

**STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

ORDER NO. R4-2008-0061

**WASTE DISCHARGE REQUIREMENTS
FOR
PORT OF LOS ANGELES
(BERTHS 145-147 WHARF IMPROVEMENT PROJECT)
(FILE NO. 08-081)**

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) finds:

1. The Port of Los Angeles (POLA) has filed an application for Waste Discharge Requirements for dredging and disposal operations and wharf improvements at Berths 145-147 within Los Angeles Harbor, Los Angeles County (Figure 1).
2. The proposed wharf improvements for Berths 145-147 (Phase I) will consist of demolishing the existing timber wharf and portions of the existing concrete wharf (Figure 2), dredging to a depth of -65 feet Mean Lower Low Water (MLLW) in certain areas of the existing slope (Figure 3), constructing a new slope and dike, installing 705 feet of new wharf and seismically upgrading 1,022 feet of existing wharf to provide -53 MLLW depth at the Pier Head line. The proposed project will include removal of approximately 770 existing timber piles and 360 existing concrete piles, removal of approximately 85 feet of existing sheet pile wall and dredging of approximately 260,500 cubic yards of sediments to allow creation of the new slope and dike, and increase berthing depths to -53 feet MLLW.

In the future, Phase II improvements will be implemented to seismically upgrade the existing wharf at Berths 136-139. The details have not been finalized, but the project likely will require dredging of approximately 27,200 cubic yards to deepen the berths to -53 feet MLLW, as well as removal of existing wharf and concrete piles and installation of new facilities. POLA plans to request modifications to these Waste Discharge Requirements in the future as necessary to accommodate the Phase II activities.

3. A sediment characterization study was conducted in 2007 to assess sediment quality in the Berths 145-147 area. The proposed dredging area was divided into five units for the characterization study. Four of the five testing units were tested for physical parameters, bulk sediment chemistry, toxicity and bioaccumulation potential. The remaining testing unit was located deep in the shoreline and was tested for bulk sediment chemistry only. Sample collection was conducted using a

August 6, 2008

vibracore for marine sediments (two testing units) and an angled- or upright-auger drill for shoreline sediments (three testing units). Marine sediment cores were collected at five locations within Site 1 and combined into a single composite for analysis, and at six locations within Site 2 and combined into a single composite for analysis. Shoreline sediments were collected using a rig-mounted rotary boring drill and sediments were divided such that three strata were represented: Upper Stratum (+5.6 feet MLLW to -20 feet MLLW), Lower Stratum (-20 feet MLLW to -40 feet MLLW) and Native Stratum (below -40 feet MLLW). Grain size and chemistry results are presented in Table 1.

Table 1. Grain size and sediment chemistry results from marine sediment and shoreline sediment sampling (composite samples).

Constituent	Site 1	Site 2	Upper Stratum	Lower Stratum	Native Stratum Core B1	Native Stratum Core B2
Grain size	5.2% sand 66.1 % silt 28.8% clay	18.6% sand 58.2 % silt 23.3% clay	52.1% sand 37.3 % silt 10.6% clay	29.5% sand 50.8 % silt 19.7% clay	Not analyzed	Not analyzed
Arsenic	6.59 ppm	10.1 ppm	4.18 ppm	7.42 ppm	7.46 ppm	8.34 ppm
Cadmium	0.239 ppm	0.445 ppm	0.14 ppm	0.176 ppm	0.178 ppm	0.189 ppm
Chromium	33.8 ppm	48.5 ppm	18 ppm	32.2 ppm	36 ppm	44.7 ppm
Copper	41.2 ppm	69.9 ppm	18.9 ppm	30.9 ppm	34.3 ppm	37.7 ppm
Lead	20.5 ppm	38 ppm	10.2 ppm	7.64 ppm	9.09 ppm	10.6 ppm
Mercury	0.164 ppm	0.449 ppm	0.0421 ppm	0.0635 ppm	0.0853 ppm	0.0775 ppm
Nickel	18.5 ppm	29.7 ppm	12.7 ppm	22.8 ppm	25.4 ppm	30.1 ppm
Selenium	ND	ND	ND	1.09 ppm	ND	0.867 ppm
Silver	ND	0.212 ppm	ND	ND	0.146 ppm	0.155 ppm
Zinc	139 ppm	164 ppm	136 ppm	133 ppm	109 ppm	158 ppm
Total Butyltins	30 ppm	37 ppm	ND	ND	ND	ND
Total DDTs	5.4 ppb	11 ppb	10.9 ppb	ND	ND	ND
Total PCBs	24 ppb	54 ppb	ND	ND	ND	ND
Total PAHs	1383 ppb	2474 ppb	903 ppb	450 ppb	ND	966 ppb

ppm = parts per million; ppb = parts per billion; ND = non-detected; DDT = dichloro-diphenyl-trichloroethane; PCB = polychlorinated biphenyls; PAH = polynuclear aromatic hydrocarbons

Based on the initial bulk sediment chemistry and toxicity analyses, POLA determined that it would be useful to collect additional samples to characterize contaminant levels in individual cores from Site 2 and the Lower Stratum area, to see if discrete areas could be categorized as clean or contaminated. Chemistry results are presented for Site 2 in Table 2 and for the Lower Stratum in Table 3.

