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June 13, 2008

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT/
DRAFT ENVIRONMENTAL IMPACT REPORT

PROJECT NAME	: Boston Harbor Deep Draft Navigation Improvement Project (BHDDNIP)
PROJECT MUNICIPALITY	: Boston, Chelsea and Revere
PROJECT WATERSHED	: Boston Harbor
EOEA NUMBER	: 12958
PROJECT PROPONENT	: Massport
DATE NOTICED IN MONITOR	: **April 23, 2008**

Pursuant to the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62H) and Section 11.08 of the MEPA regulations (301 CMR 11.00), I hereby determine that the Draft Supplemental Environmental Impact Statement(SEIS)/Draft Environmental Impact Report (EIR) submitted on this project **adequately and properly complies** with MEPA and its implementing regulations. The proponent may prepare and submit the Final EIR for review.

The Boston Harbor Deep Draft Navigation Improvement Project (BHDDNIP) proposes navigation channel improvements within Boston Harbor to increase the commercial viability of this working port. The Port of Boston is the largest port in New England for bulk and container cargoes and an important economic engine within the local and regional economy. The Massachusetts Port Authority (Massport) indicates that the Port handles approximately 22 million tons of cargo worth approximately $2.4 billion annually to the regional economy. Its growth is limited due to existing channel depths. This $307 million dollar project will increase the ability of the port to attract larger, deeper draft vessels and thus ensure its continued use by the shipping industry. Comments from resource agencies reflect support for the selection of the

Preferred Alternative while emphasizing the significant amount of work required in the Final EIR to ensure that improvements are planned and implemented with adequate consideration and protection of other interests in the harbor, including fisheries and recreation.

As with the Boston Harbor Navigation Improvement and Berth Dredging Project (BHNIP) (#8695), the ACOE has formed a Technical Working Group (TWG) consisting of resource agencies, environmental advocates, scientists and others, to help advise the proponent through the design, permitting and construction phases of the project. The TWG will develop conditions for the Water Quality Certificate, evaluate disposal alternatives and modify construction and monitoring techniques as necessary to ensure adequate environmental protection.

Project Description

Massport is the local sponsor for this project that will be conducted by the US Army Corps of Engineers (ACOE). The purpose of the project is to meet shipping industry needs by providing access for deeper draft bulk and container vessels to enter the harbor without experiencing tidal delays. The primary goal of the project is to provide deeper access to the Massport Conley Container Terminal; however, additional port improvements in the Main Ship Channel, the Mystic River and Chelsea River are also under consideration. Based on the draft feasibility study included with the Draft SEIS/EIR, the Preferred Alternative includes the following elements:

- deepen the Broad Sound North Entrance Channel to -50 feet mean lower low water (MLLW);
- deepen the President Roads Anchorage and Main Ship Channel to -48 feet MLLW;
- deepen the Main Channel 2,600 feet above the Turning Basin to the Massport Marine Terminal to -45 feet MLLW;
- widen the Main Ship Channel to 900 feet between President Roads Anchorage and Castle Island;
- widen the Main Ship Channel to 800 feet above Castle Island to the Reserved Channel;
- widen the channel bends at Spectacle Island and Castle Island to 1,050 feet;
- widen the Reserved Channel Turning Area to a minimum of 1,500 feet;
- deepen the Mystic River Channel to the Medford Street Terminal to -40 feet MLLW;
- deepen the Chelsea River Channel and Turning Basin to -40 feet MLLW;[1]
- widen the Chelsea River Channel at the bridge approaches, the bend between the two bridges and the area through the Chelsea Street bridge opening;
- deepen the two existing deep berths at Conley Terminal to -42 MLLW to -45 MLLW to allow vessels to employ tidal assistance to enter the Terminal; and
- deepen the Massport Marine Terminal to -45 feet MLLW.

[1] Deepening project depends upon replacement of the Chelsea Street Bridge and removal and relocation of the Keyspan gas siphon.

In addition, channel and anchorage areas not maintained in the past dredging projects may be dredged during the improvement dredging to provide alternative routes for shallow-draft traffic. Areas under consideration include the Broad Sound South Entrance Channel, the 35-foot northern lane of the Broad Sound North Entrance Channel, the Nubble Channel, and the 35-foot West Anchorage at Presidents Road. Approximately 264,000 cubic yards (cy) of maintenance material would be dredged and disposed.

