



US Army Corps
of Engineers
Alaska District

Public Notice of Application for Permit

Regulatory Branch (1145b)
Post Office Box 6898
Elmendorf AFB, Alaska 99506-6898

PUBLIC NOTICE DATE: 19 January 2006
EXPIRATION DATE: 3 February 2006
REFERENCE NUMBER: POA-2003-502-N
WATERWAY: Ship Creek

Interested parties are hereby notified that an application has been received for a Department of the Army permit for certain work in waters of the United States as described below and shown on the attached plan.

APPLICANT: Port of Anchorage, 2000 Anchorage Port Road, Anchorage, Alaska 99501.

LOCATION: The Port of Anchorage is located in Upper Cook Inlet, within section 31, T. 14 N., R. 3 W.; and sections 6 & 7, T. 13 N., R. 3 W; Latitude 61° 15' N., Longitude 149° 52' W.; in Anchorage, Alaska. The two primary gravel extraction sites, Cherry Hill and the North End Runway, and their associated haul roads are located on Elmendorf Air Force Base, northeast of the Port. Please refer to the attached project description and vicinity map for additional information.

WORK: The Port of Anchorage (POA) and the U.S. Department of Transportation, Maritime Administration (MARAD), propose to expand, reorganize and improve the facilities at the Port of Anchorage. The proposed Marine Terminal Redevelopment (Port Expansion) Project involves the construction of a new sheet pile constructed dock in the tidelands west, northwest, and southwest of the existing dock. The overall port expansion project involves a total discharge of fill material over approximately 135 acres of intertidal and subtidal waters of upper Cook Inlet and construction and operational dredging within 235 acres. Phase I (for regulatory purposes) of the project was previously permitted and encompasses 27 acres of the intertidal fill area on the north end of the Port. This permit application entails the following: a discharge of approximately 9.4 million cubic yards of fill material over the remaining 108 acres of intertidal and subtidal fill; the dredging of approximately 633,000 cubic yards of material, over approximately 47 acres, required for the construction of the proposed sheet pile dock; and the development of the Cherry Hill and North End Borrow pits and their respective haul roads, which would cumulatively remove approximately 34.5 acres of wetlands. Please refer to the attached *Phase II Description For Port Expansion Project* for additional project specific information.

PURPOSE: The purpose of the Port Expansion Project is to replace functionally obsolete structures; increase POA capacity, efficiency, and security; and accommodate the needs of the U.S. military for rapid deployment. Please refer to the attached *Phase II Description For Port Expansion Project* for additional information.

ADDITIONAL INFORMATION: The U.S. MARAD Marine Terminal Redevelopment Environmental Assessment (Final), dated March 2005, can be accessed on the following website: <http://www.portofanchorage.org/>. Additional project-specific information can be provided by the applicant's consultants at Integrated Concepts and Research Corporation (ICRC), 421 West First Avenue, Suite 200, Anchorage, Alaska 99501; (907) 264-8914.

MITIGATION: The applicant proposes to compensate for the project's unavoidable impacts to water of the U.S., by establishing a mitigation account to support and enhance sustainable salmon restoration programs under the Pacific Salmon Recovery Fund. The initial mitigation account balance would be determined by the U.S. Army Corps of Engineers (Corps) primarily in accordance with the Anchorage Debit/Credit Methodology. The account would fund ecological restoration, enhancement, and/or preservation projects, as recommended by an advisory committee and approved by the Corps, to offset the ecological impacts of the Port Expansion Project. A Memorandum of Understanding (MOU), outlining the administration and management of the mitigation account, would be established between the Municipality of Anchorage and the U.S. Army Corps of Engineers. The mitigation MOU would be finalized prior to the issuance of a Department of the Army permit for the overall Port Expansion Project.

WATER QUALITY CERTIFICATION: A permit for the described work will not be issued until a certification or waiver of certification as required under Section 401 of the Clean Water Act (Public Law 95-217), has been received from the Alaska Department of Environmental Conservation.

