

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

FINAL ORDER NO. 96-082
WASTE DISCHARGE REQUIREMENTS FOR:

PORT OF RICHMOND
POINT POTRERO MARINE TERMINAL
UPLAND SITE
RICHMOND, CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, finds that:

1. The Port of Richmond (hereinafter the "Port") submitted a Report of Waste Discharge, dated May 14, 1996, for dredging and for discharge of dredged sediment from the Port's dredging project. The disposal facility will be constructed at the Point Potrero marine terminal (hereinafter the "Site"). The total site is about 53 acres in size, and lies on the shore of San Francisco Bay (see Attachment A.)
2. These Requirements are intended to serve to both regulate the discharge of dredged material at the Port's upland site, as well as, address the need for the State to issue Clean Water Act Section 401 water quality certification for berth dredging, pursuant to Section 10 of the Rivers and Harbors Act. These Requirements are issued in response to the need for a capping of asbestos contaminated soil and for the Port to dispose of dredged sediment from the Richmond harbor deepening project.
3. A temporary drying area will be constructed on about 16 acres of land nearest Point Potrero and the Port's graving docks. Once dry, the sediment will be placed on an adjoining area for use as cap and fill (Attachment B).
4. The proposed disposal area is a former shipyard and is also known as Shipyard Number 3, a reference to its use in the World War II era. Recently, about sixty percent of the area has been used by the Port to store new automobiles; hence, the Port now refers to the area as the "parking lot". The facility is located on property owned by the City of Richmond.
5. The Port desires to place dredged sediment on the parking lot site as a final disposal site for material from its harbor deepening project as well as fulfilling a requirement by the Department of Toxic Substances Control (DTSC) to cover the site with soil as part of a "cap" over contaminated soil.
6. The Port of Richmond and U.S. Army Corps of Engineers (Corps) are undertaking a joint dredging project to deepen the harbor, referred to as "navigation improvements". The dredging of the Richmond harbor by the Corps is addressed under a separate water quality certification. The

combined dredging project involves deepening the existing ship channel from an existing depth of 35 feet below mean lower low water (MLLW) to 38 feet below MLLW (Attachment C). Also included in the project is an expansion of a turning basin at the mouth of the inner harbor at Point Potrero and deepening of berthing areas which are under the Port jurisdiction.

7. The material proposed for dredging has been extensively tested by the Corps and the Port for both aquatic and upland disposal.
8. The Port and Corps have proposed disposal (regulated under the Marine Protection, Research and Sanctuary Act) at the Deep Ocean Disposal Site, with the unacceptable material going to the Port's site. The total volume of material to be dredged from the deepening project is approximately 1, 677,000 cubic yards (cys). Of the total volume, approximately 234,000 cys was determined to be "not acceptable for unconfined aquatic disposal". The material found not acceptable consists of sediments from the inner harbor from both channel and berth areas (Attachment D).
9. The parking lot site is under a cleanup order issued by DTSC, referred to as a Consent Order. The Consent Order, HSA91/92-002 was signed by DTSC and the Port on March 30, 1992. The major concern by DTSC with the site is asbestos in the soils. In the final Remedial Action Plan, DTSC directs the Port to cover the parking lot with a cap consisting of soil and asphalt. The Port then proposed the use of dredged sediment as a source of cover for the cap.
10. Site investigations have revealed that the shipyard area is contaminated with heavy metals, petroleum hydrocarbons and polynuclear aromatic hydrocarbons (PAH), and polychlorinated biphenols (PCB) in both the soil and shallow groundwater. The DTSC has directed the Port to carry out a groundwater monitoring program.
11. The DTSC consent order covers contamination at the site and surrounding areas (shoreline areas and north graving inlet) and have designated them as separate "operable units". These Requirements only address capping at the OU-1, the Scapyard No. 3 area soil and groundwater operable unit. Over the past five years, Regional Board staff have provided oversight of the site for DTSC, pursuant to the Memorandum of Understanding between the two agencies. At the behest of DTSC, the Port has taken soil samples and has installed a network of groundwater monitoring wells. The Remedial Action Plan, dated June 30, 1995, calls on the Port to continue with groundwater monitoring of the area.
12. The DTSC Order addresses both soil and groundwater pollution present at the parking lot site; as well as, adjacent areas. The DTSC Order requires the Port to remediate soil contamination which is found to pose a threat to human health; hence the Port has been required to cap the site with a minimum of two feet of soil and asphalt.

13. The Port has proposed to offload sediment in the western most slip of the graving docks. A clamshell bucket will be used to offload the dredged sediment to the drying area. Any free water in the drying area will drain to a central sump, run through filter fabric which will in turn drain to the sanitary sewer. The Port has stated that they will obtain a permit from the POTW to discharge this water to the sewer. The wet sediment will be spread thinly for drying and frequently turned and "worked" using heavy equipment. Once dry, the sediment will be moved using dump trucks to the parking lot site for final placement and grading. The capped area will once again be used as a parking lot for new automobiles.
14. DTSC and Regional Board staff agree with the Port that coverage of the site with dredged sediment, and final capping with asphalt will remedy the threat of human contact with the asbestos and fulfill the need to dispose of sediment found to be unsuitable for aquatic disposal.
15. The sediments placed at the site comprise areas of the inner harbor which were found to be not acceptable by USEPA for aquatic disposal at the Deep Ocean Disposal Site (SF-DODS). The sediments also contain pollutants of concern, including pesticides, PCB's, heavy metals and petroleum and polynuclear aromatic hydrocarbons. Additionally, some of the sediments produced elevated toxicity in bioassay tests for aquatic disposal. However, the Regional Board has determined that the dredged sediments are acceptable for disposal at the parking lot site so long as they are properly managed in accordance with best management practices for erosion control and these Requirements.
16. The scientific literature has shown that the pollutants contained in dredged sediment are generally particle-bound and not susceptible to leaching or offsite migration if properly managed. The Port has submitted a conceptual plan which outlines an appropriate management strategy. Therefore, these Requirements resolve that the Port will contain suspended sediment in decant and return-flow water onsite to the maximum extent practicable. Technology is widely available which will allow the Port to contain sediment and suspended material at the site while allowing discharge of decant water.
17. Shallow groundwater at the Shipyard site is contaminated with pollutants from the former industrial activities at the site and is likely in hydraulic connection with the Bay. Shallow groundwater is not expected to be adversely impacted by the placement of the dried dredged sediment, for reasons discussed above.
18. These Requirements are for the discharge of wastewater from dredge material handling and disposal operations and do not preclude the Regional Board from issuance of other cleanup orders, or revision of the scope of these Requirements in the future.

19. Discharge of wastewater from drying and placement of the dredged material is expected to be minimal due to the fact that the Port has proposed to discharge any excess water to the sanitary sewer under permit with the local POTW (Contra Costa Sanitary District). Runoff from the sediment drying area during periods of heavy rain will be subject to the limits found in these Requirements.
20. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. This plan was approved by the State Water Resources Control Board and the Office of Administrative Law on July 20 and November 13, 1995, respectively. A summary of regulatory provisions is contained in Title 23 of the California Code of Regulations, section 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters.
21. The beneficial uses of the Central Bay are:
 - a. Water contact recreation.
 - b. Non-contact water recreation
 - c. Shellfish Harvesting
 - d. Wildlife habitat
 - e. Marine habitat
 - f. Preservation of rare and endangered species
 - g. Fish Migration and spawning
 - h. Navigation
 - i. Preservation of Rare and endangered species
 - j. Fish Spawning
 - k. Estuarine Habitat
22. The action to adopt waste discharge requirements for this facility is exempt from the provisions of the California Environmental Quality Act (CEQA), in accordance with Section 15301, Title 14, California Administrative Code.
23. The Port of Richmond, a department of the City government, forwarded the final *Supplemental Environmental Impact Report (SEIS/EIR) for the Richmond Harbor Navigation Improvements* to the City of Richmond City Council for document certification. The SEIR was certified by the City on June 14, 1996. The SEIS/EIR evaluated seven alternatives for both clean and contaminated dredged material at: the existing Alcatraz disposal site; the proposed aquatic disposal site at the Bay Farm Island Borrow Pit; the designated deep ocean disposal site (SF-DODS); the Port's Graving Docks; and, the proposed Montezuma wetlands restoration site. The alternatives involving the Alcatraz disposal site and the proposed Bay Farm Island site were eliminated from consideration because they would violate state policies and because the disposal capacity at the Alcatraz site is reserved for maintenance dredging projects.

