection.

C13-2

Inadvertent obstruction of the seabed by debris such as mounds of clay, rocks, and pilings is inevitable no matter how carfully the project is supervised. It is important to minimize the economic loss and safety risks inflicted on fisherman by this material.

C13-3

A number of fishing associations including, but not limited to, Mass Inshore Draggermen's Assoc., Mass Gillnetter's Assoc., Mass Lobstermen's Assoc., and the Gloucester Inshore Fishermen's Assoc. would be pleased to evaluate any proposed site on the basis of its importance to fishing. I urge you to actively solicit and carefully consider these comments. C13-4

Thank you.

Frank Mirarl

C13-1

The proposed project does not propose to utilize any unconfined ocean sites for disposal of contaminated dredged materials. The best available technologies, as described in Section 5.0 of the FEIR/S, will be employed to minimize suspension and potential dispersal of dredged materials. Dredged silts will be placed at in-channel disposal facilities and capped following placement. Parent material will be transported and dumped at the MBDS.

C13-2

The MBDS was designated as a disposal site for "clean" dredged materials as the culmination of an extensive designation process conducted by the USEPA. Any dredged material from the BHNIP that is considered suitable for unconfined open water disposal would be permittable for disposal at MBDS. The FEIR/S discusses potential beneficial uses of this clean material that would be considered a higher priority than disposal at MBDS, if practicable.

C13-3

Any disposal of dredged material from the BHNIP at the MBDS would be conducted in accordance with the regulations governing that activity. These regulations are geared towards defining and controlling the size of the area at MBDS actually affected by disposal.

C13-4

We appreciate your interest and concerns about the BHNIP. The FEIR/S is available for public review.

MORAN SHIPPING AGENCIES, INC.

451 D Street, Suite 814 Boston, Mass. 02210
Telephone: (617) 443-0616 Fax: (617) 443-0730
Cable: MORANCO-BSN Telex: 298808

AN MTI COMPANY

Offices from Maine to Texas

June 13, 1994

C14

Colonel Miller
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254

Re: Dredging Boston Harbor

Dear Colonel Miller:

Our company is engaged in maritime commerce and represents many steamship lines, tanker vessels and their charterers, owners that call at the Port of Boston. For over twenty years the subject of dredging Boston Harbor has been studied by various Federal and State agencies and to date the channels have not been dredged.

The Massachusetts Port Authority and the U. S. Army Corps of Engineers have filed a Draft Environmental Impact Report (DEIR) and a Draft Environmental Impact Statement(DEIS) for the Boston Harbor Navigation Improvement Project and Berth Dredging Project. C14-1

We urge you to approve a permit to allow the dredging project to begin as soon as possible. Recently container vessels have bypassed the port because the draft was insufficient at low water.

Any further delays to the project will cause harm to the economic stability of the Port and affect our business and jobs.

Very truly yours,

Moran Shipping Agencies, Inc.

Ralph Dexter
General Manager

RD/s

cc - File

C14-1

Thank you for expressing your support of the BHNIP. The information you have included is useful in demonstrating the need for the project.

North East Area
Boston Office

Nedlloyd Lines (U.S.A.) Corp
451 D Street, Suite 804A
Boston, Massachusetts 02210
Telephone: (617) 737-1515
Telexfax: (617) 737-1919

Nedlloyd Lines

Region Directorate
North America

C15

June 15, 1994

Colonel Miller
U.S. Army Corps of Engineers
424 Trapello Road
Waltham, MA 02254

RE: DREDGING BOSTON HARBOR

Dear Colonel Miller:

Nedlloyd Lines is engaged in maritime commerce and calls at the Port of Boston.

For over twenty years the subject of dredging Boston Harbor has been studied by various Federal and State agencies and to date the channels have not been dredged.

The Massachusetts Port Authority and the U.S. Army Corps of Engineers have filed a Draft Environmental Impact Report (DEIR) and a Draft Environmental Impact Statement (DEIS) for the Boston Harbor Navigation Improvement Project and Berth Dredging Project.

C15

We urge you to approve a permit to allow the dredging project to begin as soon as possible. Recently our containerships have bypasses the Port because the draft was insufficient at low water.

Any further delays to the project will cause harm to the economic stability of the Port of Boston and affect our business and jobs.

Sincerely,

NEDLLOYD LINES USA CORP.

Paul Gaudes
Manager, Port Operations

C15-1

Thank you for expressing your support of the BHNIP. The information you have included is useful in demonstrating the need for the project.

North Shore Recycled Fibers

53 Jefferson Avenue
P.O. Box 3007
Salem, MA 01970
617/289-9400
FAX 508/744-8857
TELEX 595955

A Newark Group, Inc. Company
Products from Recycled Fibers

THE NEWARK GROUP

C16

May 12, 1994

Brink P. Miller, Colonel
Corps of Engineers
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254

Dear Colonel Miller:

I am writing to strongly support the continued dredging of the Boston Harbor. As a local business, we rely heavily on the movement of goods in and out of Boston Harbor. It is essential to our business and the continued existence of our company to keep the Harbor as viable as possible.

Currently, because of the inability of the Harbor to accept some of the larger deep draft vessels that are calling on ports today, we have to barge our goods to New York for shipment from that port. Not only is this an added expense that we must incur, but we also have to play second when trying to get the proper equipment, i.e. containers, to do our shipments.

C16-1

As you are aware, paper related products comprise approximately 40% of the activities being exported from the Port of Boston. The number of jobs would be in the hundreds if people were displaced, as companies seek alternative means to move their cargo, such as trucks out of New England, or by train to the West Coast because of the additional expense of barging.

It is essential for our company to have the flexibility to continue shipping to Europe and the Far East via the Port of Boston, and to do so on a competitive basis with other larger East Coast Ports.

I strongly urge you to actively support the Boston Harbor navigation improvement and berth dredging project, and I thank you for your attention to this project.

Sincerely,
NORTH SHORE RECYCLED FIBERS
A Newark Group Inc., Co.

Robert F. Heffernan
Vice President

RFH:lmm

Printed on Recycled Paper

C16-1

Thank you for expressing your support of the BHNIP. The information you have included is useful in demonstrating the need for the project.

P&O Containers

C17

June 15, 1994

Colonel Miller
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, Ma 02254

Re: Dredging Boston Harbor

Dear Colonel Miller:

Our company is engaged in maritime commerce and calls at the Port of Boston to ship goods to and from the Commonwealth of Massachusetts and New England.

Our containerships, which call Boston each week, have recently had to bypass Boston due to draft restrictions. As recently as today, the arrival of the vessel was restricted to arrive during high tide. New England companies benefit because our ships make Boston the first inbound port of call (provides an excellent transit time). In light of this the ship arrives at Boston fully loaded with a deep draft. It is thus imperative that the dredging be performed so that our ships can continue to serve the New England region on a direct call basis. If the dredging is not performed there will be possible bypasses in which New England cargo will be discharged in Newark, NJ and moved to Boston via barge. This "feeder" service will reduce labor hours at Boston, incur additional transportation expenses and delay New England bound cargo for an additional 5 days! C17-1

The Massachusetts Port Authority and the U.S. Army Corps of Engineers have filed a Draft Environmental Impact Report (DEIR) and a Draft Environmental Impact Statement (DEIS) for the Boston Harbor Navigation Improvement Project and Berth Dredging Project.

For over twenty years the subject of dredging Boston Harbor has been studied by various Federal and State agencies and to date the channels have not been dredged.

We strongly urge you to approve a permit to allow the dredging project to begin as soon as possible.

Sincerely,

Matthew A. Merkel

Matthew A. Merkel
P&O Containers - Boston, Ma

Containers, Ltd.
1ne Boston Fish Pier, West Building 2, Suite 305, Boston, Massachusetts 02210
Telephone: (617) 428-6035 Telex: 130126 Telefax: (617) 737-9978
Registered Office: Beagle House, Braham Street, London, EI 8EP Registered Number: 984922 England

P&O Group

C17-1

Thank you for expressing your support of the BHNIP. The information you have included is useful in demonstrating the need for the project.

C18

PATTERSON, WYLDE & CO., IN

Agents and Brokers – F.M.C. No. 5
The Boston Fish Pier - West Bldg. #2, Suite 3
Boston, Massachusetts 022
Phone: (617) 428-6000 • FAX (617) 737-99
Cable: PATWYL • TLX 9406

June 16, 1994

Ms. Trudy Coxe, Secretary
Executive Office of
Environmental Affairs
Commonwealth of Massachusetts
100 Cambridge Street
Boston, MA 02202

Dear Ms. Coxe:

For over 100 years our company has been representing many of the various types of ships engaged in international transportation and calling at the Port of Boston.

We can well remember the years when the depth of water in the harbor was not an issue and, with the exception of some tankers, vessels could arrive and depart without waiting for the tide. Today's vessels, however, are much larger and require greater depth of water in order to navigate safely.

C18-1

Container vessels cannot afford to "wait for the tide," and if such conditions occur, those vessels will by-pass the port, which has in fact already occurred.

The Port of Boston and the Commonwealth of Massachusetts cannot afford to lose this type of activity and business; and, if we are to remain a "World Class Port," the harbor must be dredged.

The Massachusetts Port Authority and the U.S. Army Corps of Engineers have filed a Draft Environmental Impact Report and a Draft Environmental Impact Statement for the Boston Harbor Navigation Improvement and Berth Dredging Project.

We urge you to approve a permit to allow the dredging project to begin as soon as possible. Any further delay in this already longstanding issue will only cause damage to the economy of the Commonwealth and harm to the many businesses and work opportunities related to waterbourne transportation.

Sincerely,

PATTERSON, WYLDE & CO., INC.

A. R. Pope
Executive Vice President/
Treasurer

ARP/mg

cc: Colonel Brink Miller - U.S. Army Corps of Engineers
Mr. Stephen P. Tocco - Executive Director, Massachusetts Port Authority

C18-1

Thank you for expressing your support of the BHNIP. The information you have included is useful in demonstrating the need for the project.

Offices in: ATLANTA, GA · BALTIMORE, MD · CHARLESTON, SC · GREER, SC · LOS ANGELES, CA · MIAMI, FL · NEW ORLEANS, LA · NEW YORK, NY · NORFOLK, VA · SAVANNAH, GA · SEATTLE, WA · ST. LOUIS, MO

C. H. POWELL COMPANY

F.M.C. No. 176

INTERNATIONAL FREIGHT FORWARDERS AND CUSTOM HOUSE BROKERS

1 INTERCONTINENTAL WAY, PEABODY, MA 01960

Telephone
508-535-7073
FAX
508-535-7028

C19

Colonel Miller
U. S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254

13 June, 1994

Re: Dredging Boston Harbor

Dear Colonel Miller,

C. H. Powell Company is engaged in maritime commerce, in its capacity as an international frieght forwarder and customs broker. The ability of steamship lines to call directly at the Port of Boston is of vital interest to our company, and to our customers.

For over twenty years the subject of dredging Boston Harbor has been studied by various federal and state agencies. To date, the channels have not been dredged.

C19-1

The Massachusetts Port Authority and the U. S. Army Corps of Engineers have filed a Draft Environmental Impact Report (DEIR) and a Draft Environmental Impact Statement (DEIS) for the Boston Harbor Navigation Improvement Project and Berth Dredging Project.

