6431

STATE OF CALIFORNIA—ENVIRONMENTAL PROT ON AGENCY

PETE WILSON, *Governor*

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
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July 29, 1993

Lou Smith
Director of Environmental
Protection Division (Code 106.3)
U. S. Navy
Long Beach Naval Shipyard
Long Beach, CA 90822-5099

WASTE DISCHARGE REQUIREMENTS - United States Navy, Long Beach Naval Shipyard (NPDES PERMIT NO. CA0003786) (CI 6431)

On June 18, 1993, we transmitted a copy of the tentative requirements for your discharge to the Long Beach Harbor.

Pursuant to Division 7 of the California Water Code, this Regional Board at a public hearing held on July 19, 1993, reviewed and revised the tentative waste discharge requirements, considered all factors regarding this discharge, and adopted Order No. 93-045 for the waste discharge requirements. A copy of the Order is attached. Order No. 93-045 also serves as a permit under the National Pollutant Discharge Elimination System (NPDES).

On the effective date of Order No. 93-045, you are required to implement the accompanying Monitoring and Reporting Program (which includes the State Water Resources Control Board's General NPDES permit Monitoring Program for discharge of storm water associated with industrial activity) by using the attached laboratory reporting forms (RWQCB labform 10A and 10B). You may make more copies of these forms by yourself for future use or, if you prefer, may purchase a copy of computer diskette (floppy or compact hard diskette) from our office at a cost of $55 per diskette. The first monitoring report under this program is due by September 1, 1993. Please note that any monitoring report due under your previous Monitoring and Reporting Program before transition to the new program is still required and must be submitted by the due date.

The final Water Pollution Control Plan for your shipyard (NAVSHIPYDLBEACHINST 11420.5C) dated August 31, 1992, and submitted to the Board on June 21, 1993, as required under Item C. 4 of Order No. 93-045, has been approved. If any updates and/or significant deviation from this Plan occur, please notify the Board in writing within one week.

As stated in Finding No. 10, you have not yet demonstrated compliance with Section 316(b) of the Federal Clean Water Act regarding cooling water intake structures to reflect the best technology available for minimizing adverse environmental impacts. Therefore, you are hereby required to conduct an investigation of your intake structure to determine compliance with Section 316(b) and to submit a report on this investigation by October 1, 1993.

Please reference all technical and monitoring reports to our compliance file No. CI-6431 and submit to the attention of our Technical Support Unit. Do not combine other reports, such as technical reports under Item C.4 and compliance report for Section 316(b), with your monitoring reports but submit each type of report as a separate document.

To save printing and postage costs, we are not sending the "Standard Provisions" and laboratory reporting forms to those on the mailing list. Copies of the above will be furnished to anyone who requests them.

If you have any questions, please contact Winnie D. Jesena, Chief, Coastal Surface Water Regulatory Unit at (213) 266-7594.

Robert P. Ghirelli

ROBERT P. GHIRELLI, D.Env.
Executive Officer

Enclosures

cc: (See attached mailing list)

Mailing List

cc: Environmental Protection Agency, Region 9,
Permit Branch (W-5)
U.S. Army Corps of Engineers
NOAA, National Marine Fisheries Service
Department of Interior, U.S. Fish and Wildlife Service
Mr. Archie Matthews, State Water Resources Control Board,
Division of Water Quality
Mr. Jorge Leon, State Water Resources Control Board, Office
of Chief Counsel
Department of Fish and Game, Region 5
Department of Health Services, Sanitary Engineering Section
California Coastal Commission, South Coast District
South Coast Air Quality Management District
Los Angeles County, Department of Public Works, Waste
Management Division
City of Los Angeles, Bureau of Sanitation, Enforcement
Division
City of Long Beach, Harbor Department
Heal the Bay
American Ocean Campaign
George T. Ohara, Chief Engineer, Wastewater Treatment Division
Department of Public Works, City of Los Angeles
(555 Terminal Way, San Pedro, CA 90731)

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

ORDER NO. 93-045
NPDES NO. CA0003786

WASTE DISCHARGE REQUIREMENTS FOR UNITED STATES NAVY (Long Beach Naval Shipyard)

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

1. The United States Navy operates the Long Beach Naval Shipyard (LBNS) which discharges wastes under waste discharge requirements and National Pollutant Discharge Elimination System (NPDES) permit contained in Order No. 84-71 (NPDES Permit No. CA0003786), adopted by this Board on September 17, 1984.

2. The United States Navy has filed a report of waste discharge and has applied for renewal of its waste discharge requirements and NPDES permit.

3. The LBNS is at the Terminal Island Naval Complex which is located south of Ocean Boulevard on Terminal Island, Long Beach, California. The LBNS operates three drydocks for ship repair and refitting and discharges up to 6.2 million gallons per day (mgd) of wastes to West Basin, Long Beach Harbor, a water of the United States. The wastes discharged consist of single-pass noncontact cooling seawater from air compressors, single-pass cooling water from docked ships, groundwater and seawater seepage from hydrostatic pressure relief wells, and caisson seawater leakage from drydocks. The seawater used for cooling is drawn from the shipyard's fire protection system which contains zinc plumbing fixtures for corrosion prevention. The wastes are discharged through the following outfalls (see Figure 1):

Discharge Serial No.	Description
004 Latitude 33°45'17" Longitude 118°13'44"	Up to 0.8 mgd of single-pass, non-contact cooling seawater from air compressors at Building 104 via subsurface drains to the slip just west of Pier No. 3.