COASTAL ZONE MANAGEMENT ACT CERTIFICATION: Section 307(c)(3) of the Coastal Zone, Management Act of 1972, as amended by 16 U.S.C. 1456(c)(3), requires the applicant to certify that the described activity affecting land or water uses in the Coastal Zone complies with the Alaska Coastal Management Program. A permit will not be issued until the Office of Project Management and Permitting, Department of Natural Resources has concurred with the applicant's certification.

PUBLIC HEARING: Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, reasons for holding a public hearing.

CULTURAL RESOURCES: The latest published version of the Alaska Heritage Resources Survey (AHRs) as well as archaeological and architectural surveys, which have been previously conducted in the project areas, have been consulted for the presence or absence of historic properties, including those listed in or eligible for inclusion in the National Register of Historic Places. Additionally, as part of the Marine Terminal Redevelopment Project, MARAD consulted with native tribes to determine the presence of any resources significant to the Dena'ina culture. MARAD has developed a cultural resources monitoring plan to be implemented during project construction phases and would continue to consult with the affected native tribes. There are three documented archaeological sites in the project area: ANC-760 (G.W. Palmer Warehouse), ANC-1302 (terminal end of Whittier to Anchorage military pipeline), and ANC-1337 (Tak'at fish camp). These sites have been determined by the MARAD and the State Historic Preservation Officer (SHPO) to not be eligible for the National Register of Historic Places. Additionally, there are six known architectural resources in the Government Hill neighborhood near the proposed project: ANC-46, ANC-47, ANC-48, ANC-1205, ANC-49, and ANC-306. These sites are outside of the project area and would not be affected by the construction or operation of the proposed project. The proposed gravel extraction sites are considered to have a medium to high archaeological potential for early homesteading sites. Therefore, archaeological monitoring would occur during the extraction process and coordinated with the SHPO. The MARAD, in consultation with the SHPO, has determined that no historic properties would be affected by the proposed project. Therefore, no further action is required under Section 106 of

the National Historic Preservation Act. Any comments SHPO may have concerning presently unknown archeological or historic data that may be lost or destroyed by work under the requested permit will be considered in our final assessment of the described work.

TRIBAL CONSULTATION: The Alaska District fully supports tribal self-governance and government-to-government relations between the Federal government and Federally recognized Tribes. This notice invites participation by agencies, Tribes, and members of the public in the Federal decision-making process. In addition, Tribes with protected rights or resources that could be significantly affected by a proposed Federal action (e.g., a permit decision) have the right to consult with the Alaska District on a government-to-government basis. Views of each Tribe regarding protected rights and resources will be accorded due consideration in this process. This Public Notice serves as notification to the Tribes within the area potentially affected by the proposed work and invites their participation in the Federal decision-making process regarding the protected Tribal right or resource. Consultation may be initiated by the affected Tribe upon written request to the District Engineer during the public comment period.

ENDANGERED SPECIES: Preliminarily, the described activity will not affect threatened or endangered species, or their critical habitat designated as endangered or threatened, under the Endangered Species Act of 1973 (87 Stat. 844). This application is being coordinated with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Any comments they may have concerning endangered or threatened wildlife or plants or their critical habitat will be considered in our final assessment of the described work.

ESSENTIAL FISH HABITAT: The proposed work is being evaluated for possible effects to Essential Fish Habitat (EFH) pursuant to the Magnuson Stevens Fishery Conservation and Management Act of 1996 (MSFCMA), 16 U.S.C. *et seq* and associated federal regulations found at 50 CFR 600 Subpart K. The Alaska District includes areas of EFH as Fishery Management Plans. We have reviewed the January 20, 1999, North Pacific Fishery Management Council's Environmental Assessment to locate EFH area as identified by the National Marine Fisheries Service (NMFS).