We urge you to approve a permit to allow the dredging project to begin as soon as possible. Recently container ships have bypassed the Port because the draft was insufficient at low water.

Any further delays to the project will cause harm to the economic stability of the Port and affect our business and jobs.

Sincerely,

C. H. POWELL COMPANY

David E. Powell

C19-1

Thank you for expressing your support of the BHNIP. The information you have included is useful in demonstrating the need for the project.

C20

REXHAM

REXHAM INC.
P. O. Box 811
South Hadley, MA 01075-0811
Fax 413 539-5221
Telephone 413 539-5210

May 16, 1994

Brink P. Miller, Colonel
Corps of Engineers
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, Ma 02254

BPM

Dear Colonel Miller,

I am writing in regards to the Boston Harbor Navigation Improvement and Berth Dredging Project. I represent a business who exports exclusively through the port of Boston. Annually we ship nearly 50 containers and at least 100 LCL shipments. This business represents nearly 15% of our $100MM+ gross sales and our committed growth is nearly all in our international markets. By the end of 1994 we will have a European Distribution Center to service our new markets on the continent and will be supplying inventory to that DC over Boston. My point being, Boston as a viable port is crucial to our business now and will be even more in the future.

I don't doubt that the environmentally concerned citizens of Massachusetts and the surrounding area should be conscious of the issues of the dredging project. The Massport and the Corps of Engineers are project partners and there is an obvious commitment to safely and cost effectively dispose of the contaminated portion of the sediment.

C20-1

New England has lost and seems to continue to be losing jobs and manufacturing businesses. We are attempting to dig ourselves out of the recession. To many of us the only untapped markets where we can increase our business is overseas. Please do not loss sight of the importance the port of Boston has to the entire New England economic health and future growth.

If the international shipping community is moving towards more deep draft vessels it is Boston's **OBLIGATION** to mandate what ever is required to accommodate those vessels. The over 9000 jobs directly or indirectly tied to the Port of Boston are a very small portion of the economic impact you may be risking in fighting or stopping this project.

I petition you to do the right thing for your state and region - protect our environment but do not lose sight of what will keep us economically strong. With proper procedures and guidance I am sure the project can be handled with care.

Respectfully,

Marge Patterson

Marge Patterson
Transportation Administrator

C20-1

Thank you for expressing your support of the BHNIP. The information you have included is useful in demonstrating the need for the project.

Sea-Land

C21

Sea-Land Service, Inc.
Berth 11
P.W. Conley Marine Facility
South Boston, Massachusetts 02127
(617) 269-5840
(617) 268-2962 (Fax)

June 17, 1994

Colonel Miller
U.S. Army Corps. of Engineers
424 Trapelo Road
Waltham, MA 02254

RE: Dredging Boston Harbor

Dear Colonel Miller:

Our company currently operates 950' container vessels which call directly at the Port of Boston from north Europe. This weekly service has been in existence for over 7 years and has become an integral part of the waterfront economy.

On many occasions we have had to pay thousands of dollars in additional labor costs while waiting for a high tide to dock our vessel. On at least one occasion we had to bypass the Port of Boston because our schedule did not allow us to wait for a high tide. These additional expenses and delays restrict our ability to do business in Boston and have a wide ranging impact on businesses throughout New England. C21-1

The Massachusetts Port Authority and the U.S. Army Corps. of Engineers have filed a Draft Environmental Impact Report (DEIR) and a Draft Environmental Impact Statement (DEIS) for the Boston Harbor Navigation Improvement Project and Berth Dredging Project. We urge you to approve a permit to allow the dredging project to begin as soon as possible.

Further delays to the project will cause harm to the economic stability of the Port and possibly jeopardize our direct service from Europe into Boston.

Sincerely,

SEA-LAND SERVICE, INC.

Derrick A. Shirley
Port Manager

DAS/klm

C21-1

Thank you for expressing your support of the BHNIP. The information you have included is useful in demonstrating the need for the project.

BOSTON EDISON
800 Boylston Street
Boston, Massachusetts 02199

C22

June 28, 1994

Brink P. Miller
Colonel, Corps of Engineers
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254

Dear Colonel Miller:

On behalf of Boston Edison Company (BECO), I submit comments on the Boston Harbor MA Navigation Improvement Project and Berth Dredging Project Draft Environmental Impact Statement of April, 1994. Our concerns essentially are for the integrity of buried cables, bulkheads, and cooling water intake during the dredging phase, and for the integrity of buried cables and overhead transmission lines should the disposal of dredge material be on BECO property.

I also attach a copy of my March 28, 1988 comment letter on the Draft Feasibility and Environmental Assessment for deepening existing navigation channels in the Mystic and Chelsea Rivers and the Reserved Channel in that potential adverse impacts on Company facilities described for the Reserved Channel, Mystic River channel and Chelsea River remain essentially the same.

DEIS:

Figure 1-1b Boston Harbor Locus Map - Expansion of the President Roads Anchorage NNE-ward could approach the undersea 115 kv cable originating from K Street Substation and extending the length of the Reserved Channel across to Deer Island. In that location, the cable is buried 15' below the sea floor. A Key Plan and a Plan and Profile plotting the cable route and indicating depth of burial are attached. The cable route deviated from a straight path in order to avoid the submerged obstruction indicated on the profile. C22-1

Figure 2-3 Navigation Improvement Project - Mystic River and Figure 2-6 Location of Federal Channel and berth area dredging. The westward extent of Mystic Channel deepening differs on these two figures at the bridge along Alford Street adjacent to BECO's Mystic Station. A map of Everett is therefore attached which indicates the path of our utility tunnel, with four pipe cables crossing under the Mystic River from Station 250 (Mystic Station) paralleling the bridge. C22-2

Also shown on the Everett map are cables crossing Chemical Lane and passing thereafter toward Dexter Street. Cables also cross BECO property bordering Chemical Lane proceeding under the Mystic River due west into East Somerville. C22-3

BOSTON EDISON

Figure 2-5 Chelsea Creek Upstream of Chelsea Street Bridge - We have a distribution cable for Logan International Airport crossing in the vicinity of Cabot Paint. C22-4

Figure 3-1 Locations of Potential Disposal Sites Extensively Evaluated, and Figure A1-1 General Location of Short - Listed Disposal Site Alternatives - The majority of the "Everett" site is BECO property with the cable crossings as previously noted in comments on Figure 2-3. The Cabot Paint site is the distribution cable crossing to Logan International Airport as noted for Figure 2-5. The Reserved Channel Site area has BECO cables crossing from Station 385 (K Street) as shown on the attached South Boston map. C22-5

Figure A1-3 Site Map for Potential Disposal Site - Everett, includes some 35 acres of BECO property crossed by cables to and from Mystic Station as shown on the previous Everett map. C22-6

Figure A1-4 Site Map for Potential Disposal Site - Woburn - 11, indicating "power lines", involves BECO transmission Right of Way #14 and Right of Way #9 as shown on attached schematics. Our main concern is that any increase in ground level elevation under a transmission line has to be weighed in light of reducing transmission line to ground clearances inherent in electrical safety codes. Any work and use of heavy equipment within a transmission corridor/Right of Way, have additional safety issues as well. C22-7

Figure A1-2 Site Maps for Potential Disposal Site - Quincy - 03 (Squantum Point) was, until recently, BECO property taken by eminent domain for an MWRA parking facility/ferry service during Deer Island construction work.

Additional Concerns:

Reserved Channel and Mystic River dredging projects have the potential also for adversely impacting cooling water intake at New Boston Station and Mystic Station, respectively. Adverse impact on the structural integrity of the bulkheads at the two stations is also a consideration we bring to the Corps' attention. C22-8

As I indicated to you at the May 17th public meeting at the O'Neill Federal Building, we appreciate this opportunity to comment on the DEIS and would be happy to meet with the Corps or do a field walk-over, should you feel it necessary.

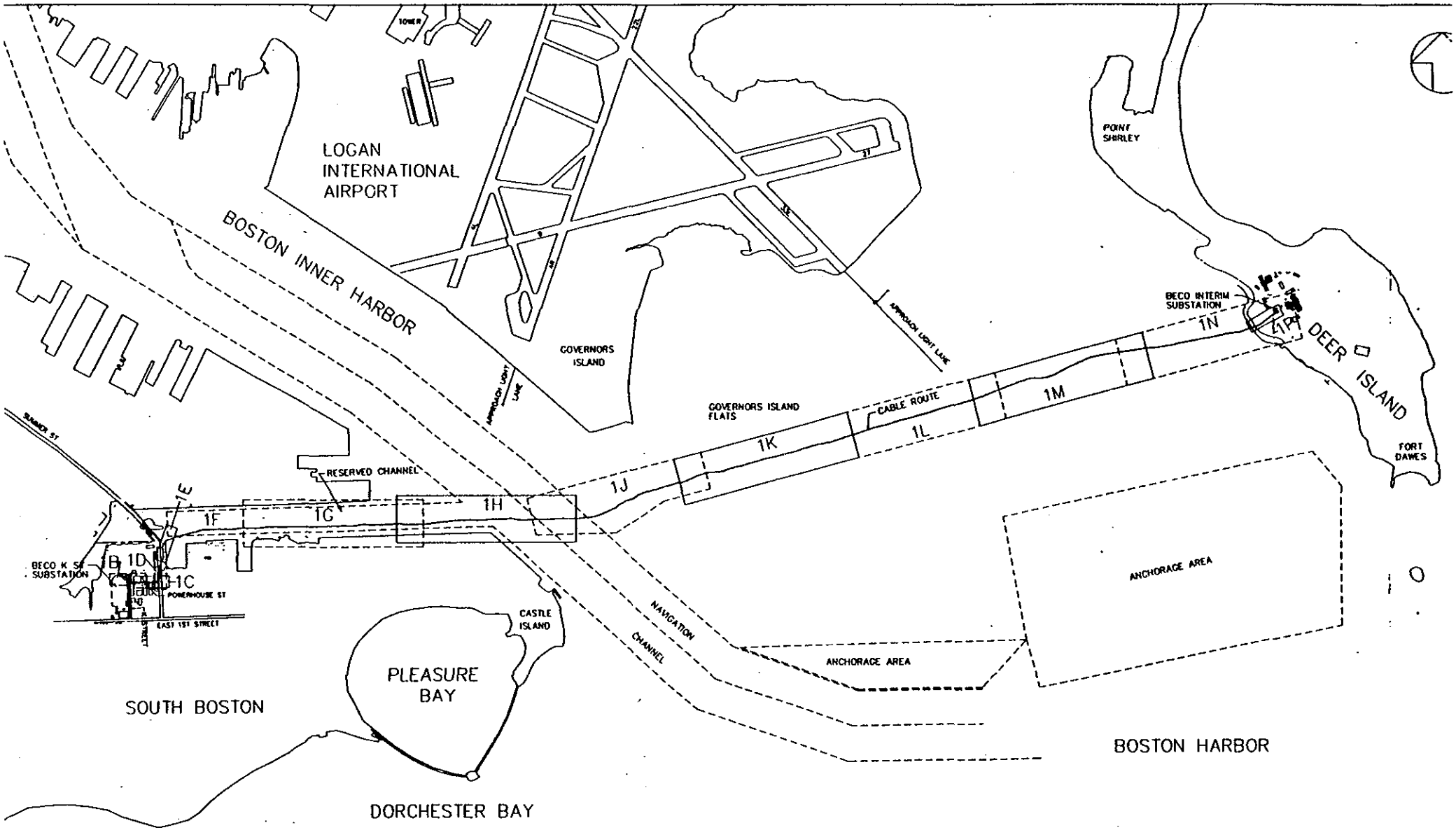
Should there be any questions, I can be reached at 424-2975.

