

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 83-15

NPDES NO. CA0038547

WASTE DISCHARGE REQUIREMENTS FOR:

CONTRA COSTA COUNTY SANITATION DISTRICT
NO. 7A, ANTIOCH, CONTRA COSTA COUNTY

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

1. Contra Costa County Sanitation District No. 7A, California (hereinafter called the discharger) by application dated December 14, 1982, has applied for reissuance of waste discharge requirements, and a permit to discharge wastes under the National Pollutant Discharge Elimination System (NPDES).
2. The discharger currently discharges an annual average of 6.9 million gallons per day (mgd) of treated wastewater containing pollutants into New York slough, a water of the United States via a deepwater outfall extending about 450 feet offshore and about 37 feet below water surface, at a point north of the new subregional treatment plant.
3. The subregional treatment plant serves City of Pittsburg, West Pittsburg and Antioch, and provides full secondary treatment. Design capacity is 9.5 mgd. The discharger is in the planning process to expand existing facilities to provide for a design capacity of 12.6 mgd. Sewage sludge is treated by dissolved air floatation thickeners, anaerobic digestion, dewatered and disposed of at an approved sanitary landfill.
4. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on July 21, 1982.
5. The beneficial uses of New York Slough and adjoining water bodies are:
 - a. Recreation
 - b. Fish migration, spawning and habitat
 - c. Habitat and resting for waterfowl, and migratory birds
 - d. Industrial, agricultural & municipal water supply
 - e. Esthetic enjoyment
 - f. Navigation
 - g. Commercial fishery
 - h. Habitat for wildlife including some rare and endangered species

6. 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.
7. The discharge is presently governed by Waste Discharge Requirements, Order No. 78-32, which allow discharge to New York Slough.
8. 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.
9. 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 Contra Costa County Sanitation District No. 7-A, California, shall comply with the following:

A. Prohibitions:

1. Discharge at any point at which the wastewater does not receive an initial dilution of at least 30:1 is prohibited.
2. There shall be no bypass or overflow of untreated wastewater to waters of the State either at the treatment plant or from the collection system.
3. The average dry weather flow shall not exceed 9.5 mgd. Average shall be determined over three consecutive months each year.
4. There shall be not less than two feet of freeboard in any storage or retention pond containing wastewater.

B. Effluent Limitations

1. Effluent discharged shall not exceed the following limits:

<u>Constituents</u>	<u>Units</u>	<u>30-Day Average</u>	<u>7-Day Average</u>	<u>Daily Maximum</u>	<u>Instantaneous Maximum</u>
Biochemical Oxygen Demand	mg/l	30	45	60	-
Suspended Solids	mg/l	30	45	60	-

<u>Constituents</u>	<u>Units</u>	<u>30-Day Average</u>	<u>7-Day Average</u>	<u>Daily Maximum</u>	<u>Instan- taneous Maximum</u>
Oil & Grease			--		--
	mg/l	10	--	20	--
Settable Matter	ml/l/hr	0.1	--	--	0.2
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 or be less than 6.0.
4. In any representative set of samples from the treatment plan 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. COLIFORMS:

- a. For months during which intake of water supplies occurs either from Mallard Slough by the Contra Costa County Water District, or from New York Slough by the City of Antioch, the following limits shall apply:

The median value for the MPN of total coliform in any seven (7) consecutive effluent samples shall not exceed twenty-three (23) coliform organisms per 100 milliliters. Any single sample shall not exceed 500 MPN/100 ml when verified by a repeat sample taken within 48 hours.

- b. For months during which no domestic water intakes occur, the following limitations shall apply:

Total coliform bacteria for a median of 5 consecutive effluent samples shall not exceed 240 MPN/100 ml. Any single sample shall not exceed 10,000 MPN/100 ml when verified by a repeat sample taken within 48 hours.

This limitation shall apply to only those months for which the discharger has received prior written indications from both the City and the Water District that neither intends to utilize their intake in that month.

6. Representative samples of the effluent shall not exceed the following limits more than the percentage of time 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(0.36)	0.02(0.72)
Cadmium	mg/l (kg/day)	0.02(0.72)	0.03(1.08)
Total Chromium	mg/l (kg/day)	0.005(0.18)	0.01(0.36)
Copper	mg/l (kg/day)	0.2(7.2)	0.3(10.8)
Lead	mg/l (kg/day)	0.1(3.6)	0.2(7.2)
Mercury	mg/l (kg/day)	0.001(0.036)	0.002(0.072)
Nickel	mg/l (kg/day)	0.1(3.6)	0.2(7.2)
Silver	mg/l (kg/day)	0.02(0.72)	0.04(1.44)
Zinc	mg/l (kg/day)	0.3(10.8)	0.5(18.0)
Cyanide	mg/l (kg/day)	0.1(3.6)	0.2(7.2)
Phenolic Compounds	mg/l (kg/day)	0.5(18.0)	1.0(36.0)
Total Identifiable Chlorinated Hydrocarbons ^{2/}	mg/l (kg/day)	0.002(0.072)	0.004(0.144)

^{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.

