

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 83-24
NPDES NO. CA 0037699

WASTE DISCHARGE REQUIREMENTS FOR:

VALLEJO SANITATION AND FLOOD CONTROL DISTRICT
SOLANO COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board) finds that:

1. Vallejo Sanitation and Flood Control District, hereinafter discharger, submitted a report of waste discharge dated May 6, 1983, for reissuance of NPDES Permit No. CA 0037699.
2. The discharger presently discharges 11.5 mgd average flow from its physical-chemical treatment plant which has a dry weather design flow of 12.5 mgd. This plant treats domestic and industrial wastewater from the Vallejo area including Mare Island Naval Shipyard. The treated wastewater is discharged into Carquinez Strait, a water of the United States, west of the Carquinez Bridge through a submerged diffuser about 64 feet below mean lower low water. (Latitude 38°, 7 min., 37 sec.; Longitude 122°, 16 min., 00 sec.)
3. The discharge is presently governed by Waste Discharge Requirements, Order No. 78-44, which allow discharge into Carquinez Strait.
4. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on July 21, 1982. The Basin Plan contains water quality objectives for Carquinez Strait and contiguous waters.
5. The beneficial uses of Carquinez Strait and contiguous water bodies are:
 - a. Recreation
 - b. Esthetic enjoyment
 - c. Preservation and enhancement of fish, wildlife and other aquatic resources
 - d. Industrial water supply
 - e. Navigation
 - f. Fishing
6. This project is exempt from the provision of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.
7. The discharger and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.

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

IT IS HEREBY ORDERED, that Vallejo Sanitation and Flood Control District 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 Water Pollution Control Act, and regulations and guidelines adopted thereunder shall comply with the following:

A. Discharge Prohibitions

1. There shall be no bypass or overflow of untreated waste water to waters of the State, either at the treatment plant or from the collection system.
2. The average dry weather flow shall not exceed 12.5 mgd. Average shall be determined over three consecutive months each year.
3. Discharge at any point at which the wastewater does not receive an initial dilution of at least 10:1 is prohibited.

B. Effluent Limitations

1. Effluent discharged shall not exceed the following limits:

<u>Constituents</u>	<u>Units</u>	<u>7-day Average</u>	<u>30-day Average</u>	<u>Maximum Daily</u>	<u>Instan- taneous Maximum</u>
a. Settleable Matter	ml/l-hr	-	0.1	-	0.2
b. BOD	mg/l	45	30	60	- - -
c. Suspended Solids	mg/l	45	30	60	- - -
d. Oil & Grease	mg/l	-	10	20	- - -
e. Chlorine Residual	mg/l	-	-	-	0.0

2. The arithmetic mean of the biochemical oxygen demand (5-day, 20°C) and suspended solids values, by weight, for effluent samples collected in a period of 30 consecutive calendar days shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected approximately the same times during the same period (85 percent removal).

3. The pH of the discharge shall not exceed 9.0 nor be less than 6.0.
4. In any representative set of samples the treatment plant before dilution, the waste as discharged shall meet the following limit of quality:

TOXICITY:

The survival of test organisms acceptable to the Board in 96-hour bioassays of the effluent shall achieve a 90 percentile value of not less than 50% survival.

5. Representative samples of the effluent shall not exceed the following limits more than the percentage indicated:⁽¹⁾

<u>Constituent</u>	<u>Unit of Measurement</u>	<u>50% of time</u>	<u>10% of time</u>
Arsenic	mg/l (kg/day)	0.01 (.47)	0.02 (.95)
Cadmium	mg/l (kg/day)	0.02 (.95)	0.03 (1.42)
Total Chromium	mg/l (kg/day)	0.005 (.24)	0.01 (.47)
Copper	mg/l (kg/day)	0.2 (9.5)	0.3 (14.2)
Lead	mg/l (kg/day)	0.1 (4.7)	0.2 (9.5)
Mercury	mg/l (kg/day)	0.001 (.047)	0.002 (.095)
Nickel	mg/l (kg/day)	0.1 (4.7)	0.2 (9.5)
Silver	mg/l (kg/day)	0.02 (.95)	0.04 (1.89)
Zinc	mg/l (kg/day)	0.3 (14.2)	0.5 (23.7)
Cyanide	mg/l (kg/day)	0.1 (4.7)	0.2 (9.5)
Phenolic Compounds	mg/l (kg/day)	0.5 (23.7)	1.0 (47.3)
Total Identifiable Chlorinated Hydrocarbons ⁽²⁾	mg/l (kg/day)	0.002	0.004

(1) These limits are intended to be achieved through secondary treatment, source control and application of pretreatment standards.