24. The SEIS/EIR states that turbidity impacts to eelgrass beds adjacent to the turning basin portion of the project (Portrero Reach) are "potentially significant" (Attachments E, F and G). The SEIS/EIR concludes that there is not "feasible" way to mitigate the impact; hence, can not be mitigated. However, in more recent discussions, the Corps has agreed to monitor and remedy eelgrass impacts (see draft Record of Decision, Attachment F).
25. Regional Board staff provided substantial comments to the Corps and County on the draft and final versions of the SEIS/EIR
26. The Board finds that the selected alternative in final SEIS/EIR, disposal at the deep ocean site SF-DODS and the Richmond Harbor parking lot, is identified as the "environmentally superior alternative under CEQA". The SEIS/EIR evaluated, but did not recommend the environmentally preferable alternative which is one of several alternatives which makes substantial use of the Montezuma project (Attachment F and G- Alternatives 4 and 7). The final SEIS/EIR, dated April 1996 recommended that the deep ocean disposal site be used in combination with the parking lot site. The Regional Board does not agree with the City's conclusion that the Montezuma site is not "superior" due to timing and cost constraints. It is the opinion of the Regional Board that an alternative involving significant placement of the Richmond Harbor project sediments at the Montezuma Wetlands restoration site is environmentally preferable to disposal at SF-DODS and the Parking Lot.
27. The Corps and City contend that the Montezuma project is not "practicable", because of timing and not "cost effective". Specifically, several key permits for construction of Montezuma have not been obtained and a final EIR for the Montezuma project has not been completed.
28. The Board has notified the Port and interested agencies and persons of its intent to proscribe waste discharge requirements for this site.
29. The Board, in a public meeting, heard and considered all the comments pertaining to the discharge.
30. IT IS HEREBY ORDERED that the Port of Richmond in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. Discharge Prohibitions:

1. The direct discharge of wastes (including dredged sediment material) to surface waters or surface water drainage courses is prohibited.
2. The discharge shall not cause degradation of any water supply.
3. The discharge shall remain within the designated disposal area at all times.
4. The dredge and disposal shall not cause a nuisance as defined in Section 13050(m) of the California Water Code.

B. Specifications

1. At no point within a containment area or cell shall the elevation of sediment exceed that of the levees, berms or other containment structures.
2. The cap design will include between 18 inches and four feet of dried sediment placed over the site with an additional six inches of aggregate and four inches of asphalt be applied over the sediment.
3. In accordance with the plan submitted by the Port, containment of wet sediment will be accomplished using movable concrete rails or soil berms. Control and treatment of sediment laden water or slurry will be facilitated using fabric filters and hay bales.
4. The Port will implement the proposed operation and maintenance plan for the cap submitted to the Board as Appendix I of the Remedial Design Report, May 8, 1996.
5. The Port shall complete a final Remedial Design Report, to the satisfaction of the Executive Officer, which describes in detail how wastewater and storm water from the site will be managed. Detailed final engineering drawings shall be submitted as a part of the Design Report, showing the drying facility weir design, and the location and construction of proposed and existing storm drain structures.

C. Effluent Limitations

Wastewater (decant water, return water) discharged at the point of discharge to the Richmond harbor (storm drain outfall) shall not exceed the following limits of quality at any time:

- (i) pH: 6.5 - 8.5
- (ii) Settleable matter: 1.0 ml/l/hr
- (iii) Dissolved sulfide: 0.1 mg/l

C. Receiving Water Limitations

1. The dredging and/or disposal of waste (i.e., sediments) shall not cause:

- a. Floating, suspended or deposited macroscopic particulate matter or foam in waters of the State at any place more than 100 feet from the dredge or point of discharge of the return flow.
- b. Alteration of apparent color beyond present natural background levels in waters of the State at any place more than 100 feet from the dredge or point of discharge of the return flow.
- c. Visible floating, suspended, or deposited oil or other products of petroleum origin in waters of the State at any place.
- d. Waters of the State to exceed the following quality limits at any point:

Dissolved Oxygen 5.0 mg/l minimum

When natural factors cause lesser concentrations, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.

Dissolved Sulfide 0.1 mg/l maximum.

pH A variation of natural ambient pH by more than 0.2 pH units.

Toxic or other deleterious substances

None shall be present in concentrations or quantities which may cause deleterious effects on aquatic biota, wildlife or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentrations.

2. Turbidity of the waters of the State at any point beyond the 100 feet of the discharge of the return flow shall not increase above background levels by more than the following:

Receiving Waters Background

Incremental Increase

<50 units
50-100 units
>100 units

5 Units, maximum
10 units, maximum
10% of background, maximum

- C. The groundwater shall not be degraded as a result of the sediment disposal and handling operation.

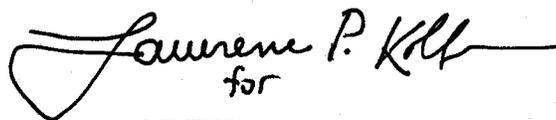
D. STANDARD PROVISIONS

1. The discharge of silt, sand, soil, clay or other earthen materials from dredging, construction or any other on-shore operation in quantities sufficient to cause deleterious bottom deposits or turbidity or discoloration in excess of natural background levels in surface waters is prohibited.
2. Dredging operations shall cease immediately whenever violations of requirements are detected through implementation of the Self-Monitoring Program (SMP) and operations shall not resume until alternative methods of compliance are provided. The Port shall notify the Regional Board immediately whenever violations are detected and operations shall not resume until the Executive Officer of the Regional Board staff has approved the corrective action plan that will provide alternative methods of compliance.
3. The Port shall file with the Regional Board monthly self-monitoring reports performed according to any Self-Monitoring Program issued by the Executive Officer.

4. All reports pursuant to these Provisions shall be prepared under the supervision of a registered civil engineer or certified engineering geologist.
5. The Port shall ensure that the foundation of the site, the levees surrounding the site, and the structures which control leachate, decant water, or surface drainage, are designed and constructed in accordance with current industry standards and are state of the art.
6. The Port shall install any additional leachate monitoring devices required to fulfill the terms of any Self-Monitoring Program issued to the Port in order that the Board may evaluate compliance with the conditions of this order.
7. The discharge of any hazardous, designated or non-hazardous waste as defined in Title 23, Division 3, Chapter 15 of the California Administrative Code, to the disposal site is prohibited. Only dredged material that has been demonstrated to be non-hazardous may be discharged to the disposal site.
8. The Port shall remove and relocate any wastes which are discharged at this site in violation of these requirements.
9. The Port shall file with this Board a report of any material change or proposed change in the character, location, or quantity of this waste discharge. For the purpose of these requirements, this includes any proposed change in the boundaries of the disposal areas or the ownership of the site.
10. The Port shall maintain a copy of this Order at the site so as to be available at all times to site operating personnel.
11. The property owner and site operator is considered to have full responsibility for correcting any and all problems which arise in the event of a failure which results in an unauthorized release of waste or wastewater.
12. The Port shall maintain all devices or designed features installed in accordance with this Order such that they function without interruption for the life of the operation.
13. The ultimate off-site disposal of the dried dredge material is subject to the approval of the Executive Officer. This approval shall be based upon a demonstration that the ultimate disposal will occur at a site which has Waste Discharge Requirements (WDR) from this Regional Board or a site that has received a waiver of WDR.