June 18, 1993
Revised July 19, 1993

Discharge Serial No.	Description
006 Latitude 33°45'19" Longitude 118°13'37"	Up to 0.8 mgd of single-pass, non-contact cooling seawater from air compressors at Building 196 via subsurface drains to the slip just west of Pier No. 2.
009 Latitude 33°45'23" Longitude 118°13'22"	Up to 1.0 mgd of single-pass, non-contact cooling seawater from air compressors at Building 150, single-pass cooling water from docked ships, drydock drainage, and caisson seawater leakage from Drydock No.1 to the adjacent slip.
010 Latitude 33°45'18" Longitude 118°13'42"	Up to 0.4 mgd of single-pass, non-contact cooling water from docked ships, drydock drainage, and caisson seawater leakage from Drydock No. 2 to the adjacent slip between Piers Nos. 2 and 3.
011 Latitude 33°45'16" Longitude 118°13'48"	Up to 0.4 mgd of single-pass, non-contact cooling water from docked ships, drydock drainage and caisson seawater leakage from Drydock No. 3 to the slip just west of Pier No. 3.
015 Latitude 33°45'25" Longitude 118°13'18"	Up to 1.0 mgd of single-pass, non-contact cooling seawater from air compressors at Building 162, Pier E.
016 Latitude 33°45'21" Longitude 118°13'28"	Up to 1.8 mgd of single-pass, non-contact cooling seawater from a steam condenser at Building 132 to the slip just west of Pier No. 1.

The LBNS has reduced its discharge from a maximum of 8.0 mgd to a maximum of 6.2 mgd by eliminating some discharges. Correspondingly, some outfalls were eliminated (Outfalls 003, 005, and 008) and some were rerouted (Outfall 002 rerouted to 009). Outfalls 001, 007, 012, 013, and 014 were eliminated previously.

4. All industrial wastes from the shipyard are either discharged to the community sewer tributary to Terminal Island Treatment

Plant or hauled away. Sanitary wastes from the shipyard and other parts of the naval complex are also discharged to the community sewer. Sanitary or industrial wastes from drydocked ships are either discharged to the sewer or retained in impervious containers and are periodically disposed of at legal points of disposal.

5. The State Water Resources Control Board adopted a Water Quality Control Policy for the Enclosed Bays and Estuaries of California on May 16, 1974. Long Beach Harbor is defined in that policy as an enclosed bay. The policy provides that sewage and industrial process waste discharge to enclosed bays shall be phased out at the earliest practicable date. For purposes of the policy, single-pass noncontact cooling water, seawater seepage, groundwater, and drydock drainage are not considered industrial process wastes.

6. On April 11, 1991, the State Water Resources Control Board adopted a Water Quality Control Plan for the Enclosed Bays and Estuaries of California. This plan incorporates the 1974 Bays and Estuaries Policy and contains narrative and numerical water quality objectives for the protection of beneficial uses and the prevention of nuisance.

7. The Regional Board adopted a revised Water Quality Control Plan for the Los Angeles River Basin (4B) on June 3, 1991. The plan incorporates by reference the State Water Resources Control Board's water quality control plans for temperature and for waters in enclosed bays and estuaries, and the policy on antidegradation. The plan also contains water quality objectives for Long Beach Harbor.

8. The beneficial uses of the receiving waters are: industrial service supply, navigation, noncontact water recreation, marine habitat, and preservation of rare and endangered species.

9. Effluent limitation standards established pursuant to Section 301 of the Federal Water Pollution Control Act and amendments thereto are applicable to the discharge.

10. Section 316(b) of the Federal Clean Water Act requires that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact. LBNS has not demonstrated compliance with this requirement.

11. On July 24, 1992, LBNS submitted to the Board a draft Water Pollution Control Plan for drydocks, moorings, and other ship repair or conversion facilities. The plan includes descriptions of the seawater intake structures and a manual of Best Management Practices for Environmental Protection in Drydocks. The final and approved plan has not yet been submitted to the Regional Board.

12. In accordance with the Section 402(p) of the 1987 amended Federal Clean Water Act, 40 CFR Parts 122, 123, and 124, LBNS has applied for coverage under the State of California adopted General Industrial Stormwater NPDES permit for its discharge of stormwater from the facility. (State Board Order No. 91-13-DWQ, as amended by Order No. 92-12-DWQ, adopted on November 19, 1991, and September 17, 1992, respectively).

13. On October 22, 1990, the Regional Board issued Cease and Desist Order (CDO) No. 90-149 requiring LBNS to cease discharge of industrial wastes that was in violation of Federal Categorical Standards and City of Los Angeles Local limits for heavy metals into the Terminal Island Treatment Plant, a publicly owned treatment works. The CDO which includes a time schedule requires LBNS to provide appropriate pretreatment for its industrial wastes, otherwise, noncomplying wastes must be hauled to legal disposal sites.

