

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 85-7
NPDES NO. CA0038270

WASTE DISCHARGE REQUIREMENTS FOR:

EAST BAY MUNICIPAL UTILITY DISTRICT
WALNUT CREEK FILTER PLANT
WALNUT CREEK, CONTRA COSTA COUNTY

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

1. East Bay Municipal Utility District, hereinafter discharger, by application, dated September 28, 1984, has applied for renewal of waste discharge requirements and a permit to discharge waste under the National Pollutant Discharge Elimination System(NPDES).
2. The discharger treats and produces an average of 20 million gallons per day (mgd) of potable water by chemical coagulation, filtration, disinfection and fluoridation. Chlorine, aluminum sulfate, or polymer activated carbon polymer, lime and fluoride are added in the treatment process. The treatment generates wastewaters which are discharged as described in the following:
 - a. One filter per day is backwashed which generates a total of 300,000 gallons of backwash water per day. Normally, the backwash water is held in the washwater basin for settling and then passed through a pressure filter to be recycled with the incoming raw water. Backwash water from the pressure filter is discharged to the washwater basin and recycled through the filter to incoming raw water. When problems occur, such as tastes and odors, backwash supernatant from the washwater settling basin is discharged through Outfall E-001 to Grayson Creek. There has been no discharge through Outfall E-001 during the last five years. None is expected during the next five years unless a problem, such as tastes and odors, should occur.
 - b. Sludge from the washwater basin is discharged to the sludge detention basin, concentrated, and then trucked to a land disposal site. Supernatant from the sludge detention basin is discharged through Outfall E-002 to Grayson Creek. During 1983, there were 79 days of discharge and the median and maximum flow were 0.03 and 0.065 mgd respectively. In the future, discharge is expected to be 25 gallons per minute for eight hours per

day (12,000 gallons) for two days a week during high turbidity periods (typically 12 weeks per year).

3. Both outfalls are surface discharges to Grayson Creek. Outfall E-001 is a 16 inch diameter concrete pipe (Latitude 37 deg., 54 min., 53.6 sec.; Longitude 122 deg., 05 min., 00.8 sec.) Outfall E-002 is a 6 inch diameter metal pipe (Latitude 37 deg., 54 min., 51.8 sec.; Longitude 122 deg., 05 min., 00.2 sec.)
4. The discharge is presently governed by Waste Discharge Requirements, Order No. 79-150, which allow discharge into Grayson Creek, a tributary to Carquinez Strait.
5. 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 Grayson Creek, Carquinez Strait and contiguous waters.
6. The beneficial uses of Grayson Creek, Carquinez Strait and contiguous water bodies are:
 - ° Water contact recreation
 - ° Non-contact water recreation
 - ° Wildlife habitat
 - ° Preservation of rare and endangered species
 - ° Estuarine and warm fresh water habitat
 - ° Fish migration and spawning
 - ° Industrial service supply
 - ° Navigation
 - ° Commercial and Sport fishing
7. The discharge to Grayson Creek violates the Basin Plan's prohibitions against discharge of any wastewater which has characteristics of concern to beneficial uses into nontidal waters and at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1.
8. The discharge of wastewater in compliance with the requirements of this order qualifies for an exception to the Basin Plan prohibitions because an inordinate burden would be placed on the discharger relative to the beneficial uses protected. Also, an equivalent level of environmental protection will be achieved by the high quality of wastewater required by this Order for discharge.
9. This Order serves as an NPDES permit, adoption of which 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.

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 an 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 THAT East Bay Municipal Utility 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 Clean Water Act as amended and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. Discharge of wastewater through Outfall E-001 is prohibited except when problems such as tastes and odors occur.
2. Discharge of wastewater through Outfall E-002 in excess of a monthly average flow of 12,000 gallons per day is prohibited except in case of emergency.
3. No sludge shall be discharged into watercourses or waters of the State.
4. There shall be no bypass of untreated wastewater to waters of the State.