Very truly yours,

Lillian N. Morgenstern

Lillian N. Morgenstern, Ph.D.
Principal Environmental Planner

Attachments



AS-BUILT NOTE

THIS DRAWING IS BASED SOLELY ON THE AS-BUILT INFORMATION PROVIDED BY THE CABLE SUPPLIER AND INSTALLATION CONTRACTOR, LES CABLES DE LYON OF FRANCE. STONE & WEBSTER PROVIDED DRAFTING SERVICES ONLY, BY INCOPORATING ALL LES CABLES DE LYON AS-BUILT INFORMATION, TO PRODUCE THIS DRAWING. STONE & WEBSTER WAS NOT RESPONSIBLE FOR, AND DID NOT HAVE ANY ROLE IN, DEVELOPING THE AS-BUILT INFORMATION. ALSO STONE & WEBSTER WAS NOT RESPONSIBLE FOR, AND DID NOT HAVE THE INFORMATION NEEDED FOR, VERIFYING THE ACCURACY OF THE AS-BUILT INFORMATION. LES CABLES DE LYON HAS ALSO REVIEWED AND APPROVED THIS DRAWING AS DRAFTED.

LAURENT GUERLOU 12-12-90
APPROVED BY LES CABLES DE LYON — DATE

NOTES:
1. BASE CABLE ROUTE - PLANS AND PROFILES DRAWINGS 18576 - DY - 1B THRU DY - 1P
2. NOTE DELETED
3. SECTIONS AND DETAILS DRAWINGS 18576 - DY-3A AND 3B

0 417 833 1667 2500
SCALE: 1 INCH = 833 FEET

ISSUE	DESCRIPTION	APPROVED BY	DATE
1	FOR BIDS ONLY	G.F. SANKEY	2-17-89
2	CONTRACT ISSUE	G.F. SANKEY	4-13-89
3	ISSUED FOR CONSTRUCTION	G.F. SANKEY	9-27-89
4	SEE AS-BUILT NOTE	[illegible]	12-12-90

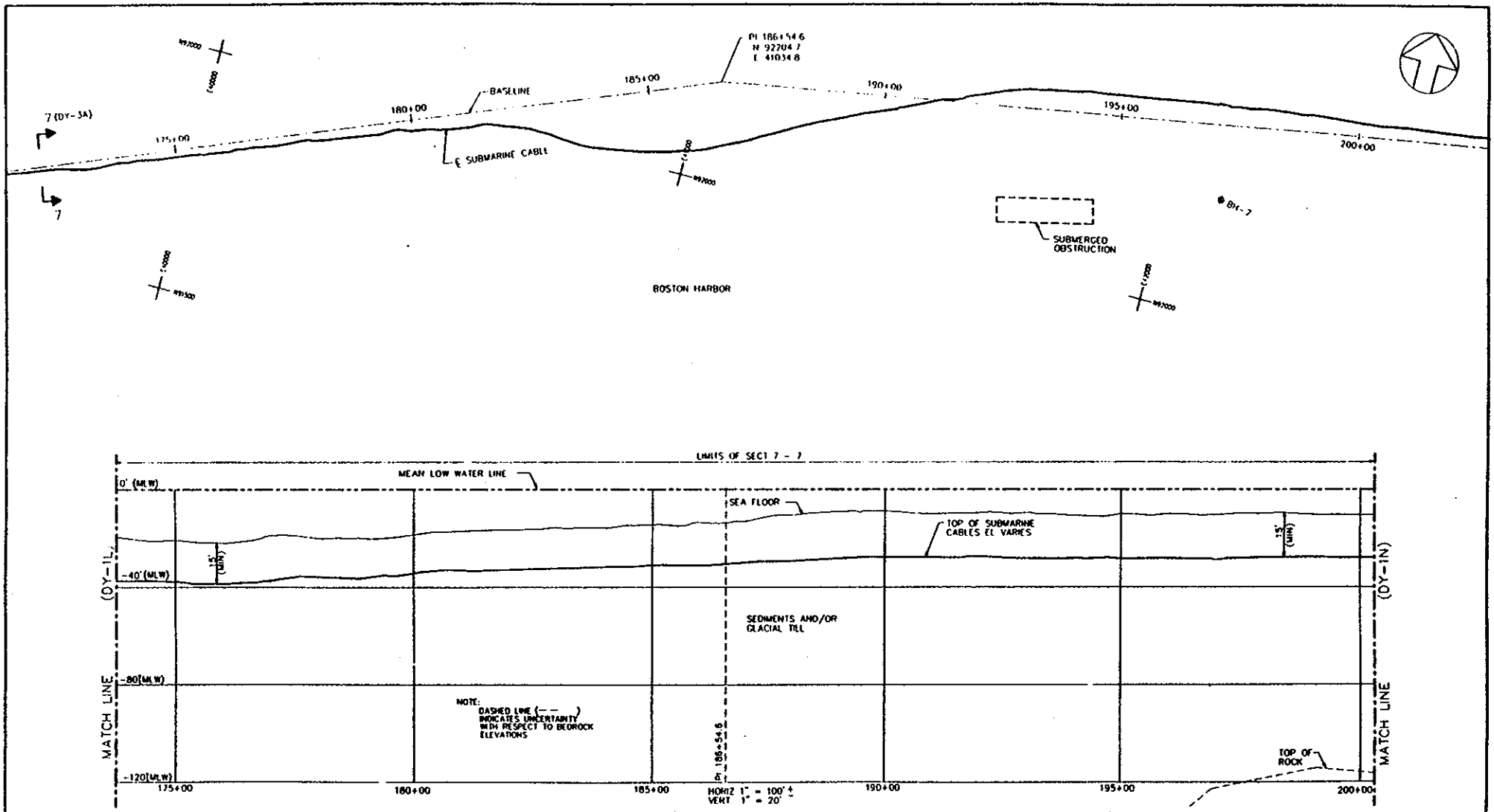
BOSTON EDISON COMPANY
115 KV CABLE - K ST. SUBSTATION TO DEER ISLAND

KEY PLAN

STONE & WEBSTER ENGINEERING CORPORATION
245 SUMMER ST. BOSTON, MASSACHUSETTS

DRAWING NUMBER 18576 - DY -1A -

DESIGNED BY R.F. DONOVAN | DRAWN BY R.E. STOCKS | REVIEW R.A. LAVACHE
DRAWN DATE BY A.J. PATR | DATE BY R.F. DONOVAN | APPROVED G.F. SANKE



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LAURENT QUERLOU — APPROVED BY LES CABLES DE LYON

12.17.96 DATE

NOTES:
1. TO OBTAIN MASSACHUSETTS STATE PLANE GRID COORDINATE SYSTEM, 1927 NORTH AMERICAN DATUM, ADD 400,000 TO NORTH, 700,000 TO EAST
2. VERTICAL DATUM IS MEAN LOW WATER (MLW) UNLESS OTHERWISE SHOWN
   (MLW) + 0.81 = (BCB) BOSTON CITY BASE
   (MLW) + 100.78 = (MDC) METROPOLITAN DISTRICT COMMISSION
3. LOCATION OF ALL EXISTING UTILITIES SHOULD BE REGARDED AS APPROXIMATE ONLY. CONTRACTOR SHALL FIELD VERIFY TYPE, EXTENT, SIZE, LOCATION AND ELEVATION OF ALL UTILITIES AFFECTED BY THE CABLE CONSTRUCTION

SCALE 1 INCH = 100 FEET

ISSUE	DESCRIPTION	APPROVED BY	DATE
1	FOR BOS ONLY	G.F. SANKEY	2-17-89
2	CONTRACT ISSUE	G.F. SANKEY	4-13-89
3	ISSUED FOR CONSTRUCTION	G.F. SANKEY	8-27-89
4	SEE AS-BUILT NOTE	G.F. SANKEY	12.12.96