14. LBNS has tried to improve its industrial wastes treatment plant but is still unable to comply consistently with pretreatment standards for the heavy metals. Currently, industrial wastes generated at LBNS are continuously being held in Baker tanks and tested, and if not in compliance, are hauled away to landfill.

    Also, the City of Los Angeles on April 15, 1991, issued an administrative order to LBNS, under industrial wastewater permit no. 426223, for violation of local limits for dissolved sulfide in its sanitary wastes. On August 19, 1992, the City issued a comprehensive industrial wastewater permit with new requirements to resolve the sulfide problem. Similar to the pretreatment of its industrial wastes, LBNS has taken several corrective actions to resolve this problem but so far is still not consistent in meeting the limits.

15. The requirements contained in this Order are based on the water quality control plans and state and federal guidelines and standards and discharge requirements mentioned above; and, as they are met, will be in conformance with the goals of applicable water quality control plans and will protect and

maintain the beneficial uses of the receiving water.

16. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code in accordance with Water Code Section 13389.

The Board has notified the discharger 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 Board, in a public hearing, heard and considered all comments pertaining to the discharge and to the tentative requirements.

This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Clean Water Act, or amendments thereto, and shall take effect at the end of ten days from the date of its adoption provided the Regional Administrator of the U. S. Environmental Protection Agency has no objections.

IT IS HEREBY ORDERED that United States Navy, Long Beach Naval Shipyard, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Federal Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. EFFLUENT LIMITATIONS

1. Wastes discharged shall be limited to single-pass non-contact cooling sea water, single-pass noncontact cooling water from docked ships, groundwater and seawater seepage from hydrostatic pressure relief wells, caisson seawater leakage, and drydock drainage, as proposed.

2. The discharge of an effluent with constituents in excess of the following limitations is prohibited: (For footnotes, see pages 8&9.)

a. Major Wastewater Constituents

		Discharge Limitations[1]	
Constituent	Units	30-Day Average	Daily Maximum
Residual chlorine	mg/l	---	0.1

a. Major Wastewater Constituents (continued)

Constituent	Units	Discharge Limitations[1] 30-Day Average	Daily Maximum
Turbidity	TU	50	75
Oil and grease	mg/l	10	15
	lbs/day	517	776
Suspended solids	mg/l	50	150
	lbs/day	2,585	7,756

b. Marine Aquatic Life Toxicants

Constituent	Units	Discharge Limitations[1] 30-Day Average	Daily Average	Instantaneous Maximum
Arsenic	µg/l	---	36	69
	lbs/day	---	1.86	
Cadmium	µg/l	---	9.3	43
	lbs/day		0.48	
Chromium (VI)[2]	µg/l	---	50	1100
	lbs/day		2.60	
Copper	µg/l	---	---	2.7
	lbs/day			
Lead	µg/l	---	5.6	140
	lbs/day		0.29	
Mercury	ng/l	25	---	2,100
	lbs/day	1.2×10^{-3}		
Nickel	µg/l	---	8.3	75
	lbs/day		0.43	
Selenium	µg/l	---	71	300
	lbs/day		3.67	
Silver	µg/l	---	---	2.3
	lbs/day			

b. Marine Aquatic Life Toxicants (continued)

Constituent	Units	Discharge Limitations[1] 30-Day Average	Daily Average	Instantaneous Maximum
Zinc	µg/l	---	86	95
	lbs/day		4.50	
DDT[3]	pg/l	600	1,000	---
	lbs/day	$0.03x10^{-3}$	$0.05x10^{-3}$	
Dieldrin	pg/l	140	1,900	---
	lbs/day	$7.3X10^{-6}$	$98x10^{-6}$	
Endosulfan[3]	ng/l	---	8.7	34
	lbs/day		$0.45x10^{-3}$	
Endrin[3]	ng/l	---	2.3	37
	lbs/day		$119x10^{-6}$	
Heptachlor	ng/l	0.17	3.6	---
	lbs/day	$88x10^{-6}$	$0.18x10^{-3}$	
Hexachloro-cyclohexane Gamma	ng/l	62	160	---
	lbs/day	$3.2X10^{-3}$	$8.2X10^{-3}$	
PCBs[3]	pg/l	70	30,000	---
	lbs/day	$3.6x10^{-6}$	$1.6x10^{-3}$	
Pentachlorophenol	µg/l	---	7.9	13
	lbs/day		0.41	
Toxaphene	ng/l	---	0.02	210
	lbs/day		$1.1x10^{-6}$	
Chlordane[3]	pg/l	81	4,000	---
	lbs/day	$4.2x10^{-6}$	0.2010^{-3}	

c. Human Health Toxicants[4]

Constituent	Units	Discharge Limitations[1] 30-Day Average
1,2-dichloro-benzene	mg/l	18

c. Human Health Toxicants[4] (continued)

Constituent	Units	Discharge Limitations[1] 30-Day Average
1,3-dichloro-benzene	µg/l	2,600
Fluoranthene	µg/l	42
Toluene	mg/l	300
Tributyltin	ng/l	5.0

d. Carcinogens[4]