Table 2. Grain size and sediment chemistry results from Site 2 (individual core samples).

Constituent	Core 2-1	Core 2-2	Core 2-3	Core 2-4	Core 2-5	Core 2-6
Arsenic	12.1 ppm	11.1 ppm	12.9 ppm	10.8 ppm	9.05 ppm	12.6 ppm
Cadmium	0.542 ppm	0.4 ppm	0.449 ppm	0.577 ppm	0.303 ppm	0.718 ppm
Chromium	59 ppm	47.2 ppm	45.9 ppm	59.7 ppm	39.1 ppm	69.2 ppm
Copper	79.3 ppm	57.8 ppm	69.2 ppm	158 ppm	53.2 ppm	104 ppm
Lead	46 ppm	36.7 ppm	22.3 ppm	48.4 ppm	22.7 ppm	72.2 ppm
Mercury	0.432 ppm	0.345 ppm	0.165 ppm	0.698 ppm	0.165 ppm	0.747 ppm
Nickel	32.3 ppm	30.1 ppm	34.8 ppm	35 ppm	26.4 ppm	33.3 ppm
Selenium	1.12 ppm	ND	1.17 ppm	ND	0.785 ppm	1.35 ppm
Silver	0.294 ppm	0.191 ppm	0.191 ppm	0.213 ppm	0.144 ppm	0.334 ppm
Zinc	189 ppm	163 ppm	154 ppm	264 ppm	144 ppm	223 ppm
Total Butyltins	91 ppm	32 ppm	39 ppm	340 ppm	66 ppm	128 ppm
Total DDTs	16 ppb	12 ppb	7.5 ppb	22 ppb	12 ppb	44 ppb
Total PCBs	81 ppb	34 ppb	27 ppb	210 ppb	50 ppb	120 ppb
Total PAHs	3484 ppb	3395 ppb	1357 ppb	15742 ppb	1627 ppb	7885 ppb

ppm = parts per million; ppb = parts per billion; ND = non-detected; DDT = dichloro-diphenyl-trichloroethane; PCB = polychlorinated biphenyls; PAH = polynuclear aromatic hydrocarbons

Table 3. Sediment chemistry results from Lower Stratum and Native Stratum (individual core samples).

Constituent	B1-A Lower Stratum	B2-A Lower Stratum
Arsenic	8.46 ppm	9.14 ppm
Cadmium	0.253 ppm	0.196 ppm
Chromium	25.7 ppm	35.6 ppm
Copper	36.4 ppm	37.7 ppm
Lead	9.10 ppm	9.06 ppm
Mercury	0.0706 ppm	0.0659 ppm
Nickel	22.6 ppm	27.2 ppm
Selenium	0.836 ppm	0.898
Silver	ND	ND
Zinc	106 ppm	113 ppm
Total Butyltins	ND	ND
Total DDTs	ND	ND
Total PCBs	ND	ND
Total PAHs	130 ppb	2611 ppb

ppm = parts per million; ppb = parts per billion; ND = non-detected; DDT = dichloro-diphenyl-trichloroethane; PCB = polychlorinated biphenyls; PAH = polynuclear aromatic hydrocarbons

4. Sediments consisted primarily of fine sands and silts and generally contained low levels of contaminants. Site 2 and Lower Stratum sediments generally exhibited slightly elevated chemical concentrations for arsenic, copper, mercury, nickel, zinc, as well as toxic effects for amphipods and the potential for PAH bioaccumulation. Site 2 sediments also exhibited elevated chemical concentrations for DDTs, PCBs and PAHs. Evaluation of the individual sediment core results indicate that these problems are confined to the berth-side shoal within Site 2 and contiguous sediments located in the southern half of the Lower Stratum and Native stratum shoreline sediments. Consequently, sediments from these areas would not meet the criteria for offshore ocean disposal, but the sediments in the northern portion of this area would be suitable for ocean disposal.

The United States Environmental Protection Agency has approved disposal of approximately 159,800 cubic yards (cy) of clean dredged material from Site 1 (18,500 cy), the Upper Stratum of the shoreline area (88,700 cy), and the northern half of Lower and Native Strata (28,600 and 24,000 cy, respectively) of the shoreline area (Figure 4) for offshore ocean disposal at the LA-2 Ocean Disposal Site (Figure