The project will alter approximately 22 acres of previously undisturbed Land Under the Ocean and it could convert approximately 1,100 to 1,300 acres of soft-bottom to hard substrate. The project will take two years to design and from three to five years to complete, with construction estimated to begin in 2011. The ACOE will conduct most of the actual dredging and related mitigation while Massport may implement discrete elements of it. Channel deepening associated with the Preferred Alternative will require blasting and use of a mechanical bucket dredge. It will require removal and disposal of approximately 1,032,000 cy of rock and 11.7 million cy of dredged spoils.[2] Dredged material will consist of glacial parent material and rock ledge that is suitable for disposal at the Massachusetts Bay Disposal Site (MBDS). The glacial materials are composed primarily of Boston blue clay and mixed tills with compacted sands, gravel and cobble. Any silty material not suitable for disposal at the MBDS site will be disposed of in one of the previously permitted Confined Aquatic Disposal (CAD) Cells developed as part of the Boston Harbor Navigation Improvement Project (BHNIP). Although the material may be disposed at the MBDS, the proponent has analyzed and proposed beneficial uses. ACOE proposes to create an extensive artificial reef with the rock material and to cap the EPA Industrial Waste Site (IWS), located adjacent to the MBDS, with the parent material.

Permits and Jurisdiction

The project is undergoing MEPA review and requires the preparation of an EIR pursuant to Section 11.03 (a)(1)(a) because it requires a state permit and will alter more than ten acres of wetlands. The project requires a 401 Water Quality Certification from the Department of Environmental Protection (DEP) and it may require an 8(m) permit from the Massachusetts Water Resources Authority (MWRA). It requires an Order of Conditions from the Boston, Chelsea and Revere Conservation Commissions. Also, it will require Federal Consistency Review by Coastal Zone Management (CZM).

The project requires review under the National Environmental Policy Act (NEPA). The proponent requested that the MEPA/NEPA review processes be coordinated. Accordingly, the proponent submitted a joint Draft SEIS/EIR review document and coordinated the comment period. Although the Draft SEIS/EIR addresses both the federal and state scopes, I am issuing a determination of adequacy only for those portions of the document required in the state scope.

[2] This estimate is based on Table 2-2. This estimate assumes a 2-foot overdepth allowance and a 1:3 side slope for ordinary material. It assumes an additional two feet where ledge is encountered and a 1:1 side slope for rock removal.

Because the proponent is a state agency and, under a cost sharing agreement, is responsible for providing a significant percentage of the project costs, MEPA jurisdiction extends to all aspects of the project that may cause significant Damage to the Environment including air quality, water quality, threatened and endangered species, marine habitat, fisheries and historic and archaeological resources.

Review of the Draft EIR

The Draft SEIS/EIR provides a thorough description of the project and all project elements. It provides a description of existing environmental conditions and resources, includes an alternatives analysis, identifies associated environmental impacts and identifies measures to avoid, minimize and mitigate project impacts.

Review of the BHNIP, the Inner Harbor Maintenance Dredging Project (IHMDP) and the Outer Harbor Maintenance Dredging Project (OHMDP)

As required, the Draft SEIS/EIR includes a section on the previous improvement dredging and maintenance dredging projects. The BHNIP included the maintenance and improvement dredging of the main shipping channels and berths within Boston's Inner Harbor. Over 784,850 cubic yards of dredged material deemed unsuitable for open-water disposal was placed within nine Confined Aquatic Disposal (CAD) cells constructed within the dredging footprint of navigation channels. The planning and permitting process for the BHNIP addressed a number of issues that are directly relevant to the design and implementation of this project. The BHNIP, which was completed in late 2002, provided a framework for creating an environmentally acceptable dredging and disposal plan. It furthered understanding of dredging operations and techniques, provided information about baseline conditions within Boston Harbor, and resulted in the development of guidelines for permitting and constructing CAD cells for disposal of contaminated materials. The recommendations included in the EIR, including water quality monitoring methodology, are informed by the experience developed during the BHNIP.

Although the BHNIP, the Inner Harbor Maintenance Project (IHMDP) and the Outer Harbor Maintenance Project (OHMDP) project provide useful framework for decision-making and baseline environmental information, this project differs from previous projects in two significant respects – the scale of the project and the type of material to be dredged. The improvement and maintenance dredging consisted primarily of dredging significant amounts of contaminated silty material for disposal at the MBDS or within CAD cells. These projects required only a relatively small amount of rock removal, the majority of which could be removed with an excavator, compared to this project. The amount of parent material to be dredged for the BHDDNIP is approximately 3 to 6 times greater than the BHNIP. The Draft SEIS/EIR identifies four fish kill events associated with 13 blasting events during the maintenance project. In light of these events, the amount of rock removal and the blasting associated with its removal is a significant concern.

Alternatives Analysis

The Draft SEIS/EIR includes a draft feasibility study and an alternatives analysis that addresses the Port of Boston's current and future role in maritime commerce and identifies potential levels of future vessel traffic and commerce. The analyses explore options for accommodating increased deep draft vessel traffic in Boston Harbor, including No Action, Non-Structural Alternatives, and Structural Alternatives/Navigational Channel Depths and it includes a cost-benefit analysis for the range of alternatives. In addition, it analyzes alternative dredging methods, dredged material disposal alternatives and beneficial use alternatives for dredged material.

