CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 98-037
NPDES NO. CA0038750

WASTE DISCHARGE REQUIREMENTS FOR:

WICKLAND OIL COMPANY
SELBY WASTEWATER TREATMENT PLANT
SELBY
CONTRA COSTA COUNTY

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

1. Wickland Oil Company, hereinafter called the discharger, submitted a Report of Waste Discharge dated January 21, 1997 for issuance of waste discharge requirements and a permit to discharge wastewater to waters of the State and the United States under the National Pollutant Discharge Elimination System (NPDES).

2. The discharger operates a storage and distribution terminal and a blending facility for petroleum products.

3. The discharger in conjunction with ASARCO, Inc., and the California State Lands Commission is remediating the former ASARCO, Inc., lead smelter site in Selby. The remediation necessitates the closure of an existing sewage oxidation pond, which provides domestic wastewater treatment for 16 homes near the site, the John Swett School District Administration building and the Wickland Oil Terminal.

4. The discharger proposed to construct a package wastewater treatment plant to replace the existing oxidation pond to serve the Selby area. The treatment plant will be built at A street, at the Old Highway 40, Selby, Contra Costa County, California (see Attachment A), and will be owned and operated by the discharger. The plant will provide secondary level treatment for domestic wastewater from the existing 16 homes near the site, the John Swett School District Administration building and the Wickland Oil Terminal. Discharge from sources other than the three sources mentioned above is not authorized in this permit. The discharger's service area has a present population of 45. The treatment plant will have an average dry weather design flow of 0.023 million gallons per day (mgd), and can treat up to 0.11 mgd during the wet weather flow period.

5. The U.S. Environmental Protection Agency (USEPA) and the Board have classified this discharge as a minor discharge.

6. The proposed treatment facilities utilized prior to discharge to the Carquinez Straits/San Pablo Bay consist of grit removal, flow equalization, followed by biological treatment using activated sludge in a sequencing batch reactor, disinfection, and dechlorination. A treatment process schematic diagram is included as Attachment B.

7. Treated wastewater will be discharged into the Carquinez Straits/San Pablo Bay through a submerged outfall (Latitude 38 Deg. 03 Min. 30 Sec.; Longitude 122 Deg. 14 Min. 38 Sec.).

8. The sludge generated in the reactor vessel is to be aerobically stabilized in a digestor using an aspirator type aerator. The digested sludge is then transferred to sludge drying beds by a sludge pump, where the sludge will be dried prior to off-site disposal.

9. The Board adopted a revised Water Quality Control Plan (Basin Plan) for the San Francisco Bay Region on June 21, 1995. The revised Basin Plan was approved by the State Water Resources Control Board and the Office of Administrative Law on July 20 and November 13, 1995, respectively. The Basin Plan identifies beneficial uses and water quality objectives for surface waters and groundwaters in the region, as well as effluent limitations and discharge prohibitions intended to protect beneficial uses. This Order implements the plans, policies and provisions of the Board's Basin Plan.

10. The Basin Plan contains water quality objectives and beneficial uses for San Pablo Bay and contiguous waters. The beneficial uses of San Pablo Bay and contiguous water bodies include:

    - Industrial Service and Process Supply
    - Navigation
    - Water Contact Recreation
    - Non-contact Water Recreation
    - Ocean Commercial and Sport Fishing
    - Wildlife Habitat
    - Preservation of Rare and Endangered Species
    - Fish Migration and Spawning
    - Shellfish Harvesting
    - Estuarine Habitat

11. Effluent limitations in this permit are based on the Basin Plan, USEPA water quality criteria (Quality Criteria for Water, EPA 440/5-86-001, 1986; Gold Book),

applicable Federal Regulations (40 CFR Parts 122 and 131), and Best Professional Judgment.

12. The discharge receiving water, is an estuarine water with salinity that is generally marine in character. Therefore, effluent limitations for the discharge are based on marine water quality objectives.

13. The effluent limitation for copper in this permit is based on the Board's study to develop a site-specific water quality objective for copper for San Francisco Bay, based on Best Professional Judgment. This study and associated staff analysis are described in the September 25, 1992 Board staff report entitled "Revised Report on Proposed Amendment to Establish a Site Specific Objective for Copper for San Francisco Bay."

14. To protect beneficial uses, the Basin Plan (page 3-4) also sets a narrative objective which states that all waters shall be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental responses in aquatic organisms. The effluent limitation for copper in this permit is also designed to implement this objective.