- 5). Approximately 100,700 cubic yards of dredged material unsuitable for ocean disposal from Site 2 (36,600 cy) and the southern half of the Lower Stratum and Native Stratum (37,200 and 26,900 cy, respectively) of the shoreline sediment within Site 2 (Figure 4) would be disposed of at the Anchorage Road Soil Storage Site located within Los Angeles Harbor (Figure 6). This site has been used several times in the past for disposal of dredged material from POLA maintenance dredging or capital improvement projects.
5. The United States Corps of Engineers (COE) received application number 2003-01142-SDM for proposed dredging and disposal for the Berths 145-147 Wharf Improvement Project. Due to modifications to the proposed project, the public comment period began on June 29, 2007 and closed on September 26, 2007. The COE expects to issue a final permit in August, 2008.
 6. The Los Angeles Board of Harbor Commissioners certified the Environmental Impact Report for the Berths 136-147 Container Terminal Project on December 6, 2007.
 7. The Regional Board adopted a revised Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties on June 13, 1994. The Water Quality Control Plan contains water quality objectives for Los Angeles-Long Beach Harbor. The requirements contained in this Order as they are met will be in conformance with the goals of the Water Quality Control Plan.
 8. The beneficial uses of Los Angeles-Long Beach Harbor (All Other Inner Areas) are: industrial process supply; navigation, water contact recreation (potential), non-contact water recreation, commercial and sport fishing, marine habitat, shellfish harvesting (potential), and preservation of rare, threatened or endangered species (one or more species utilize waters or wetlands for foraging and/or nesting).
 9. With proper management of the dredging and disposal operations, the project is not expected to release significant levels of contaminants to the Harbor waters or other State waters nor adversely impact beneficial uses.
 10. Dredging and disposal operations will be accomplished through the use of temporary equipment. The Waste Discharge Requirements imposed below will not result in any significant increase in energy consumption.

The Regional Board has notified the Port of Los Angeles and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for this discharge and has provided them with an opportunity to submit their written views and recommendations.

The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge and to the tentative requirements.

IT IS HEREBY ORDERED that the Port of Los Angeles, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act as amended, and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Requirements

1. The removal and placement of dredged/excavated material shall be managed such that the concentrations of toxic pollutants in the water column, sediments or biota shall not adversely affect beneficial uses.
2. Enclosed bay and estuarine communities and populations, including vertebrate, invertebrate and plant species, shall not be degraded as a result of the discharge of waste.
3. The natural taste and odor of fish, shellfish or other enclosed bay and estuarine resources used for human consumption shall not be impaired as a result of the discharge of waste.
4. Toxic pollutants shall not be discharged at levels that will bioaccumulate in aquatic resources to levels which are harmful to human health.
5. There shall be no acute toxicity or chronic toxicity in ambient waters as a result of the discharge of waste.
6. Dredging, excavation or disposal of dredge spoils shall not cause any of the following conditions in the receiving waters:
 - a. The formation of sludge banks or deposits of waste origin that would adversely affect the composition of the bottom fauna and flora, interfere with the fish propagation or deleteriously affect their habitat, or adversely change the physical or chemical nature of the bottom.
 - b. Turbidity that would cause substantial visible contrast with the natural appearance of the water outside the immediate area of operation.
 - c. Discoloration outside the immediate area of operation.
 - d. Visible material, including oil and grease, either floating on or

suspended in the water or deposited on beaches, shores, or channel structures outside the immediate area of operation.

- e. Objectionable odors emanating from the water surface.
- f. Depression of dissolved oxygen concentrations below 5.0 mg/l at any time outside the immediate area of operation.
- g. Any condition of pollution or nuisance.

B. Provisions

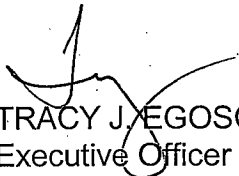
1. The Discharge Requirements specified above are valid only for dredging and disposal of a maximum of 260,500 cubic yards of sediment and soil as proposed by POLA.
2. POLA shall notify the Regional Board immediately by telephone of any adverse conditions in receiving waters or adjacent areas resulting from the removal of dredge materials, disposal operations; written confirmation shall follow within one week.
3. A copy of this Order shall be made available at all times to project construction personnel.
4. POLA shall provide the following information to the Regional Board:
 - a. A copy of the final permit issued by the United States Corps of Engineers for the dredge and disposal operations.
 - b. The scheduled date of commencement of each dredging and disposal operation at least one week prior to initiation of dredging.
 - c. Notice of termination of dredging and disposal operations, within one week following the termination date.
5. POLA shall submit, under penalty of perjury, technical reports to the Regional Board in accordance with specifications prepared by the Executive Officer.
6. In accordance with section 13260(c) of the Water Code, POLA shall file a report of any material change or proposed change in the character, location, or volume of the waste.