14. The Port shall permit the Regional Board or its authorized representative, upon presentation of identification:
- a. Entry on to the premises on which wastes are located or in which records are kept.
 - b. Access to copy any records required to be kept under the terms and conditions of this Order.
 - c. Inspection of any treatment equipment, monitoring equipment. or monitoring method required by this Order.
 - d. Sampling of any discharge or surface water covered by this Order.
15. This Order does not remove liability under federal, state or local laws, regulations or rules of other programs and agencies nor does this Order authorize the discharge of wastes without appropriate permits from other agencies or organizations.
16. These Requirements are written *in lieu* of Clean Water Act section 401 water quality certification of an activity regulated under Section 10 of the Rivers and Harbors Act., pursuant to and section 3857, Title 14, California Code of Regulations.

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is a full, complete and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on June 19, 1996.



Laurene P. Kell
for

LORETTA K. BARSAMIAN
EXECUTIVE OFFICER

Attachments:

- A: Location Map
- B: Upland Lot Site Map
- C: Dredging Profile
- D: Dredging Project Map
- E: Eelgrass Locations
- F: draft Corps of Engineers Record of Decision
- G: Summary of Impacts Table from SEIS/EIR
- H: Self Monitoring Program (SMP)

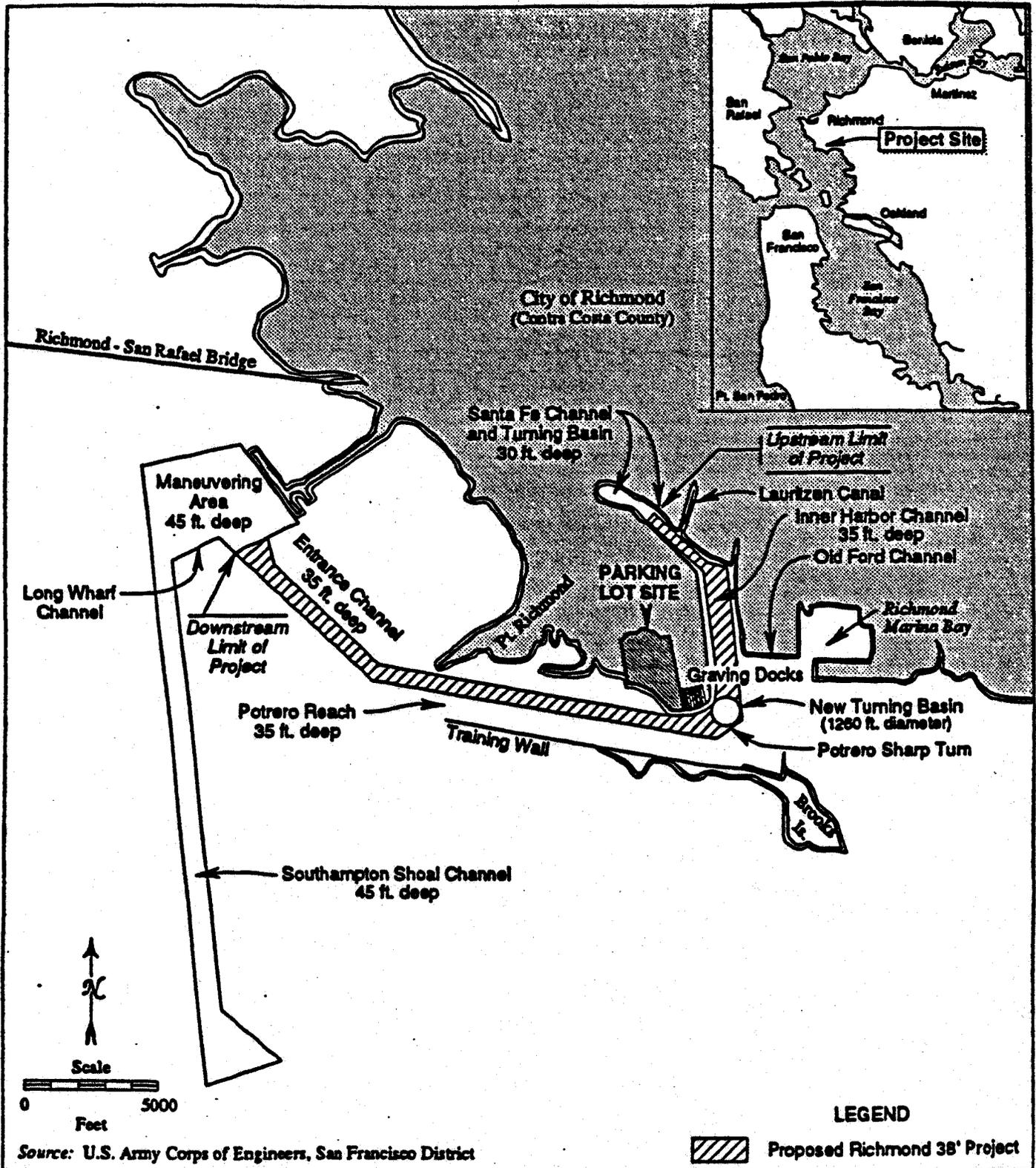


Figure 1.1-1
LOCATION OF RICHMOND HARBOR DEEPENING PROJECT

Attachment A

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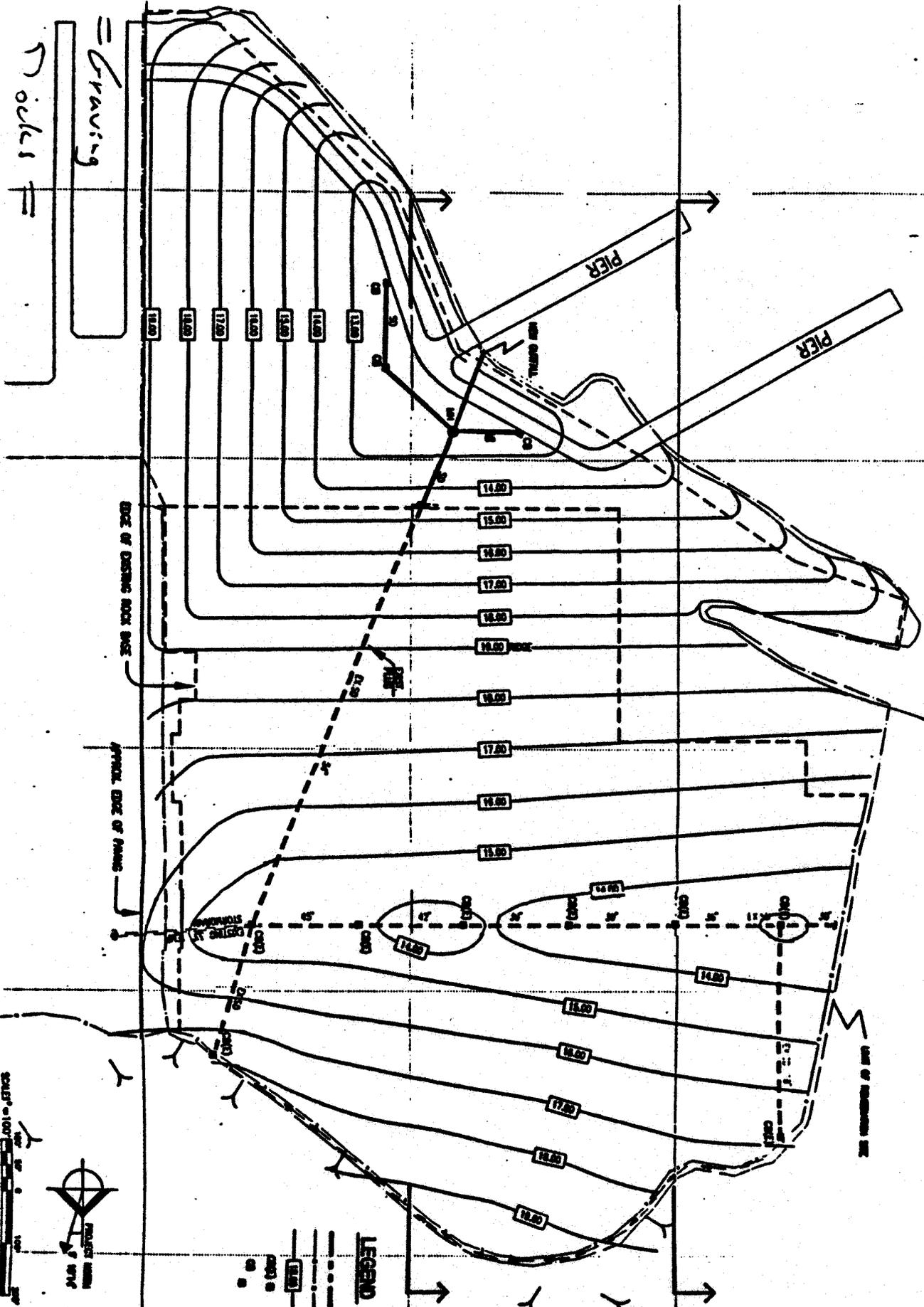
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FORMER PORT
PROPERTY

