

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 82-65
NPDES PERMIT NO. CA0038539

WASTE DISCHARGE REQUIREMENTS FOR:

WEST COUNTY AGENCY OF CONTRA COSTA
COUNTY, CALIFORNIA, A JOINT POWERS
AGENCY

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

1. The West County Agency of Contra Costa County, California (hereinafter called the discharger), a joint powers agency formed between the City of Richmond Municipal Sewer District and the West Contra Costa Sanitary District, applied to the Board on June 24, 1982, for reissuance of waste discharge requirements, and a permit to discharge under the National Pollutant Discharge Elimination System (NPDES).
2. The discharger currently discharges an average of 13.4 million gallons per day (mgd) of combined effluent containing pollutants into San Francisco Bay, a water of the United States, via an outfall located 9300 feet offshore of Point Richmond at a depth of 26 feet (7.9 meters) (MLLW) at 37°54'41" latitude and 122°25'6" longitude. For the protection of shellfish the outfall provides a minimum dilution of at least 45:1 under normal conditions. Less dilutions may occur during periods of high delta outflows, but shellfish should nonetheless receive adequate protection during such periods.
3. The discharger provides treatment of domestic wastewater at the following facilities:
 - a. West Contra Costa Sanitary District's treatment facilities, providing full secondary treatment. An annual average of 6.8 mgd of treated effluent is conveyed via a force main to a junction structure at the Richmond facilities. Design flow is 12.5 mgd. Sludge is disposed of at an authorized disposal site.
 - b. Richmond Municipal Sewer District's treatment facilities, providing full secondary treatment. An annual average of 6.6 mgd of treated effluent is combined with that of the Sanitary District's and discharged by gravity via the combined deepwater outfall and dechlorination facilities. Design flow is 16.0 mgd. Sludge is conveyed via force main to the Sanitary District's facilities, for disposal of at an authorized disposal site.
4. The West Contra Costa Sanitary District is in the process of constructing facilities to provide full secondary treatment for wet weather flows pursuant to a schedule contained in Cease and Desist Order No. 79-66, issued to the Sanitary District on June 19, 1979.

It is estimated that construction of these facilities will be completed by October, 1983.

5. The City of Richmond is in the process of planning efforts to provide wet weather flow treatment and eliminate raw sewage overflows from the collection system, pursuant to an Enforcement Order for Issuance of a Time Schedule, Order No. 79-102, issued to the City on August 21, 1979. The Board on November 17, 1982 adopted Order No. 82- , amending Order No. 79-102, requiring the City to provide additional flow monitoring and engineering studies.
6. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on July 21, 1982.
7. The beneficial uses of the San Francisco Bay are:
 - a. Water contact recreation
 - b. Non-contact water recreation
 - c. Navigation
 - d. Open commercial and sport fishing
 - e. Wildlife habitat
 - f. Fish spawning and migration
 - g. Industrial uses
 - h. Preservation of rare and endangered species
 - i. Shellfishing
8. This project is exempt from the provisions 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.
9. The discharge is presently governed by Waste Discharge Requirements, Order No. 77-126, which allow discharge to San Francisco Bay.
10. 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.
11. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder, and to the provisions of the Federal Water Pollution Control Act Amendments of 1972, and regulations and guidelines adopted thereunder, that the West County Agency of Contra Costa County, California, a joint powers agency, shall comply with the following:

A. Prohibitions

1. Bypass or overflow of untreated wastewater to waters of the State, either at the treatment plant or from the collection system, is prohibited.

2. Average dry weather flow greater than 28.5 million gallons (107,900M³) per day is prohibited. (Average flow shall be determined over three consecutive months each year.)
3. Degradation of harvestable shellfish in the area as a result of the discharge is prohibited.
4. Discharge of waste at any point where it does not receive a minimum initial dilution of 45:1, other than periods when the Delta outflow is greater 8000 cubic feet (227 M³) per second, is prohibited. During the periods of Delta outflow greater than 8000 cubic feet (227 M³) per second, the waste shall receive a minimum initial dilution of 10:1 at all times.