7. These requirements do not exempt POLA from compliance with any other laws, regulations, or ordinances which may be applicable: they do not legalize this waste discharge, and they leave unaffected any further restraint on the disposal of wastes at this site which may be contained in other statutes or required by other agencies.
8. In accordance with Water Code section 13263(g), these requirements shall not create a vested right to continue to discharge and are subject to rescission or modification. All discharges of waste into waters of the State are privileges, not rights.
9. This Order includes Attachment N: "Standard Provisions, General Monitoring and Reporting Requirements" ("Standard Provisions") and the attached Monitoring and Reporting Requirements, both of which are incorporated herein by reference. If there is any conflict between provisions stated hereinbefore and said "Standard Provisions", those provisions stated hereinbefore prevail. If there is any conflict between requirements stated in the attached Monitoring and Reporting Program and said "Standard Provisions", the former shall prevail.
10. This Order fulfills the requirements for a Clean Water Act Section 401 Water Quality Certification for the proposed project. Pursuant to section 3860 of title 23 of the California Code of Regulations (23 CCR), the following three standard conditions shall apply to this project:
 - a. this certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to section 13330 of the California Water Code and Article 6 (commencing with 23 CCR section 3867);
 - b. this certification action is not intended and shall not be construed to apply to any activity involving a hydroelectric facility and requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to 23 CCR subsection 3855(b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought;

- c. this certification is conditioned upon total payment of any fee required pursuant to 23 CCR division 3, chapter 28, and owed by the applicant.

11. This Order shall expire on December 31, 2011.

I, Tracy J. Egoscue, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on September 11, 2008.



TRACY J. EGOSCUE
Executive Officer

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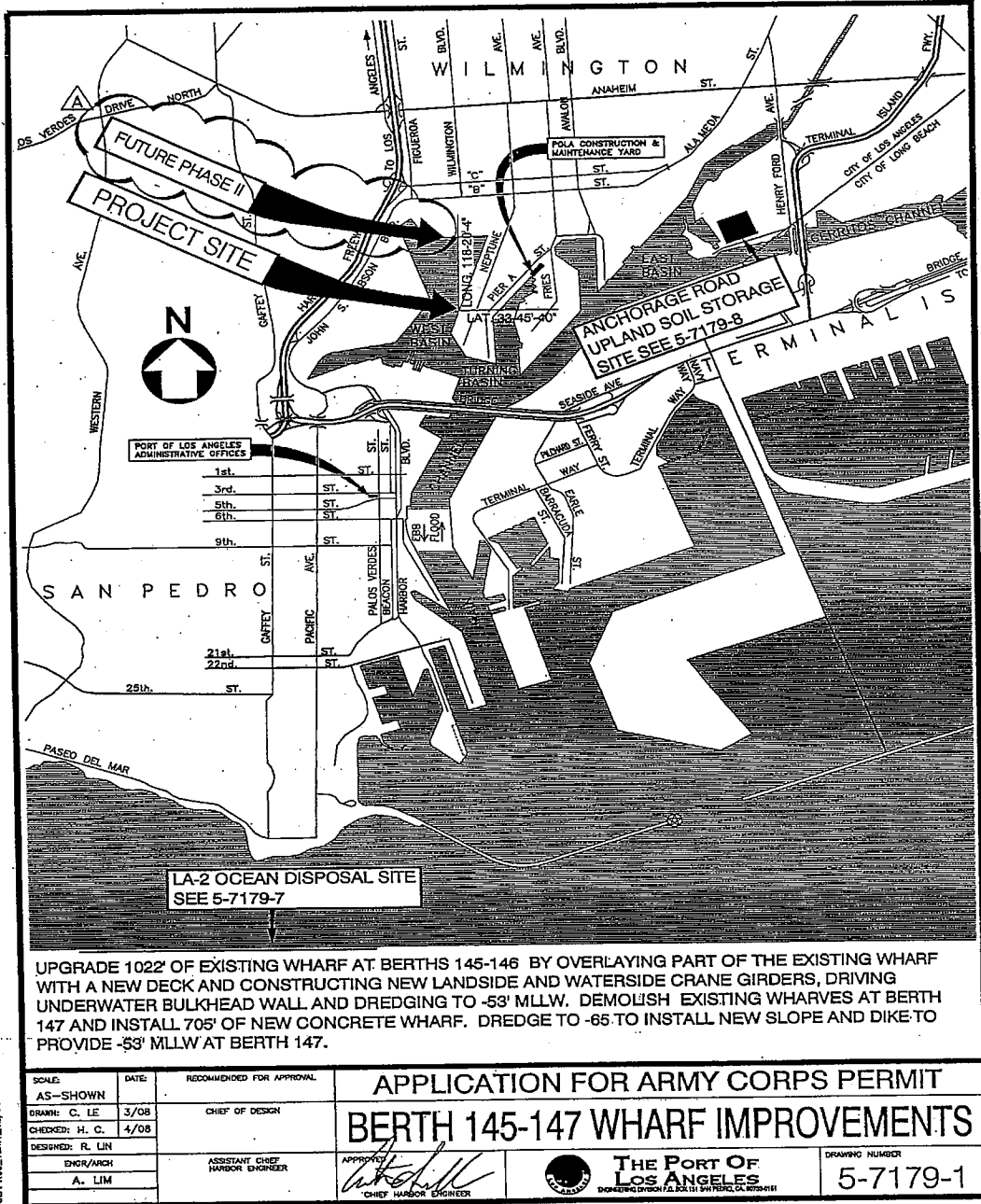


Figure 1. Location map for Berths 145-147 Wharf Improvements project in Los Angeles Harbor.