Non-Structural Alternatives include measures that allow for greater unit-loading of vessels without deepening (e.g. use of tides, light-loading of vessels, and lightering), alternative sites for cargo transfer and alternative means of cargo transport. The analysis concludes that management measures are already being employed to the extent feasible and are not sufficient to support deeper draft vessels expected to be employed by the shipping industry. It indicates that there are no other ports within New England with sufficient facilities and depths to provide a viable alternative to Boston Harbor. The analysis indicates that alternative means of cargo transport consist of truck transportation of containers which increase the cost of shipping and add traffic to existing highways with associated increases in emissions of air pollutants.

Structural Alternatives examine channel deepening at a range of depths including deepening the Entrance Channel, Main Anchorage and Main Ship Channel from – 40 feet MLLW up to – 50 feet MLLW, the Mystic River Channel from –35 feet MLLW up to – 40 feet MLLW and the Chelsea River Channel from – 38 MLLW up to – 40 feet MLLW. Improvements were examined in one-foot increments. Three segments in the Main Ship Channel were selected for presentation of costs and impacts (Plan A – 45 foot, Plan B – 48 feet and Plan C – 50 feet). Improvements to support bulk cargo terminals and petroleum terminals were also examined and include: Plan D – extend Main Ship Channel above Reserved Channel to the Massport Marine Terminal to a depth of -45 feet MLLW; Plan E – deepen a small area of the Mystic River Channel up to – 40 feet MLLW to access the Massport Medford Street Terminal in Charlestown to divert smaller bulk cargo operations from the Marine Terminal; and Plan F-deepening the entire Chelsea River Channel to -40 feet to benefit the four active petroleum terminals along this waterway.

The Draft SEIS/EIR estimates dredge quantities associated with each alternative which will range from 6.4 to 15.0 million cy of parent material and 450,000 to 1.5 million cy of rock.[3] The Preferred Alternative, which is described in the introduction to this Certificate, is based on providing the highest net economic benefits while meeting the objectives of the ACOE and Massport. The Draft SEIS/EIR indicates that the Preferred Alternative will evolve based on Congressional authorizations, updated shipping trends and economic information and completion of related projects (e.g Chelsea River project is dependent upon replacement of the Chelsea Street Bridge and removal of the Keyspan gas siphon).

[3] This estimate is also based on Table 2-2.

The Draft SEIS/EIR indicates that use of a mechanical dredge is the only feasible dredging method for rock, tills, stiff clays and other glacial deposits. In addition, because low levels of turbidity are associated with dredging of hard pack Boston blue clay, the proponent asserts that water quality standards will be maintained. The Draft SEIS/EIR identified disposal alternatives evaluated during the BHNIP and indicates that MBDS was the only practical alternative for non-contaminated material and CAD cells for disposal of contaminated material. Consistent with the policy of the ACOE to use dredged material, where practicable, for beneficial use, the Draft SEIS/EIR, evaluates several alternatives to disposal at the MBDS including: use of parent material for lining landfills or capping of the EPA IWS and use of rock for creation of an artificial reef, shore protection or construction. The Draft SEIS/EIR asserts that costs and logistical challenges render use of material for lining landfills, shore protection and/or construction purposes infeasible.

The alternatives analysis is adequate for MEPA purposes. Comment letters from state agencies support the Preferred Alternative, acknowledge that the Preferred Alternative may be revised, and agree that the majority of material will be suitable for disposal at the MBDS. Although material is suitable for disposal in the MBDS, most commentors agree that evaluation of beneficial reuse alternatives for rock was not thorough and should be re-assessed prior to the filing of the Final EIR. I understand that CZM is developing an alternative for reuse of rock material by a materials handling company that would provide a beneficial reuse while minimizing project costs associated with transport and disposal of dredged material. In addition, the Final EIR should address whether any of the material would be appropriate for beach nourishment at Winthrop Beach. Although general support is expressed for habitat restoration through creation of an artificial reef, significant concern is expressed with the siting and scale of the proposed reef. If the artificial reef is intended to serve as a major mitigation commitment, the proponent will need to consult closely with state and federal agencies and, in particular, DMF and NMFS, to identify a site and develop a design that meet the project objectives.

Environmental Conditions and Impacts – Marine Resources

The Draft SEIS/EIR includes a section on existing environmental conditions and environmental impacts of dredging and dredged material disposal including water quality issues, biological resources, threatened and endangered species, and historic and archaeological resources. Information on benthic resources was compiled from data collected by ACOE, MWRA and Massport. Information on lobsters, fisheries and marine mammals is based on data collected by DMF, MWRA and from previous dredging projects. The document addresses resources and impacts related to the dredging sites, the MBDS/IWS and the artificial reef sites. In addition, it addresses the secondary impacts of the deepening project including increased ship traffic and an increase in the size of ships entering the harbor. Although the Draft SEIS/EIR generally characterizes impacts as insignificant and/or temporary in nature, it indicates that the dredging project will alter approximately 22 acres of previously undisturbed bottom and may convert more than 1,100 acres of soft-bottom to hard substrate. In addition, the project will follow over ten years of maintenance and improvement dredging in the harbor that were conducted from 1998 – 2002 (BHNIP), 2004 – 2005 (OHMDP) and the current IHMDP that will extend from 2008 to 2009. The Draft EIS/EIR indicates that, cumulatively, these dredging

projects will result in temporary and permanent impacts to approximately 3,600 acres (although portions of the projects overlap).