Constituent	Units	Discharge Limitations[1] 30-Day Average
Aldrin	pg/l	140
Benzene	µg/l	21
Chloroform	µg/l	480
Dichloromethane	µg/l	1,600
1,4-dichloro-benzene	µg/l	64
Halomethanes[3]	µg/l	480
Heptachlor epoxide	ng/l	0.07
Hexachloro-benzene	pg/l	690
Hexachloro-cyclohexane		
Alpha	ng/l	13
Beta	ng/l	46
PAHs[3]	ng/l	31
TCDD[3] equivalents	pg/l	0.014
2,4,6-trichloro-phenol	µg/l	1.0

Footnotes to Effluent Limitations:

[1] The mass emission rate limitations (in lbs/day) are based on proposed maximum flow rate of 6.4 million gallons per day. For constituents which do not have mass emission rate values, these values shall be determined using the tabulated concentration limits and the maximum flow rate of 6.2 mgd of the effluent.

Footnotes to Effluent Limitations: (continued)

[2] The discharger may at its option monitor for total chromium in lieu of chromium (VI). However, in that event, total chromium concentration in excess of the chromium(VI) limitation will be considered a violation unless the result of a chromium(VI) analysis of a replicate sample indicate otherwise.

[3] As defined in the California Enclosed Bays and Estuaries Plan, 1991.

[4] Other carcinogens and non-carcinogens are included in Marine Aquatic Life Toxicants.

3. The pH of wastes discharged shall at all times be within the range of 6.0 to 9.0.

4. The temperature of wastes discharged shall not exceed 100°F.

5. The acute toxicity of the effluent shall be such that the average survival in undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test producing less than 70% survival.

6. If the effluent consistently exceeds acute or chronic toxicity limitation, a toxicity reduction evaluation (TRE) shall be conducted by the discharger. The TRE shall include all reasonable steps to identify the source(s) of toxicity. Once the source of toxicity is identified, the discharger shall take all reasonable steps necessary to reduce toxicity to the required level.

B. RECEIVING WATER LIMITATIONS

1. The wastes discharged shall not cause the pH of the receiving water to be less than 6.5 nor more than 8.5. The wastes discharged shall not change the normal ambient pH levels of the receiving waters by more than 0.2 units within any given 24-hour period.

2. The wastes discharged shall not cause the dissolved oxygen concentration of the receiving waters to be depressed below 5.0 mg/l except when natural conditions

cause lesser concentrations, in which case the wastes discharged shall not cause any further reduction in the dissolved oxygen concentration of the receiving waters.

3. The wastes discharged shall not result in residual chlorine concentrations greater than 0.1 mg/l in the receiving waters.

4. The wastes discharged shall not increase receiving water temperature at any time or place within any given 24-hour period by more than 5°F above ambient receiving water temperature. However, when ambient receiving water temperature is less than 60°F, the wastes discharged shall not increase the receiving water temperature above 70°F.

5. The wastes discharged shall not degrade surface water communities and populations, including vertebrate, invertebrate and plant species.

6. The wastes discharged shall not impair the natural taste and odor of fish, shellfish or other surface water resources used for human consumption.

7. The wastes discharged shall not produce concentrations of toxic substances in the receiving waters at levels that are toxic to or produce detrimental physiological responses in human, animal or aquatic life.

8. The wastes discharged shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.

9. The wastes discharged shall not cause any increase in turbidity to the extent that such an increase causes nuisance or adversely affects beneficial uses.

10. The wastes discharged shall not contain any individual pesticide or combination of pesticides in concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life due to the wastes discharged.

11. The wastes discharged shall not contain toxic pollutants that will bioaccumulate in aquatic resources to levels which are harmful to human health.

12. No sewage solids or other physical evidence of waste discharge shall be visible at any time in the water or on beaches, shores, rocks, or structures.

13. The wastes discharged shall not significantly reduce transmittance of natural light such that the mean of sampling results for any consecutive 30-day period would be beyond one standard deviation of the mean determined for natural levels for the same period.

14. The wastes discharged shall not increase the concentration in marine sediments of substances listed in Item A.2 above that present under natural conditions.

15. The wastes discharged shall not change the rate of deposition of inert solids and the characteristics of inert solids in marine sediments such that benthic communities are degraded.

16. The wastes discharged shall not increase the concentration of organic materials in marine sediments above that which would degrade marine life.

17. The wastes discharged shall not increase the dissolved sulfide concentration of waters in and near sediments above that present under natural conditions.

C. REQUIREMENTS AND PROVISIONS

1. This Order includes the attached "Standard Provisions and General Monitoring and Reporting Requirements" ("Standard Provisions"). If there is any conflict between provisions stated hereinbefore and said "Standard Provisions", those provisions stated hereinbefore prevail.

2. The discharger shall comply with the requirements of the State Water Resources Control Board's General NPDES permit for discharges of storm water associated with industrial activity (Order No. 91-13-DWQ and as amended by Order No. 92-12-DWQ).

3. If vessel holding tanks are pumped, the contents shall be disposed of at a legal point of disposal or discharged to a community sewer system. For the purpose of this requirement, a legal point of disposal is one for which waste discharge requirements have been prescribed by a

regional water quality control board and which is in full compliance therewith.