PRELIMINARY GRADING
AND PAVING PLAN

June 23-10

Attachment B.



Source: Map/Owner 199
PRELIMINARY

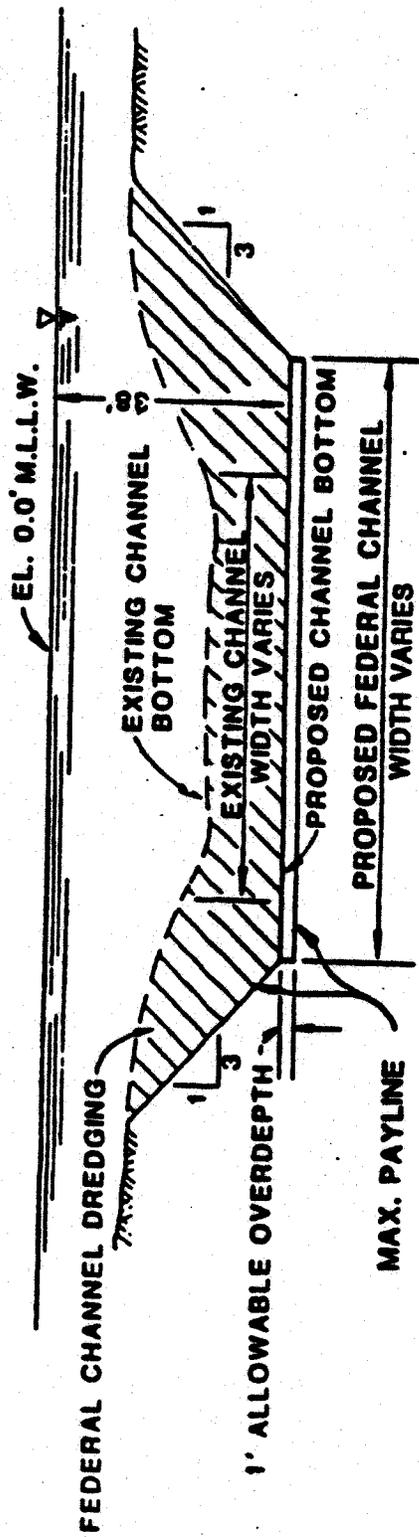
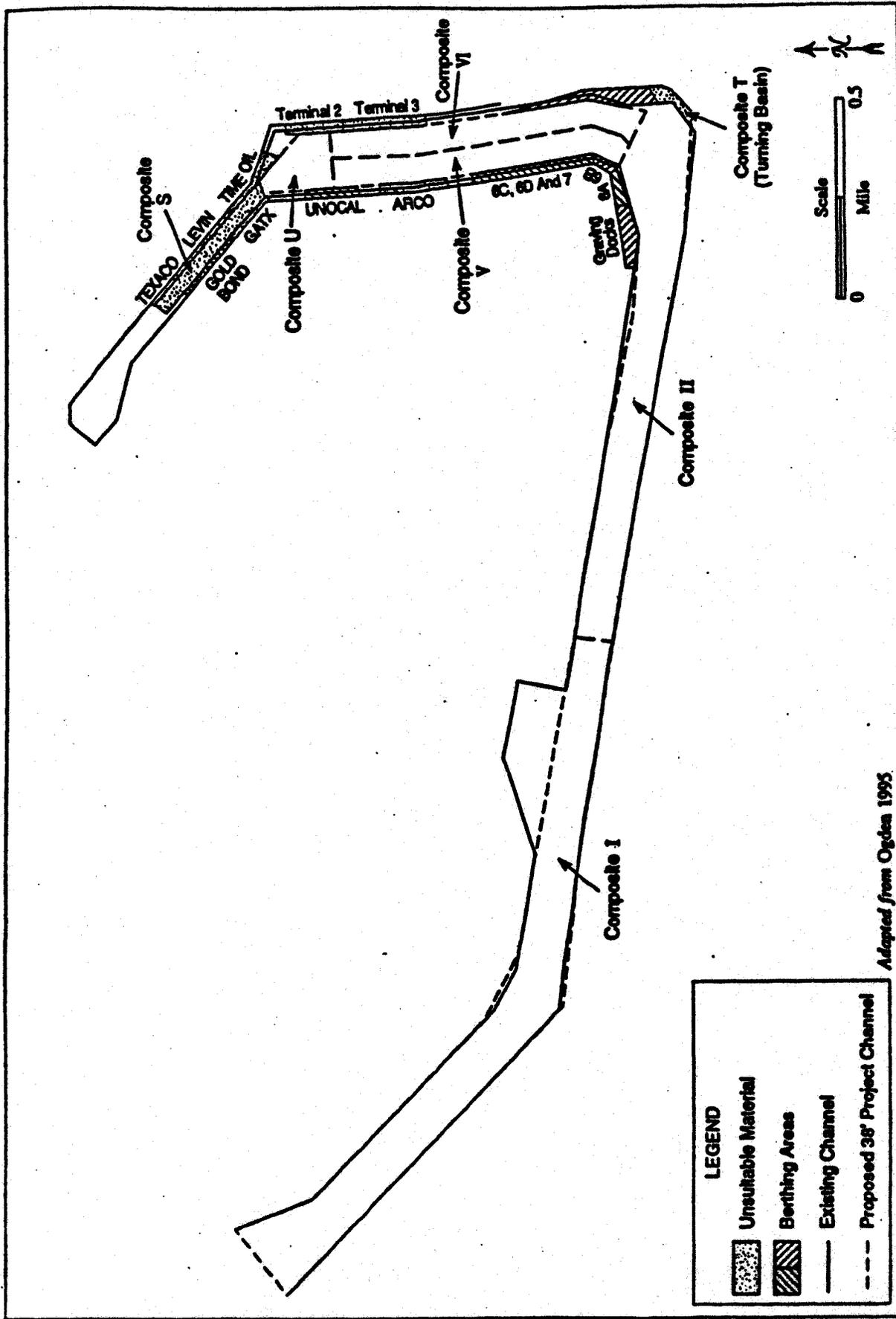


