CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 95-158

FINAL WASTE DISCHARGE REQUIREMENTS FOR:

City of Oakland,
Department of Public Works
Dredging of Lake Merritt
Temporary Dredged Material Storage and Handling
Oakland, Alameda County

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

1. The City of Oakland (hereinafter the Discharger) submitted a Report of Waste Discharge, dated June 22, 1995, for discharge of decant water from dredging of Lake Merritt. The Discharger proposes to dredge the lake to approximately 14 feet below mean tide (elevation at minus 11 feet NGVD).

2. The Purpose of this project is to remove sediment and leaf debris from regions of the Lake where major storm drains (former creeks) discharge to the Lake. The Discharger states that dredging is required to improve water quality and maintain flood control capacity.

3. The lake is located in downtown Oakland on property owned by the Discharger. Recreational and flood control functions of the lake are managed by the Office of Parks and Recreation and the Alameda Flood Control and Water Conservation District, respectively.

4. The Corps of Engineers has issued a Public Notice for this dredging project on April 24, 1995. That Public Notice, Number 20733E75 states that the project requires state Water Quality Certification, pursuant to the Clean Water Act.

5. Pursuant to Title 23, California Code of regulations Section 3857, this action is equivalent to a waiver of water quality certification.

6. The Discharger proposes to dredge approximately 22,300 cubic yards of dredged material from the lake in a single episode.

7. The Discharger proposes to dispose of the dredged material at an upland permitted landfill or permitted waste recycling facility.

8. These requirements are for the discharge of decant water from dredge material handling and disposal operations.

9. The accumulation of sediment and debris from the storm drains and creeks has caused severe degradation of the Lake's water and a odor and visual nuisance condition.

10. The regions of the Lake which require dredging are the Trestle Glen and Glen Echo arms(see attached map). These portions of the Lake accumulate fine sediment and debris which flows from two major storm drains.

11. The Discharger has requested permission to either place material in an upland drying and rehandling pond prior to transport offsite or transport material directly from the barges to an off-site facility (e.g., permitted landfill).

12. Due to the park setting and otherwise urban nature area surrounding the Lake, no suitable location may exist for a dredged material drying pond. Therefore, the Discharger requests that dewatering of sediments be allowed to occur on the barge. Dredging operations will include measures to control and reduce turbidity effects within the project area.

13. Decant or return-flow water will be discharged back into the lake at a maximum rate of 40,390 gallons per day. Depending upon the dredging equipment employed, considerably less decant water may result.

14. The Discharger has submitted a report of dredged material testing (Moju Environmental, dated April 3, 1995) which indicate that decant water resulting from this project will not be acutely toxic.

15. The Discharger has stated that dredging of the Trestle Glen arm must be completed prior to November so as not to interfere with the winter nesting of waterfowl.

16. The beneficial uses of the Lake Merritt water body, according to the Basin Plan are:

    a. Water contact recreation.
    b. Non-contact water recreation
    c. Wildlife Habitat
    d. Estuarine Habitat
    e. Fish Spawning

17. The Board, on December 17, 1986, adopted a revised Water Quality Control Plan (Basin Plan) which contains water quality objectives for Lake Merritt. The

requirements of this document are consistent with that Plan.

18. 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.

19. This project is maintenance dredging and is therefore categorically exempt from CEQA pursuant to section 15304(g) Title 14, California Code of Regulations.

20. The Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge.

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

22. IT IS HEREBY ORDERED that the Discharger, 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 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 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. The Discharger has the option to dewater and handle dredged material either on shore or on a barge. For shore-based dewatering a containment structure or pond which may result in a flow of waste water to the Lake. For barge-based dewatering, there will be drainage off the barge into the Lake. Silt curtains will be employed to control migration of the plume resulting from dredging.

2. The upland ponds and containment area must have at least two feet of freeboard.

3. The dredge site shall be contained by a silt curtain, or similar device. The purpose of the silt curtains is to minimize and localize the adverse effects of the dredging and dewatering activities. The curtains or similar device are intended to contain resuspended dredged material and to minimize effects of turbidity and suspend solids to the project area

4. In the event that barges need to be removed from the pro during dredging, the containment structure shall be compris

curtains or similar devices which feature an integral lock system.

5. In all cases the immediate dredging area shall be contained by at least one silt curtain.

6. Dewatering of dredged material in ponds shall be controlled by gates, valves, weir boards or similar devices.

C. Effluent Limitations

1. Effluent limitations apply at the point of discharge for the upland ponds and containment structures and at the edge of the dredging project area for barge return flow water.

CONSTITUENT	INSTANTANEOUS MAXIMUM LIMIT (ppb)	BASIS FOR LIMITATION
Arsenic	20	Basin Plan
Cadmium	10	Basin Plan
Chromium (VI)	11	Basin Plan
Copper	20	Basin Plan
Cyanide	25	Basin Plan
Lead	5.6	Basin Plan
Mercury	1.0	Basin Plan
Nickel	7.1	Basin Plan
Silver	2.3	Basin Plan
Zinc	58	Basin Plan
Phenols	500	Basin Plan
PAH's	15	Basin Plan
TPH	50	Best professional judgement
pH	6.5-8.5	Basin Plan
Toxicity	90% median survival and 90th percentile value of 70% min.	Basin Plan

2. Conventional Pollutants.

Waste water (decant water, return water) discharged at points adjacent to the project area 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

D. 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. Bottom deposits or aquatic growth in waters of the State.

c. 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.

d. Visible floating, suspended, or deposited oil or other products of petroleum origin in waters of the State at any place.

e. 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	5 Units, maximum
50-100 units	10 units, maximum
>100 units	10% of background, maximum

E. 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 discharger shall notify the Regional Board immediately whenever violations are detected and operations shall not resume until the Executive Officer of the Regional Board has approved the corrective action plan that will provide alternative methods of compliance.