The proponent indicates that it will use dredging protocols developed during the BHNIP to minimize turbidity and migration of dredged sediments during dredging and disposal. Measures used during blasting to minimize impacts to fisheries included an independent fisheries observer, side scan sonar fish finder and fish startle system. The Draft SEIS/EIR identifies four fish kill events associated with 13 blasting events as part of the maintenance project (ledge pinnacle removal) that occurred despite implementation of protective measures. The Draft SEIS/EIR does not provide the "After Action Report" referenced in the ENF or identify revisions to protocols or additional mitigation necessary to avoid and minimize these impacts. Although blasting presents the most significant source of risk for impacts to marine resources, the Draft SEIS/EIR does not include an analysis of the location, timing and methods of proposed blasting and anticipated impacts on marine resources. It does indicate that the project will be sequenced to minimize impacts to fisheries but it does provide a schedule that supports this or indicate what factors will be considered for sequencing. Appendix D of the Draft SEIS/EIR provides a schedule (Table D2-30) that projects blasting for a 15-month period from May of 2011 to August 2012 within the Broad Sound North Entrance Channel. Additional blasting would occur in the Chelsea River in May, 2011, in the Presidents Road Anchorage from August to September of 2012, in the Lower Reserved Channel and Turning Basin from April to August of 2013, in the Main Ship Channel Roads to Reserved Channel from August to October 2013, and in the Main Ship Channel Extension to the Massport Marine Terminal from November to December, 2013. Further, the Draft SEIS/EIR indicates that, development of more detailed data, including more extensive borings to characterize the type and quantities of rock to be removed, will not be conducted until the final design phase.

To assist the permitting agencies in their evaluation of the potential impacts of this project within the context of a growing and active harbor, the Draft SEIS/EIR includes a qualitative cumulative impacts analysis that identifies completed, ongoing and planned projects within Boston Harbor and Massachusetts Bay, including the Hubline Submarine Natural Gas Pipeline project and Everett Extension (EEA #12355) and the use of an offshore borrow site (NOMES I) by the Department of Conservation and Recreation (DCR) as a sand source for the Winthrop Shores Reservation and Restoration Program (EEA #10113). It includes a summary of the project impacts, individually and cumulatively, including the size of the impacted area, the resources impacted by the projects, and the duration of the impacts. In addition, it includes a timeline that shows when the projects are planned to occur in relation to the dredging project. This analysis underscores the amount of activity ongoing and planned within Boston Harbor with the potential to impact up to 18% of Boston Harbor. This analysis demonstrates that the BHDDNIP, HubLine and the the Winthrop Shores Reservation Restoration Program are associated with the vast majority of potential impacts (temporary and permanent).

Comment letters express significant concern with three issues – the timely development of additional data to adequately characterize sediment types and affected resources, development of mitigation to adequately avoid, minimize and mitigate impacts to fisheries, in particular from blasting impacts, and additional consideration of beneficial reuse opportunities. EPA comments indicate that the duration and magnitude of blasting described in the Draft SEIS/EIR is of a scope

that has the potential for serious and significant impacts to fish and marine mammals and is the most significant source of risk for impacts to marine resources associated with the project. Comments from DMF and NMFS stress the importance of this ecosystem to fisheries and indicate the grave status of some species within Boston Harbor. DMF identifies the importance of the project site to several species of shellfish and finfish, including lobster (*Homarus americanus*), soft shell clam (*Mya arenaria*), mussels and winter flounder (*Pseudopleuronectes americanus*). In addition, several diadromous species utilize the area including rainbow smelt (*Osmerus mordax*), Atlantic tomcod (*Microgadus tomcod*), white perch (*Morone Americana*), and river herring (*Alosa spp.*). Comments from NMFS also highlight the presence of alewife (*Alosa pseuodoharengus*) and blueback herring (*Alosa aestivalis*). Boston Harbor is classified as Essential Fish Habitat (EFH) for 23 federally managed species including winter flounder and Atlantic cod. DMF has banned fishing for river herring due to population concerns and rainbow smelt is listed as a "species of concern" by NMFS. Commentors indicate that the Final EIS/EIR should include a sequencing plan, blasting plan and pre- and post-monitoring plan to ensure adequate provisions are made to avoid, minimize and mitigate project impacts.

Environmental Impacts – Air Quality

The Draft SEIS/EIR includes an air quality analysis and discusses alternatives for establishing consistency with the federal Clean Air Act (CAA) General Conformity provisions (section 176(c)(1)). MassDEP's role in a general conformity determination under federal regulation is to review and provide comments on conformity determinations. Federal actions must support the goals of the Massachusetts State Implementation Plan (SIP) and be shown not to:

- Cause or contribute to new violations of any national ambient air quality standard (NAAQS) in any area;
- Increase the frequency or severity of any existing violation of any NAAQS or interim emission reductions;
- Delay timely attainment of any NAAQs or interim emission reductions.