(2) Total Identifiable chlorinated Hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other identifiable chlorinated hydrocarbons.

6. The median value for the MPN of total coliform in any five (5) consecutive effluent samples shall not exceed 240 coliform organisms per 100 milliliters. Any single sample shall not exceed 10,000 MPN/100 ml when verified by a repeat sample taken within 48 hours.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:

- a. Floating, suspended, or deposited macroscopic particulate matter or foam;
 - b. Bottom deposits or aquatic growths;
 - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
 - e. Toxic or other deleterious substances to be present in concentrations or quantities which will 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 concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:
- a. Dissolved oxygen 5.0 mg/l minimum. Annual median - 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
 - b. Dissolved Sulfide 0.1 mg/l maximum.
 - c. pH Variation from natural ambient pH by more than 0.2 pH units.
 - d. Un-ionized ammonia 0.025 mg/l as N Annual Median
0.4 mg/l as N Maximum
3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Provisions

1. The requirements prescribed by this Order supersede the requirements prescribed by Order No. 78-44 adopted on June 20, 1978. Order No. 78-44 is hereby rescinded.

2. Where concentration limitations in mg/l are contained in this permit, the following mass emission limitations shall also apply as follows:

Mass Emission Limit in lbs/day = Concentration limit in mg/l X
8.34 X Actual Flow in mgd Averaged Over the Time Interval to
which the Limit Applies.

3. The discharger shall comply with all sections of this Order immediately upon adoption.
4. The discharger shall review and update annually its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.
5. The discharger is required to effectively implement a pretreatment program under the authority of Section 307(b) and 402(b)(8) of the Clean Water Act. As part of this responsibility, the discharger shall ensure compliance with pretreatment standards promulgated under Section 307(b) and (c) of the Clean Water Act:
 - (a) Compliance by existing industrial sources with pretreatment standards shall be within 3 years of the date of promulgation of the standard unless a shorter compliance time is specified.
 - (b) Compliance by new sources of industry with promulgated pretreatment standards shall be required upon commencement of discharge.
6. The discharger shall comply with the self-monitoring program as ordered by the Executive Officer.
7. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977.
8. This Order expires July 20, 1988. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.
9. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Federal Water Pollution Control Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on July 20, 1983.

FRED H. DIERKER
Executive Officer

Attachments:
Standard Provisions &
Reporting Requirements, April 1977
Self-Monitoring Program

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

Vallejo Sanitation and Flood Control District

Solano County

NPDES NO. CA 0037699

ORDER NO. 83-24

CONSISTS OF

PART A , dated January 1978

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT AND INTAKE

<u>Station</u>	<u>Description</u>
A-001	At any point in the treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment.

B. EFFLUENT

<u>Station</u>	<u>Description</u>
E-001	At any point in the outfall containing Waste 001 between the point of discharge and the point at which all treatment has been completed and all waste tributary to that outfall is present.
E-001-D	At any point in the disinfection facilities for Waste 001 at which point adequate contact with the disinfectant is assured. (May be the same as E-001)

C. RECEIVING WATERS

<u>Station</u>	<u>Description</u>
C-1	In Carquinez Strait, the area about 200 feet square and centered above the diffuser section of the outfall sewer.
C-2	At any point located in C-1.
C-R	At any point in Carquinez Strait, 2000 feet upcurrent from discharge.

D. LAND OBSERVATIONS

<u>Station</u>	<u>Description</u>
P-1 thru P-'n'	Located at the corners and midpoints of the perimeter fence line surrounding the treatment facilities. (A sketch showing the locations of these stations will accompany each report)

E. OVERFLOWS AND BYPASSES

<u>Station</u>	<u>Description</u>
O-1 thru O-'n'	Bypass or overflows from manholes, pump stations, or collection system.

Note: Initial SMP report to include map and description of each known bypass or overflow location.

Reporting - Shall be submitted monthly and include date, time and period of each overflow or bypass.