15. 40 CFR 122.44(d)(1)(I) requires the permit to include limits for all pollutants "which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard." The discharger's permit application contained information about copper concentrations in source water and has a maximum daily value of 0.36 mg/l. Since source water is eventually discharged to the wastewater treatment plant and the treatment plant, although may be able to remove some of the copper, is not designed specifically to remove copper, the Board finds that the discharger's effluent has a reasonable potential to cause or contribute to an excursion of the proposed site specific objective for copper for San Francisco Bay. The Board also finds that the discharger's effluent has a reasonable potential to cause or contribute to an excursion of the narrative water quality objective contained in the Basin Plan which states that all waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Numerical effluent limitation for copper is included in this Order.

16. This permit may be amended in the future to include specific copper mass loading limitations and loading reductions in accordance with an approved copper wasteload allocation.

17. 40 CFR 122.44(d)(1)(I) requires the permit to include limits for all pollutants "which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard." The discharger's permit application stated that

no analysis has been performed on the proposed discharge. It also stated that source water analyses indicate the presence of many trace inorganic and organic chemicals. The proposed treatment plant and its service area is in the vicinity of the Selby Slag site, a previous lead smelting facility. The slag waste at the site contains varying concentrations of metals, including lead, zinc, arsenic, mercury, chromium, copper and cadmium. Several investigations at the site have characterized the extent of environmental concerns to include the presence of elevated heavy metal concentrations in on-site slag deposits, notably lead, arsenic, copper and zinc. Studies also indicated the presence of elevated arsenic concentrations in on-site shallow ground water and acidic ground water in the ground waters near the acid processing and storage area. It is possible that contaminated runoff or ground water at the slag site may enter the collection systems and discharge to the proposed treatment plant. Although the wastewater treatment plant may remove some of these chemicals, the plant is not designed specifically for their removal. Therefore, the Board finds that the discharger's effluent has a reasonable potential to cause or contribute to excursions of water quality objectives as established in the Basin Plan for the following constituents: arsenic, cadmium, chromium, copper, lead, mercury, nickel, cyanide, selenium, silver, zinc, phenols, and PAHs. Numerical effluent limitations for these constituents are established in this permit.

18. The Basin Plan prohibits discharges that contain particular characteristics of concern that receive less than 10:1 minimum initial dilution. The receiving water of the discharge has viable shellfish beds which could be affected by the discharge. To protect the shellfish beds, the Board has required other discharges in the area to achieve a minimum initial dilution of 45:1. This Order prohibits any discharge at any point at which the wastewater discharge does not receive a minimum initial dilution of 45:1.

19. Federal Regulations for storm water discharges were promulgated by the USEPA on November 19, 1990. The regulations [40 Code of Federal Regulations (CFR) Parts 122, 123, and 124] require specific categories of industrial activity (industrial storm water) to obtain a NPDES permit and to implement Best Available Technology Economically Available and Best Conventional Pollutant Control Technology to control pollutants in industrial storm water discharges.

20. The discharger indicated that the storm water flows from the wastewater treatment facility process areas will be directed to the wastewater treatment plant headworks and treated along with the wastewater discharged to the treatment plant. These storm water flows constitute all industrial storm water at this facility and consequently this permit regulates all industrial storm water discharges at this facility.

21. The discharger is responsible for the operation and maintenance of the collection system contributing to the treatment plant and is responsible for any sewage spill/overflow from the system.

22. 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 [California Environmental Quality Act (CEQA)] pursuant to Section 13389 of the California Water Code.

23. 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 an opportunity to submit their written views and recommendations.

24. 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 Clean Water Act and regulations and guidelines adopted thereunder, that the discharger shall comply with the following:

A. DISCHARGE PROHIBITIONS

1. Discharge of treated wastewater at a location or in a manner different from that described in findings of this Order is prohibited.

2. Discharge at any point at which the wastewater does not receive an initial dilution of at least 45:1 is prohibited.

3. The bypass or overflow of untreated or partially treated wastewater to waters of the State, either at the treatment plant or from the collection system or pump stations tributary to the treatment plant, is prohibited.

4. The average dry weather flow discharge shall not exceed 0.023 mgd. The average dry weather flow shall be determined over three consecutive dry weather months each year. Discharge from sources other than those described in findings of this Order is prohibited.

5. Discharges of water, materials, or wastes other than storm water, which are not otherwise authorized by this permit, to a storm drain system or waters of the State are prohibited.

6. Storm water discharges shall not cause pollution, contamination, or nuisance.

B. EFFLUENT LIMITATIONS

The term "effluent" in the following limitations means the fully treated wastewater effluent from the discharger's wastewater treatment facility, as discharged to San Pablo Bay.