We have determined that the described activity may adversely affect EFH. The proposed work may affect up to 135 acres of EFH for juvenile/adult salmon, Pacific Cod, walleye Pollock, and sculpins. The POA and MARAD have initiated the consultation requirements with the NMFS under the MSFCMA. The cumulative effects to EFH will be considered in our final assessment of the described work. Any conservation recommendations regarding EFH for federally managed fish will also be considered in our final assessment of the described work. This proposed project may also adversely affect associated species such as major prey or predator species which are not covered by Fishery Management Plans.

The applicant proposes to implement several BMPs to avoid and minimize impacts to EFH and compensatory mitigation to offset the permanent loss of habitat associated with the proposed project.

EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impacts including cumulative impacts of the proposed activity and its intended use on the public interest. Evaluation of the probable impacts, which the proposed activity may have on the public interest, requires a careful weighing of all the factors that become relevant in each particular case. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. The decision whether to authorize a proposal, and if so, the conditions under which it will be allowed to occur, are therefore determined by the outcome of the general balancing process. That decision should reflect the national concern for both protection and utilization of important resources. All factors, which may be relevant to the proposal, must be considered including the cumulative effects thereof. Among

those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. For activities involving 404 discharges, a permit will be denied if the discharge that would be authorized by such permit would not comply with the Environmental Protection Agency's 404(b)(1) guidelines. Subject to the preceding sentence and any other applicable guidelines or criteria (see Sections 320.2 and 320.3), a permit will be granted unless the District Engineer determines that it would be contrary to the public interest.

The Corps of Engineers is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Comments on the described work, with the reference number, should reach this office no later than the expiration date of this Public Notice to become part of the record and be considered in the decision. Please contact Mr. Ryan Winn at (907) 753-2712, toll free from within Alaska at (800) 478-2712, or by mail at the letterhead address if further information is desired concerning this notice.

AUTHORITY: This permit will be issued or denied under the following authorities:

(X) Perform work in or affecting navigable waters of the United States - Section 10 Rivers and Harbors Act 1899 (33 U.S.C. 403).

(X) Discharge dredged or fill material into waters of the United States - Section 404 Clean Water Act (33 U.S.C. 1344). Therefore, our public interest review will consider the guidelines set forth under Section 404(b) of the Clean Water Act (40 CFR 230).

A plan, Notice of Application for Certification of Consistency with the Alaska Coastal Management Program, and Notice of Application for State Water Quality Certification are attached to this Public Notice.

District Engineer
U.S. Army, Corps of Engineers

Attachments

PHASE II DESCRIPTION FOR PORT EXPANSION PROJECT

Current Port Activity

The Port of Anchorage (POA), located in the Municipality of Anchorage in upper Cook Inlet, occupies approximately 129 acres. Figure 1 shows the POA vicinity and surrounding project area. Immediately south and outside the POA boundaries lie other Port-related commercial activities covering about 111 acres predominantly owned by the Alaska Railroad Corporation (ARRC). These activities include the ARRC intermodal rail yard, petroleum storage and transfer, dry bulk transshipment, and container cargo storage. To the north and east, Elmendorf Air Force Base (EAFB) lies on a terrace roughly 100 feet above the POA; in the south and southeast, the lands formerly containing the US Army Anchorage Fuel Terminal delimit the POA. The POA extends into the Knik Arm of Cook Inlet on the west.

The POA stages 100 percent of the exports of refined petroleum products from the State's largest refinery (in Fairbanks) and facilitates petroleum deliveries from smaller refineries on the Kenai Peninsula and in Valdez. The POA handles all of the jet fuel for Ted Stevens Anchorage International Airport, JP-8 fuel for EAFB, and petroleum products for Alaska's bush area; goods for all major military installations; and wholesale goods for all retail distributors and grocery stores north of Cordova. In addition, the POA has been designated as the 15th Strategic Commercial Seaport by the Department of Defense and is considered to be a critical link in the rapid deployment of US troops throughout the world.