BOSTON EDISON COMPANY

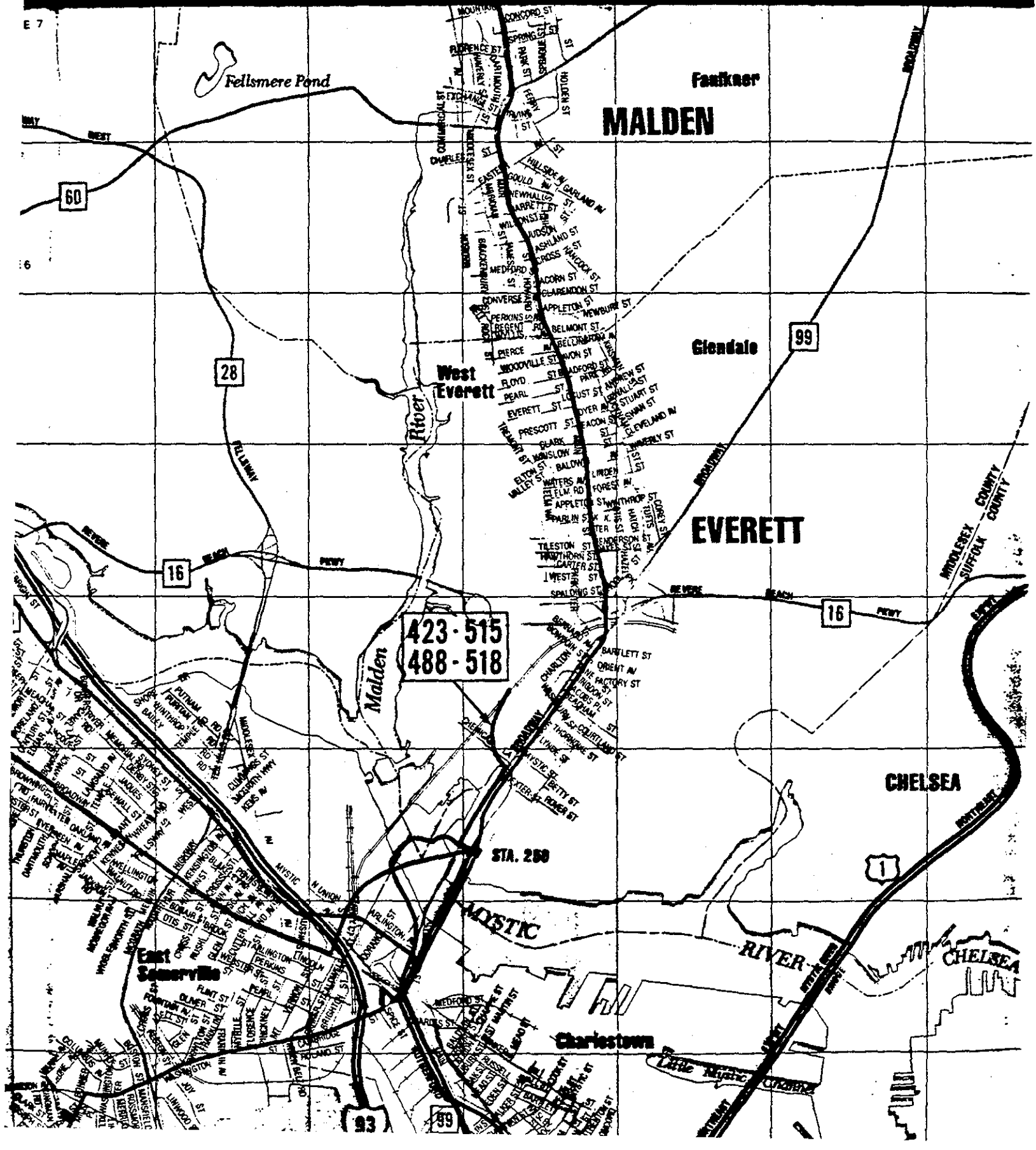
115 KV CABLE - K ST. SUBSTATION TO DEER ISLAND

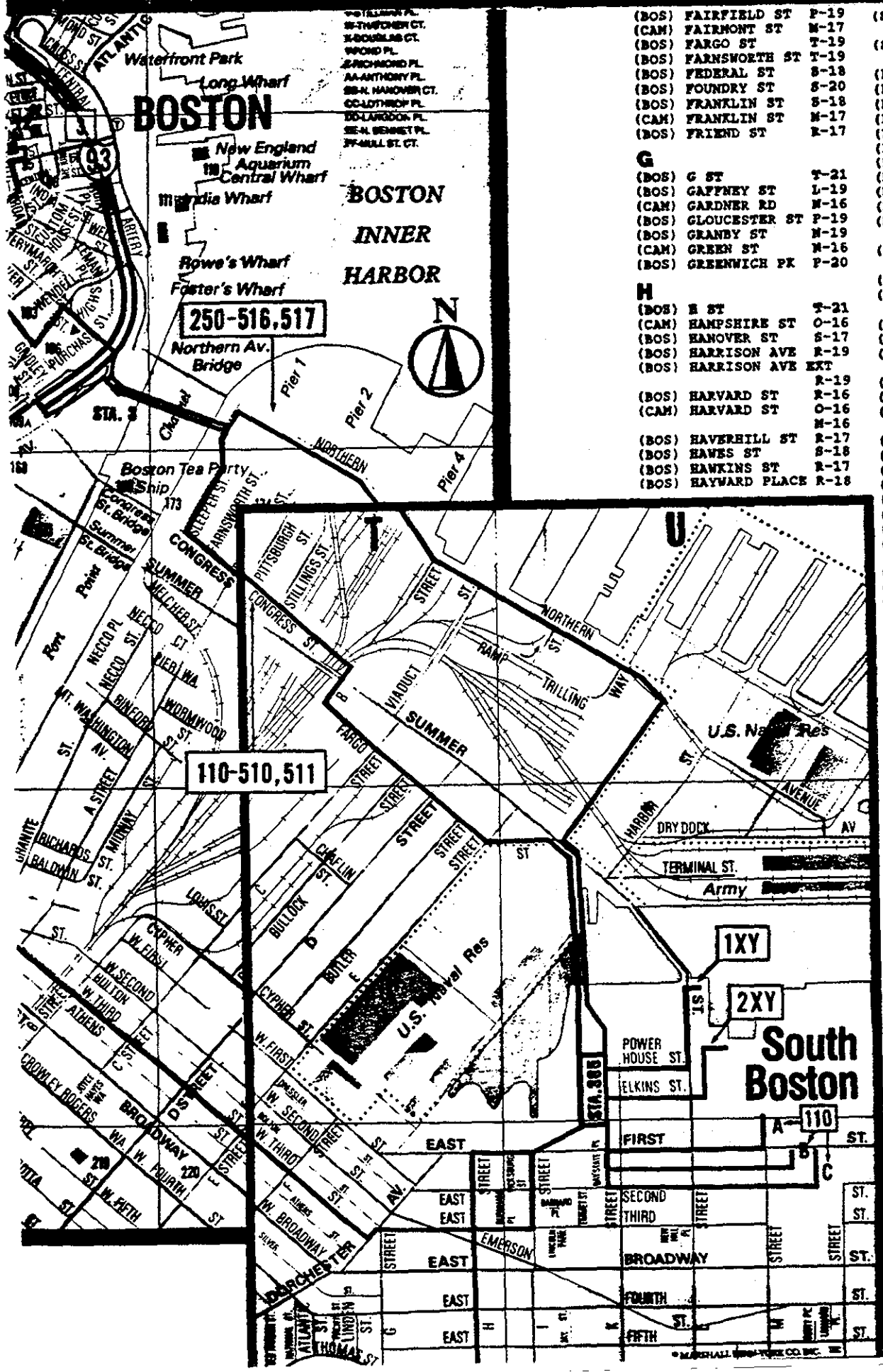
PLAN AND PROFILE SHEET 11

STONE & WEBSTER ENGINEERING CORPORATION
245 SUMMER ST BOSTON, MASSACHUSETTS

DRAWING NUMBER 18576 - DY - 1M - 4

DESIGNED BY R.F. DONOVAN | DRAWN BY R.E. STOCKS | REV. R.A. LAVAGNE | DWN G.F. SANKEY
DWG CHK'D BY A.J. PATR | CHK'D BY R.F. DONOVAN


Fellsmere Pond
Faulkner
MALDEN
Glendale
West Everett
Malden River
EVERETT
423 · 515
488 · 518
STA. 250
CHELSEA
MYSTIC RIVER
East Somerville
Charlestown
Little Mystic Channel
60
28
99
16
1
93



(BOS) FAIRFIELD ST P-19
(CAM) FAIRMONT ST M-17
(BOS) FARGO ST T-19
(BOS) FARNSWORTH ST T-19
(BOS) FEDERAL ST S-18
(BOS) FOUNDRY ST S-20
(BOS) FRANKLIN ST S-18
(CAM) FRANKLIN ST M-17
(BOS) FRIEND ST R-17

G

(BOS) G ST T-21
(BOS) GAFFNEY ST L-19
(CAM) GARDNER RD N-16
(BOS) GLOUCESTER ST P-19
(BOS) GRANBY ST N-19
(CAM) GREEN ST N-16
(BOS) GREENWICH PK P-20

H

(BOS) H ST T-21
(CAM) HAMPSHIRE ST O-16
(BOS) HANOVER ST S-17
(BOS) HARRISON AVE R-19
(BOS) HARRISON AVE EXT R-19
(BOS) HARVARD ST R-16
(CAM) HARVARD ST O-16 M-16
(BOS) HAVERHILL ST R-17
(BOS) HAWES ST S-18
(BOS) HAWKINS ST R-17
(BOS) HAYWARD PLACE R-18
(SOM) EAST SOMERVILLE M-14
(SUD) EAST SUDBURY STATION E-12
(EVE) EVERETT S-11
(BOS) FANEUIL J-18
(MAL) FAULKNER S -8
(BOS) FIELDS CORNER S-26
(EVE) GLENDALE S-10
(BOS) JAMAICA PLAIN L-24
(BRO) LONGWOOD M-21
(MAL) MALDEN R -8
(MAL) MAPLEWOOD S -7
(MED) MEDFORD L-10
(MED) MEDFORD HILLSIDE M-11
(BOS) MEETING HOUSE HILL R-25
(MEL) MELROSE S -5
(MEL) MELROSE HIGHLANDS R -2
(MIL) MILTON P-31
(NEE) NEEDHAM B-28
(NEE) NEEDHAM JUNCTION A-28
(NEW) NEWTON D-23
(NEW) NEWTONVILLE D-19
(BOS) NORTH BRIGHTON J-17
(SUD) NORTH SUDBURY E -5
(NEW) NONAUTUM D-17
(MAL) OAK GROVE Q -7
(SUD) PINE REST C -9
(QUI) QUINCY U-30
(BOS) ROSLINDALE K-27
(BOS) ROXBURY O-22
(BOS) ROXBURY CROSSING R-21
(BOS) SAVIN HILL R-24
(SOM) SOMERVILLE M-13
(BOS) SOUTH BOSTON U-20
(SUD) SOUTH SUDBURY D-12
(SOM) SPRING HILL K-14
(NEW) THOMPSONVILLE E-24
(BOS) UPHAMS CORNER BOSTON R-24
(WAL) WALTHAM B-14
(WAL) WALTHAM D-20
(WAT) WATERTOWN G-17
(EVE) WEST EVERETT Q-10
(MED) WEST MEDFORD K -9
(BOS) WEST ROXBURY I-29
(WIN) WINCHESTER J -5
(WIN) WINCHESTER HIGHLANDS L -2
(WOB) WOBURN H -3
(MEL) WYOMING Q -4

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PUBLISHERS NOTE

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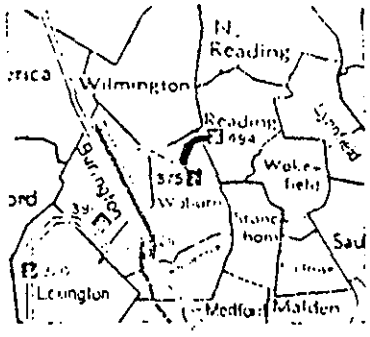
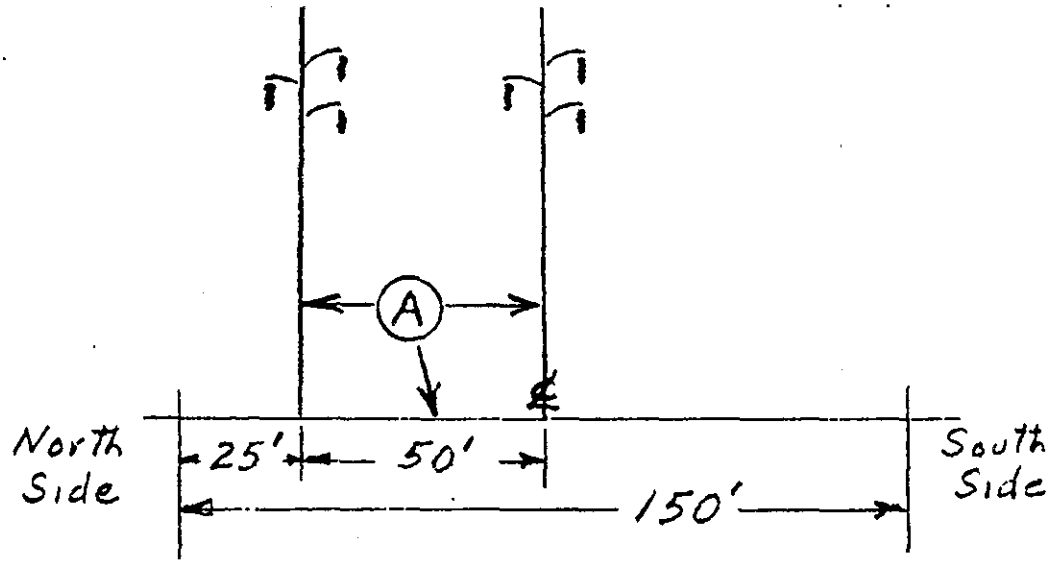
BY ..... DATE ..... SUBJECT ..... SHEET NO. ..... OF .....
CHKD. BY ..... DATE ..... JOB NO. .....