B. Effluent Limitations

1. Effluent discharged shall not exceed the following limits:

<u>Constituents</u>	<u>Units</u>	<u>30-day Average</u>	<u>Daily</u>	<u>Instan- taneous Maximum</u>
a. Total Suspended Solids	mg/l	15	30	
b. Settleable Matter	ml/l-hr	0.1	0.2	
c. Total Chlorine residual (1)	mg/l	-	-	0.0
d. Aluminum Dissolved	mg/l	1.0	1.5	

(1) Requirement defined as below limit of detection in standard test methods.

2. Waste shall not have a pH of less than 6.5 nor greater than 8.5, unless the raw influent water being filtered has a pH greater than 8.5, in which case the waste shall not have a pH greater than that of the influent water.
3. 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 median of 90% survival and a 90 percentile value of not less than 70% survival.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any point.
 - 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. Increased turbidity above background levels by more than the following:

<u>Receiving Water Background</u>	<u>Incremental Increase</u>
<50 units (NTU)	5 units, maximum
50-100 units	10 units, maximum
>100 units	10% of background, maximum

- e. Visible, floating, suspended, or deposited oil or other products of petroleum origin:
- f. 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 this 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. Median of any three consecutive months shall not be less than 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 0.5 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 Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water 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. 79-150 adopted on November 20, 1979. Order No. 79-150 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 upon adoption.
4. The discharger shall review and update by December 31, 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 willfull and negligent violation of this Order pursuant to Section 13387 of the California Water Code.
5. The discharger shall comply with the self-monitoring program as adopted by the Board and as may be amended by the Executive Officer.
6. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977, except items A.5., A.12., B.2., B.3., and B.5.
7. This Order expires January 16, 1990. 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 applicable for issuance of new waste discharge requirements.
8. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water 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, Roger B. James, 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 January 16, 1985.

ROGER B. JAMES
Executive Officer

Attachments
Standard Provisions & Reporting
Requirements, April 1977
Self-Monitoring Program
Resolution 74-10

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

EAST BAY MUNICIPAL UTILITY DISTRICT

WALNUT CREEK FILTER PLANT

WALNUT CREEK, CONTRA COSTA COUNTY

NPDES NO. CA0038270

ORDER NO. 85-7

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

A. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13268, 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No. 73-16.

The principal purposes of a self-monitoring program by a waste discharger, are: (1) to document compliance with waste discharge requirements and prohibitions established by this Regional Board, (2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge., (3) to develop or assist in the development of effluent or other limitations, discharge prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards, and (4) to prepare water and wastewater quality inventories.

B. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to the latest edition of Standard Methods for the Examination of Water and Wastewater prepared and published jointly by the American Public Health Association, American Water Works Association, and Water Pollution Control Federation, or other methods approved and specified by the Executive Officer of this Regional Board. (See Appendix E)

Water and waste analyses shall be performed by a laboratory approved for these analyses by the State Department of Health or a laboratory approved by the Executive Office. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his laboratory and shall sign all reports of such work submitted to the Regional Board.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. DEFINITION OF TERMS

1. A composite sample is defined as a sample composed of individual grab samples mixed in proportions varying not more than plus or minus five percent from the instantaneous rate of waste flow corresponding to each grab sample collected at regular intervals not greater than one hour, or collected by the use of continuous automatic sampling devices capable of attaining the proportional accuracy stipulated above throughout the period of discharge or 24 consecutive hours, whichever is shorter.

2. A grab sample is defined as an individual sample collected in fewer than 15 minutes

3. Standard Observations

a. Receiving Water

- (1) Floating and suspended materials of waste origin (to include oil, grease, algae, and other macroscopic particulate matter): presence or absence, source, and size of affected area.
- (2) Discoloration and turbidity: description of color, source, and size of affected areas.
- (3) Odor: presence or absence, characterization, source, and distance of travel.

b. Waste Effluent

- (1) Floating and suspended material of waste origin (to include oil, grease, algae, and other macroscopic particulate matter): presence or absence.
- (2) Odor: presence or absence, characterization, source, distance of travel.

c. Periphery of Waste Treatment and/or Disposal Facilities

- (1) Odor: presence or absence, characterization, source and distance of travel

D. SCHEDULE OF SAMPLING, ANALYSES, AND OBSERVATIONS

The discharger is required to perform observations, sampling, and analyses according to the schedule in Table I.