II. SCHEDULE OF SAMPLING, MEASUREMENTS, AND ANALYSIS

A. The schedule of sampling, measurements, and analysis shall be that given as Table I.

III. MODIFICATIONS

Does not include the following paragraphs of Part A: C3, C4

I, Fred H. Dierker, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure 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. 83-24.
2. Is effective on the date shown below.
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 the Executive Officer

FRED H. DIERKER
Executive Officer

Date Ordered July 29, 1983

Attachment:
Table I

TABLE I
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A	E-001			E-001-D			All O	All P & L Stations		C-1	C-2 & C-R	
	C-24	G	C-24	Cont	G	C-24	Cont		O	O			G
Flow Rate (gpd)	D		D										
BOD, 5-day, 20° C, or COD (mg/l & kg/day)	5/W		5/W										
Chlorine Residual & Dosage (mg/l & kg/day)					2H	OR	Cont						
Settleable Matter (ml/1-hr. & cu. ft./day)		D											
Total Suspended Matter (mg/l & kg/day)	5/W		5/W										
Oil & Grease (mg/l & kg/day)	(1) 2W		(1) 2W										
Coliform (Total) (MPN/100 ml) per req't					3/W								
Fish Toxicity, 96-hr. TL ₅₀ % Survival in undiluted waste						M							
Ammonia Nitrogen (mg/l & kg/day)													
Nitrate Nitrogen (mg/l & kg/day)													
Nitrite Nitrogen (mg/l & kg/day)													
Total Organic Nitrogen (mg/l & kg/day)													
Total Phosphate (mg/l & kg/day)													
Turbidity (Jackson Turbidity Units)			2/M										M
pH (units)		D											M
Dissolved Oxygen (mg/l and % Saturation)		D											M
Temperature (°C)		D											M
Apparent Color (color units)			2/M										M
Secchi Disc (inches)													M
Sulfides (if DO < 5.3 mg/l) Total & Dissolved (mg/l)													M
Arsenic (mg/l & kg/day)			3M										
Cadmium (mg/l & kg/day)			3M										
Chromium, Total (mg/l & kg/day)			3M										
Copper (mg/l & kg/day)			3M										
Cyanide (mg/l & kg/day)			3M										
Silver (mg/l & kg/day)			3M										
Lead (mg/l & kg/day)			3M										

TABLE I (continued)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	E-001				E-001-D			All O	All P&L Stations	C-1	C-2 & C-R	
	A	G	C-24	Cont	G	C-24	Cont		O	O		G
Mercury (ug/l & kg/day)			3M									
Nickel (ug/l & kg/day)			3M									
Zinc (ug/l & kg/day)			3M									
Total LC Composite (ug/l & kg/day)			3M									
All Applicable Standard Observations		D						E		2/W	M	
Bottom Sediment Analyses and Observations	--	--	--	--	--	--	--	--	--	--	--	--
Total identifiable Chlorinated Hydrocarbons (mg/l & kg/day)			3M									
Non-dissociated Ammonium Hydroxide as N (ug/l)												M

LEGEND FOR TABLE

TYPES OF SAMPLES

- G = grab sample
- C-24 = composite sample - 24-hour
- C-X = composite sample - X hours
(used when discharge does not continue for 24-hour period)
- Cont = continuous sampling
- DI = depth-integrated sample
- BS = bottom sediment sample
- O = observation

TYPES OF STATIONS

- I = intake and/or water supply stations
- A = treatment facility influent stations
- E = waste effluent stations
- C = receiving water stations
- P = treatment facilities perimeter stations
- L = basin and/or pond levee stations
- B = bottom sediment stations
- O = overflows and bypasses**

FREQUENCY OF SAMPLING

- E = each occurrence
- H = once each hour
- D = once each day
- W = once each week
- M = once each month
- Y = once each year
- 2/H = twice per hour
- 2/W = 2 days per week
- 5/W = 5 days per week
- 2/M = 2 days per month
- 2/Y = once in March and once in September
- Q = quarterly, once in March, June, Sept. and December
- 2H = every 2 hours
- 2D = every 2 days
- 2W = every 2 weeks
- 3M = every 3 months
- Cont = continuous

FOOTNOTES FOR TABLE I

(1) Oil and grease sampling shall consist of 3 grab samples taken at 8-hour intervals during the sampling day, with each grab being collected in a glass container. The grab samples shall be mixed in proportion to the instantaneous flow rates occurring at the time of each grab sample, within an accuracy of plus or minus 5%. Each glass container used for sample collection or mixing shall be thoroughly rinsed with solvent rinsings as soon as possible after use, and the solvent rinsings shall be added to the composite wastewater sample for extraction and analysis.

If the average of the results of the biweekly samples is greater than the 30-day average limitation, oil and grease shall be sampled weekly by the discharger until relieved in writing by the Regional Board staff.