Right Of Way #14

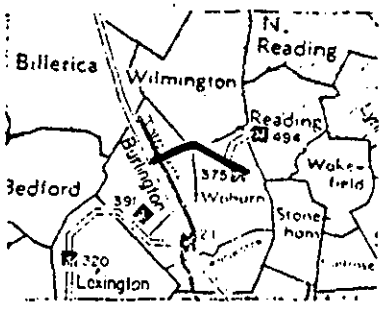
R/W #9, Woburn To Reading Town Line

Length - 1.2 miles Acquisition - 1970
Easement 99 % Fee 1 %



(A) 1970 - Northerly 100' width of R/W cleared. 2-115KV wood pole with davit arm lines built.
North line: 211-503, 795 MCM all aluminum
Center line: 211-504, 795 MCM all aluminum

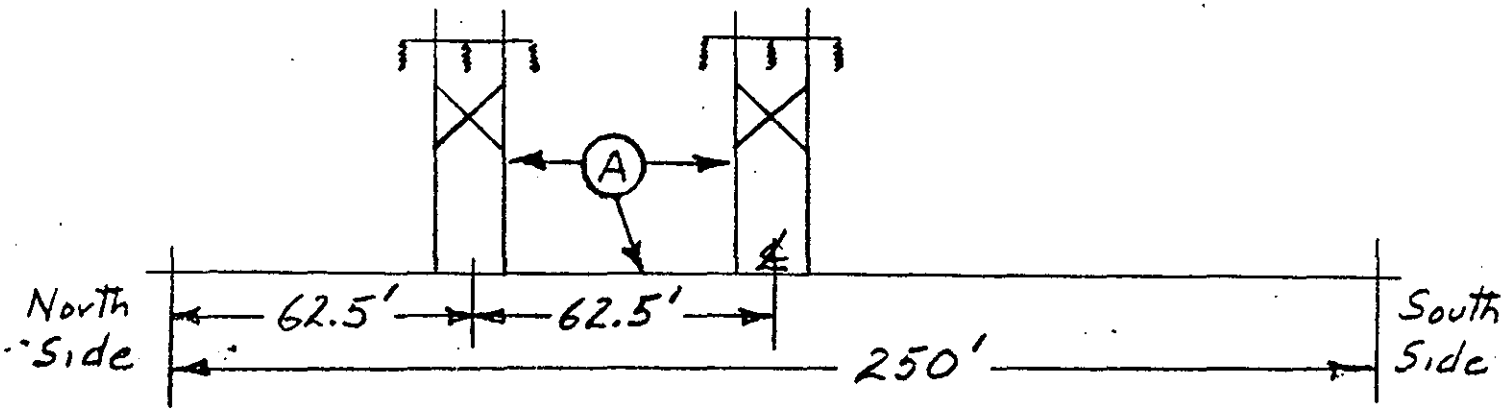
BY ..... DATE ..... SUBJECT ..... SHEET NO. ..... OF .....
CHKD. BY ..... DATE ..... JOB NO. .....



Right Of Way #9

R/W #5, Burlington to North Woburn Station 375

Length - 3.8 miles Acquisition - 1958
Easement 0 % Fee 100 %



(A) 1961 - Total width of R/W cleared except for a few parcels. Two 115KV wood H-frame lines built:
North line: 211-503, 795 MCM ACSR.
Center line: 211-504, 795 MCM ACSR.

Note: Various 13.8KV circuits installed in Woburn over the years.

BOSTON EDISON
800 Boylston Street
Boston, Massachusetts 02199

March 28, 1988

Division Engineer
New England Division
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254-9149

Dear Colonel Rhen:

On behalf of Boston Edison Company, I submit comments on the Draft Feasibility Report and Environmental Assessment for deepening existing navigation channels in the Mystic and Chelsea Rivers and the Reserved Channel. I congratulate you in the thoroughness and clarity of the draft report and thank you for the opportunity to review the proposed modifications. We would welcome an opportunity to meet with your staff as the project proceeds and to provide you with details you may require.

I would in the interim offer the following specific comments on your Recommended Plan of Improvement as they impact or have the potential to impact the Company.

1. Reserved Channel, South Boston, southside:

   a) On a copy of report Figure 34, I have indicated the approximate dividing line between existing Boston Edison Company property and our east boundary neighbor, the MBTA.

   b) Also indicated on that figure is an area in front of the New Boston Station screenwell structure, last dredged in 1976, which the Company has under consideration for future dredging. We would hope that the area could be considered in concert with your dredging. A 1974 plan and cross sections are attached.

   c) The Company also has a utility tunnel extending approximately northward from the New Boston Station adjacent to the "L" Street Bridge.

   d) The report references Boston Edison Company, as a "Beneficiary" and recommends that the south side of the channel be narrowed by some 15'±. As is planned for the northside, we would anticipate consideration of the structural integrity of bulkheads on the southside as well prior to dredging to 40' depth and of any deepening of berthing areas.

   e) Enclosed also is a plan indicating two proposed cable routes from the New Boston Station (on ~~"L"~~ Street) out to Deer Island to provide power for MWRA construction activities in a ~~1990~~ 1991 timeframe.

"K"

BOSTON EDISON

2. Mystic River Channel:

   a) On a copy of report Figure 34, I have indicated on the north side of the river that Boston Edison property now includes that portion marked as "Belcher Petroleum".

   b) From the Mystic Station, a utility tunnel containing lines 250-517 and 329-511 is indicated approximately parallel to the Malden Bridge. A larger plan is available which provides more detail of the area. Lines 250-516, 329-510, 211-514 and a spare pipe are in the Mystic River.

   c) Boston Edison's Mystic Station outfall canal structure is presently under consideration for some repair/maintenance work. If the -40' MLW deepening of the river is bounded by the Federal Channel line, the present structure is considered to be sound. It is unclear presently what effect a berth deepening of -40 MLW right up to that bulkhead would have however.

3. Chelsea River:

   a) The report (page 60) references Company cables in need of burying 200 + 300' downstream of the Chelsea St. Bridge.

   b) Page 60 also references sixteen five-inch electrical conduits 2,800' ± upstream of the McArdle Bridge. Those are Boston Edison conduits but it is not clear that they would not be impacted by a deepening to -40' MLW.

4. Weymouth Fore River:

   a) This week the Company issued a Request for Proposal for the revitalization of our Edgar Generating Station on the Weymouth Fore River opposite the former Quincy Shipyard. It is anticipated that reuse of the Edgar site for up to 600 MW of power will be proposed over the next three to four months. I have enclosed two drawings: one a closeup of the site and the second indicating its location relative to Nantasket Roads.

   b) The question I would raise is whether you have any plans to deepen the Weymouth Fore River in view of the reuse of the Quincy Shipyard by the MWRA? We would be interested in any plans for deepening the river between the Fore River Bridge and Nantasket Roads.

In conclusion, thank you for this opportunity to comment on your recommendations for Boston Harbor. As your proposed project becomes finalized, we would welcome the opportunity to discuss details regarding our utilities and generating station waterfront structures. I can be reached at 424-2975 should you have any questions.

Sincerely,

Lillian N. Morgenstern

Lillian N. Morgenstern, Ph.D.
Principal Environmental Planner

C22-1

Expansion of president Roads Anchorage in the NEE direction is not presently contemplated. Figure 1-1b (DEIR/S) is misleading in that it shows the original outline of the anchorage and a 700-foot wide extension authorized in 1946 and constructed in the late 1950's.

C22-2

Figures 2-1a and 2-3 show the correct channel limits.

C22-3

Cables shown on the map for Everett are not within the proposed dredging area.

C22-4

The Design Memorandum which will be prepared after the FEIR/S contains a section on utilities. This information has been incorporated into that document.

C22-5

These Everett and Cabot Paint sites are not preferred disposal alternatives. The cable crossings will be noted if these sites are proposed for future use.

C22-6

(see response to C22-5)

C22-7

No work is proposed for the Woburn site under the "power lines". Equipment would use existing roads if this site was used in the future.

C22-8

Care will be taken to limit turbidity during dredging and disposal operations. It may be necessary to dredge only during the portion of the tidal cycle which directs any plume away from the intakes. Water quality modeling has shown that project operations will not violate water quality standards.

Bulkhead integrity was examined with respect to deepening of the Federal channel. Results of our investigations indicate no significant loads are to be placed on the adjacent bulkheads.

PRIVATE CITIZENS

COMMENTS AND RESPONSES

P1

15 June 1994

Brink P. Miller, Colonel
U.S. Army Corps of Engineers (COE)
424 Trapelo Road
Waltham, Massachusetts 02254

RE: Draft Impact Statement DEIS dated April 1994

Trudy Coxe, Executive Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, Massachusetts 02202

RE: MEPA Unit Draft Report EOEA File No. 8695

Dear Colonel Miller and Secretary Coxe:

Requirements mandate that any activity having significant effect upon the environment be supported by data is gathered in one place and necessary to make a decision, including complex factors outside the authorities scope. The Draft joint Federal and State document and process to address impacts associated with the proposed Boston Harbor, and Berth, Navigation Improvement Dredging Projects (B-NIP) are both INADEQUATE and NOT PRACTICAL.

Policy acts also mandate that the public must be informed of the significance of the environment and the problems involved. The repeal of a prohibition on capping is a significant problem.

No one, not even a branch of the government, is ever above the law. The Environmental Protection Agency (EPA) must respond, judge violations, and actively police anti-pollution rules and supplemental federal administrative regulations. The more complicated the nature of the determinations to be made, the longer the period of investigation and deliberation required.

I DEMAND an EIS be initiated immediately regarding all aspects of capping at the Massachusetts Bay Disposal Site (I shall use the terms "MBDS" and "Stellwagen Basin" and "the preferred alternative" interchangeably throughout my comments herein). P1-1

Capping is prohibited at MBDS. This prohibition was the product of administrative experience, appreciation of the complexities of the problem, realization of statutory policies and responsible treatment of the uncontested facts.There can be no 100% efficient physical isolation of all contaminated, unclean materials from B-NIP. Capping at the Basin is not a "potential" flaw in B-NIP's proposal, it is a fatal flaw. Proponents and reviewers may have placed at risk the proposal's entire scoping and consistency.

Capping was prohibited in EPA's MBDS designation Record of Decision (1/13/93) which "...expressly bars the disposal of (such) contaminated materials, even if they were to be capped..." (p 10). EPA questioned the viability and efficacy of capping at MBDS when it enacted the prohibition. Mass Coastal Zone Management concurred. These proposed dredging documents are legal challenges not only to that MBDS designation but also

to designation of the Stellwagen National Marine Sanctuary (NMS).

MBDS has been used with and remains the marker for comparing all other practical B-NIP alternatives. However, when exception from an administrative regulation or existing prohibition is sought, the moving party has the burden of proof and the cost of going forward to bear. COE's specific responses to disposal and capping at the Basin is presented in Appendix G ("G" for "Generic?") yet viability and prohibition repeal are downplayed. Prohibition repeal has not been clearly and simply presented in documents, press reports or at public informational meetings. P1-1

Instead, capping off Portland, Maine at a water depth of 50 meters and in deeper waters off the Pacific coast and Long Island constitute "new data." Despite unspecified "modeling" a single reference in Ms. Lynch's comments (p. A-2-9) suggests that a COE experiment to cap FAILED near the Basin and that the sediments ended up in different areas (something about a toggle buoy failing to remain tight and taut in deep waters...). I don't believe reasonable consideration has been given yet to the duration, intensity and quality/quantity issues of B-NIP. While COE and MassPort may be confident and more than willing to experimentally test in Class SA waters adjacent to a NMS, costs are relative in a migratory endangered species corridor.