4. The discharger shall implement the approved Water Pollution Control Plan for drydocks, moorings, and other ship repair or conversion facilities, as part of this Order.

The Plan shall be revised or updated as directed by the Executive Officer and the revised or updated Plan, when approved by the Executive Officer, shall supersede the existing plan.

In the event that any significant deviation from the approved Plan occurs, the discharger shall notify the Board immediately by telephone and confirm in writing within one week.

D. EXPIRATION DATE

This Order expires on July 10, 1998.

The discharger must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.

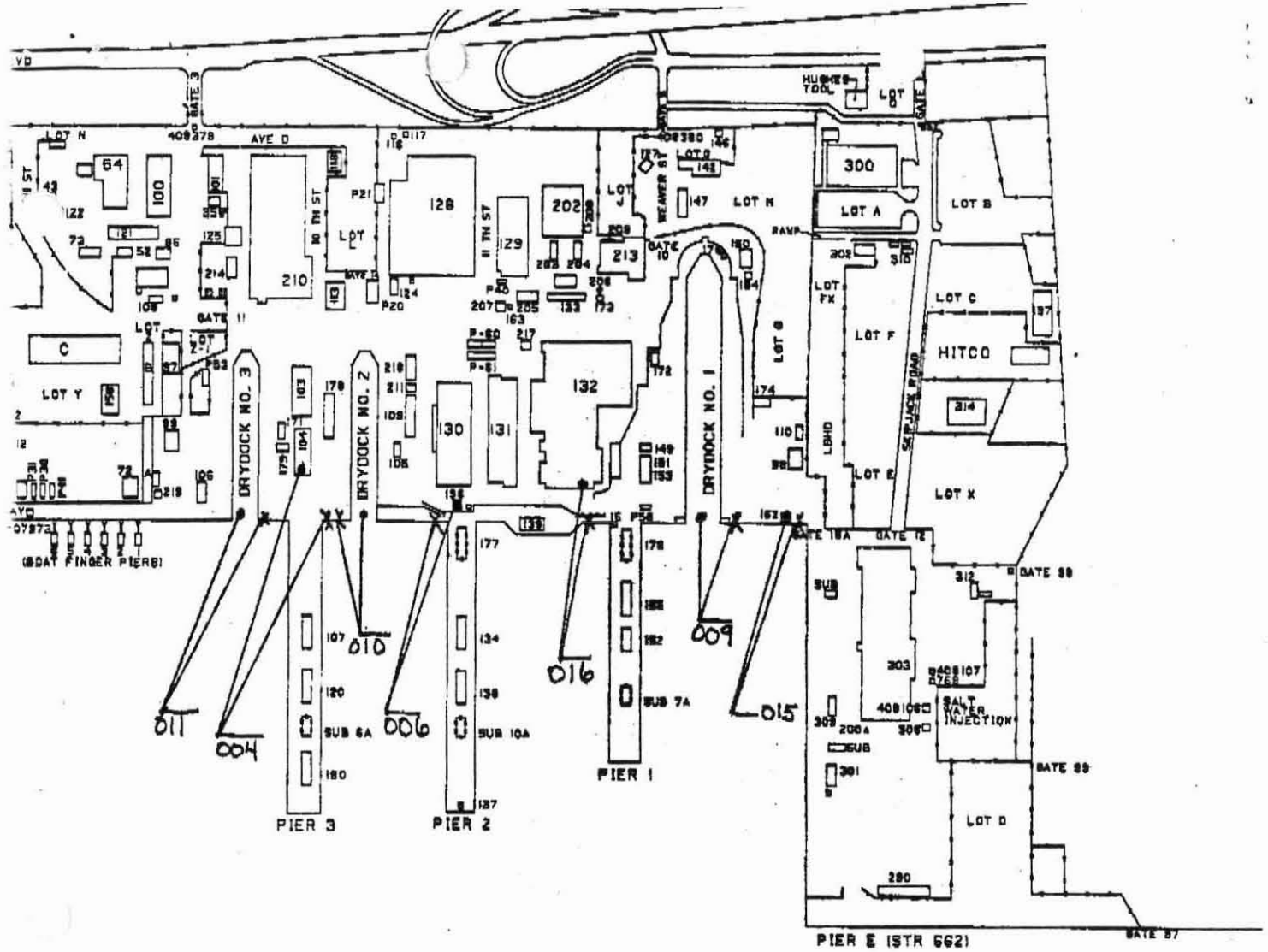
E. RESCISSION

Except for enforcement purposes, Order No. 84-71, adopted by this Board on September 17, 1984, is hereby rescinded.

I, Robert P. Ghirelli, 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 July 19, 1993.