The Draft SEIS/EIR includes an air quality analysis for the No Build, Plan A and Plan C. The analysis indicates that emissions associated with both alternatives would exceed the general conformity deminimis thresholds.

The proponent has identifies two approaches to address general conformity. It can structure the project to ensure its emissions are below identified thresholds or it can offset the total emissions of the projects through emission reductions projects or through the purchase of emission reduction credits. The Draft SEIS/EIR indicates that, without a work stoppage, the project will likely be subject to the General Conformity provisions of the CAA. The EIR indicates that sufficient emission reductions credits are available to offset project emissions and that the costs of this alternative are equivalent to those associated with the cost of one mobilization and demobilization of the project.

The EIR identifies two options (Alternatives 1 and 2) to reduce emissions below the general conformity review thresholds. Both alternatives propose the replacement of older, higher emitting equipment with newer and cleaner burning equipment in 2011 and beyond and extend the dredging schedule to reduce annual emissions associated with the project. Alternative 1 would increase the dredging schedule by 6 months and Alternative 2 would increase the dredging project by four years. Extension of the dredging schedule through work stoppages will not reduce actual emissions associated with the project. The use of cleaner burning equipment will provide a relatively small decrease in overall emissions. Nitrogen Oxide (NO_x) emissions associated with these alternatives would remain close to the deminimis level under the general conformity requirements.

Comments from MassDEP indicate that the proponent should explore additional mitigation strategies, including the use of emission reduction credits to offset emissions. MassDEP comments also express support of the use of lower emitting nonroad engines for the project and identify the need to verify how this strategy will be implemented and enforced. In addition, MassDEP notes that if the proponent chooses to delay the project schedule, it should consider targeting dredging operations in the pre-or post-ozone season.

Comments from EPA express concern with the approach to general conformity and, in particular, with the potential impacts to marine resources associated with an extended schedule which would increase the duration of impacts and therefore the recovery period. EPA indicates that the proponent should further consider the use of emission credits and/or offsets and that the approach to general conformity be fully vetted for public review as part of the environmental review document rather than addressed during the final design process. They note that a general conformity analysis requires a public review process and issuance of a final conformity determination prior to the issuance of the Record of Decision (ROD) and, therefore, draft conformity findings should be reviewed prior to the close of the NEPA process.

Impacts to Historic and Archaeological Resources

The Draft SEIS/EIR identifies potential impacts to historic and archaeological resources. It indicates that, based on remote sensing surveys and vibracore investigations, significant cultural resources are unlikely to be encountered in the Main Ship Channel, the extension of the Main Ship Channel above the Turning Basin and in the Mystic River. It indicates that borings and remote sensing surveys should be conducted for the widening of the Chelsea River Channel to assess the presence of cultural resources. The Draft EIS/EIR indicates that the proponent will continue its consultations with the Massachusetts Historical Commission (MHC) and the Massachusetts Board of Underwater Archaeological Resources (BUAR).

Conclusion

Review of the Draft SEIS/EIR, review of comment letters and consultation with state agencies indicate support for the proposed project. Although additional review of alternatives is not warranted, there are significant outstanding issues that must be resolved regarding development of measures to avoid, minimize and mitigate project impacts. These outstanding issues can be addressed in the Final EIR and the proponent may prepare and submit the Final

EIR for review. I expect that the proponent will fully address the issues identified in the Scope below. In particular, I note that failure to adequately characterize resources could lead to requirement of more conservative mitigation measures in state permits.

In the event that the Final EIS does not fully address issues, the comment letter from EPA has noted that a supplemental NEPA process may be necessary to provide to agencies and the public supplemental information during the design phase of the project. I note that the MEPA regulations allow the filing of a Notice of Project Change (NPC) subsequent to the review of the Final EIR that can be used to provide public review of significant changes to the project and/or development of additional information/analysis.

SCOPE

The Final EIR should follow Section 11.07 of the MEPA regulations for outline and content, as modified by this scope. It should include a copy of this Certificate and of each comment received.

Marine Resources

Regulatory Consistency

The Water Quality Certificate, issued by MassDEP, will be the vehicle for establishing enforceable mitigation commitments. Adequate resource characterization and development of mitigation commitments will be necessary for CZM to issue a federal consistency statement. The Final EIR should provide additional information on 401 Water Quality Certification standards and criteria and demonstrate how the project is being designed to ensure consistency with these requirements. MassDEP, as the permitting agency, will incorporate requirements for fisheries protection into the Water Quality Certificate based on consultation with DMF. As noted previously, provision of adequate resource characterization and mitigation developed in response to these findings will balance the need for more conservative mitigation approaches such as strict dredging windows. Best management practices will need to be developed based on available technology.