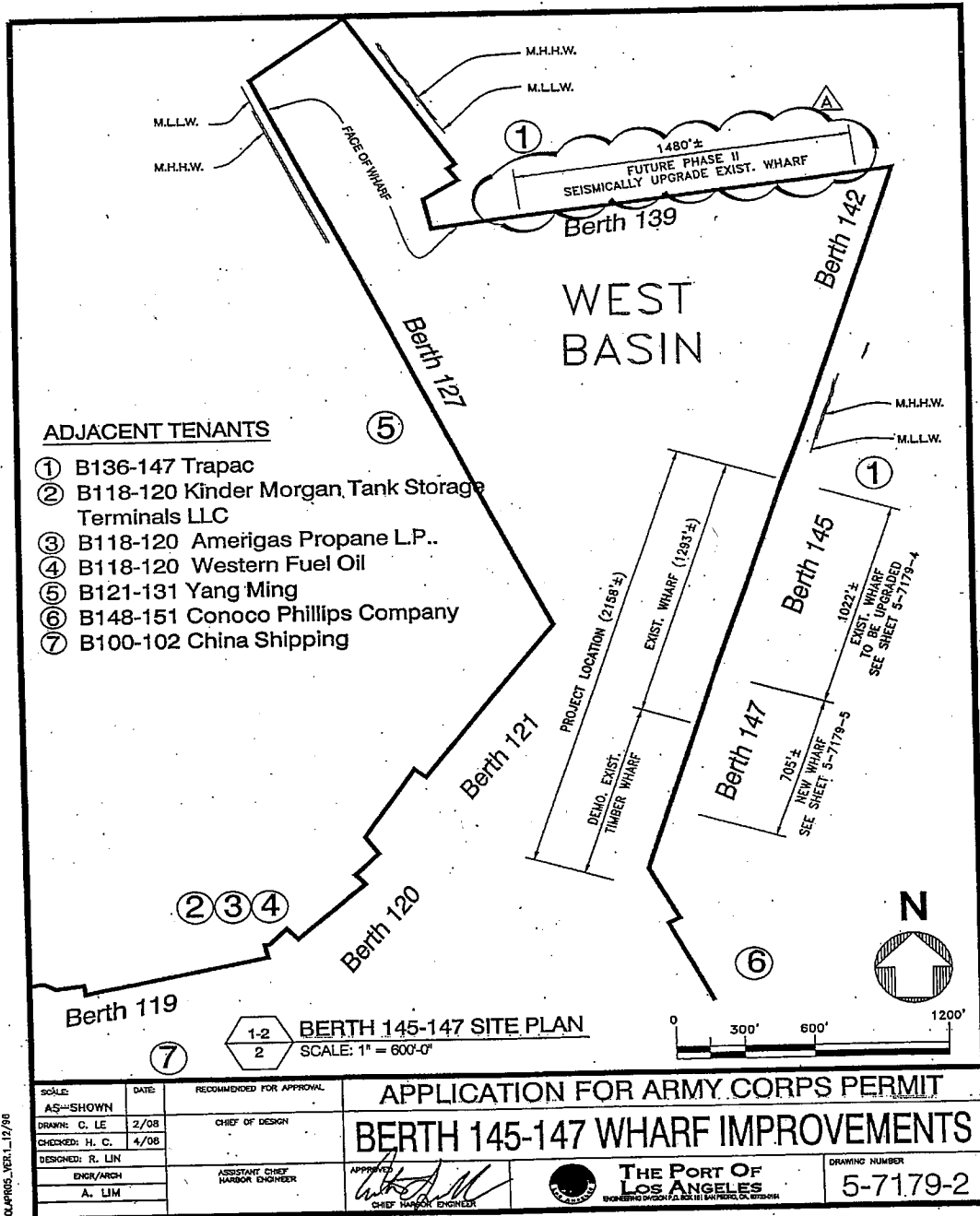


Figure 2. Demolition and new construction for Berths 145-147 Wharf Improvements project in Los Angeles Harbor.