The POA is currently operating at or near critical capacity ranges for various types of cargo, and POA facilities, including the terminals and docking berths, are substantially past their design life. The purpose of the Marine Terminal Redevelopment Project (Project) is to replace functionally obsolete structures; increase POA capacity, efficiency, and security; and accommodate the needs of the US military for rapid deployment. Based on the review of candidate locations, the POA established that expansion would be best accomplished by reclaiming land to the west, northwest, and southwest of the existing POA, which consists of tidelands owned or leased by the POA.

Port Expansion Project Description

The Project is to be accomplished for the POA through federal funds administered by the US Department of Transportation Maritime Administration (MARAD). The Port Expansion Project would add 135 acres of surface area to the existing POA facilities (Figure 2). The location of these expanded port facilities include all or part of: Township 14 North, Range 3 West, Section 31 and Township 13 North, Range 3 West, Sections 6 and 7. The Project is divided into Phases I and II:

- Phase I, **previously permitted**, encompasses construction of 27 acres of fill on the north end of the Port and is not an active part of this application.
- Phase II entails the remaining 108 acres to be filled, as well as borrow sources on EAFB for the fill material and transportation route for those materials from EAFB to the Port. Refer to Figure 1 for a view of the EAFB borrows sites at Cherry Hill and the North End, as well as the associated haul route. Phase II is the subject of this application.

Location descriptors for the borrow sites and haul road are as follows:

- 1) Cherry Hill Borrow Site: Township 13 North, Range 3 West, within portions of Sections 5 and 6.
- 2) North End Borrow Site: Township 14 North, Range 3 West, within portions of Sections 27, 28, 33, and 34.
- 3) Proposed Haul Route from North End Borrow Site to Cherry Hill Borrow Site is routed through Township 14 North, Range 3 West, Sections 33 and 32; and Township 13 North, Range 3 West, Sections 5 and 6.
- 4) Cherry Hill Haul Route to the Port is located within Township 13 North, Range 3 West, Section 6.

The POA facilities expansion would be accomplished by constructing 8,880 feet of dock located approximately 400 feet from, and parallel to, the face of the existing dock structure and backfilling behind the new dock structure to the existing shoreline. The completed Marine Terminal (Figure 3) would include: seven modern dedicated ship berths; two dedicated barge berths; rail access; and modern shore-side facilities and equipment to accommodate cruise passengers, cement bulk, petroleum, oils, and lubricants (POL), Roll On/Roll Off (RO-RO) cargo, containers, general cargo, Army Stryker Brigade Combat Team, general cargo on barges; and additional land area to support expanding military and commercial operations.

Implementing the proposed Project would involve four components:

- 1) Contiguous expansion onto tidelands and construction of marine structures for berths to accommodate barges and additional RO-RO vessels, a floating dock; a cement berth, two improved POL terminals, three longer berths to accommodate larger container ships, a staging area for Stryker Brigade Combat Team and industrial fabrication, and land for other new or expanded operations.
- 2) Reorganization of the POA system and support structure for loading, unloading, and storage of cargo, and more efficient intermodal freight transfer facilities for commercial and military use. As part of the reorganization, the POA would provide enhanced security measures, and improved equipment for loading and unloading containers.
- 3) Excavation and transport of fill material from EAFB borrow sites at Cherry Hill and the North End, by use of improved haul roads to the Port.
- 4) Dredging in the harbor area during construction to provide necessary deeper draft for the larger commercial and military ships that would be using the POA in the future.

Construction is anticipated to take approximately seven years, beginning in 2006, primarily occurring between the spring and fall, annually. Operations at the POA would continue during construction.

Project Elements

Construction Activities. Given the size of the expanded surface area envisioned for the Project, the need to segregate the work undertaken in each year for project control purposes, and the need to temporarily relocate existing operations during construction to maintain POA operations, construction of the Project would be phased over seven years. Table 1 below provides a summary of the planned earthwork unique to each manageable construction year within a given season associated with this Phase II application.