B. 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 7.0 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. 78-32 adopted on May 16, 1978. Order No. 78-32 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. In the event of a process upset or failure requiring the use of the emergency flow detention facilities, the discharger shall immediately notify the City of Antioch, the Contra Costa County Water District, the State Department of Health, the Contra Costa County Health Department, and the Regional Board office of such action. (This will allow the City and the District to take appropriate steps to protect their water supplies.)
5. 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.
6. 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.
7. The discharger shall comply with the Self-monitoring program as ordered by the Executive Officer.
8. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977, except B.3.
9. This Order expires June 15, 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.
10. 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 June 23, 1983.

FRED H. DIERKER
Executive Officer

Attachments:
Standard Provision and
Reporting Requirements dated April, 1977
Tentative SMP

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

REVISED
SELF-MONITORING PROGRAM
FOR

Contra Costa County

Sanitation District No. 7A

NPDES NO. CA 00038547

ORDER NO. 83-15

CONSISTS OF

PART A

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT

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

B. EFFLUENT

<u>Station</u>	<u>Description</u>
E-001	At any point in the outfall between the point of discharge and the point at which all waste tributary to the outfall is present and at which all treatment has been completed.
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 coincident with E-001)

C. RECEIVING WATERS

<u>Station</u>	<u>Description</u>
C-1	At a point in New York Slough directly above the center of the diffuser.
C-2-A C-2-B	At points in New York Slough located 100 feet upstream and downstream, respectively of the center of the diffuser.
C-R	At a point in New York Slough located 100 feet upstream from the diffuser.

D. LAND OBSERVATIONS

<u>Station</u>	<u>Description</u>
P-1	Located at the corners and midpoints of the perimeter fenceline 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: Bypass shall be reported to this Regional Board by telephone immediately after occurrence. A written report shall be filed with the Board within 5 working days which shall contain information such as quantity involved, location, course of bypass, nature of affects, and corrective measures taken.

F. RETENTION OR STORAGE PONDS

<u>Station</u>	<u>Description</u>
L-1 through L-n	At the corners and midpoints of levees enclosing each storage or retention pond intended to contain wastewater for flow equalization, re-treatment, or other purpose.

II. SCHEDULE OF SAMPLING, ANALYSIS AND OBSERVATIONS

The schedule of sampling, analysis and observations shall be that given in Table I.

III. MODIFICATION OF PART 'A', DATED 1/78

Exclusions: Paragraphs C-5c.

I, Roger B. James, 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. 83-15.
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.



for ROGER B. JAMES
Executive Officer

Attachments:
Table 1(2 pages)

Effective Date 7/30/85

TABLE I
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	I		E-001		E-001 D	All Sta	All Sta	All Sta	All Sta				
TYPE OF SAMPLE	C-24	Cont	G	C-24	G	G	O	O					
Flow Rate (mgd)		D											
BOD, 5-day, 20° C (mg/l & kg/day)	5/W			5/W									
Chlorine Residual (mg/l)			Cont of 2H										
Settleable Matter (ml/1-hr.)			D										
Total Suspended Matter (mg/l & kg/day)	5/W			5/W									
Oil & Grease (1) (mg/l & kg/day)				2/M									
Coliform (Total) (2) (MPN/100 ml)					3/W								
Fish Toxicity, % Survival in undiluted waste				M									
Mercury (mg/l & kg/day)				Q									
Nickel (mg/l & kg/day)				Q									
Zinc (mg/l & kg/day)				Q									
Total Organic Nitrogen (mg/l & kg/day)													
Total Phosphate (mg/l & kg/day)													
Turbidity (Jackson Turbidity Units)													
pH (units)			D			M							
Dissolved Oxygen (mg/l and % Saturation)			D			M							
Temperature (°C)			D			M							
Apparent Color Visual Description			-			M							
Secchi Disc (inches)													
Sulfides (if DO ≤ 5.0 mg/l) (mg/l)			W			W							
Arsenic (mg/l & kg/day)				Q									
Cadmium (mg/l & kg/day)				Q									
Chromium, Total (mg/l & kg/day)				Q									
Copper (mg/l & kg/day)				Q									
Cyanide (mg/l & kg/day)				Q									
Silver (mg/l & kg/day)				Q									
Lead (mg/l & kg/day)				Q									

TABLE I (continued)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANAL.

Sampling Station	I		E-001		E-001	All	All	All	A ₊
	C-24	Cont	G	C-24	D	Sta	Sta	Sta	Sta
TYPE OF SAMPLE									
Phenolic Compounds (mg/l & kg/day)				2/Y					
TICH (mg/l & kg/day)				2/Y					
All Applicable Standard and Observation				-		M	E	2/W	
Un-ionized Ammonia as N (mg/l)				-		M			
Total Dissolved Solid						M			
Freeboard (ft. & inches)									W

- (1) Oil and grease sampling shall consists 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.
- (2) For any month Effluent Limitation B.5.b is in effect, the District shall submit documentation from the Water District and the City of Antioch that there will be no intake of water supplies either from Mallard Slough or New York Slough.

LEGEND FOR TABLE

TYPES OF SAMPLES

- G = grab sample
- C-24 = composite sample - 24-hour
- Cont = continuous sampling
- 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

FREQUENCY OF SAMPLING

- E = each occurrence
- 2H = every 2 hours
- D = once each day
- W = once each week
- M = once each month
- Y = once each year
- Cont = continuous
- 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