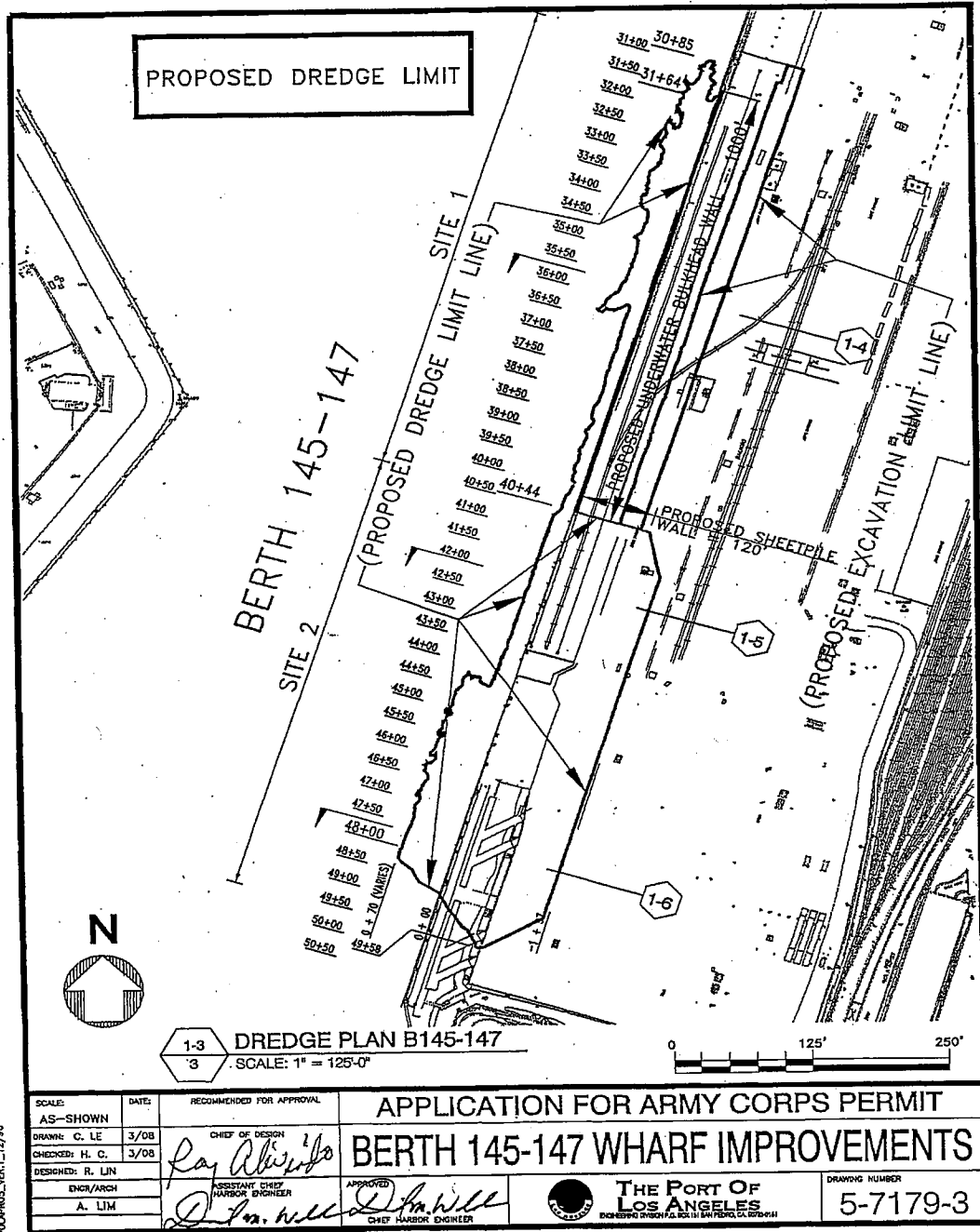


Figure 3. Areas to be dredged for Berths 145-147 Wharf Improvements project in Los Angeles Harbor.