1. The effluent discharged to San Pablo Bay shall not exceed the following limits:

Constituent	Units	Monthly Average	Weekly Average	Daily Max.	Instantaneous Max.
a. Biochemical Oxygen Demand (BOD_5, 20^oC)	mg/l	30	45	--	--
b. Total Suspended Solids	mg/l	30	45	--	--
c. Oil & Grease	mg/l	10	--	20	--
d. Settleable Matter	ml/l-hr	0.1	--	0.2	--
e. Chlorine Residual (1)	mg/l	--	--	--	0.0

Footnote: (1) Requirement defined as below the limit of detection in standard test methods defined in Standard Methods for the Examination of Water and Wastewater.

2. **pH**: The pH of the discharge shall not exceed 9.0 nor be less than 6.0.

3. **Total Coliform Bacteria**: The treated wastewater, at some place in the treatment process prior to discharge, shall meet the following limits of bacteriological quality:

   a. The moving median value for the Most Probable Number (MPN) of total coliform bacteria in any five (5) consecutive samples shall not exceed 240 MPN/100 ml; and,

   b. Any single sample shall not exceed 10,000 MPN/100 ml.

4. **85 Percent Removal, BOD_5 and TSS**: The arithmetic mean of the biochemical oxygen demand (Five-day, 20^oC) and total suspended solids values, by weight, for effluent samples collected in each calendar month 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.

5. **Toxic Substances Effluent Limitations**: The effluent shall not exceed the following limits (1) (2):

Table 1
(All limits in µg/l)

Constituent		Monthly Average (3)	Daily Average (3)
1. Arsenic	(5)		200
2. Cadmium	(5)		30
3. Chromium	(4) (5)		110
4. Copper			37
5. Lead	(5)		56
6. Mercury		0.21	1
7. Nickel	(5)		65
8. Cyanide	(6)		25
9. Selenium	(5)		50
10. Silver			23
11. Zinc	(5)		580
12. Phenols			500
13. PAHs		0.31	

Footnotes:

(1) These limits are based on marine water quality objectives. Compliance with these limits is intended to be achieved through secondary treatment and as necessary, pretreatment and source control.

(2) All analyses shall be performed using current USEPA methods, as specified in 40 CFR 136, or equivalent reference approved in writing by the Executive Officer. Method Detection Limits, Practical Quantitation Limits, and Limits of Quantitative Levels will be taken into account in determining compliance with effluent limitations.

(3) Limits apply to the average concentration of all samples collected during the averaging period (Daily - 24-hour period; Monthly - calendar month).

(4) The discharger may meet this limit as total chromium.

(5) Effluent limitation may be met as a four-day average. If compliance is to be determined based on a four-day average, then four separate 24-hour composite samples shall be obtained over four consecutive days, and the concentration results for each composite sample shall be reported, as well as the average of the four.

(6) The discharger may demonstrate compliance with this limitation by measurement of weak acid dissociable cyanide.

6. **Acute Toxicity**: Representative samples of the effluent shall meet the following limits for acute toxicity: (Provision 4.a.-4.d. of this Order applies to these bioassays.)

   a. The survival of organisms in undiluted effluent shall be an eleven (11) sample median value of not less than 90 percent survival; and,

   b. an eleven (11) sample 90 percentile value of not less than 70 percent survival.

   The eleven sample median and 90th percentile effluent limitations are defined as follows:

   11 sample median: Any bioassay test showing survival of 90 percent or greater is not a violation of this limit. A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit, if five or more of the past ten or less bioassay tests show less than 90 percent survival.

   90th percentile: Any bioassay test showing survival of 70 percent or greater is not a violation of this 90 percentile value limit. A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit, if one or more of the past ten or less bioassay test show less than 70 percent 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 place:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam; or

b. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses; or

c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels; or

d. Visible, floating, suspended, or deposited oil or other products of petroleum origin; or

e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on wildlife, waterfowl, or other aquatic biota, 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 any place within one foot of the water surface:

a.	Dissolved Oxygen	5.0 mg/l, minimum
	The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified above, then the discharge shall not cause further reduction in ambient dissolved oxygen concentrations.	
b.	Dissolved Sulfide	0.1 mg/l, maximum
c.	pH	Variation from normal ambient pH by more than 0.5 pH units.
d.	Un-ionized Ammonia	0.025 mg/l as N, annual median 0.16 mg/l as N, maximum
e.	Nutrients	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

3. The discharge shall not cause a violation of any particular water quality standard for receiving waters adopted by the Board or the State 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.