January 1993, upon formal MBDS designation, EPA's Belaga and EOEA's Tierney set prerequisite for repeal of prohibitions on hazardous dumping and subsequent capping at MBDS. Other agencies were meant to be party to legal prohibited uses challenge. When need appears to outweigh due process and potential environmental consequences then public review/comment can be deemed reasonable.

Since 1974, approximately 3 million cubic yards (mcy) of materials have been placed at MBDS. Since 1977, MBDS has been used exclusively for dredged materials disposal. B-NIP proposes:

1.1 mcy of contaminated materials
2 mcy of "parent" or underlying materials
4.4 mcy from future project dredge maintenance

P1-2

for a conservative estimate of 7.5 mcy. When will MBDS capacity be exceeded? When is a Basin no longer a basin? Does MBDS have COE's "unlimited capacity as long as there is sufficient capping material" for this a single yet massive input of known spoils proposed over the next 3-10 years? Are mega-projects (B-NIP, CA/T) why we designated a regional dredge disposal site?

Boston, but especially the Inner, Harbor is an active sink trap for particle reactive components. There are significant accumulations of PCBs, PAHs, cadmium, chromium, lead and other heavy metals (along with oil and other "constituents of concern"). Top sediments show lower concentration of metals than the overlying water columns. Is there a diffusive flux into the harbors' sediments? Does accumulation of excess carbon P1-3

and nutrients drive the redox potential at several hundred hot spots within these highly oxic areas proposed to be dredged? Scores of CSOs empty, factories line the shoreline. The sediments have been oxygen depleted for 100 to 200 years. Upon the introduction of oxygen and aromatic PAHs, even in massive debris fields, new metabolic conditions have occurred. "In situ" bioremediation of sediments have been successful despite the extent of systematic degradation. At the Charlestown Naval Shipyard, where PAHs concentrate due to overly-treated creosote wood pilings, micro-organisms that eat carbon have flourished. Why aren't there specific references to cleaning sediments BEFORE dredging and disposal? Per cubic yard cost estimates should be based on remedial actions on site and driven by the resource. P1-4

MPRSA Title I made it unlawful after 31 Dec 1991 for dumping or transport for the purposes of dumping industrial waste without a permit. Will ALL proposed dredging materials, including clean "parent" (never before dredged) materials, be CONTINUALLY tested up to disposal? What is the likelihood of known contaminated upper sediments and silt of Boston's harbors shifting, shoalling, settling, eroding, becoming shaken out of buckets, resuspending and migrating onto "clean" underlying materials during operations or in the interim? Why won't all capping materials be marginal? P1-5

At a proposed dredging rate of 2-8 barges daily, 8-12 hours to load and tow, over 1½-2 years, is it reasonable to anticipate more than 4,000 barges to an off-shore site? How much time (in days, weeks, months, seasons, and years) will pass between the first shipment of spoils to full capping? Based on B-NIP's proposed: quality/quantity; location/duration; technology/costs; every barge possesses high/less high degrees of hazardous spoils. P1-6

What could happen to the integrity not only of the product but the permanent structure COE proposes to build at MBDS? What will be the backgrounds, expertise and authority of these COE inspectors on proposed MBDS trips? Who monitors, confirms and can make adjustments to operations or the MBDS taut-wire moored buoy? Why no monitoring during and around the descent phase?

The US Coast Guard (CG) regulates all vessel traffic control, navigational and shipping activities, vessel design, construction and operation, and is responsible for minimizing the likelihood of accidents, conducting routine vessel inspections and must ensure safe working conditions are maintained onboard ships and barges. In addition, when harmful discharges do take place and in response to The National Contingency Plan for the removal of hazardous substance discharges (40 CFR Part 300), the CG, in cooperation with EPA, administers The Plan and the clean-up, CG personnel must investigate all reported offshore spills and supervise all clean-up operations including the hiring of private contractors when response is not prompt, and it is the CG that retains final authority over clean-up procedures and equipment. P1-7

Taking into account that the CG may be court-ordered to shut down shipping into Boston Harbor until CG funds and mounts effective monitoring programs, estimated at $5 million annually, to enforce national laws protecting endangered whales and other Sanctuary resources, does anyone see an expanded role for CG in proposed dredging, transport, disposal, capping & monitoring?

MBDS is an Impact Category I Site. MBDS still remains a site of unknown contamination. Chemical, nuclear, munitions, and dredged disposal has occurred in varied containment. Coffins of radioactive containment, ringers, are only blips on modeling side scans. DAMOS/ADDAMS didn't do continuous coverage of the whole bay floor only reconnaissance surveys. The burden of proof is NOW on discharger(s) to show that area resources will not be further damaged. Before a permit is issued and in compliance with 40 CFR 228.10, who will vigorously pursue and encourage the best available management practices to minimize even relatively small impacts to an Impact Category I Site? What are the boundaries and buffer zones to Impact Category I Sites? P1-8

MBDS is established over a two-nautical-mile-diameter circle. The Basin touches slightly at a point the NMS. Rather than a holistic approach, NOAA appears to be reactive about threats to the deepest part of Mass Bay and the Stellwagen System. This general area has also been called the Foul (not Fowl) area and/or Marblehead, which is 10 miles to shore. The preferred alternative terminates in Class SA waters, adjacent to an outstanding area of national and regional importance. Water and habitat quality at this Basin affects the Bank. This is an ecosystem that has maintained its integrity for at least the last 13,000 years.

The Basin is surrounded by continental shelf, banks and ledges. Water depths at MBDS average 90 meters plus and shrinking. While the Basin possess deeper waters, the coastal shelf does not. Even relatively small impacts could produce significant changes to internal waves, currents and other Sanctuary resources and qualities. The eastern slope of the Basin is incredibly pristine.

Sand is the predominant sediment of the Bank and surrounding areas. Sand on top of clayey-silt covers most of Stellwagen Basin and is mixed by currents with fine-grained materials. Bottom currents carry fine sediments which are then reworked in patches with coarse grains that are the result of area erosion of exposed substrate. Deposition is on-going. Fine sediments don't build up. They appear only temporary. Most deposition is available to be resuspended in the currents and water columns. The Basin's sediments are the System's source of clean detritus and change. However, in the center of the Stellwagen Basin, sandy cover gives way to sand-silt-clay bordering clayey silt.

Capping may be impossible to attain, establish or repair. The technical capability to cap soft, unconsolidated materials with

Boston blue clay has not been clearly shown to be viable. The structural properties needed to support and form dense cohesive material, especially considering the contamination matrix, may not create a permanent capping barrier. Rock blasted from B-NIP may sink to the Basin area's firm substrate. The most severely contaminated spoils won't go down first (private berthing dredges not in sequence; soft surficial materials dispersed over larger than anticipated areas; concentrations not solely a function of dilution). Attempted capping could further disturb what was last disposed in 1983 and could again move spoils beyond the site boundaries. Estimated 3-5% lost during descent phase is the unaccounted for dissolved containment fraction of the most hazardous "constituents of concern" possibly in the nation. Capping presents risks and a high failure potential that needs to be fully disclosed publicly, hopefully in a separate EIS/R. P1-9

The Merrimac River is the dominant source of fresh water tothe Basin. Direction is in a rugged pattern driven by tides, depth, cooling at the surface, and a mean westerly wind. Severe weather events, and I'm not referring to Hurricane Gloria, have a higher occurrence probability than we have recently experienced. We're overdue 100-250-500-year storms. Normal circulation is influenced by all these factors until an established current is hit. Counterclockwise surface currents flow over the system. Does MassPort, their contractors or COE proposed any volume or weather or seasonal restrictions regarding the proposed dredging, transport, disposal, capping and monitoring operations? P1-1

Why doesn't this information exist in the DEIR/S for this bench marker alternative? Don't we need relevant background information to achieve any reasonable combination of logistics, technology and cost within the given time constraints and regulatory mazes? P1-11

I would like to comment on the Boston Lightship/Industrial Waste Site's fine grained substrate to be borrow pitted and Messburger Sites 2 and 7 being near impossible to model and monitor but it would be premature to prejudge cumulative impacts of the proposed MWRA outfall dispersal system so near to these sites. P1-12

The "rainy day" introduction of nearly a billion gallons of fresh water to the salinity levels and currents there, near-site impacts to levels of pre-treatment achieved at Deer Island prior to discharge start-up at the mile-long "submerged killing fields" from MWRA's own "constituents of concern," and what monitoring and mitigation will be judged necessary and in place still remains to be seen. (Will you join me in pressing for the long overdue permit application process and public review?) P1-13

Please give me reasons why Boston doesn't deserve another island monument to "transport not treatment" waste management practices. P1-14

I have concerns about MassPort. To whom is MassPort responsive? P1-15

I can support dredging and disposal alternatives for B-NIP that include: sediment bio-remediation (fullest extent achievable) prior to public and private dredging; no barges (How do Truitt barges operate? Got pictures?) of "unclean spoils" but nearby placement and capping at shallow depths; reusing and recycling underlying materials in already degraded (Class SB and Class SC waters) marine environments; suction technology to dredge; silt screens in place for all phases of operations; beneficial uses of underlying substrate for sea walls/slope stabilization in areas prone to erosion and estimated in proposed maintenance; use of MBDS only for low-volume, clean materials following both in-depth report and publicly-released-for-review MOUs with EPA, Commerce/NOAA/Sanctuary Management and the CG; and proactive, beefed-up, safety standards for transports to and from Boston. P1-1

I'm a little concerned that what's proposed for federal channels and private/public berths may not be deep enough. Too many container vessels, LNG ships, and oil tankers calling Boston in 1991 were well over 900 feet in length. They draw as much as 41 feet yet there were no accidents or grounding upon turning. The navigational realities of fully loaded double-hulled vessels expected 1995-96 could make the proposed dredge depths inadequate before it even finishes review. The proposed B-NIP bottom will be a little deeper, a whole lot harder, and bigger will come. Are any high-risk cargo restrictions planned to follow B-NIP? P1-

There are reasons to believe the spoils will be contaminated and unable to satisfy exclusion criteria (Tier I data review). There is potential at MBDS for Toxicity/Bio-accumulation as capping at 90 meters is at best experimental but logistically can't not be impacts to the marine ecosystem (Tiers II & III). Because capping is viable in shallow water and shallow water's located within an economically/operationally feasible distance, prohibitions for incompatible uses exist and should exist in sensitive areas, this consistency review is incomplete and lacking. Because time limits to COE actions exist, and it is naive to think that we can keep pollution at bay or make changes later, the preferred alternative is NOT PRACTICAL as presented.

Please reserve and present copies of any new EIS/Rs or relative documents, any Supplemental EIS//R, the Final EIS/R, Consistency Reviews, MOUs, and the ROD for my review and comment. Thanks!

Bev Carney

Bev Carney
38 Longview Drive
Orleans, MA 02653

P.S. Really wanted to attend the Cape public meeting of 19 May but Demos never called back (16 May 0937 hours at (617) 647-8257). Thought the repeal at the Basin would have been significant to Cape Codders but unable to make needed reservations (see attached).

NEWS BRIEFS

Comment on Boston project invited today

HYANNIS — A public meeting and workshop to discuss the proposed improvements to Boston Harbor will begin at 7:30 p.m. today at the Tara Hyannis Hotel.