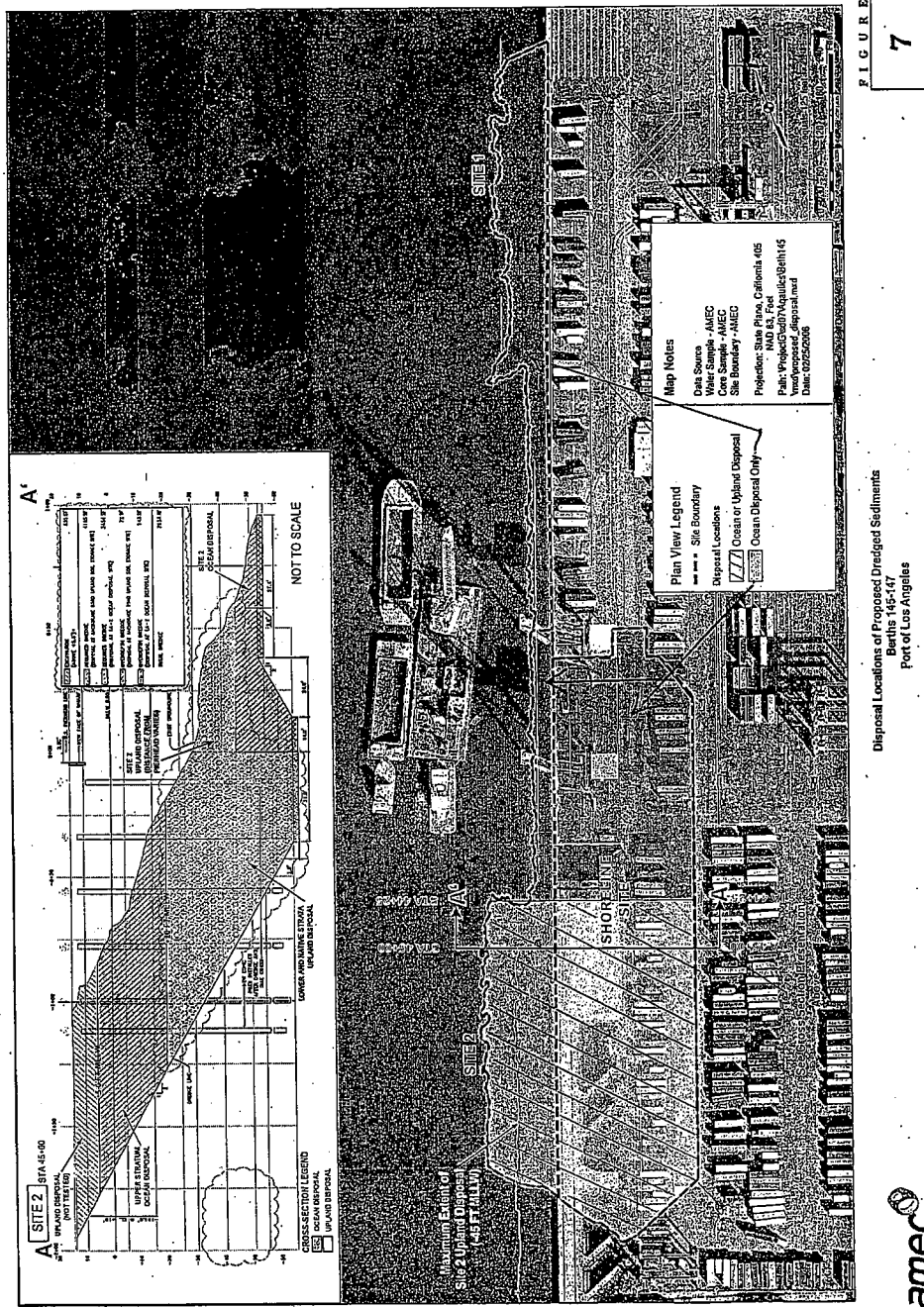


FIGURE
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Disposal Locations of Proposed Dredged Sediments
Berths 145-147
Port of Los Angeles



Figure 4. Disposal alternatives for dredged material from Berths 145-147 Wharf Improvements Project in Los Angeles Harbor.