4. Storm Water Discharge

   a. Storm water discharges shall not adversely impact human health or the environment.

   b. Storm water discharges shall not cause or contribute to a violation of any applicable water quality objective for receiving waters contained in the Basin Plan.

D. SLUDGE MANAGEMENT PRACTICES

1. All sludge generated by the discharger must be disposed of in a municipal solid waste landfill, reused by land application, or disposed of in a sludge-only landfill in accordance with 40 CFR Part 503. All the requirements in 40 CFR 503 are enforceable by USEPA whether or not they are stated in an NPDES permit or other permit issued to the discharger.

2. Sludge treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, or result in groundwater contamination.

3. Duty to mitigate: The discharger shall take all reasonable steps to prevent or minimize any sludge use or disposal which has a likelihood of adversely affecting human health or the environment.

4. The discharge of sewage sludge shall not cause waste material to be in a position where it is, or can be carried from the sludge treatment and storage site and deposited in the waters of the State.

5. The sludge treatment and storage site shall have facilities adequate to divert surface runoff from adjacent areas, to protect boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in the temporary storage site. Adequate protection is defined as protection from at least a 100 year storm and protection from the highest possible tidal stage that may occur.

6. The Discharger is hereby notified that on February 19, 1993, the USEPA issued the final rule for the use and disposal of sewage sludge (40 [Code of Federal Regulations] (CFR) Part 503). This rule requires that producers of

sewage sludge meet certain reporting, handling, and disposal requirements. The Discharger is advised to contact USEPA regarding compliance with 40 CFR Part 503.

7. Sludge that is disposed of in a municipal solid waste landfill must meet the requirements of 40 CFR 258. The discharger's annual self-monitoring report shall include the amount of sludge disposed of, and the landfill(s) to which it was sent.

8. Permanent on-site sludge storage or disposal activities are not authorized by this permit. A report of Waste Discharge shall be filed and the site brought into compliance with all applicable regulations prior to commencement of any such activity by the discharger.

9. Sludge Monitoring and Reporting Provisions of this Board's "Standard Provisions and Reporting Requirements", dated August 1993, apply to sludge handling, disposal and reporting practices.

10. The Board may amend this permit prior to expiration if changes occur in applicable state and federal sludge regulations.

E. PROVISIONS

1. The discharger shall comply, as appropriate, with all sections of this Order immediately upon adoption.

2. This permit may be reopened to include a numeric mass loading limit for copper.

3. Where concentration limitations in mg/l or µg/l are contained in this permit, the following Mass Emission Limitations shall also apply.

   Mass Emission Limit in kg/day = (Concentration Limit in mg/l) x (Actual Flow in million gallons per day averaged over the time interval to which the limit applies) x 3.78 (conversion factor).

4. Compliance with Acute Toxicity and Toxic Substances Effluent Limitation

   a. Compliance with Acute Toxicity Effluent Limitation of this Order shall be evaluated by measuring survival of test species exposed to undiluted effluent for 96 hours in flow-through or static renewal bioassays. Two fish species will be tested concurrently. Each fish species represents a single bioassay.

b. The two compliance species shall be as specified by the Executive Officer. The discharger shall conduct a minimum of one screening of three species: three-spine stickleback, rainbow trout and fathead minnow. All tests in a single screening must be completed within ten days of each other. The three species screening requirement can be met using either flow-through or static renewal bioassays. The discharger shall submit screening test data acceptable to the Executive Officer, within ten months after the commencement of the new discharge permitted by this Order. Before a determination is made by the Executive Officer, any two of the three species can be used for the bioassay.

c. The Executive Officer may consider allowing compliance monitoring with only one fish species (the most sensitive of the two), if the discharger can document that the acute toxicity limitation, specified above, has not been exceeded during the previous three years, or that acute toxicity has been observed in only one of two fish species.

d. All bioassays shall be performed according to protocols approved by the USEPA or State Water Resources Control Board, or published by the American Society for Testing and Materials (ASTM) or American Public Health Association.

e. The discharger shall comply with Toxic Substances Limitations immediately upon adoption of this Order.

5. In reviewing compliance with 85% removal for BOD_5 and TSS of this Order, the Board will take into consideration difficulties encountered in achieving compliance during periods of extreme wet weather when ordinary treatment plant removal efficiencies are impeded by less concentrated influent resultant from stormwater dilution.

6. In reviewing compliance with wet weather overflows of this Order, the Board will take into consideration the discharger's efforts to control wet weather overflows in accordance with the Basin Plan's strategy for control of wet weather overflows.