Table 1. Phase II Dredge and Fill Summary

Construction Season	Berth Length	Construction Surface	Fill Volume	Construction Dredge Volume
Year	Feet	Acre	Cubic Yard	Cubic Yard
2006	0	6	160,000	0
2007	2,940	28	2,382,000	165,000
2008	1,325	36	1,768,000	90,000
2009	1,200	11	1,428,000	90,000
2010	1,375	12	1,624,000	156,000
2011	2,040	15	2,030,000	132,000
Total	8,880	108	9,392,000	633,000

The sequence of construction required for successful implementation of the Project must occur so that:

- Additional lands are available to meet the requirements for Stryker Brigade Combat Team and other deployments;
- Present and future supplies of critical goods to Anchorage and throughout Alaska continue unabated; and
- Crane operations are relocated off the existing structure as soon as it is feasible to allow necessary demolition of decaying structures.

This sequencing requires the creation of backlands as the first step in construction in 2006. Because most of the available surface areas at the POA are in use, initial construction activities would focus on creating new backlands north and south of existing operations. These new backlands would serve as construction staging areas for the heavy equipment and materials required to construct the dock, the required staging area for military deployments, and needed container storage. This would allow for existing operations to be temporarily relocated to the new facilities before construction activities take place in existing operational areas, without interrupting cargo flows.

Other steps in the sequence include dredging of the construction area, where required; filling; construction of open cell sheet pile (OCSP); construction of pile supports for the crane; completion of dock construction; movement of operations to new areas; demolition of current facilities; placement of new cranes; and completion of final operational layouts, utilities, road systems, and security systems. A typical construction season in Anchorage lasts approximately 180 days and takes place from mid-April through October, depending upon weather conditions. Construction activities that generate high noise levels would typically occur from 6:00 a.m. to 10:00 p.m. seven days a week. Some backland construction and material deliveries may occur year round.

Dredging. Dredging for construction behind the new dock face at depths varying from -25 feet Mean Lower Low Water (MLLW) to -45 feet MLLW would be conducted in conjunction with the development of tidelands. Approximately 633,000 cubic yards (over approximately 47 acres) of material would be removed by dredging for the construction of the project. Subsequent to the construction of the proposed expanded facilities, additional USACE dredging would be necessary for creating the appropriate operational bathymetry depths in the harbor. Dredge material would be removed by clamshell and hydraulic cutter-suction dredging methods and disposed at the existing USACE disposal site, approximately 138 acres in area and located approximately 3,000 feet west from the southern project limits (Figure 4). The top of the dredged material in the disposal area shall not be higher than an elevation of -45 feet MLLW.

Recent evaluations of Knik Arm by the Alaska Department of Environmental Conservation indicate there is no reason to suspect hazardous substance contamination in the area to be dredged. To support this conclusion, appropriate sampling and analysis of the dredge material would be performed to verify the

absence of contamination. If significant levels of contamination are detected, the dredged materials would be temporarily stored on the south backlands area indicated on Figure 5 where natural dewatering of the material would occur. BMPs and on-site runoff containment methods would be employed to ensure contaminants do not leach off site. Once the dredge materials have sufficiently dewatered, they would be transported to the Final Disposal Site as shown on Figure 5 and used as fill material for the Project. These contaminated materials would be covered with a combination of common fill and engineered fill to effectively cap the dredge material and prevent leaching of contaminants.

The U.S. Army Corps of Engineers (USACE) performs annual operational maintenance dredging within a 206 acre survey area in the existing POA vicinity to a depth of -39 ft MLLW. Figure 6 depicts the existing USACE survey area in relation to the proposed construction and operational dredge areas of the proposed Project. The operational dredge depth in front of the new (proposed) dock would involve a maximum depth of -47 feet MLLW (approximately 8 feet below the current maximum dredging depth of -39 feet). Approximately 87 acres of additional operational dredging areas outside of the existing survey area would be required at the north and south ends of the project area, as shown on Figure 6. The initial operational dredging would require removal of an estimated 3.9 million cubic yards of material over an area of approximately 189 acres (Figures 6 and 7). Future maintenance dredging would be accomplished by using either a clamshell and/or a hopper dredge, depending on shoaling patterns. Annual maintenance dredging quantities are estimated to range between 1.5 and 4.0 million cubic yards, depending on the hydrodynamic flow pattern changes that affect shoaling rates.