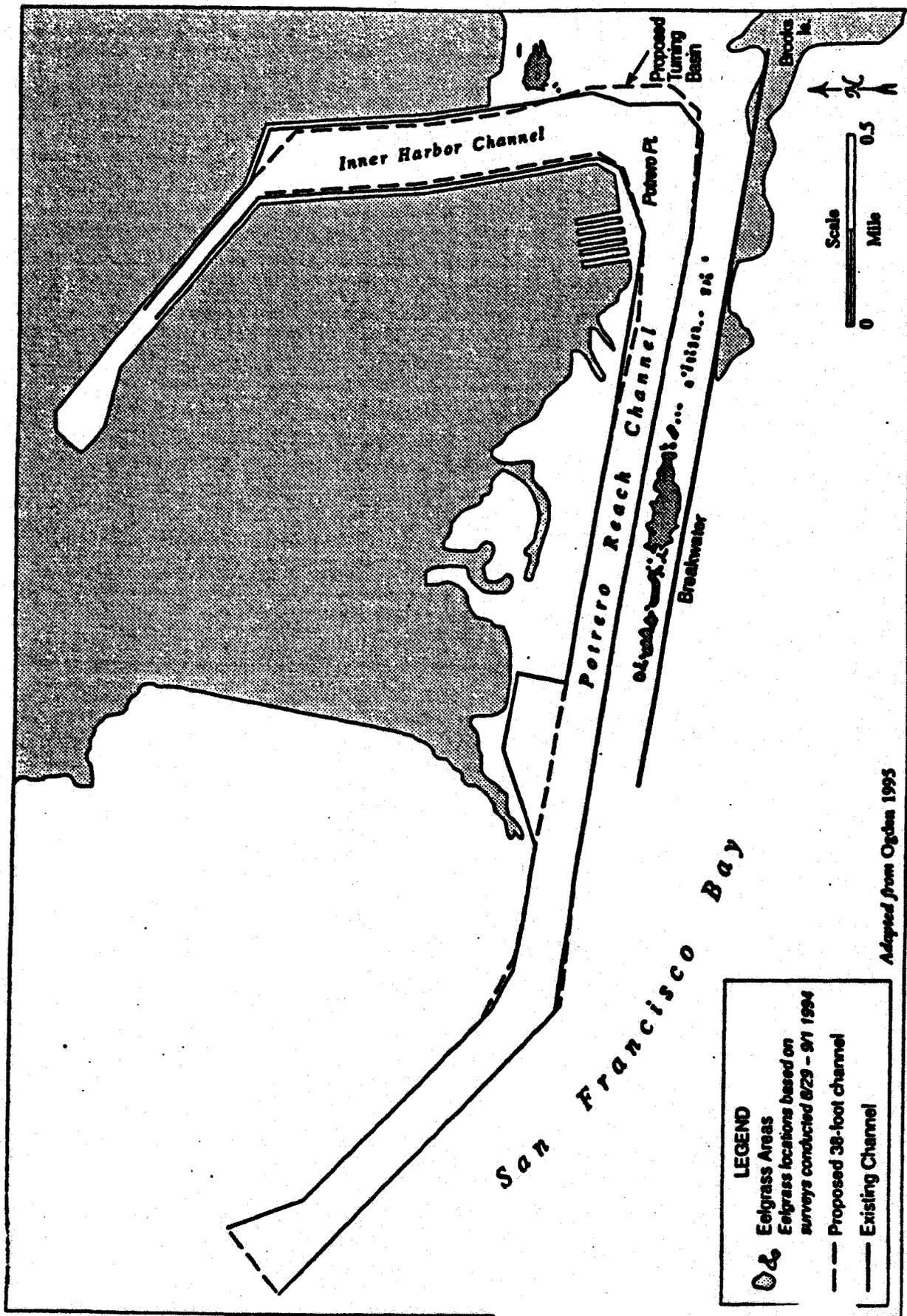
Figure 2.2-1

TYPICAL DREDGE SECTION



Adapted from Ogden 1995

Figure 2.1-1
SEDIMENT MAP



Adapted from Ogden 1995

Figure 4.6-2
APPROXIMATE BOUNDARIES OF EELGRASS AREAS IN RICHMOND HARBOR

**Record of Decision
Richmond Harbor Navigation Improvements Project**

I have reviewed the *General Design Memorandum (GDM)* (February, 1996) and the *Final Supplemental Environmental Impact Statement/Environmental Impact Report (FSEIS/EIR) Richmond Harbor Navigation Improvements* (April, 1996) addressing improvements located in the City of Richmond, Contra Costa County, California. Based on this plan recommended by the District Engineer and the public, I find the plan to be engineeringly feasible, economically justified, in accordance with environmental statutes, and in the public interest.

The recommended navigation improvements for Richmond Harbor include:

- deepening of the existing the existing 4.0 nautical mile channel from -35 feet mean lower low water (MLLW) to -38 MLLW;
- widening the entrance channel to approximately 600 feet and the inner harbor between 750 - 800 feet; and
- creating a 1,200-foot-diameter turning basin at Point Potrero.

The National Economic Development (NED) plan, and the Environmentally Preferred Plan, include the above, and the following dredged material disposal scenario:

- reuse of approximately 234,000 cubic yards of dredged material unsuitable for unconfined aquatic disposal as fill for a 50-acre parking lot near Point Potrero; and
- disposal of approximately 1,677,000 cubic yards of dredged material suitable for disposal at the EPA Section 102 San Francisco Deep Ocean Disposal Site (SF-DODS).

The Corps continues to consider reuse of dredged material from this project suitable for wetland construction at the Montezuma Wetlands Project (MWP), or another beneficial reuse site. The use of such sites would be contingent on: the completion of the permit process; site availability; no increase in project cost, or cost to the local sponsor; and no delay in project schedule.

Other disposal alternatives considered in addition to the no project alternative included: disposal at the Graving docks and SF-DODS; the Graving docks and

Alcatraz; the Bay Farm Borrow Area; Montezuma Wetlands; Montezuma Wetlands and SF-DODS; and Montezuma Wetlands and parking lot.

All practicable means to avoid or minimize adverse environmental impacts are included in the recommended plan.

Construction of the navigation improvements will cause a temporary, adverse effect on subtidal habitat in the Harbor. A recent scientific study of the benthic environment shows no significant biological differences between the shallow and deeper habitats in the Harbor. Because of this finding, and because the benthos will naturally repopulate the new channel and side slopes, no compensation for this temporary impact is recommended.

Eelgrass is an important biological resource in Richmond Harbor. Aside from its uniqueness and limited distribution in San Francisco Bay, frequently eggs of the Pacific herring incubate to hatching while attached to the plants. Mitigation measures to minimize turbidity impacts the eelgrass and herring during the spawning season are part of the recommended plan. Further mitigation and monitoring for possible turbidity impacts on eelgrass have been suggested, and to the extent feasible are incorporated in the additional mitigation that follows this Record of Decision.

Technical and economic criteria used in formulation of alternative plans were those specified in the Water Resources Council's *Principles and Guidelines*. The District Engineer considered applicable laws, executive orders, regulations and local plans. The recommended plan is the least environmentally damaging alternative available at this time, and incorporates environmental design features, or other means of avoiding or minimizing adverse impacts.

I find that the transportation benefits gained by construction of the recommended plan offset any adverse effects. This Record of Decision completes the National Environmental Policy Act process for the Federal portion of the navigation improvement project.