The ACOE has committed to convening an interagency underwater blasting technical working group with federal and state resource agencies to focus on construction sequencing for several areas of the harbor, constraints on work during certain tidal and weather conditions, operational changes and equipment changes. As noted previously, the Final EIR must provide more information on sequencing including the location, timing and methods of proposed blasting and anticipated impacts on marine resources. The Final EIR should further illustrate how much hard bottom is impacted, how much will be converted to other habitat and how much may be created within the project site. In addition, a pre- and post-monitoring plan must be developed for the project as a whole, including the artificial reef if that remains as a project component.

The Final EIR should identify total impacts (permanent and temporary) to Land Under the Ocean. It should include a timeline and plans that clearly illustrate where and when the BHNIP, IHMDP, OHMDP and the BHDDNIP overlap. It should provide a plan that clearly delineates areas that BHDDNIP will alter that have not been disturbed by the BHNIP, IHMDP and OHMDP. The Final EIR should include maps that clearly delineate resource areas including eelgrass beds and shellfish habitat. In addition, the Final EIR should assess noise impacts associated with the blasting, in particular, for blasting associated with the Mystic River and Chelsea River.

Monitoring Program

Resource agencies identify the need for an environmental monitoring plan to assess the recovery period of impacted areas. The monitoring plan should be included in the Final EIR. Its scope and duration should be developed in consultation with the working group. It should include pre- and post-monitoring, real-time information on the impacts of blasting and reporting protocols. The Final EIR should identify the extent of suspended sediment dispersion resulting from dredge operations and indicate how the plume is modeled and verified.

Resource Characterization

Comments from CZM and DMF indicate that additional information on shellfish, fish, benthic infauna and epifauna, and other species of decapod crustaceans is necessary to adequately evaluate baseline conditions and recovery. The lack of site specific data for the blast area is of particular concern due to potential impacts to relatively stable exposed bedrock seafloor habitat. A minimum of one year of fisheries data should be collected to support the development of a sequencing plan. The total amount of conversion of soft-bottom habitat to hard substrate should be identified and conversion should be identified on project plans.

In addition, CZM notes that the Draft SEIS/EIR identifies the presence of scallops in the outer and lower harbor, with areas of coarser-grain material and encourages the development of additional resource characterization and monitoring to further characterize these resources. DMF notes particular concern with softshell clam habitat that will be impacted by dredging in the Chelsea River, including permanent loss through habitat conversion. The Final EIR should include a clear delineation of the shellfish habitat potentially impacted by dredging and assess the functional loss to other species. The Final EIR should identify measures to avoid, minimize and mitigate impacts to these resources. In addition, the Final EIR should identify any elements of the project that are located within the Cod Conservation Zone.

The proponent should consult with MassDEP, as the permitting agency, DMF and CZM regarding further characterization of resources prior to the filing of the Final EIR.

Sequencing Plan

The sequencing plan should include a plan for sequencing the most disruptive and potentially damaging aspects of the project (e.g. blasting) to avoid sensitive locations during

critical times of year. Additional resource characterization, including a minimum of one year of biological surveys to assess fisheries resources and use of habitat, should be completed to support a rational sequencing plan. It should identify the volumes of material that will be dredged in what time periods and it should consider timing of disposal (i.e. dredge contaminated in early phases so that it can be capped with clean material dredged in subsequent phases). The Proponent should consult with DEP, as the permitting agency, and DMF to determine what additional data is necessary to support the sequencing plan and the monitoring plan. As noted previously, the proponent may choose to more fully characterize the resources affected by the project or may be subject to a more conservative management approach including time-of-year restrictions.

The proponent should establish plans for communication with the fishing and lobstering communities regarding construction activities and timing to avoid impacts and conflicts.

Blasting Plan

The blasting plan should be included in Final EIR to understand impacts and potential recovery of the area and plan for modifications that may be necessary as the project proceeds. ACOE has indicated it will provide an "After Action Report" to provide information and determine what lessons can be learned from 2007 fish kills. This report must be included in the Final EIR and will inform development of the blasting plan. The blasting plan should consider avoidance measures such as shifting of channel limits and, where feasible, removal of rock with a large toothed bucket mounted on an excavator. It should consider additional technological approaches, sequencing and time of year restrictions. Technological approaches could include use of additional acoustic fish exclusion devices and consideration of bubble curtains. The proponent should commit to provide an independent third party observer that will consult with the TWG and ensure procedures are followed or modified on a real-time basis.

Threatened and Endangered Species, Marine Mammals

Comments from NMFS indicate that its previous determination that the project is likely to have no adverse affect on marine mammals was based on removal of two to six cy of material and did not identify the need for blasting for rock removal. NMFS comments indicate the need to reinitiate consultation and provide additional information regarding the potential impacts of blasting on marine mammals.

EPA has indicated that ACOE should evaluate the potential for impacts of blasting on the recently installed buoy listening and monitoring system. This system was designed to reduce the likelihood of ships colliding with whales by providing close to real time information regarding the presence of whales in the shipping channel.