B. Effluent Limitations

1. Effluent discharged shall not exceed the following limits:

<u>Constituent</u>	<u>Units</u>	<u>30-Day Average</u>	<u>7-Day Average</u>	<u>Daily Maximum</u>	<u>Instantaneous Maximum</u>
a. Chlorine Residual	mg/l	---	---	---	0.0
b. Biochemical Oxygen Demand	mg/l	30	45	60	---
c. Suspended Solids	mg/l	30	45	60	---
d. Settleable Matter	ml/l-hr	0.1	---	---	0.2
e. Grease & Oil	mg/l	10	---	20	---

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 at approximately the same times during the same period (i.e. 85 percent removal).
3. The discharge shall not have a pH of less than 6.0 nor greater than 9.0.
4. In any representative set of samples, the waste as discharged shall meet the following limit of quality:

TOXICITY: The survival of test fishes in 96-hour bioassays of the effluent as discharged shall be a 90 percentile value of not less than 50 percent survival.

5. Representative samples of the effluent shall not contain constituents in excess of the following limits:

	Unit of Measurement	50% of time	10% of time
Arsenic	mg/l	0.01	0.02
Cadmium	mg/l	0.02	0.03
Total Chromium	mg/l	0.005	0.01
Copper	mg/l	0.2	0.3
Lead	mg/l	0.1	0.2
Mercury	mg/l	0.001	0.002
Nickel	mg/l	0.1	0.2
Silver	mg/l	0.02	0.04
Zinc	mg/l	0.3	0.5
Cyanide	mg/l	0.1	0.2
Phenolic Compounds	mg/l	0.5	1.0
Total Identifiable Chlorinated Hydrocarbons <u>1/</u>	mg/l	0.002	0.004

1/ 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 total coliform bacteria for a median of five consecutive effluent samples shall not exceed 240 MPN per 100 ml, nor shall more than 10% of all samples taken in a 30 day period exceed 1100 MPN per 100 ml. Furthermore, any single sample shall not exceed 1100 MPN per 100 ml when verified by a repeat sample taken within 48 hours.

Compliance with this limitation may be demonstrated in the two separate outfall facilities, following disinfection and prior to discharge into the combined outfall.

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 concentrations.
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 7.0 mg/l minimum. Annual median - 80% saturation. When natural factors cause lesser concentrations 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 annual median
as N 0.4 mg/l 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. 77-126 adopted on September 20, 1977. Order No. 77-126 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 Averaged Over the Time Interval to which the Limit Applies.
3. The discharger shall comply with all sections of this Order immediately, except during periods when wet weather flows exceed the treatment and/or conveyance capacity of the wastewater

facilities. Compliance with Prohibition A.l. and Effluent Limitations B.l.b, B.l.c and B.l.d during such periods shall be achieved according to provisions and time schedules contained in enforcement Orders issued to the West Contra Costa Sanitary District (Cease and Desist Order No. 79-66) and the City of Richmond (Time Schedule Order Nos. 79-102 and 82-66).

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, except B.3.
8. This Order expires November 17, 1987. 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 December 15, 1982.

FRED H. DIERKER
Executive Officer

Attachments:

Standard Provision and
Reporting Requirements dated April, 1977
Tentative SMP
Map

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

West County Agency of

Contra Costa County

NPDES NO. CA 0038539

ORDER NO. 82-65

CONSISTS OF

PART A

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT AND INTAKE (WEST CONTRA COSTA AND RICHMOND TREATMENT PLANTS)

<u>Station</u>	<u>Description</u>
A-1	At any point in the West Contra Costa Sanitary District treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment.
A-2	At any point in the City of Richmond treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment.

B. EFFLUENT (WEST CONTRA COSTA AND RICHMOND TREATMENT PLANTS AND OUTFALL)

<u>Station</u>	<u>Description</u>
E-001	At any point in the joint outfall between the point of discharge and the point at which all waste tributary to that outfall is present. (May be the same as E-001-DC)
E-001-D-1	At any point in the Richmond disinfection facilities at which point adequate contact with the disinfectant is assured.
E-001-D-2	At any point in the West Contra Costa Sanitary District disinfection facilities at which point adequate contact with the disinfectant is assured.
E-001-DC	At any point in the joint outfall following dechlorination.

C. LAND OBSERVATIONS (WEST CONTRA COSTA AND RICHMOND TREATMENT PLANTS)

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

D. OVERFLOWS AND BYPASSES (WEST CONTRA COSTA AND RICHMOND TREATMENT PLANTS AND OUTFALL)

<u>Station</u>	<u>Description</u>
0-1 through 0-'n'	Bypass or overflows from manholes, pump stations or collection systems. 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 AND ANALYSIS

- A. The results of sampling and analysis shall be that given as Table I.