Additional Mitigation Richmond Harbor Navigation Improvements Project

Dredging, to the extent feasible, will be phased to avoid dredging within 50 meters of eelgrass beds during the flowering season May 15 through July 15, and during the period September 1 to December 1 when the plants are storing their winter energy reserves. A closed dredge bucket will be utilized within 50 meters of eelgrass beds to minimize dispersion of dredged material as it is being lifted through the water column.

A pre-construction survey, similar to the *Richmond Harbor Deepening Eelgrass Survey Final Report* (Ogden 1994), will be used to document the distribution of the eelgrass. The survey methodology uses acoustic fathometry. Bounce dives are used to verify the locations of eelgrass plants.

Turbidity and light penetration of the water column will be surveyed in the area(s) of eelgrass beds before construction takes place near eelgrass, and during construction when turbidity plumes have the highest likelihood of flowing over the eelgrass beds.

Turbidity will be measured utilizing United States Geological Survey (USGS) methodology for measuring Total Suspended Solids (TSS) in the San Francisco Bay published in *Summary of Suspended-Solids Concentration Data, San Francisco Bay, California, Water Year 1994* (USGS Open-File Report 96-776). Grab samples will be taken to calibrate the data as indicated in USGS protocol. In addition, light attenuation will be measured in conjunction with turbidity monitoring. Concurrent temperature data will be taken to calibrate light attenuation data. Sampling frequency and duration will be established in cooperation with California Department of Fish and Game once the construction schedule is known.

A post-construction survey identical to the pre-construction survey, will be undertaken, and will be used to document changes in distribution of eelgrass plants.

The three eelgrass surveys and the results of turbidity monitoring will be reviewed by the Corps and the California Department of Fish and Game (CDFG). If analysis of the data demonstrate adverse impacts to eelgrass, the Corps, CDFG, and the other trustee organizations will consult and develop appropriate compensation measures.

Table S-1. Summary of Potentially Significant Impacts
(page 1 of 9)

Applicable Site	Resource	Potentially Significant Impact	Mitigation Measure	Significance after Mitigation
Richmond Harbor Dredging Site, Graving Docks, SF-DODS	Air Quality	Alternative 1 (Disposal at SF-DODS and Graving Docks) Emissions from dredging and disposal activities would exceed the Best Available Control Technology (BACT) trigger levels for TOG/ROG, CO, NO _x , SO ₂ , and PM ₁₀ .	Use BACT to control NO _x emissions. Use reformulated diesel fuel to reduce TOG/ROG and SO ₂ emissions.	SO ₂ emissions would be insignificant. TOG/ROG, CO, NO _x , and PM ₁₀ emissions would remain significant.
		Release of contaminants due to rupture of containment structure.	Proper engineering design of graving docks to accommodate the maximum credible earthquake (MCE) on the Hayward Fault.	Insignificant.
Richmond Harbor Dredging Site	Biology	Increased turbidity from dredging could adversely affect herring spawning in Richmond Harbor.	Dredges shall attempt to avoid spawning areas during spawning season (December 1 to March 1). If dredging is necessary during this time, a qualified observer shall be provided aboard the dredging vessel. If the observer notes spawning activities within the dredging areas, dredging shall not occur within 200 m of the spawning site for a minimum of 2 weeks.	Insignificant.
Richmond Harbor Dredging Site	Biology	Turbidity from dredging could potentially result in reduced growth and biomass of eelgrass in Richmond Harbor.	There are no feasible measures to mitigate the impact if it occurred.	Potentially significant.

Attachment 6.

Table S-1. Summary of Potentially Significant Impacts
(page 2 of 9)

Applicable Site	Resource	Potentially Significant Impact	Mitigation Measure	Significance after Mitigation
		Alternative 1 (Disposal at SF-DODS and Graving Docks)		
Graving Docks	Cultural Resources	Alteration of the graving docks, which may be eligible for inclusion on the National Register of Historic Places, would reduce their levels of integrity of design, setting, feeling, and association of the property.	Design criteria shall take into account the visual and functional historic characteristics of the graving docks. Produce Historic American Building Survey/Historic American Engineering Record (HABS/HAER) documentation for graving docks and related structures and mechanical equipment. Inventory historic features to be removed and offered to local repositories. Make HABS/HAER documentation available to local repositories.	Insignificant.
Richmond Harbor Dredging Site	Noise	Dredging would increase noise levels at three or four residences on Point Richmond above daytime and nighttime criteria of 60 dBA and 55 dBA, respectively.	Equip all internal combustion engine-driven equipment with mufflers that are in good working condition. Monitor noise when dredging equipment is 3,000 feet from sensitive receptors. If noise exceeds regulatory criteria, limit dredging to 7 A.M. to 7 P.M. on weekdays and 9 A.M. to 8 P.M. on weekends and legal holidays.	Insignificant.
Alternative 2 (Disposal at Alcatraz and Graving Docks)				
Richmond Harbor Dredging Site, Graving Docks, Alcatraz	Air Quality	Emissions from dredging and disposal activities would exceed the BACT trigger-level for TOG/ROG, CO, NO _x , and SO ₂ .	Use BACT to control NO _x emissions. Use reformulated diesel fuel to reduce TOG/ROG and SO ₂ emissions.	SO ₂ emissions would be insignificant. TOG/ROG, CO, and NO _x emissions would remain insignificant.
Graving Docks	Geology and Seismicity	Release of contaminants due to rupture of containment structure.	Proper engineering design of graving docks to accommodate the MCE on the Hayward Fault.	Insignificant.

Table S-1. Summary of Potentially Significant Impacts
(page 3 of 9)

Applicable Site	Resource	Potentially Significant Impact Alternative 2 (Disposal at Aleatraz and Graving Docks)	Mitigation Measure	Significance after Mitigation
Richmond Harbor Dredging Site	Biology	Increased turbidity from dredging could adversely affect herring spawning in Richmond Harbor.	Dredges shall attempt to avoid spawning areas during spawning season (December 1 to March 1). If dredging is necessary during this time, a qualified observer shall be provided aboard the dredging vessel. If the observer notes spawning activities within the dredging area, dredging shall not occur within 200 m of the spawning site for a minimum of 2 weeks.	Insignificant.
Richmond Harbor Dredging Site	Biology	Turbidity from dredging could potentially result in reduced growth and biomass of eelgrass in Richmond Harbor.	There are no feasible measures to mitigate this impact, if it occurred.	Potentially significant.
Graving Docks	Cultural Resources	Alteration of the graving docks, which may be eligible for inclusion on the National Register of Historic Places, would reduce their levels of integrity of design, setting, feeling, and association of the property.	Design criteria shall take into account the visual and functional historic characteristics of the graving docks. Produce Historic American Building Survey/Historic American Engineering Record (HABS/HAER) documentation for graving docks and related structures and mechanical equipment. Inventory historic features to be removed and offer to local repositories. Make HABS/HAER documentation available to local repositories.	Insignificant.
Richmond Harbor Dredging Site	Noise	Dredging would increase noise levels at three or four residences on Point Richmond above daytime and nighttime criteria of 60 dBA and 55 dBA, respectively.	Equip all internal combustion engine-driven equipment with mufflers that are in good working condition. Monitor noise when dredging equipment is 3,000 feet from sensitive receptors. If noise exceeds regulatory criteria, limit dredging to 7 A.M. to 7 P.M. on weekdays and 9 A.M. to 8 P.M. on weekends and legal holidays.	Insignificant.