Robert P. Ghirelli

ROBERT P. GHIRELLI, D.Env.
Executive Officer



Legend

X outfall

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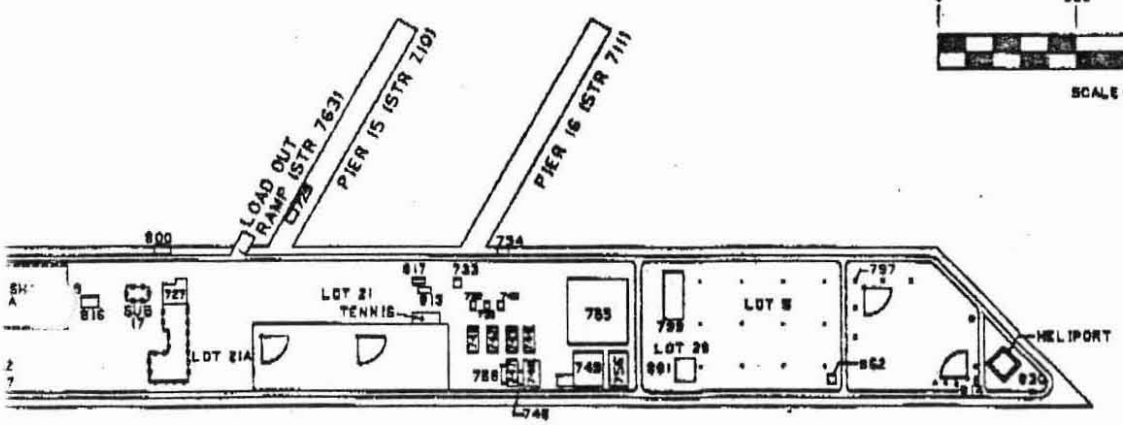
TOTAL LAND AREA: 497.65 ACRES



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

MONITORING AND REPORTING PROGRAM NO. 6431
FOR
UNITED STATES NAVY
(Long Beach Naval Shipyard)
(CA003786)

The discharger shall implement this monitoring program on the effective date of this permit.

Unless otherwise specified, quarterly monitoring shall be performed during the months of February, May, August, and November; semiannual monitoring during the months of February and August; and annual monitoring during the month of May.

Monitoring reports shall be submitted by the first day of the second month following the monitoring period. If no flow occurred during the month, the report shall so state.

Each monitoring report must affirm in writing that:

> All analyses were conducted at a laboratory certified for such analyses by the State Department of Health Services and in accordance with current EPA guideline procedures or as specified in the Monitoring Program.

For any analysis performed for which no procedure is specified in the EPA guidelines or in this Monitoring Program, the constituent or parameter analyzed and the method or procedure used must be specified in the report.

By **July 1** of each year, the discharger shall submit an annual report to the Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year. In addition, the discharger shall discuss the compliance record and the corrective actions taken or planned which may be needed to bring the discharge into full compliance with the waste discharge requirements.

A. EFFLUENT MONITORING

> A sampling station shall be established for each point of discharge and shall be located where representative samples of that effluent can be obtained. Effluent samples may be obtained at a single station provided that station is representative of the effluent quality from all discharge points. Location of such stations and any changes thereof shall be submitted for the Executive Officer's approval.

The following shall constitute the effluent monitoring program:

Constituent	Unit	Type of Sample	Frequency[1] of Analysis
Total waste flow	mgd	----	monthly
Total chlorine residual[2]	mg/l	grab	monthly
pH	pH units	grab	monthly
Temperature	°F	grab	monthly
Turbidity	TU	grab	monthly
Oil and grease	mg/l	grab	monthly
Suspended solids	mg/l	grab	monthly
Zinc	µg/l	grab	monthly
Acute toxicity[3]	% survival	grab	quarterly
Cyanide	µg/l	grab	semi-annually[4]
Arsenic	µg/l	grab	semi-annually[4]
Cadmium	µg/l	grab	semi-annually[4]
Chromium (VI)	µg/l	grab	semi-annually[4]
Copper	µg/l	grab	semi-annually[4]
Lead	µg/l	grab	semi-annually[4]
Mercury	ng/l	grab	semi-annually[4]
Nickel	µg/l	grab	semi-annually[4]
Selenium	µg/l	grab	semi-annually[4]
Silver	µg/l	grab	semi-annually[4]
Tributyltin	ng/l	grab	annually
Aldrin	pg/l	grab	once every 5 yrs
Benzene	µg/l	grab	once every 5 yrs
Chlordane	pg/l	grab	once every 5 yrs
Chloroform	µg/l	grab	once every 5 yrs
DDT	pg/l	grab	once every 5 yrs
1,2-dichloro-benzene	mg/l	grab	once every 5 yrs
1,3-dichloro-benzene	µg/l	grab	once every 5 yrs
1,4-dichloro-benzene	µg/l	grab	once every 5 yrs
Dichloromethane	µg/l	grab	once every 5 yrs
Dieldrin	pg/l	grab	once every 5 yrs
Endosulfan	ng/l	grab	once every 5 yrs
Endrin	ng/l	grab	once every 5 yrs
Fluoranthene	µg/l	grab	once every 5 yrs
Halomethanes	µg/l	grab	once every 5 yrs
Heptachlor	ng/l	grab	once every 5 yrs
Heptachlor epoxide	ng/l	grab	once every 5 yrs

Constituent	Unit	Type of Sample	Minimum[1] Frequency of Analysis
Hexachloro-benzene	pg/l	grab	once every 5 yrs
Hexachloro-cyclohexane			
Alpha	ng/l	grab	once every 5 yrs
Beta	ng/l	grab	once every 5 yrs
Gamma	ng/l	grab	once every 5 yrs
PAHs	ng/l	grab	once every 5 yrs
PCBs	pg/l	grab	once every 5 yrs
Pentachlorophenol	µg/l	grab	once every 5 yrs
TCDD equivalents	pg/l	grab	once every 5 yrs
Toluene	mg/l	grab	once every 5 yrs
Toxaphene	ng/l	grab	once every 5 yrs
2,4,6-trichloro-phenol	µg/l	grab	once every 5 yrs

Footnotes for effluent monitoring program:

[1] The discharger shall perform all the analysis within a month from the effective date of this Order. The results of these analysis shall be contained in the first monitoring report under this program. Thereafter, frequencies of subsequent sampling and reporting shall be according to this program.

