

1

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER 90-137

WATER RECLAMATION REQUIREMENTS FOR:

WEST CONTRA COSTA SANITARY DISTRICT; EAST BAY MUNICIPAL UTILITY DISTRICT; CHEVRON U.S.A., INC., IN CONTRA COSTA COUNTY

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

1. The West Contra Costa Sanitary District (WCCSD) operates a sewage treatment plant in Richmond which has an average dry-weather flow of 6.7 million gallons per day (MGD). This plant provides secondary treatment with nitrification.
2. Chevron U.S.A., Inc. (Chevron) operates a petroleum refinery with a crude-run throughput of 256,000 barrels per day in Richmond. The NPDES permit for the discharge of treated wastewater from this facility is contained in Board Order 87-073.
3. The East Bay Municipal Utility District (EBMUD) and Chevron have committed to implementing a wastewater reclamation project, which would provide a potable water savings of up to 5.4 million gallons per day for EBMUD and a reliable source of supply to Chevron, for use as make-up water in their process cooling tower basins. A study was recently conducted, which demonstrated the feasibility of providing tertiary treatment to secondary effluent from WCCSD for this project. This wastewater will ultimately be discharged as blowdown, and will then receive treatment at Chevron's wastewater treatment plant. No waste discharge requirements currently exist for this project.
4. EBMUD has agreed to construct and operate an Advanced Wastewater Treatment (AWT) plant located in North Richmond. The AWT will take chlorinated secondary effluent from WCCSD treatment plant. This wastewater will be further treated by coagulation with addition of lime and soda ash, clarification, sand filtration and disinfection so as to meet reclamation criteria specified by Title 22 of the California Administrative Code. The AWT is expected to be completed by 1993.
5. Two documents have been received relative to this project: Chevron Wastewater Reclamation Project - Pilot Plant Study, dated July 1987; and

EBMUD/Chevron Water Reclamation Project, dated July 1990. These two documents are judged to be the equivalent of a Report of Waste Discharge for this project.

6. EBMUD is hereinafter called the Producer of the reclaimed water. It is their responsibility to maintain and operate the AWT, and to make sure that the reclaimed water meets the quality standards of this Order. Chevron is the sole User of the reclaimed water.
7. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 17, 1986. The water quality goals to be used in regulating water quality factors as set forth in the Basin Plan include the maximum feasible reclamation or reuse of municipal, industrial, and agricultural wastewaters.
8. Section 13523 of the California Water Code provides that a Regional Board, after consultation with and receipt of recommendations from the State Department of Health Services, and if it determines such action to be necessary to protect the public health, safety, or welfare, shall prescribe water reclamation requirements for water which is used or proposed to be used as reclaimed water.
9. These water reclamation requirements are in conformance with the statewide reclamation criteria established by the State Department of Health Services as prescribed in Title 22, Section 60301 through Section 60355, California Administrative Code.
10. On July 20, 1988, the Board adopted Resolution 88-130, titled "Statement of Support for Municipal Wastewater Reuse in Petroleum Refinery Operations - Chevron U.S.A., Inc." In this Resolution, the Board acknowledged the importance of wastewater reclamation to meet future water demands. Cooling blowdown can constitute 20-50% of the total Chevron discharge. In Resolution 88-130, the Board stated its intent to amend Chevron's NPDES permit such that their permit limits account for pollutants present in the reclaimed wastewater. The Board also stated that if Chevron experiences violations of its permit limits and can present substantial evidence that the cause of the violation was the use of reclaimed water, the staff and the Board will include this information in the consideration of any enforcement action.
11. EBMUD prepared an Environmental Impact Report (EIR), which was certified in October, 1989, in accordance with the California Environmental Quality Act (Public Resources Code Section 21000 et seq.) The EIR found this project to have no significant adverse impact on the environment with the implementation of proper mitigation measures, and in fact this project is beneficial in that potable water will be conserved and the total pollutant discharge to the Bay will be reduced.

3. Additional users may be authorized to use reclaimed water only by action of the Board.

User

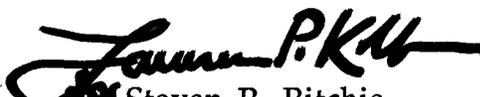
4. The User shall take all reasonable steps to prevent cross-contamination between all pipelines transporting reclaimed water and those transporting potable water.
5. The User shall provide adequate means of notification to their employees that reclaimed water is being used for the cooling tower make-up.
6. Use of reclaimed water shall be primarily used as cooling tower make-up unless written authorization is obtained from the Executive Officer.

C. Provisions

1. The Producer shall comply with the attached Self-Monitoring Program as ordered by the Executive Officer.
2. The User and Producer shall permit the Board or its authorized representatives in accordance with California Water Code Section 13267(C):
 - a. Entry upon premises where a regulated facility of activity is located or conducted, or where records are kept under the conditions of this Order;
 - b. Access to and copy at reasonable times any records that must be kept under the conditions of this Order;
 - c. Inspection at reasonable times of any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this order; and
 - d. To photograph, sample, and monitor at reasonable times for the purposes of assuring compliance with this Order.
3. The Producer and User shall maintain in good working order and operate, as efficiently as possible, any facility or control system installed or as modified to achieve compliance with this Order.
4. All key equipment which may at any time contain reclaimed water shall be adequately and clearly identified with warning signs and the Producer and User shall make all necessary provisions, in addition, to inform its workers that the liquid contained is reclaimed water and is unfit for human consumption.