Fill Material. Phase II of the Project would require approximately 9.4 million cubic yards of suitable engineered and common fill material. Multiple sources could supply the remaining fill through various delivery methods. MARAD and POA intend to obtain most, if not all, of these materials from EAFB based on an agreement between MARAD and EAFB. This approach would necessitate the new construction or widening of two haul roads and the development, operations, and reclamation of two borrow pits (Cherry Hill and the North End). Haul and borrow operations are planned for a six-year duration. These roads and pits are depicted in Figure 1, 8, and 9 and described below:

- Cherry Hill Haul Road. The Cherry Hill Haul Road would be a new road to provide direct access between EAFB and the POA. It would be approximately one mile in length with an aggregate surface. The road would support two-way traffic by off-road haul trucks. It is projected for construction in the spring of 2006 and would be maintained during its operation. The construction, operation, and maintenance of the haul road would comply with a master Storm Water Pollution Prevention Plan which would address all activities on EAFB. At the conclusion of haul and borrow operations, this road would be reclaimed to contours required by EAFB.
- POA Haul Road. Construction of the POA Haul Road would consist of improving a series of existing one- and two-lane roads and trails to support two-way traffic by off-road haul trucks. It would be approximately four miles in length with an aggregate surface. An estimated seven acres of land could be disturbed as part of these road improvements. This road would provide a safe and efficient haul route between the North End Borrow Pit and the Cherry Hill Borrow Pit. It is projected for construction in the spring of 2006 and would be maintained during its operation. The construction, operation, and maintenance of the haul road would comply with a master Storm Water Pollution Prevention Plan which would address all activities on EAFB. At the conclusion of haul and borrow operations, this road would be returned to the EAFB to operate and maintain.
- Cherry Hill Borrow Pit. This is an existing borrow pit that would be expanded to approximately 100 acres. Approximately 3-5 million cubic yards of material may be excavated over a six-year period. The site is projected for development in the spring of 2006 and would be managed in accordance with a site-specific Mining Plan. This Plan would address annual development, mining operations, environmental considerations and controls, as well as annual reclamation. Environmental considerations would include

methodology to assess and manage potential existing contamination of earth materials which may be encountered within the pit boundaries. This plan would also comply with a master Storm Water Pollution Prevention Plan which would address all activities on EAFB. Materials excavated from this site would be processed and stockpiled on site to meet engineered fill requirements. Wasted earth materials would be incorporated into the reclamation of the site. At the conclusion of borrow operations, this pit would be returned in stabilized condition to EAFB to operate and maintain.

- North End Borrow Pit. This is an existing borrow pit that would be expanded to approximately 300 acres. Approximately 7-9 million cubic yards of materials may be excavated over a six-year period. The site is projected for development in the spring of 2006 and would be managed in accordance with a site-specific Mining Plan. This Plan would also address annual development, mining operations, environmental considerations and controls, as well as annual reclamation. Environmental considerations would include methodology to assess and manage potential existing contamination of earth materials which may be encountered within the pit boundaries. This plan would also comply with a master Storm Water Pollution Prevention Plan which would address all activities on EAFB. Excavated material would be processed and stockpiled on site to meet engineered fill requirements. Wasted earth materials would be incorporated into the reclamation of the site. At the conclusion of borrow operations, this pit would be returned in stabilized condition to EAFB to operate and maintain.

Material from the above borrow pits on EAFB are intended to fill tidelands for the Project. An 8.5 acre wetland is present within the Cherry Hill Borrow Site, and a cumulative 26 acres in twelve distinct wetlands are present within the North End Borrow Site. The wetlands would be impacted by the proposed materials extraction activities. However, the sites would be operated and managed so that no haul roads or long-term stockpiles would be constructed within the identified wetland boundaries. These wetlands pose bird-flight hazards to EAFB operations. The wetlands would be removed in time in accordance with annual mining plans and final reclamation contours.