Table S-1. Summary of Potentially Significant Impacts
(page 4 of 9)

Applicable Site	Resource	Potentially Significant Impact Alternative 3 (Disposal at Bay Farm Borrow Area)	Mitigation Measure	Significance after Mitigation
Richmond Harbor Dredging Site/Bay Farm Borrow Area	Air Quality	Dredging and disposal activities would exceed the BACT trigger level for NO _x .	Use BACT to control NO _x emissions.	Significant.
Bay Farm Borrow Area	Geology and Seismicity	Contaminants could be released from unsuitable material placed beneath the cap.	Proper cap design and post-project monitoring over time.	Insignificant.
Richmond Harbor Dredging Site	Biology	Increased turbidity from dredging could adversely affect herring spawning in Richmond Harbor.	Dredges shall attempt to avoid spawning areas during spawning season (December 1 to March 1). If dredging is necessary during this time, a qualified observer shall be provided aboard the dredging vessel. If the observer notes spawning activities within the dredging areas, dredging shall not occur within 200 m of the spawning site for a minimum of 2 weeks.	Insignificant.
Richmond Harbor Dredging Site	Biology	Turbidity from dredging could potentially result in reduced growth and biomass of eelgrass in Richmond Harbor.	There are no feasible measures to mitigate this impact, if it occurred.	Potentially significant.
Bay Farm Borrow Area	Water Quality	Placement of dredged material unsuitable for unconfined aquatic disposal could result in the short-term depletion of dissolved oxygen and the release of contaminants.	Proper cap design and post-project monitoring over time. Material placement will be controlled to ensure Basin Plan dissolved oxygen levels are met. Unsuitable material should be transported by bottom-dump haul barge.	Insignificant.
Richmond Harbor Dredging Site	Noise	Dredging would increase noise levels at three or four residences on Point Richmond above daytime and nighttime criteria of 60 dBA and 55 dBA, respectively.	Equip all internal combustion engine-driven equipment with mufflers that are in good working condition. Monitor noise when dredging equipment is in use near sensitive receptors. If noise exceeds regulatory criteria, limit dredging to 7 A.M. to 7 P.M. on weekdays and 7 A.M. to 7 P.M. on weekends and legal holidays.	Insignificant.

Table S-1. Summary of Potentially Significant Impacts¹
(page 5 of 9)

Applicable Site	Resource	Potentially Significant Impact Alternative 3 (Disposal at Bay Farm Borrow Area)	Mitigation Measure	Significance after Mitigation
Bay Farm Borrow Area	Water Quality	Placement of dredged material unsuitable for unconfined aquatic disposal could result in the short-term depletion of dissolved oxygen and the release of contaminants.	<p>Unsuitable sediment excavated by clamshell from the haul barge will not be allowed to overflow during dredging or in transit. Full haul barges will not be allowed to stand by for periods of time greater than 24 hours.</p> <p>Release of unsuitable material will be instantaneous below the water surface within the target area.</p> <p>Dump position for unsuitable and suitable material will be established by an electronic positioning system capable of +/- 3m accuracy.</p> <p>Bathymetric surveys will be performed monthly during placement, then twice yearly for 2 years, then yearly.</p> <p>Minimize the elapsed time between completion of contaminated material placement and capping.</p>	Insignificant.
Bay Farm Borrow Area	Water Quality	Placement of dredged material unsuitable for unconfined aquatic disposal could result in the short-term depletion of dissolved oxygen and the release of contaminants.	<p>Use cap placement methods (i.e., slow release) to avoid resuspension of contaminated material.</p>	Insignificant.
Richmond Harbor Dredging Site	Noise	Dredging would increase noise levels at three or four residences on Point Richmond above daytime and nighttime criteria of 60 dBA and 55 dBA, respectively.	<p>Apply uniform layers of cap material to ensure adequate coverage.</p> <p>Equip all internal combustion engine-driven equipment with mufflers that are in good working condition. Monitor noise when dredging equipment is 3,000 feet from sensitive receptors. If noise exceeds regulatory criteria, limit dredging to 7 A.M. to 7 P.M. on weekdays and 9 A.M. to 8 P.M. on weekends and legal holidays.</p>	Insignificant.

Table S-1. Summary of Potentially Significant Impacts
(page 6 of 9)

Applicable Site	Resource	Potentially Significant Impact	Mitigation Measure	Significance after Mitigation
Alternative 4 (Disposal at Montezuma Wetlands)				
Richmond Harbor Dredging Site/ Montezuma Wetlands	Air Quality	Dredging and disposal activities would exceed the BACT trigger levels of TOG/ROG, NO _x , and SO ₂ .	Use BACT to control NO _x emissions. Use reformulated diesel fuel to reduce TOG/ROG and SO ₂ emissions.	SO ₂ emissions would be insignificant. TOG/ROG, and NO _x emissions would remain insignificant.
Richmond Harbor Dredging Site	Biology	Increased turbidity from dredging could adversely affect herring spawning in Richmond Harbor.	Dredges shall attempt to avoid spawning areas during spawning season (December 1 to March 1). If dredging is necessary during this time, a qualified observer shall be provided aboard the dredging vessel. If the observer notes spawning activities within the dredging area, dredging shall not occur within 200 m of the spawning site for a minimum of 2 weeks.	Insignificant.
Richmond Harbor Dredging Site	Biology	Turbidity from dredging could potentially result in reduced growth and biomass of eelgrass in Richmond Harbor.	There are no feasible measures to mitigate this impact, if it occurred.	Potentially significant.
Richmond Harbor Dredging Site	Noise	Dredging would increase noise levels at three or four residences on Point Richmond above daytime and nighttime criteria of 60 dBA and 55 dBA, respectively.	Equip all internal combustion engine-driven equipment with mufflers that are in good working condition. Monitor noise when dredging equipment is 3,000 feet from sensitive receptors. If noise exceeds regulatory criteria, limit dredging to 7 A.M. to 7 P.M. on weekdays and 9 A.M. to 8 P.M. on weekends and legal holidays.	Insignificant.
Alternative 5 (Disposal at Parking Lot, SF-DODS)				
Richmond Harbor Dredging Site, Parking Lot, SF-DODS	Air Quality	Emissions from dredging and disposal activities would exceed the Best Available Control Technology (BACT) trigger levels for TOG/ROG, CO, NO _x , SO ₂ , and PM ₁₀ .	Use BACT to control NO _x emissions. Use reformulated diesel fuel to reduce TOG/ROG and SO ₂ emissions.	SO ₂ emissions would be insignificant. TOG/ROG, CO, NO _x , and PM ₁₀ emissions would remain significant.

Table S-1. Summary of Potentially Significant Impacts
(page 7 of 9)

Applicable Site	Resource	Potentially Significant Impact Alternative 5 (Disposal at Parking Lot, SF-DODS)	Mitigation Measure	Significance after Mitigation
Parking Lot	Geology and Seismicity	Release of contaminants at Parking Lot site due to berm failure during dewatering.	Use standard engineering measures to construct berm to contain any free water present should berm fail during a seismic event.	Insignificant.
Richmond Harbor Dredging Site	Biology	Increased turbidity from dredging could adversely affect herring spawning in Richmond Harbor.	Dredges shall attempt to avoid spawning areas during spawning season (December 1 to March 1). If dredging is necessary during this time, a qualified observer shall be provided aboard the dredging vessel. If the observer notes spawning activities within the dredging area, dredging shall not occur within 200 m of the spawning site for a minimum of 2 weeks.	Insignificant.
Richmond Harbor Dredging Site	Biology	Turbidity from dredging could potentially result in reduced growth and biomass of eelgrass in Richmond Harbor.	There are no feasible measures to mitigate this impact, if it occurred.	Potentially significant.
Richmond Harbor Dredging Site	Noise	Dredging would increase noise levels at three or four residences on Point Richmond above daytime and nighttime criteria of 60 dBA and 55 dBA, respectively.	Equip all internal combustion engine-driven equipment with mufflers that are in good working condition. Monitor noise when dredging equipment is 3,000 feet from sensitive receptors. If noise exceeds regulatory criteria, limit dredging to 7 A.M. to 7 P.M. on weekdays and 9 A.M. to 8 P.M. on weekends and legal holidays.	Insignificant.
Parking Lot	Noise	If disposal occurred at night, noise could exceed 55 dBA at residences on Sandpiper Spit.	Equip all internal combustion engine-driven equipment with mufflers that are in good working condition. Limit disposal activities to the daytime (7 A.M. to 7 P.M. on weekdays and 9 A.M. to 8 A.M. on legal holidays).	Insignificant.