[2] A statement that this constituent has not been added to the system may be submitted in lieu of an analysis.

[3] By the method specified in "Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms" -March 1985 (EPA/600/4-85/013). Submission of bioassay results should include the information noted on pages 45-49 of the "Methods". The fathead minnow (Pimephales promelas) shall be used as the test species if the conductivity of the effluent is appropriate for that species. If the conductivity is excessively high for fathead minnow, then threespine stickleback (Gasterosteus aculeatus) may be used unless otherwise directed by the Executive Officer.

Except with prior approval from the Executive Officer, ammonia shall not be removed from bioassay samples. The wastewater used for the toxicity test shall be analyzed for ammonia, and the result along with an interpretation shall be submitted with the toxicity data. If the test result is less than 70%, parallel tests on 100% effluent without ammonia removal and 100% effluent with ammonia removed shall be conducted.

If the results of at least 10 consecutive toxicity tests yield full compliance with the acute toxicity effluent limitation, then the frequency of analysis shall be reduced to a minimum of annually. However, if the result of any annual toxicity test yields a survival rate of less than 90%, then the frequency of analysis shall revert to quarterly until at least three consecutive test results have been obtained and full compliance with the acute toxicity effluent limitation has been demonstrated, after which the frequency of analysis shall revert to annually.

[4] First sampling and analysis shall be done within the first month of the effective date of this Order.

B. RECEIVING WATER MONITORING

1. Receiving water stations (see Figure M-1)

a. Sediment sampling stations shall be located as follows:

R1	-	In front of Drydock No. 1, east of Pier 1
R2	-	In front of Building 132, west of Pier 1
R3	-	In front of Drydock No. 2, east of Pier 3
R4	-	In front of Drydock No. 3, west of Pier 3
R5	-	On Navy Mole, in vicinity of Building 800

b. Bioaccumulation stations shall be located as follows:

M1	-	Pier 3, inland end
M2	-	On Navy Mole, in vicinity of Building 800

2. Type and frequency of monitoring

a. Sediment Monitoring - The five receiving water monitoring stations (R1 through R5) shall be sampled annually in August for sediment monitoring. The results shall be included in the appropriate monthly monitoring report.

Surface grab samples containing the upper two centimeters of sediment shall be taken from an Ekman grab (or another method approved by the Executive Officer) collected at each station and analyzed for, at a minimum, sediment grain size (percent sand, silt, and clay), total organic carbon, arsenic, cadmium, chromium, copper, lead,

nickel, zinc, PCBs[1], PAHs[2], DDT[3], tributyltin (TBT), and total petroleum hydrocarbons. A description of sample odor, if any, visible aquatic life, and color of sample shall be included.

b. Bioaccumulation Monitoring - The two receiving water monitoring stations (M1 and M2) shall be sampled annually for bioaccumulation monitoring, the first report of which shall be included in the first annual monitoring report. Transplant mussels, Mytilus edulis, shall be deployed, collected and analyzed as described in "The California Department of Fish and Game QA/QC Manual, March 14, 1990". Mussel tissue shall be analyzed for, at the minimum, arsenic, cadmium, chromium, copper, lead, nickel, zinc, PCBs[1], PAHs[2], DDT[3], and TBT.

Footnotes for receiving water monitoring program:

1 Sum of chlorinated biphenyls which analytical characteristics resemble those of Aroclor 1016, Aroclor 1221, Aroclor 1232, Aroclor 1242, Aroclor 1248, Aroclor 1254, and Aroclor 1260.

2 Sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene, and pyrene.

3 Sum of 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'-DDE, 4,4'-DDD, and 2,4'-DDD.

c. Visual Observations - The following general observations of the receiving water shall be made at the receiving water stations (R1-R4) on a monthly basis and shall be included in the monthly report.

Observations shall be descriptive, where applicable, such that colors, approximate amounts, or types of materials are apparent.

1) Tidal stage, date, and time of monitoring
2) Weather conditions
3) General water conditions
4) Color of water
5) Appearance of oil films or grease, or floatable materials

6) Extent of visible turbidity or color patches
7) Presence of red tide
8) Presence of marine life
9) Presence and activity of California Least Tern and California Brown Pelican

3. QA/QC Procedures

Prior to the first sediment sampling event, the discharger shall submit a list of proposed analytical methods to be employed for each test, "ecologically relevant" detection limits, and associated laboratory quality assurance/quality control procedures for approval by the Executive Officer.