Surface Improvements and Drainage. After reaching the subgrade elevation at the POA marine terminal expansion site, the imported materials would be prepared for paving. A road grader would generally level the entire area and then create multiple drainage slopes along the entire surface. The surface area would then be paved as appropriate. Designed to accommodate tractor-trailers and heavy equipment, the pavement would be constructed on a layer of select non-frost susceptible material and would be capped either with asphaltic concrete. Prior to installing the capping material, multiple catch basins and underground drainage pipes would be installed. The storm drains would collect and divert rainfall runoff and snowmelt to Knik Arm, as is done currently at the POA. Utility trenches, conduits, fire and potable water pipes, and miscellaneous foundations for light poles and other features would also be installed prior to capping the surface, as required. Construction would include security fencing along the perimeter and designated gates for entrance to the POA.

MARAD and the POA would require selected construction contractors to identify and implement BMPs to prevent erosion and sedimentation during construction and operation; control specific on-site erosion and sedimentation; protect adjacent properties and watercourses from effects related to erosion, sedimentation, and flooding; control spills; and handle potentially hazardous materials and waste in accordance with federal, state, and local requirements.

MARAD's local contractor, ICRC, would carefully monitor construction to determine proper implementation of BMPs such as:

- clearly marking construction limits with stakes and survey tape;
- placement of silt fencing in appropriate locations to reduce erosion and sedimentation;
- reseeding of slopes subject to erosion;

- armoring of slopes subject to flooding with riprap; and
- maintenance of on-site capabilities to respond to spills of oils, fuels, or other similar materials.

OCSF Construction. Construction of the Project using the sheet pile design would involve construction of steel sheet pile cells concurrent with development of tidelands and dredging. A typical OCSF cross-section of this design through the dock is shown on Figure 10. Backland construction of foundations, pavement, and facilities would follow the procedures already discussed.

Installation of steel sheet pile cells would form the first phase of this work. The cells would serve to retain the fill material and provide the dock structure for berthing barges and ships. A combination of land-based and floating cranes would be used to construct the sheet pile face. The sheet piles would be staged on barges and positioned near the crane. A template would be used to guide the sheet piles to their proper position. The template would be positioned in the correct location with the help of survey instruments.

The sheet piles would be installed to the desired tip elevation by a pile driving hammer, likely a vibratory hammer. Pile driving activities are known to introduce noise in the water column at levels that incidentally constitute a harassment of Beluga Whales. Therefore, in accordance with the Marine Mammal Protection Act, the MARAD has initiated consultation with the National Marine Fisheries Service to minimize adverse impacts and to obtain authorization prior to the commencement of potential harassment activities. Engineered fill material, consisting of clean sand, gravel, or stone would be placed immediately behind the sheet pile face, and back a distance determined in the final design. Common fill could be used behind the engineered fill. The fill material would require deep compaction using a vibrating probe at multiple locations after placement and/or by vibratory rollers passing over the ground as it is placed.

Barge Facilities. Barge facilities would consist of two components, a wet berth and a dry berth.

Wet Berth: The wet berth facilities would be an extension of the OCSF wharf at a design depth of -25 feet MLLW. This configuration would allow for operations at the wharf similar to the ship berths.

Dry Berth: The dry barge berth would be at a design depth to allow for RO-RO operations. Berth configuration would be designed to minimize influence of tides and currents, and to reduce scouring and siltation.

Construction would require a combination of dredging and filling. Armor stone would be placed on all fill slopes to protect the berth from wave impacts. Sheet pile would be driven on the uplands adjacent to the berth to retain fill and define berth limits.

Upland development in the barge facility would be similar to the ship berths to maximize flexibility and efficiency.

Equipment Replacement. The Project includes installation and operation of three 100-gage container cranes, an upgraded cathodic protection and protective coating system, a new fendering system and mooring system, upgraded drainage system, and a new utilities system.