E. RECORDS TO BE MAINTAINED

1. Written reports, strip charts, calibration and maintenance records, and other records shall be maintained at the waste treatment plant and shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board or Regional Administrator of the U.S. Environmental Protection Agency, Region IX. Such records shall show the following for each sample:
 - a. Identity of sampling and observation stations by number.
 - b. Date and time of sampling and/or observations.

- c. Date and time that analyses are started and completed, and name of personnel performing the analyses.
 - d. Complete procedure used, including method of preserving sample and identity and volumes of reagents used. A reference to specific section of Standard Methods is satisfactory.
 - e. Calculations of results.
 - f. Results of analyses and/or observations.
2. A tabulation shall be maintained showing the total waste flow or volume for each day.

F. REPORTS TO BE FILED WITH THE REGIONAL BOARD

1. Spill Reports

A report shall be made of any spill or toxic or hazardous material. Spills shall be reported to this Regional Board and the Department of Fish and Game by telephone immediately after occurrence. A written report shall be filed with the Regional Board within five (5) days and shall contain information relative to:

- a. Nature of waste or pollutant,
- b. Quantity involved,
- c. Cause of spilling,
- d. Estimated size of affected area,
- e. Nature of effects (i.e., fishkill, discoloration of receiving water, etc.),
- f. Corrective measures that have been taken, or planned, and a schedule of these activities, and
- g. Persons notified.

2. Bypass Reports

Bypass reporting shall be an intergral part of regular monitoring program reporting, and a report on bypassing of untreated waste or bypassing of any treatment unit(s) shall be made which will include cause, time and date, duration and estimated volume of waste bypassed, method used in estimating volume, and persons notified, for planned and/or unplanned bypasses.

The discharger shall file a written report at least 15 days prior to advertising for bid on any construction project which would cause or aggravate the discharge of waste in violation of requirements; said report shall describe the nature, costs, and scheduling of all action necessary to preclude such discharge. In no case should any discharge of sewage-bearing wastes be permitted without at least primary treatment and chlorination.

In the event the discharger is unable to comply with the conditions of the waste discharge requirements and prohibitions due to:

- (a) maintenance work, power failures, or breakdown of waste treatment equipment, or
- (b) accidents caused by human error or negligence, or
- (c) other causes such as acts of nature,

the discharger shall notify the Regional Board Office by telephone as soon as he or his agents have knowledge of the incident and confirm this notification in writing within two weeks of the telephone notification. The written report shall include pertinent information explaining reasons for the noncompliance and shall indicate what steps were taken to prevent the problem from recurring.

In addition, if the noncompliance caused by items (a), (b), or (c) above is with respect to any of the effluent limits, the waste discharger shall promptly accelerate this monitoring program to analyze the discharge at least once every day for those constituents which have been violated. Such daily analysis shall continue until such time as the effluent limits have been attained, or until such time as the Executive Officer determines to be appropriate. The results of such monitoring shall be included in the regular Self-Monitoring Report.

3. Self-Monitoring Report

Written reports shall be filed regularly for each calendar quarter (unless specified otherwise) by the fifteenth day of the month following quarter. The reports shall be comprised of the following:

a. Letter of Transmittal:

A letter transmitting self-monitoring reports should accompany each report. Such a letter shall include a discussion of requirement violations found during the past month and actions taken or planned for correcting violations, such as plant operation modifications and/or plant facilities expansion. If the discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. Monitoring reports and the letter transmitting reports shall be signed by either a principal executive officer, ranking elected official, or other duly authorized employee.