Offered by the Army Corps of Engineers and the Massachusetts Port Authority, the meeting is designed to give the public an opportunity to comment.

The workshop will include a presentation on the major features of the improvement project and a forum where comments may be made. Recess will be held between 4 and 6 p.m.

Reservations for people wishing to address the meeting at a particular time may be made by calling the Public Affairs Office

P1-1

Use of MBDS for silt dredged from the BHNIP is not proposed in the FEIR/S. Disposal of sediments considered unsuitable for unconfined open water disposal at MBDS could be considered in the future only if capping is successfully demonstrated.

P1-2

Your comment points to a need for a regional disposal site that can accommodate the disposal of contaminated dredged material in a safe manner. Support for a regional disposal site is needed.

P1-3

Due to the volume of material contaminated, the types of contaminants present and the proposed project schedule the in-situ bioremediation of the silt material is not a viable option. Based upon a recent review of existing bioremediation technologies, as part of the Assessment and Remediation of Contaminated Sediments (ARCS) Program, the USEPA has concluded that "because of the complexity of the sediment-water ecosystem; the difficulties in controlling physical and chemical, as well as biological, processes in the sediment, and the need to adjust environmental conditions for various stages of the biodegradation process; limited effectiveness has been demonstrated for in-situ bioremediation" (USEPA 1994). In addition, in-situ bioremediation is not effective in treating the inorganic contaminants present in the Boston Harbor sediments.

P1-4

Section 3.0 and Appendix D in the final EIR/S discusses the effectiveness of treatment technologies. Factors considered for the various technologies include how fast the dredged material can be processed, what contaminants are removed and to what levels, cost and availability.

P1-5

Dredged material is not regulated as industrial waste. This project is not proposing to discharge industrial waste in ocean waters nor any other location. This project is exclusively to dredge and dispose of same material. There is no plan to continually test the clean parent material. This material has remained in its present condition since glacial times and is not expected to become contaminated from continued accumulation of surficial silt. The dredging of overlying silt will be conducted so as not to disturb the parent material before its removal. Refer to Section 5.0 for details on the Dredge Management Plan. Therefore, upon its removal, the parent material will be clean for capping and other beneficial uses.

P1-6

Approximately 1.6 million cubic yards of parent material will be disposed during the navigation improvement project at the MBDS. The average barge will carry between 3,000 to 12,000 cy of parent material per day to the MBDS. That means between about 130 and 530 trips would be made during construction of the project, not 4,000 trips. Only clean parent material will be disposed at the MBDS. Disposal of the clean parent material could actually help cap other material previously disposed at the MBDS.

There is no permanent structure proposed at the MBDS. The Corps of Engineers will hire an independent dredge inspector to assure accurate placement of the dredged material. The Corps determines the placement of the taut-wire moored buoy. No monitoring of the MBDS site is needed as the material is clean, previously undisturbed parent material.

P1-7

The Coast Guard currently oversees harbor safety practices. There is a direct role related to blasting safety and seaworthiness of the tugs and scows. An expanded role of the Coast Guard related to dredging is not foreseen. Also, dredged material from Boston Harbor is not classified as hazardous material.

P1-8

The reader should refer to the U.S. EPA's site designation of the MBDS for additional information.

P1-9

No disposal of unsuitable material will occur at the MBDS for this project.

P1-10

Severe weather events, regardless of the global position of the source, are relatively predictable by today's sophisticated equipment and meteorological modeling. The dredging contractor will be required to develop an *Accident Prevention and site Emergency Plan* as part of the required preliminary submittals for performing this work. This plan, as noted in Section 5.8.3.1, *Weather Related Issues,* will include specific actions to be taken in the event of severe weather. Tug captains will make the decision whether to transport parent material into Massachusetts Bay during inclement weather. Dredging operations will not occur if the weather is too severe. Also, no dredging or disposal will occur during restricted periods in the Mystic River and Inner Confluence.

P1-11

Information on the susceptibility of the potential aquatic disposal sites to storms (and the resulting wave generated bottom currents) is included in Appendix G and was used in the comparison of the aquatic alternatives (Section 4).

P1-12

The DEIR/S did not propose to construct a borrow pit at the Boston Lightship. Neither the Boston Lightship nor the Meisburger sites was identified as the preferred disposal alternative for the BHNIP.

P1-13

Because the Meisburger sites were found not to be the preferred alternative for disposal of silts from the BHNIP, this project will not interfere with the monitoring of the MWRA outfall.

P1-14

The BHNIP is not proposing to create an island for disposal of dredged materials.

P1-15

Massport has reviewed and responded to all comments received on the BHNIP.

P1-16

The selection of the in-channel alternative provides the least disruptive, most environmentally benign scenario for disposal of silts dredged from Boston Harbor. The Dredge Management and Monitoring Plan (Section 5) provides details on the techniques that are being proposed to control both the dredging and disposal phases of the project. The feasibility of bio-remediation has been examined, but it would be impracticable for this project, particularly in situ, as the commenter suggests. The proposed disposal plan would not eliminate barges but it would minimize their movements in the harbor. Clay is being provided to municipalities for closure of landfills. Any not used for this purpose would be disposed at the MBDS. The MBDS has been designated as dredged material disposal site for material suitable for unconfined open water disposal, like the parent material from Boston Harbor. No MOU's between agencies are needed. The EIR/S acts as vehicle for public comment. Information has been reviewed on several suction technology dredges such as the XETEX Corporations Eddy Pump. Specifications are expected to require contractors to meet certain production requirements. If these requirements can be meet with a suction technology then it will be considered. The Corps always requires appropriate safety standards for dredging and disposal operations.

P1-17

The 1988 Feasibility Report examined deeper channels but they were not economically justified at that time. A new study to examine all or a part of Boston Harbor would have to be requested by a local sponsor.

P2

PAUL P. CODINHA
70 FRIEND STREET
GLOUCESTER, MA. 01930
DAYS: (617) 274-4304 EVES: (508) 283-8886

5TH ESSEX STATE REPRESENTATIVE CANDIDATE

JUNE 16, 1994

Ms. Janeen Hanson, Project Mgr. for Dredging
% Massachusetts Port Authority
Atlantic Ave.
Boston, MA. 02101

Dear Ms. Hanson:

This letter is to publicly voice my opposition to the proposed dumping of about 1 million cubic yards of contaminated material from Boston Harbor (near one of the state's most productive lobster fishery areas). P2-1

After reading the article by David Olson in the June 9th issue of the Gloucester Daily Times, I think its time for the citizens of Essex, Gloucester, and Rockport to ban together in opposition to such detrimental measures which could potentially affect the future of our area's fishermen and their families, not to mention the health, economy, and environment of the Cape Ann community. We have been blessed with the beauty of the ocean, and its up to us to keep it clean for its marine life and preserve our resources for future generations.

There must be other alternatives that could be explored that would not have such a devastating effect on our community and its quality of life. I would appreciate setting a meeting for the Cape Ann citizens to express their concerns in my district since none was arranged in the past. I look forward to hearing from you .

Sincerely yours,

Paul P. Codinha

Paul P. Codinha
5th Essex State Representative
Candidate

JUN 2 0 1994

Paul P. Codinha
5th Essex State Representative
Candidate

CC: Mr. William Adler, Mass. Lobstermen's Assoc.
Mr. Tom Bruha, Corp of Engineers (CATHY)
Mr. Philip Coates, Dir. Mass. Marine Fisheries
Mr. Thomas Higgins, Mass. Dept. of Environmental Protection
Letter to the Editor, Gloucester Daily Times

P2-1

The revised alternatives analysis (Section 4.0) has concluded that the in-channel, partial-fill shoreline and upland sites are the least environmentally damaging alternatives for disposal of silt from the BHNIP. Any of these alternatives would minimize impacts to the lobster fishery.

P3

Dr. Paul F. Murray
P. O. Box 2107
Osterville, Ma. 02655
(508) 428 - 7807
Fax (508) 428 - 8404

Ms. Trudy Coxe, Secretary
Massachusetts Executive Office of Environmental Affairs
MEPA Unit
100 Cambridge Street
Boston, MA 02202

May 19, 1994

re: **Boston Harbor Dredging**

Dear Ms. Coxe:

I attended the public meeting on May 19, 1994 in Hyannis, MA, and spoke about the lack of sufficient background material for the public to make an informed decision or to ask relevant questions based on the executive summary of the draft environmental impact report/statement that was provided.

The Corps of Engineers representative provided me with a copy of the two volume environmental impact report that gives a great deal of information that was not covered in the brief presentations made at the public meeting.

The basic public policy issue appears to me to be "Where and how should the 1.3 million cubic yards of contaminated silt materials be disposed of to minimize environmental risks at a reasonable cost?"

Having an extensive background as an international developer of real estate projects and based on an analysis of the information provided in the reports furnished, I have come to the conclusion that **the contaminated materials should be disposed of in a trench in the little Mystic channel and the westerly portion of the Mystic River not being deepened to 40 feet.** P3-1

While this alternative is slightly more costly, there are advantages that make this the most environmentally sound alternative in my judgment. Some advantages of this alternative are:

1. Moving contaminated material out of the inner harbor runs the risk of spills and contamination of unintended areas containing marine life,

2. Ocean disposal in the outer harbor has the potential of creating future problems, if contaminated materials escape into the water and effect the marine life, and

3. The clean material, over excavated to make room for the contaminated material, may be put to good use in environmentally sound locations, such as clean fill to extend land areas, barriers for beach erosion, and possible commercial or other environmentally sound uses.

This placement of contaminated material should be at a depth to allow for future dredging to a depth of 40 feet to avoid conflicts with unknown future needs. Any material not accommodated on site in the inner harbor should be capped in a location not subject to excessive currents, most likely at Spectacle Island.

The suggestion of the Conservative Law Foundation of an independent observer with powers to stop work is an unnecessary, potentially costly, and dangerous precedence. P3-2

The future maintenance dredging of 4.4 million cubic yards of contaminated material over the next 50 years should be evaluated over time. Perhaps environmentally and economically sound alternatives will be available, such as: chemical treatment and other locations for disposal. P3-3

As a tax payer, I was disturbed to see that it takes six years of planning and considerable cost to get this necessary project underway. Let's hope you can finalize this environmental impact report soon and start construction. No solution will satisfy everyone who has an interest. Make your best judgment.

Sincerely,

Dr. Paul F. Murray

cc: Brink P. Miller
Colonel, Corps of Engineers
424 Trapelo Road
Waltham, MA 02254

P3-1

The BHNIP team concurs that in-channel disposal is an alternative that would minimize impacts to the environment, although we believe that using the areas already to be impacted by dredging is preferable to expanding into areas not proposed for dredging. The design for this alternative incorporates extra depth to protect the silts from future maintenance dredging. The parent material (primarily Boston blue clay) will be made available for closure of municipal landfills.

P3-2

Only the Corps of Engineers contracting officer or her representative can control the contractor's work. Independent observers can identify potential violations to the Corps inspector on-site.

P3-3

Future maintenance dredging will have to follow applicable environmental regulations at that time. The EIR/S attempts to predict an area that may be acceptable for future maintenance dredged material disposal.