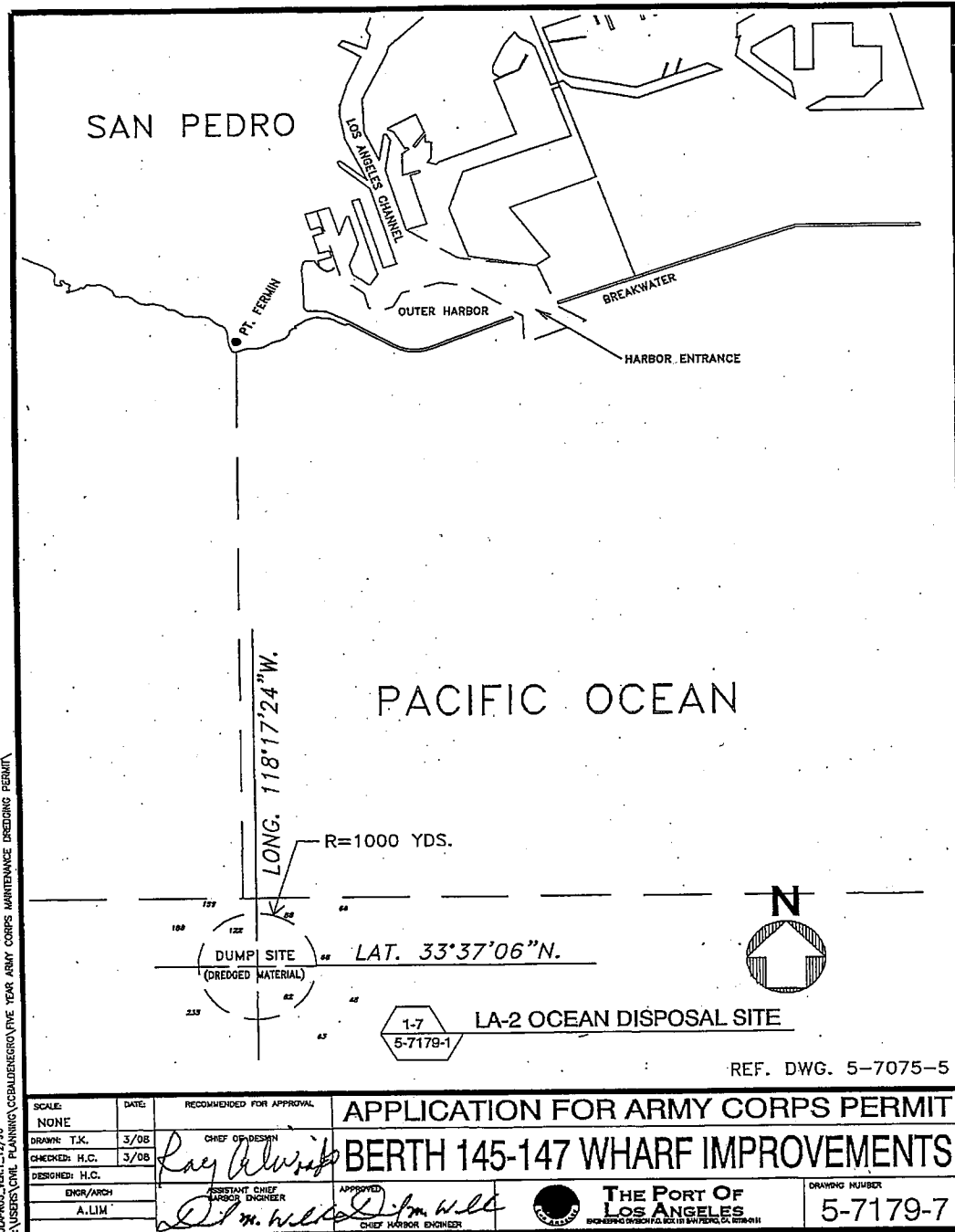


Figure 5. Location of LA-2 Offshore Ocean Disposal Site.

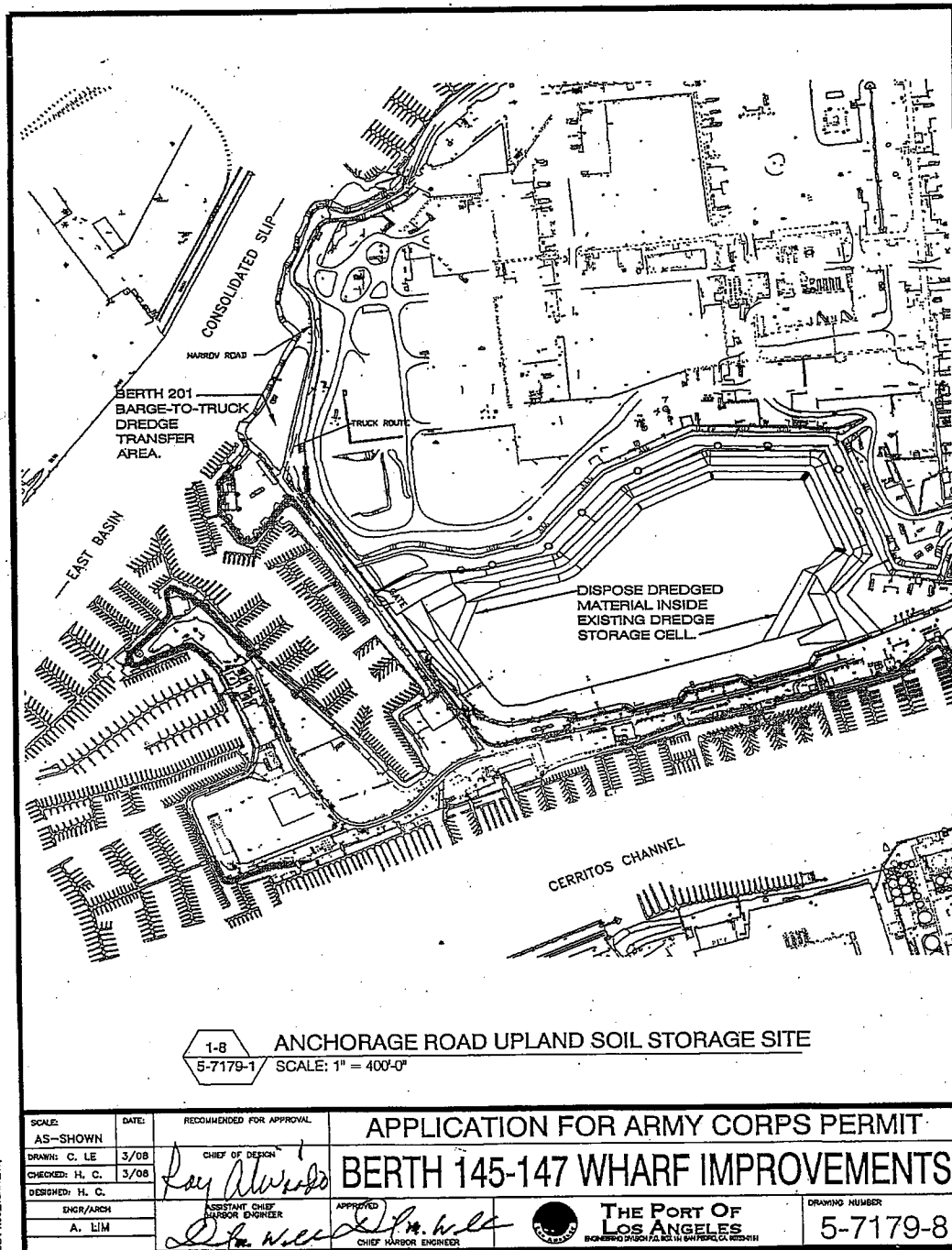


Figure 6. Location of Anchorage Road Soil Storage Site in Los Angeles Harbor.