Summary of receiving water monitoring

Parameter	Stations	Type of Sample	Minimum Frequency
Sediments	R1-R5	Surface grab	Annually
Bioaccumulation	M1, M2	Tissue	Annually
Visual observations	R1-R4	---	Monthly

C. HAULING REPORTS

In the event wastes covered by the NPDES permit including pretreatment are transported to a different disposal site during the reporting period, the following shall be reported:

a. Type(s) of wastes and quantity of each type;

b. Name and either the address or the State Registration number for each hauler of wastes used, or the method of transportation if other than by hauling; and

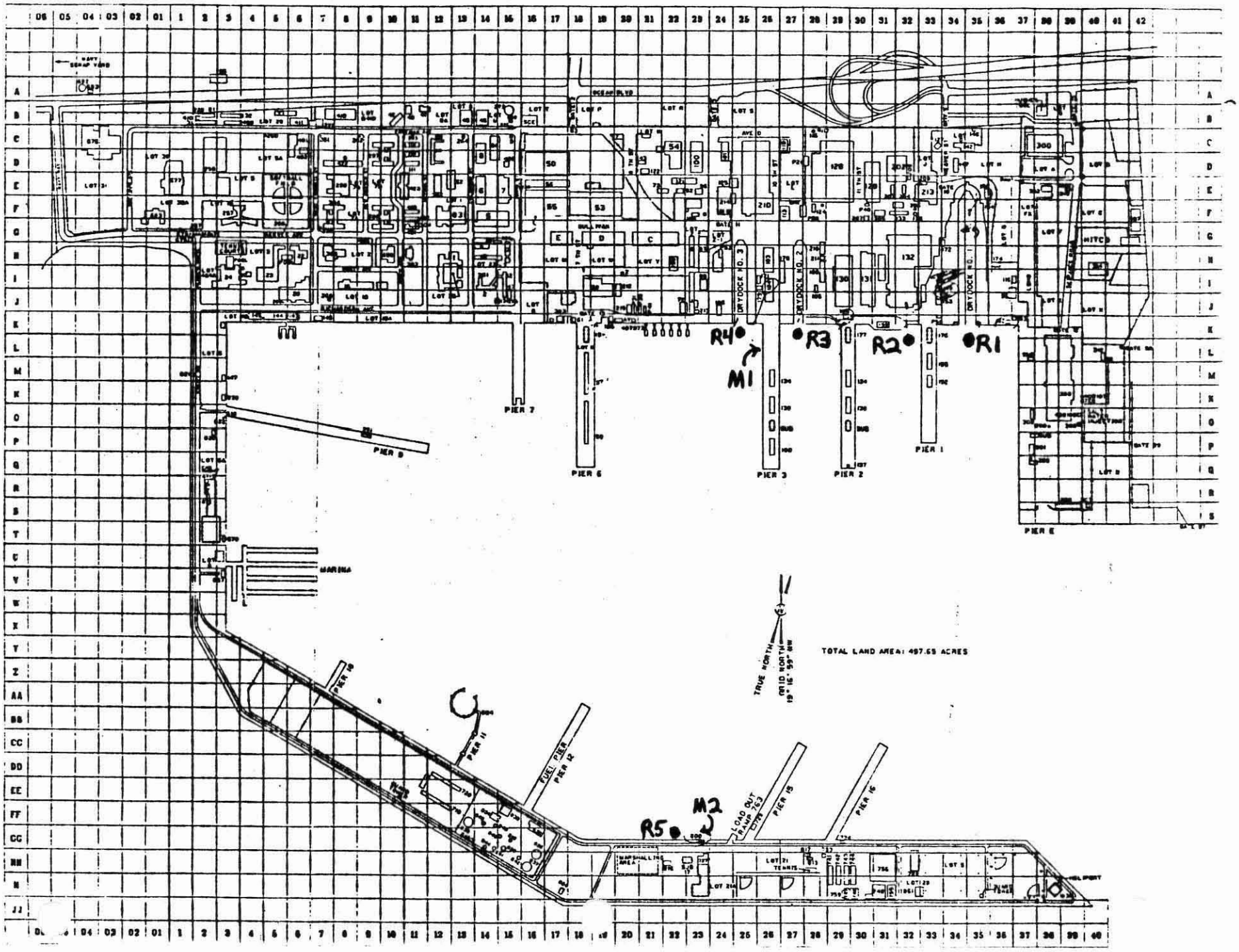
c. Address or specific location of the final point(s) of disposal for each type of waste.

If no wastes are transported offsite during the reporting period a statement to that effect shall be submitted.

Ordered by:

Robert P. Ghirelli
ROBERT P. GHIRELLI, D.Env.
Executive Officer

Date: July 19, 1993


M1
M2
R1
R2
R3
R4
R5
PIER 7
PIER 6
PIER 3
PIER 2
PIER 1
PIER E
PIER 9
MARINA
PIER 11
FUEL PIER
PIER 12
PIER 13
PIER 14
PIER 15
PIER 16
LOAD OUT RAMP 763
DRYDOCK NO. 3
DRYDOCK NO. 2
DRYDOCK NO. 1
TOTAL LAND AREA: 497.65 ACRES
TRUE NORTH
GRID NORTH