Disposal and Reuse of Dredged Materials

The Draft EIS/EIR proposes to use dredged materials to cap the EPA IWS and to create an artificial reef. The Draft EIS/EIR indicates that five sites were evaluated for creation of an

artificial reef based on ACOE siting criteria. These were narrowed to two sites - one site in Massachusetts Bay and one site in Broad Sound. The Draft EIS/EIR indicates that, dependent upon the final alternative selected and the reef design, the project would alter 220 to 530 acres of soft bottom habitat.

As noted previously, comment letters indicate the need to re-assess beneficial uses for the rock material. Comments urge the proponent to reconsider upland disposal options as a first priority and creation of the proposed reef as a secondary consideration. The proponent should consult with CZM regarding an upland disposal alternative that is being developed by its staff and address its viability in the Final EIS/EIR.

Comment letters indicate that, based on the information provided in the Draft EIS/EIR, both sites support a diverse and abundant benthic community, include substantial hard bottom habitat and are productive for managed species such as winter flounder and red hake. Comments from DMF indicate that the proponent should use the DMF Artificial Reef Policy for developing site selection and monitoring and consider application of the site selection model used by DMF for creation of the Hub Line cobble reef. If the proponent wants to include an artificial reef alternative in the Final EIR, it should continue consultation with the TWG to develop alternatives that may better meet the identified goal of providing fish habitat. The Final EIR should define more precisely the potential for impacts associated with the project, assess the loss of soft bottom habitat and related impacts and include a monitoring program to document colonization rates and other indicators of habitat creation.

EPA and CZM support use of parent material to cap the IWS in Massachusetts Bay. EPA comments indicate that the capping of the site is an opportunity to further reduce the remaining risk associated with waste barrels that may still exist at the site. The results of the preliminary capping demonstration, which will be conducted as part of the OHMDP, should be reviewed by the TWG and included in the Final EIR.

The Final EIR should address whether any of the material that will be dredged is appropriate for placement on Winthrop Beach for its beach nourishment program (EEA #10113). The proponent should assess the compatibility of material with Winthrop Beach using the additional geotechnical investigations that will be conducted for the BHDDNIP. The proponent should consult with the DCR and the Town of Winthrop regarding this assessment.

Technical Working Group (TWG)

The EIR clearly states the proponent's commitment to ongoing participation in the project by the TWG. I expect the TWG will participate in the development of the Final EIR, as well as final design, to further develop monitoring and mitigation requirements. Close cooperation between the proponent and state and federal agencies during the design phase of the project must be built in to ensure that final plan meets goals of the proponent while avoiding, minimizing and mitigating project impacts. During dredging operations, the TWG should be convened on a regular basis to assess the success of control measures and review project progress.

CZM has suggested the creation of a technical advisory sub-committee, facilitated by an independent, third-party contractor, to manage unforeseen developments as they arise during the construction phase of the project. The contractor would coordinate with the independent fisheries observer during dredging operations to provide a rapid, coordinated response from agency and community representatives. The Final EIR should indicate whether the proponent will incorporate this measure into its management plan.

Air Quality

I urge the proponent to provide a revised approach to conformity within the Final EIR and to consult with and EPA and MassDEP regarding this approach. As noted previously, comment letters, including letters from MassDEP and EPA, indicate that the proponent should explore additional mitigation strategies, including the use of emission reduction credits to offset project related emissions. The Final EIR should identify how use of lower emitting nonroad engines and extension of the dredging schedule will implemented and enforced and should consider targeting dredging operations in the pre-or post-ozone season. In addition, the Final EIR should identify impacts to marine resources associated with an extended schedule. Consistent with EPA's comment that draft conformity findings should be reviewed prior to the close of the NEPA process and issuance of the Record of Decision (ROD), the Final EIR should provide additional information regarding measures for establishing consistency with general conformity and include a general conformity finding. Consistent with comment letters, I urge the proponent to commit to the purchase of emission reduction credits.

Historic and Archaeological Resources

Comments from MHC indicate that it anticipates continued consultation with ACOE regarding the methodology and results of its cultural resource surveys. Comments from BUAR indicate that it has consulted with ACOE regarding mitigation for previous dredging projects and has been satisfied with findings and recommendations of archaeological surveys conducted to date. BUAR concurs with the recommendation that a remote sensing archaeological survey should be conducted for the areas of potential affect in the Mystic River and Chelsea River channels.