5. Prior to distributing reclaimed water, the Producer shall submit a contingency plan acceptable to the Executive Officer outlining the actions to be taken in the event the reclaimed water fails to meet the requirements of this Order.
6. The Producer shall file with the Board a Report of Waste Discharge at least 180 days before making any material change in the character, location of volume of the reuse except for emergency conditions in which case the Board shall be notified.
7. The Board will review this Order periodically and may revise the requirements when necessary.
8. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
 - a. Violation of any term or condition contained in this Order;
 - b. Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts;
 - c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized reuse; and
 - d. Endangerment to public health or environment that can only be regulated to acceptable levels by order modification or termination.
9. Inspection, supervision, and employee training should be provided by the Producer to assure proper operation of the reclamation facilities and to provide worker protection. Records of inspection and training should be maintained by the Producer.

I, Steven R. Ritchie, 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 October 17, 1990.


Steven R. Ritchie
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

FINAL
SELF-MONITORING PROGRAM
FOR

EAST BAY MUNICIPAL UTILITY DISTRICT
CHEVRON RECLAMATION PROJECT
CONTRA COSTA COUNTY

ORDER NO. 90-137

CONSISTS OF
PART A

PART A

EBMUD/CHEVRON WASTEWATER RECLAMATION PROJECT (for both Producer and User)

I. 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 monitoring program by a waste discharger, also referred to as a self-monitoring program, are:

1. To document compliance with waste reclamation requirements and prohibitions established by the Regional Board.
2. To facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste water reclamation.

II. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage and analyses shall be performed according to the 40 CFR 136 or other methods approved and specified by the Executive Officer of this Regional Board. All chemical or biological analyses required by this order shall be accompanied by adequate and sufficient quality assurance/quality control (QA/QC) protocols to the satisfaction of the Board's Executive Officer. This QA/QC analysis shall be at a minimum that required by the standard methods employed, and a summary of the QA/QC data (including, but not limited to the quality assurance procedures, test results for replicate samples, sample blanks, any quality assurance tests, and the recovery percentages for the internal and surrogate standards) shall accompany the analytical reports to which it applies.

Water and waste analyses shall be performed by a laboratory approved for these analyses by the State Department of Health (DOHS) or a laboratory waived by the Executive Officer from obtaining a certification for these analyses by the DOHS. The director of the laboratory whose name appears on the certification or his/her laboratory supervisor who is directly responsible for analytical work performed shall supervise all analytical work including appropriate quality assurance/quality control procedures in his or her 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.

III. DESCRIPTION OF SAMPLING STATIONS AND SCHEDULE OF SAMPLING, ANALYSIS AND OBSERVATIONS

1. DESCRIPTION OF SAMPLING STATIONS

A. EFFLUENT (PRODUCER)

<u>STATION</u>	<u>DESCRIPTION</u>
E-001	Located at any point in the effluent from the advanced water treatment facilities where all waste tributary to the effluent is present, prior to being used in the discharger's cooling tower (May be the same point as E-001D)
E-001D	Located at any point in the effluent from the disinfection facilities at which point adequate contact with the disinfectant is assured.

2. SCHEDULE OF SAMPLING, ANALYSES, AND OBSERVATIONS

- a. This self-monitoring program is applicable during the periods when wastewater is being reclaimed for cooling tower make-up.
- b. The Producer of the reclaimed water is required to perform sampling and analyses according to the schedule given in Table I.

IV. REPORTS TO BE FILED WITH THE REGIONAL BOARD

1. Violation of Requirements:

In the event the Producer or User are unable to comply with the conditions of the water reclamation requirements and prohibitions due to:

- (a) maintenance work, power failure, or breakdown of the Advanced wastewater treatment plant, or
- (b) accidents caused by human error or negligence, or
- (c) other causes such as acts of nature,

the Producer or User 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 non-compliance and shall indicate what steps were taken to prevent the problems from recurring.

2. Self-Monitoring Reports

Written reports shall be filed regularly for each calendar month by the fifteenth day of the following month. The reports shall be comprised of the following:

a. Letter of Transmittal:

A letter transmitting self-monitoring reports shall accompany each report. The letter shall include a discussion of requirement violations found during the past month and actions taken or planned for correcting violations, such as operation modifications and/or facilities expansion. If the Producer has previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. 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. Results of Analyses and Observations:

Tabulations of the results from each required analysis and/or observations specified in Table I by date, time, type of sample, and station.

c. List of Approved Analyses:

- (1) Listing of analyses for which the Producer is approved by the State Department of Health.
- (2) List of analyses performed for the Producer 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).

I, Steven R. Ritchie, 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 the Water Reclamation Requirements established in Regional Board Order No. 88-060.

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.

A handwritten signature in black ink, appearing to read "Steven R. Ritchie". The signature is fluid and cursive, with a large initial "S" and "R".

STEVEN R. RITCHIE
Executive Officer

Effective Date: **10/26/90**

Attachments: Table I

TABLE ISCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSES
(CHEVRON/EBMUD WASTEWATER RECLAMATION PROJECT)

<u>SAMPLING STATIONS</u>	<u>E-001</u>		<u>E-001D</u>
<u>Types of Samples</u>	<u>C-24</u>	<u>G</u>	<u>G</u>
Flow Rate, MGD	Cont.		
Cl residual, mg/l (1)			D
Turbidity, NTU		D	
Total Coliform, MPN/100 ml			D

LEGEND FOR TABLE

G = Grab sample

C-24 = 24-hour composite sample

D = Daily

Cont. = Continuous flow measurement

Notes:

1. Chlorine residual to be measured following a 90 minute contact.