III. MODIFICATIONS TO PART A

The following paragraphs of Part A do not apply:

C.3, C.4, C.5.d, and D.4

IV. MISCELLANEOUS REPORTING

1. The annual report shall include the previous 10 analyses for heavy metals and phenols or all such analyses made within the past year, whichever is greater.
2. Final chlorine residual shall be reported using the attached "Form A, Chlorine Residual" or equivalent.

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. 82-65.
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 December 20, 1982

Attachment:

Table I with footnotes
Form A, Chlorine Residual

TABLE I
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A-1 A-2	E-001		E-881-B1		E-001-DC			All Sta.	All Sta.	
TYPE OF SAMPLE	C-24	G	C-24	Cont	G	C-24	G	C-24	Cont	0	0
Flow Rate (mgd)				D							
BOD, 5-day, 20° C, or COD (mg/l & kg/day)	2/W		5/W								
Chlorine Residual & Dosage (mg/l & kg/day)					D (2)				2H (3) or Cont		
Settleable Matter (ml/1-hr. & cu. ft./day)		D									
Total Suspended Matter (mg/l & kg/day)	2/W		5/W								
Oil & Grease (1) (mg/l & kg/day)			2/W								
Coliform (Total or Fecal) (MPN/100 ml) per req't					5/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)											
pH (units)							5/W				
Dissolved Oxygen (mg/l and % Saturation)							W				
Temperature (°C)											
Apparent Color (color units)											
Secchi Disc (inches)											
Sulfides (if DO < 5.0 mg/l) Total & Dissolved (mg/l)											
Arsenic (mg/l & kg/day)			2/Y								
Cadmium (mg/l & kg/day)			2/Y								
Chromium, Total (mg/l & kg/day)			2/Y								
Copper (mg/l & kg/day)			2/Y								
Cyanide (mg/l & kg/day)			2/Y								
Silver (mg/l & kg/day)			2/Y								
Lead (mg/l & kg/day)			2/Y								

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

Sampling Station	A-1 A-2	E-001		E-001-D1 E-001-D2	E-001+DC		All Sta	All Sta					
TYPE OF SAMPLE	C-24	G	C-24	Cont	G	C-24	G	C-24	O				
Mercury (mg/l & kg/day)			2/Y										
Nickel (mg/l & kg/day)			2/Y										
Zinc (mg/l & kg/day)			2/Y										
PHENOLIC COMPOUNDS (mg/l & kg/day)			2/Y										
All Applicable (4) Standard Observations		5/W							2 W	E			
Bottom Sediment Analyses and Observations													
Total Identifiable Chlorinated Hydrocarbons (mg/l & kg/day)			2/Y										
SO ₂ Dosage (2)							D						
Un-ionized Ammonium Hydroxide (5)			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
 G = groundwater stations

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:

- (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 and analyzed separately. Results shall be expressed as a weighted average of the 3 samples, based upon the instantaneous flow rates occurring at the time of each grab sample.

If the plant is not staffed 24 hours per day or if the discharge does not occur continuously, then the three grab samples may be taken at approximately equal intervals during the period that the plant is staffed or during the period that discharge is made.

In the event that sampling for oil and grease once every two weeks or less frequently shows an apparent violation of the waste discharge permit 30-day average limitation (considering the results of one or two day's sampling as a 30-day average), then the sampling frequency shall be increased to weekly, so that a true 30-day average can be computed and compliance can be determined.

- (2) Dosage for chlorine and SO₂ shall be reported daily as total lbs or kgs during previous 24 hours, instantaneous dosage rate (rotometer reading) and calculated dosage concentration based on rotometer and flow at time of reading. Concentration at head end of contact chamber and immediately prior to de-chlorination shall also be reported.
- (3) See attached Form A.
- (4) Effluent observations shall be recorded in a log book maintained at each treatment plant. Reporting of these observations shall be limited to conditions of unusual coloration or levels of floating and suspended material of waste origin.
- (5) Un-ionized ammonium hydroxide concentration shall be calculated based on analyses of ammonia, TDS, temperature and pH, which shall also be reported.