Harbor Infrastructure

The EIR identifies potential conflicts with existing harbor infrastructure including tunnels and utility crossings. It identifies a potential conflict with the 115 Kv Submarine Power Cable that extends from the Reserved Channel to Deer Island and is the primary source of power to the Deer Island Treatment plant. The cable construction, operation and maintenance and associated substations is borne entirely by the MWRA and its ratepayers. The proposed limit of the project may deepen the Reserved Channel at or deeper than the current location of this cable. NSTAR documents indicate that the cable was installed at approximately -50 feet MLLW with variations higher and lower along its course. The permit for the cable required it to be buried at -60 feet MLLW to avoid conflicts with deepening projects. The Draft SEIS/EIR indicates that the

ACOE, which issued a Section 10 permit for the cable, has referred the matter to the U.S. Attorneys' office as an enforcement action. The U.S. Attorney's office is negotiating with MWRA and NSTAR to address the conflict with the BHDDNIP.

MWRA comments express significant concern with the impacts of blasting and dredging on this cable and identify the need for additional survey work to determine the precise location and depth of the cable.

The Final EIR should provide an update on negotiations, indicate who will be responsible for identifying actual locations and depths of existing infrastructure that could be directly affected by the project's construction, who is responsible for related costs, and asses the feasibility and cost of relocating the cable.

MWRA comments also note that work within the Chelsea River must be carefully coordinated with the MWRA to avoid impacts to its 36" water main and three wastewater crossings. In addition, the comments note that this element may require a 8(m) permit.

Mitigation

The Draft SEIS/EIR identifies the following measures to avoid, minimize and mitigate project impacts:

- Sequencing to minimize impacts on fish and shellfish populations;
- Preparation of an "after action report" to provide information on all of the blasting events associated with fish kills;
- Establishment of an interagency underwater blasting technical working group comprised of federal and state resource agencies;
- Use of a fisheries observer, side scan sonar fish finder and fish startle system to minimize impacts to fisheries during blasting;
- Prohibition on blasting when schools of fish, sea turtles or mammals are observed in the vicinity;
- For any disposal of contaminated material, proponent will follow protocol for disposal in CAD cells developed through BHNIP;
- Creation of artificial reef with rock material to preserve space in MBDS and provide mitigation for habitat impacts;
- Remote sensing surveys and borings of the northern portion of the Presidents Road Anchorage and area of the Chelsea River proposed for widening to identify historic resources and proposed rock reef sites;
- Remote sensing surveys of proposed rock reef sites to identify historic resources; and
- Development of a disposal plan at the MBDS and a capping plan at the IWS to avoid located shipwrecks;
- Development of a communications system to provide notice to lobstermen and fishermen prior to drilling, blasting and dredging operations; and

- Replacement of older, higher emitting equipment with newer and cleaner burning equipment in 2011 and beyond and extension of the dredging schedule to reduce annual emissions associated with the project.

The Final EIR should include an updated and revised mitigation section including a summary of all mitigation measures to which the proponent has committed. It should include draft Section 61 Findings for the 401 Water Quality Certificate. Mitigation should address temporary, short-term and long-term impacts.

It should indicate whether the proponent will develop compensatory mitigation plans for direct and indirect mortality of fisheries resources, delayed recovery of habitat and areas of habitat that are permanently lost or altered.

Response to Comments

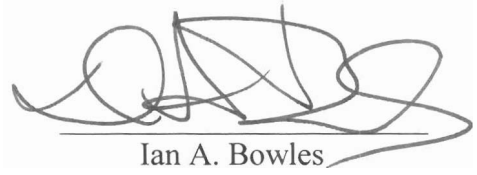
To ensure that the issues raised by commentors are addressed, the Final EIR should include a response to comments. This directive is not intended to, and shall not be construed to, enlarge the scope of the Final EIR beyond what has been expressly identified in the initial scoping Certificate or this Certificate. The Final EIR should include a copy of this Certificate and a copy of each comment letter received. I defer to the proponent as it develops the format for this section, but it should provide clear answers to questions raised.

I note the comment letter submitted by the Town of Winthrop expressing concern with the scale of the proposed project, impacts on fisheries habitat and potential changes to sediment transport patterns. I expect the ACOE will provide a response to those issues that are within the Scope of this Certificate and, in particular, address the potential of the project to affect long-term sediment transport patterns.

Circulation

The Final EIR should be circulated in compliance with Section 11.16 of the MEPA regulations. Copies should be sent to any state agencies from which the proponent will seek permits or approvals, to the list of "comments received" below, to the Conservation Commissions in Boston, Revere and Chelsea and copies should be provided to the public library in Boston, Revere and Chelsea.

June 13, 2008
Date



Ian A. Bowles

Comments received:

6/2/08	Board of Underwater Archaeology (BUAR)
5/28/08	Coastal Zone Management (CZM)
6/3/08	Department of Environmental Protection (DEP)
6/2/08	Division of Marine Fisheries (DMF)
5/5/08	Massachusetts Historical Commission
6/2/08	Massachusetts Water Resources Authority (MWRA)
5/23/08	U.S. Environmental Protection Agency (EPA)
6/2/08	National Marine Fisheries Service (NMFS)
6/2/08	City of Boston/The Environment Department
6/2/08	The Boston Harbor Association (TBHA)
6/2/08	Save the Harbor/Save the Bay
5/30/08	Town of Winthrop/Town Council

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