The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true and correct.

b. Compliance Evaluation Summary

Each report shall be accompanied by a compliance evaluation summary sheet prepared by the discharger. The report format will be prepared using the example shown in Appendix A. The discharger will prepare the format using those parameters and requirement limits for receiving water and effluent constituents specified in his permit.

c. Map or Aerial Photograph

A map or aerial photograph shall accompany the report showing sampling and observation station locations.

d. Results of Analyses and Observations

Tabulations of the results from each required analysis specified in Section G by date, time, type of sample, and station, signed by the laboratory director. The report format will be prepared using the examples in APPENDIX B.

e. Effluent Data Summary

Summary tabulations of the data to include flow, and for each constituent, total number of analyses, maximum, minimum, and average values for each period.

f. List of Approved Analyses

- (1) Listing of analyses for which the discharger is approved by the State Department of Health.
- (2) List of analyses performed for the discharger by another approved laboratory (and copies of reports signed by the laboratory director of that laboratory shall also be submitted as part of the report).

4. Annual Reporting

By January 30 of each year, the discharger shall submit an annual report to the Regional Board covering the previous calendar year. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year. In addition, the report shall contain a comprehensive discussion of the compliance record and the corrective actions taken or planned which may be needed to bring the discharger into full compliance with the waste discharge requirements. The report format will be prepared by the discharger using the examples shown in APPENDIX D and should be maintained and submitted with each regular self-monitoring report.

G. MONITORING SPECIFICATIONS

1. Description of Sampling Stations

a. Intake

<u>Station</u>	<u>Description</u>
I-1	At any point in the raw water supply prior to any treatment.

b. Effluent

<u>Station</u>	<u>Description</u>
E-001	At any point in the Outfall Pipe E-001.
E-002	At any point in the Outfall Pipe E-002.

c. Receiving Waters

<u>Station</u>	<u>Description</u>
C-1	At a point in Grayson Creek, located approximately 100 feet upstream from Outfall E-001 point of discharge.
C-2	At a point in Grayson Creek, located approximately 25 feet downstream from Outfall E-001 point of discharge.
C-3	At a point in Grayson Creek, located approximately 100 feet upstream from Outfall E-002 point of discharge.
C-4	At a point in Grayson Creek, located approximately 25 feet downstream from Outfall E-002 point of discharge.

2. Schedule of Sampling and Analysis

- a. The schedule of sampling and analysis shall be that given as Table I.

I, Roger B. James, Executive Officer, do 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. 85-7.
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.

ROGER B. JAMES
Executive Officer

Effective Date January 25, 1985

Attachments

Table I
Appendix A
Appendix B
Appendix D
Appendix E

TABLE I

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSES

NPDES # CA0038270

ORDER NO. 85-7

SAMPLING STATIONS	E-001		E-002		C-1 & C-2		I		
	C-24	G	C-24	G	G	O	G		
Flow Rate (mgd)		(1) D		(1) D					
Settleable Matter (ml/l-hr)		D		D					
Total Suspended Solids (mg/l & lbs/day)		D		D					
Aluminum dissolved (mg/l & lbs/day)		Y		Y					
Chlorine Residual (mg/l)		D		D					
pH (units)		D		D	D		D		
Fish Toxicity, 96-hour % Survival in undiluted waste		Y		Y					
Turbidity (Nephelometric Turbidity Units)		D		D	D				
All Applicable Standard Observations						D			

LEGEND FOR TABLETYPES OF SAMPLES

G = grab sample
 C-24 = composite sample - 24-hour
 O = observation

FREQUENCY OF SAMPLING

Y = yearly, during the first calendar quarter
 W = weekly
 M = monthly
 D = daily when there is a discharge.

TYPES OF STATIONS

I = intake and/or water
 supply stations
 E = waste effluent stations
 C = receiving water stations

(1) An estimate is acceptable. Basis of calculation shall be stated.