For the open cell dock, the crane beams would be supported on piling that would be driven through the fill. Various options exist for the type of piles that can be used for the crane beams, including steel pipe piles, H-piles, precast concrete piles, and auger-cast (or cast-in-place) concrete piles. The crane beams and the open cell dock should be independent by design. Therefore, the crane beam size and pile spacing could be optimized. Special design requirements need to be considered for the pile placement and spacing in the vicinity of the open cell dock tail sections.

Cathodic Protection. The area of steel potentially to be protected includes both the seaside and landside faces of the sheet pile because both would be in contact with corrosive environments. However, the rate of corrosion on the landside face would be much less than the seaside face because the landside face is not subjected to the depolarizing effects associated with large tidal fluctuations and significant tidal velocities. Therefore, a decision would be made whether to apply a protective coating to the seaside face only or to all faces, including the tail walls. A balance between the capital cost of protective coating, capital cost of the impressed current system, and energy use for the impressed current system would be determined for the design life-cycle of the system.

Fendering System. A floating fender is proposed for the Project. Fendering would be free to move vertically with the tide; allowing the ships to make contact with the fender at any tide level. A panel may be secured to the sheet pile cell to provide a smooth contact surface for the fender. The fendering system would be offset from the main structure and would occupy the length of the structure through the tidal zone and below.

Drainage System. A typical sheet pile drainage penetration includes additional steel framing that is welded in place to transfer loads around the opening. Structural analysis is required to evaluate where the loading on the bulkhead structure is less severe, and the outfalls may be installed at these locations. The outfall locations are also susceptible to corrosion, ice buildup, and damage from other floating debris. For these reasons, it is desirable to minimize the number of outfalls for the open cell dock.

Utility Systems. The earthen filled dock structure would allow more flexibility for installation of utility lines to the berthing areas. Fuel lines would be fully enclosed in the subsurface to prevent exposure to the environment. The main lines and laterals would be located as underground, insulated utilities wherever it is most convenient, since the cells are filled with soil and topped with asphaltic concrete, as opposed to a pile-supported dock where there is a maze of exposed substructure elements. The utility lines would also be less susceptible to freezing because they are buried in non-frost-susceptible material, insulated, and protected from wind and other environmental factors. The water lines would be installed below the crane beams, which are typically 4 feet to 4.5 feet below grade, or sleeved through the crane beams. Utilidors can be designed to provide added protection, more convenient access for maintenance, and more reliable freeze protection, as well as providing a future location for conduits.

Operations. Once completed, the Project would accommodate military vessels, multi-purpose vessels, barges, and railroad traffic associated with cargos at the POA. Expansion would include accommodations for cement, two POL berths, two container berths, a military RO-RO cargo berth (with access to 100-foot gage cranes), and two barge berths. The new POA would also have increased lighting facilities, improved storm water drainage, and improved access within the POA and secure access to the POA from the outside. The expanded area is projected to be sufficient to accommodate projected increases in commodities and traffic for at least twenty years.

Management Actions. The Project would include the implementation of various management actions, including mitigation, monitoring, and the implementation of environmentally beneficial programs to limit potential impacts to the environment. Mitigation measures include implementation of BMPs and compensation for loss of Essential Fish Habitat (EFH) and tidelands. The specific proposals for mitigation of EFH and tidelands would be identified as part of this Section 404 permitting process with the USACE and appropriate resource agencies. Monitoring and ongoing studies would be conducted before, during, and in some cases, after construction, for fish and beluga whales. The POA also is proposing projects that would enhance the local environment, including improvements to the Sea Services Veterans Memorial and Ship Creek Point area and the area around a Comprehensive Environmental Response, Compensation, and Liability Act-regulated landfill on EAFB (LF04).

FIGURES

- Figure 1 Marine Terminal Redevelopment Project Vicinity Map
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- Figure 10 Example Cross Section through Dock