LETTERS RECEIVED AFTER THE COMMENT PERIOD

PETER G. TORKILDSEN
6TH DISTRICT, MASSACHUSETTS

ARMED SERVICES COMMITTEE

SMALL BUSINESS COMMITTEE

MERCHANT MARINE AND FISHERIES COMMITTEE

Congress of the United States
House of Representatives

120 CANNON BUILDING
WASHINGTON, DC 20515
(202) 225-8020

70 WASHINGTON STREET
SALEM, MA 01970
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156 BROAD STREET, SUITE 106
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(617) 599-2424

160 MAIN STREET
HAVERHILL, MA 01830
(508) 521-0111

61 CENTER STREET
BURLINGTON, MA 01803
(617) 273-4400

August 17, 1994

The Honorable William F. Weld
Office of the Governor
State House
Boston, MA 02133

Dear ~~Governor Weld,~~ Bill,

I am writing at the request of Safe Waters in Massachusetts (SWIM) whose members I have been working with on an important environmental issue facing the Northshore.

As you may be aware, the U.S. Army Corps of Engineers is planning to perform maintenance dredging to deepen a navigation channel in Boston Harbor. The dredging project should be a positive step toward increasing commercial shipping into the harbor which will help boost the Massachusetts economy.

The issue that SWIM and many others are concerned with is the proposal to dump the dredged material off the coast of the Northshore at an ocean site known as "Meisberger 2." According to the information I have been provided, Meisberger 2 is a prime lobster habitat and especially an area where juvenile lobsters develop. SWIM has access to research performed by scientists from Northeastern University which illustrates that the dredge material has a toxic effect on lobsters. This information was presented to the Corps of Engineers at a public hearing on Thursday, July 28, in Nahant.

It is my understanding that the Corps of Engineers performed a "Biological Assessment" while studying the Meisberger 2 proposal which tested the effect of the ocean dumping on "threatened and endangered species." However, as the Massachusetts Lobstermen's Association pointed out, just because lobsters are neither threatened nor endangered, does not mean we should pursue a disposal alternative that would harm the existing and future lobster population.

I know you are aware of the incredible challenges currently facing the commercial fishing and lobster industries in Massachusetts. Now is certainly not the time for the state and federal governments to be imposing additional hardship on these industries. As a member of the House Merchant Marine and Fisheries Committee I am very concerned about the quality of marine life and the future of the fishing industry.

PRINTED ON RECYCLED PAPER

As with most federal projects of this scope, the Corps of Engineers cannot begin work without some form of consent from the proper state agencies. While I do not want to do anything to prevent or delay the dredging of Boston Harbor, I would like to make sure that members of SWIM and other concerned citizens have the opportunity to provide information to state officials with jurisdiction over this matter prior to any decision being made.

I would like to request that someone from your staff look into this matter further. If any agencies are planning public meetings or hearings on this issue I would appreciate being informed so that I can pass the information on to members of SWIM and others. If you have any questions regarding this issue please feel free to contact me.

Very truly yours,

PETER G. TORKILDSEN
Member of Congress

PGT/maa

cc: Mayor Patrick McManus, Lynn
Colonel Earle C. Richardson, Corps of Engineers
Nahant Board of Selectmen
Swampscott Board of Selectmen
Safe Waters in Massachusetts (SWIM)

MASSACHUSETTS HARBORMASTERS
HARBOR MASTER
ASSOCIATION
(North Shore)

CF: Pete Jackson
PAO

November 2, 1994

Ms. Trudy Coxe, Secretary
Massachusetts Executive Office
of Environmental Affairs
MEPA Unit
100 Cambridge Street
Boston, MA 02202

Subject: Boston Harbor, Massachusetts Navigation
Improvement and Berth Dredging Project

Dear Ms. Coxe:

At its meeting of November 1, 1994, the North Shore Harbormaster's Association reviewed circumstances surrounding the disposal of dredged material associated with the subject project at sea, particularly at a site called Meisburger Two. Following protracted and detailed discussion, the association voted unanimously to strenuously urge your own and other involved agencies not to dump Boston's contaminated dredging spoils in North Shore waters especially where the MWRA sewage outfall will soon be located. Indeed, we correspond to request that your agency and others make certain that this dredged material is not disposed off our shores.

We are particularly concerned about the potential effect on North Shore harbors and on the fishermen and lobstermen who operate their small businesses from those harbors. Dr. Joseph Ayers, Interim Director of the Northeastern University Marine Center, has outlined the devastating effect that dumping of polluted dredging spoils could have on the survival of young lobsters at Meisburger Two (the area known locally as Rosie's hole). Already

the fishing and lobstering industries are in trouble. If we intentionally damage and pollute the habitat where fish and lobster grow, the situation will only get worse.

No studies have been done of the combined effects of sewage and dredging spoils disposed of so close together and it therefore will be impossible to monitor pollution from either because each will blame the other for any violations. Now, the Massachusetts Water Resources Authority is talking of not completing secondary treatment and MWRA is also talking about placing an oil tanker terminal offshore, somewhere in the vicinity of the sewage outfall and the Meisburger Two site. This would constitute a "triple Whammy" which could deliver the final blow to our fragile coastal environment where many earn their living, where tourists pay to visit, and where we and our children live, play, and swim.

We urge you to work for the following goals:

1. That Meisburger Two be eliminated as a possible dumping site for dredging spoils.

2. That no contaminated materials of any kind be dumped anywhere at sea.

3. That before any plans to pollute go forward, scientific studies be accomplished to determine the combined effects of dredging, sewage disposal, and oil spills from tankers.

4. That genuine solutions be found reducing pollution at its source, treating waste materials properly, and ultimately developing alternative forms of energy to reduce dependence upon fossile fuels.

It does not make sense to clean a dirty place such as Boston Harbor by polluting a clean place such as Massachusetts Bay.

Very truly yours,
North Shore Harbormasters Association

Joseph Dunn
President

P.S. Harbormasters and Assistant Harbormasters of communities from Salisbury to Winthrop and all cities and towns in between comprise the membership of the North Shore Harbormasters Association.

cc: Brink P. Miller
Colonel, Corps. of Engineers
U.S. Army Corps. of Engineers
424 Trapelo Road
Waltham, MA 02254

National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930-2298

F. M. VALENTI, INCORPORATED & ASSOCIATES

ESTABLISHED IN 1967

Colonel Brink P. Miller
Division Engineer
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254-9149

September 15, 1994

Dear Colonel Miller,

I'm sure that you've seen the enclosed effort by the Nahant SWIM group. I am also certain you are aware of the plight that faces all ocean front communities, so I won't bore you with redundant pleas to do what is right. It is painfully obvious that one can not clean house by sweeping the dirt under the carpet nor can one take polluted material from the harbor and dump it into the bay. This course of action will pollute the bay and, because of its proximity, find its way back to all the shores and the harbor too.

Please do your best to ensure that the officials of the Commonwealth aren't accused of being so foolish as to spit in the wind or shovel silt against the tide.

If there are no landfills that can use the dredged materials, the least that could be done is to take the contaminants out a couple of hundred miles. This wider dispersion would do considerably less damage to the environment than that anticipated in the confined area closer to shore. Too often Massachusetts has taken the short term view, only to pay exponentially later on. If you take the right steps up front, you and we the voters won't suffer the consequences later on.

The citizens of this environment will be watching and your actions will be rewarded at the polls.

RECEIVED

Sincerely yours,

Fran

Fran Valenti

ps: The Japanese built an airport in Osaka Bay with landfill material. Boston's back bay was built on landfill. Surely there is some future endeavor that could benefit from this fill, polluted of not. Don't you politicians plan any further ahead than the next election? How about Logan Airport? Won't that facility need to expand in the future? Where does all of the "study money" go? Pork barrels me thinks!

1 SAUNDERS LEDGE • NAHANT, MA 01908-1692 • (617) 592-5300

-[illegible]-
SUSPENSE DATE-[illegible]

9/13/94

Dear Colonel Miller,

I am writing to you to express my concern about the proposed dumping of contaminated dredging spoils from Boston Harbor, Chelsea Creek and the Mystic River into "Meisburger 2" - locally known as "Rosie's Hole."

I am against the dumping of this material or any other contaminated material in any ocean and am especially concerned that no dumping will take place in Rosie's Hole or Meisburger 2!

Sincerely,
Nancy Wilson
106 Pond St
Nahant, MA 01908

RECEIVED
SEP 19 1994
REGULATORY DIVISION

Dear Colonel Miller,

I am writing to urge you to support efforts to find a different solution to the dumping of contaminated material (spoils of Boston Harbor, Chelsea Creek & Mystic River; and semi-treated sewage) into the ocean. There are less invasive alternatives.

RECEIVED SEP - 6 1994 ... DIVISION

Thank you.

Sincerely,

Betsi Lattimer

Betsi Lattimer

COASTAL ADVOCACY NETWORK

c/o Massachusetts Bays Program, 100 Cambridge Street, Room 2006,
Boston, MA 02202, *phone:* 1-800-447-BAYS, *fax:*(617) 727-2754

March 31, 1995

Brink P. Miller, Colonel
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254

Dear Colonel Miller,

We are writing because of a concern among our membership regarding the ongoing possibility of ocean disposal of contaminated sediments from the Boston Harbor Navigation Improvement Project into Massachusetts Bay. We know that our opinion about this was expressed to you thoroughly during the comment period for the Draft Environmental Impact Review process, and our early indications suggest that you were listening to what we had to say. We hope that proves to be the case when the Final statement is released.

However, we are concerned that there has not been enough thought given to the potential cumulative impact that may result, should ocean disposal of contaminated sediments occur, especially in light of the increased toxicant burdens placed on the Massachusetts Bay system by the extended MWRA outfall pipe (now scheduled to begin operation in 1997). We feel that if these two major potential ecosystem impacts start in such close proximity to each other, more thought and attention should be given to the combined effects of the two projects. Undoubtedly, this would take place through a study modelling all aspects of these projects, but with special attention to their effect on the biota of the system.

While we realize that such a study may be time-consuming, we feel it is vital to step cautiously before exposing this important area to additional risks. The waters of Massachusetts Bay are used by many commercially and recreationally important fish and shellfish, and by numerous endangered species. These resources are too valuable to treat lightly, both for their inherent worthiness and their commercial importance to the region.

We also want to take this opportunity to thank the Army Corps for the openness with which this project has proceeded to this point. We appreciate being invited to participate in the working groups, and look forward to continuing to work with the Army Corps as this project moves to fruition.

Sincerely,

Mason Weinrich

Mason Weinrich, Chair

Coastal Advocacy Network:
Susan Nickerson, Assoc. for the Preservation of Cape Cod
Mason Weinrich, Cetacean Research Unit

The views of the Coastal Advocacy Network do not necessarily represent those of the Massachusetts Bays Program.

Bob Loring, Clean Water Action
Peter Shelley, Conservation Law Foundation
Robert Buchsbaum, Mass. Audubon Society
Paul Burns, MassPIRG
Roger Stern, Massachusetts Bay Marine Studies Consortium
Jonathan Kaledin, National Water Education/Funding Council
Polly Bradley, Safer Waters In Massachusetts
Jodi Sugerman, Save the Harbor/Save the Bay
Mary Loebig, Stop The Outfall Pipe

cc: Secretary Trudy Coxe, EOEA
Doug MacDonald, MWRA Executive Director
Ralph Cox, MassPort, Maritime Director
Diane Gould, MBP Executive Director