Table S-1. Summary of Potentially Significant Impacts
(page 8 of 9)

Applicable Site	Resource	Potentially Significant Impact	Mitigation Measure	Significance after Mitigation
Montezuma Wetlands, SF-DODS	Air Quality	Emissions from dredging and disposal activities would exceed the Best Available Control Technology (BACT) trigger levels for TOG/ROG, CO, NO _x , SO ₂ , and PM ₁₀ .	Use BACT to control NO _x emissions. Use reformulated diesel fuel to reduce TOG/ROG and SO ₂ emissions.	SO ₂ emissions would be insignificant. TOG/ROG, CO, NO _x , and PM ₁₀ emissions would remain significant.
			Dredges shall attempt to avoid spawning areas during spawning season (December 1 to March 1). If dredging is necessary during this time, a qualified observer shall be provided aboard the dredging vessel. If the observer notes spawning activities within the dredging area, dredging shall not occur within 200 m of the spawning site for a minimum of 2 weeks.	Insignificant.
Richmond Harbor Dredging Site	Biology	Increased turbidity from dredging could adversely affect herring spawning in Richmond Harbor.	There are no feasible measures to mitigate this impact, if it occurred.	Potentially significant.
Richmond Harbor Dredging Site	Biology	Turbidity from dredging could potentially result in reduced growth and biomass of eelgrass in Richmond Harbor.	Equip all internal combustion engine-driven equipment with mufflers that are in good working condition. Monitor noise when dredging equipment is 3,000 feet from sensitive receptors. If noise exceeds regulatory criteria, limit dredging to 7 A.M. to 7 P.M. on weekdays and 9 A.M. to 8 P.M. on weekends and legal holidays.	Insignificant.
Richmond Harbor Dredging Site	Noise	Dredging would increase noise levels at three or four residences on Point Richmond above daytime and nighttime criteria of 60 dBA and 55 dBA, respectively.	Use BACT to control NO _x emissions. Use reformulated diesel fuel to reduce TOG/ROG and SO ₂ emissions.	SO ₂ emissions would be insignificant. TOG/ROG, CO, NO _x , and PM ₁₀ emissions would remain significant.
			Use BACT to control NO _x emissions. Use reformulated diesel fuel to reduce TOG/ROG and SO ₂ emissions.	SO ₂ emissions would be insignificant. TOG/ROG, CO, NO _x , and PM ₁₀ emissions would remain significant.

Table S-1. Summary of Potentially Significant Impacts
(page 9 of 9)

Applicable Site	Resource	Potentially Significant Impact	Mitigation Measure	Significance after Mitigation
Parking Lot	Geology and Seismicity	Release of contaminants due to rupture of containment structure.	Proper engineering design to accommodate the MCE on the Hayward Fault.	Insignificant.
Richmond Harbor Dredging Site	Biology	Increased turbidity from dredging could adversely affect herring spawning in Richmond Harbor.	Dredges shall attempt to avoid spawning areas during spawning season (December 1 to March 1). If dredging is necessary during this time, a qualified observer shall be provided aboard the dredging vessel. If the observer notes spawning activities within the dredging areas, dredging shall not occur within 200 m of the spawning site for a minimum of 2 weeks.	Insignificant.
Richmond Harbor Dredging Site	Biology	Turbidity from dredging could potentially result in reduced growth and biomass of eelgrass in Richmond Harbor.	There are no feasible measures to mitigate this impact, if it occurred.	Potentially significant.
Richmond Harbor Dredging Site	Noise	Dredging would increase noise levels at three or four residences on Point Richmond above daytime and nighttime criteria of 60 dBA and 55 dBA, respectively.	Equip all internal combustion engine-driven equipment with mufflers that are in good working condition. Monitor noise when dredging equipment is 3,000 feet from sensitive receptors. If noise exceeds regulatory criteria, limit dredging to 7 A.M. to 7 P.M. on weekdays and 9 A.M. to 8 P.M. on weekends and legal holidays.	Insignificant.
Parking Lot	Noise	If disposal occurred at night, noise could exceed 55 dBA at residences on Sandpiper Spit.	Equip all internal combustion engine-driven equipment with mufflers that are in good working condition. Limit disposal activities to the daytime (7 A.M. to 7 P.M. on weekdays and 9 A.M. to 8 A.M. on legal holidays).	Insignificant.

Note: 1. Impacts of dredged material disposal at SF-DODS and the Montezuma Wetlands Project have been or are being addressed in separate environmental reviews. Those impacts have been summarized in Chapter 4 of this SEIS/EIR but are not attributable to the Richmond Harbor project because mitigations have been developed (in the case of SF-DODS) or are being developed (in the case of Montezuma Wetlands) for each project independently. These impacts are therefore not included in this summary table.

**CALIFORNIA REGIONAL WATER QUALITY CONTROL PLAN
SAN FRANCISCO BAY REGION**

SELF-MONITORING PROGRAM

FOR

**PORT OF RICHMOND
POINT POTRERO
DREDGE DISPOSAL SITE**

Part A

**Refer to applicable sections of Part A.
Standard Monitoring Requirements**

CALIFORNIA REGIONAL WATER QUALITY CONTROL PLAN
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR
PORT OF RICHMOND
POINT POTRERO
DREDGE DISPOSAL SITE

Part B

This part of the Self Monitoring Program (SMP) contains terms and definitions specific to the permitted discharge. This monitoring program is for stormwater runoff. Dry weather discharge will be to the POTW. If the Port wishes to switch to a dry weather discharge to the San Francisco Bay, then the monitoring schedule should be adjusted and this program reissued.

I. DESCRIPTION OF SAMPLING STATIONS

A. RECEIVING WATERS (Return Flow)

- A.1. Existing storm drain outfall located east of the site on the inner harbor.
- A.2. New storm drain outfall located south of the site on the Potrero Reach of the ship channel.

Samples from A.1. and A.2. to be from the end of outfall pipe during a period of maximal stormwater runoff, or from a sampling port located within the storm drain near the discharge point.

B. RECEIVING WATERS

- B.1 A sampling point at least 100 feet, but not more than 3,000 feet offshore of the outfall structure discharge to the receiving water. Distance is in linear feet from discharge point. Sample to be taken at mid-depth of water column.

II. LAND OBSERVATIONS

- L# Series Visual observations at points equidistant along the site perimeter and along levees not to exceed 2,00 feet spacing.

III. SCHEDULE OF SAMPLING, ANALYSIS AND OBSERVATIONS

A. The following parameters shall be measured as a unique program established specifically for the discharge described in the corresponding permit.

Parameter	"A" Stations	"B" Stations	"L" Stations
<i>Type of Sample</i>	<i>Grab</i>	<i>Grab</i>	<i>Observations</i>
Settleable Matter (ml/1/hr)	Daily	Once per discharge episode or Weekly	
Standard Observations			Weekly

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Regional Board,s Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 96-082
2. Was adopted by the Board on June 19, 1996.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the Port, and revisions will be ordered by Executive Officer or Regional Board.


 for
 LORETTA K. BARSAMIAN
 EXECUTIVE OFFICER