3. The discharger shall file with the Regional Board bi-weekly 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 discharger 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 to be state of the art.

6. The discharger shall install any applicable additional leachate monitoring devices required to fulfill the terms of any Self-Monitoring Program issued to the discharger 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.

8. The Discharger shall remove and relocate any wastes which are discharged at this site in violation of these requirements.

9. The discharger shall file with this Regional 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 discharger 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 discharger 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 facility which holds valid Waste Discharge Requirements (WDR), or a waiver of such Requirements from a Regional Board, or at a facility which is a recycling or reclamation facility which holds all applicable federal, state and local permits.

14. The Discharger 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.

I, Steven R. Ritchie, 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 July 19, 1995.

Lawrence P. Kolb

~~STEVEN R. RITCHIE~~
Acting EXECUTIVE OFFICER

Attachments: A: Site Map
B: Self Monitoring Program (SMP)

CALIFORNIA REGIONAL WATER QUALITY CONTROL PLAN
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

CITY OF OAKLAND

DREDGING AND DREDGED MATERIAL HANDLING

LAKE MERRITT

Part A-

Attached: December 1993 version

SELF-MONITORING PROGRAM

FOR

CITY OF OAKLAND

DREDGING AND DREDGED MATERIAL HANDLING

LAKE MERRITT

Part B

This portion of the Self Monitoring Program (SMP) contains terms and definitions specific to the permitted discharge.

I. DESCRIPTION OF SAMPLING STATIONS

A. Upland Dredged Material Handling Area/Ponds

Point of Discharge:

U1. The sampling point shall be located at the point of discharge from the upland sediment handling facility (discharge pipe or weir)

Receiving Waters:

U2. The sampling point shall be located within 20 feet of the discharge to the receiving water. Sample to be taken at mid-depth of water column.

U3. The sampling point shall be within 100 feet of the discharge to the receiving water. Sample to be taken at mid-depth of water column.

B. Dredging Plume

Project Area

D1. The sampling point shall be located within 50 feet of the dredge at a point downstream of the dredge and within the area contained by the silt curtain or other containment structure. The downstream location will depend upon dredge location and tidal stage, but will be generally located at points south and southwest of the project areas. (see attached map).

The primary purpose of this station is to assess the magnitude of process and project-area water quality.

Receiving Waters:

D2. The sampling point shall be located **outside** and within 20 feet of the silt curtain or other containment structure. Samples are to be taken below the middle depth of the water column.

The primary purpose of this station is to assess compliance of the dredging project with discharge limits.

D3. The sampling point shall be within 200 feet of project area and at least 150 feet from the silt curtain or other containment structure. Samples are to be taken at mid-depth of water column.

The primary purpose of this station is to provide site- and project-specific information on receiving water quality. Data from this station may be used as a basis for comparison in monitoring of the project area.

II. CONTAINMENT OBSERVATIONS

L-XX. Visual observations along the perimeter levee at points equidistant and not exceeding 200 feet spacing.

S-XX. Visual observations along the silt curtain or other containment structure on equidistant points not exceeding 100 feet spacing.

III. SCHEDULE OF SAMPLING, ANALYSIS AND OBSERVATIONS

A. Reports of sample analysis and observations shall be filed with the Regional Board within 21 days of completion.

B. Reports shall be filed every two weeks for the duration of the project.

C. The following table is to be implemented as a principle part of the SMP and will demonstrate compliance with Waste Discharge Requirements.

Parameter	Station U1	Station U2 and U3.	Stations D	Stations S	Stations L
Type of Sample	Grab	Grab	Grab		
Settleable Matter (ml/1-hr)	Daily	Daily	---		
pH	Daily	Daily	Daily for four successive days, then bi-weekly thereafter.		
Dissolved Sulfide (mg/l)	Weekly*	Weekly*	Daily for four successive days, then bi-weekly thereafter.		
Dissolved Oxygen (mg/l)	Daily	Weekly	Daily for four successive days, then bi-weekly thereafter.		
Temperature (°C)	Daily	Weekly	Daily for four successive days, then bi-weekly thereafter.		
Turbidity (JTU)	Daily	Weekly	Daily for four successive days, then bi-weekly thereafter.		
Toxic Constituents***	Weekly	Weekly	Daily for four successive days, then bi-weekly thereafter.		
Standard Observations	n/a	n/a		Daily	Daily
Bioassay	Bimonthly **	Bimonthly **	—		

* To be performed if D.O. drops below 5.0 mg/l at Station U1..

** Test to be carried out using standard ASTM protocol for the Pacific Oyster (*Crassostea gigas*) or Bay Mussel (Mytilus edulis) larval development or other method as approved by the Executive Officer.

*** Water samples to be filtered using a 0.45 micron filter prior to analysis.

n/a not applicable

I, Steven R. Ritchie, 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. 95-154.

2. Was adopted by the Board on July 19, 1995.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be ordered by Executive Officer or Regional Board.

Lawrence P. Kolb

~~Steven R. Ritchie~~
Acting Executive Officer

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