7. If the discharger chooses to pursue a capacity increase for the treatment plant, information that must be submitted prior to Board consideration of a flow increase must include, but may not be limited to, the following:

a. Engineering reports documenting adequate reliability, capacity and performance of the completed improvements to the treatment facility;

b. Documentation that increased discharges (evaluation must include assessment of wet weather flows) will not result in degradation of receiving waters, or adverse impacts on beneficial uses of receiving waters, in accordance with State and Federal regulations;

c. Plans for including reuse of the treated effluent as an integral part of the wastewater management plan; and

d. Documentation of compliance with the CEQA.

8. The discharger shall submit an Operations and Maintenance Manual, acceptable to the Executive Officer, before any discharge described in this permit is authorized.

9. The discharger shall submit a Contingency Plan as required by Board Resolution 74-10 and acceptable to the Executive Officer, before any discharge described in this permit is authorized.

10. The discharger shall submit a contingency plan for change of control or ownership, acceptable to the Executive Officer, before any discharge described in this permit is authorized. The intent of the requirement is to develop a system that will ensure continued operation and maintenance of the plant and outfall in the event that the discharger ceases to be a viable company.

11. The discharger shall review, and update as necessary, its Operations and Maintenance Manual, annually, or within 90 days of completion of any significant facility or process changes. The discharger shall submit to the Board, by April 15 of each year, a letter describing the results of the review process including an estimated time schedule for completion of any revisions determined necessary, and a description or copy of any completed revisions.

12. Annually, the discharger shall review and update as necessary, its Contingency Plan as required by Board Resolution 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or adequately implement a contingency plan will be the basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code. Plan revisions, or a letter stating that no changes are needed, shall be submitted to the Board by April 15 of each year.

13. The discharger shall implement a program to regularly review and evaluate its wastewater collection, treatment and disposal facilities in order

to ensure that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded as necessary, in order to provide adequate and reliable transport, treatment, and disposal of all wastewater from both existing and planned future wastewater sources under the discharger's service responsibilities. A Treatment Facilities Evaluation Program report discussing the status of this evaluation program, including any recommended or planned actions, shall be submitted to the Board by April 15 of each year.

14. The discharger shall conduct and complete a dilution test program to verify the actual minimum dilution achieved at the outfall during the most critical flow condition that the test can reasonably be conducted. The discharger shall prepare a report containing all the findings obtained from the test and shall submit the report, acceptable to the Executive Officer, before any discharge described in this permit is authorized.

15. The discharger shall comply with the Self-Monitoring Program for this order, as adopted by the Board and as may be amended by the Executive Officer.

16. The discharger shall comply with all applicable items of the attached "Standard Provisions and Reporting Requirements " dated August 1993 (attached), or any amendments thereafter.

17. In the event of any change in control or ownership of land or waste discharge facilities owned or controlled by the discharger, and the change may have direct effect or may be directly related to the discharge authorized by this Order, the discharger shall notify this office immediately by letter and shall notify the succeeding owner or operator of the existence of this Order by letter.

    To assume operation of this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. (Refer to Standard Provisions, referenced above). The request must contain the requesting entity's full legal name, the address and telephone number of the persons responsible for contact with the Board and a statement. The statement shall comply with the signatory paragraph described in Standard Provisions and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code.

18. The Board may modify, or revoke and reissue, this Order and Permit if present or future investigations demonstrate that the discharge(s) governed

by this Order are causing or significantly contributing to adverse impacts on water quality and/or beneficial uses of the receiving waters.

19. This Order expires on May 20, 2003. The discharger must file a report of waste discharge in accordance with Title 23, Division 3, Chapter 9, Article 3. of the California Administrative Code not later than 180 days before this expiration date as application for reissuance of waste discharge requirements.

20. This Order shall serve as a NPDES permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after the date of its adoption provided the Regional Administrator, USEPA, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Loretta K. Barsamian, Executive Officer, do hereby certify that 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 May 20, 1998.

for LORETTA K. BARSAMIAN
Executive Officer

Attachments:

A. Location/Site Maps
B. Process Schematic
C. Self-Monitoring Program
D. Standard Provisions and Reporting Requirements - August 1993
E. Contingency Plan - Resolution 74-10

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

WICKLAND OIL COMPANY
SELBY WASTEWATER TREATMENT PLANT
SELBY
CONTRA COSTA COUNTY

NPDES PERMIT NO. CA

ORDER NO. 98-037

CONSISTS OF

PART A
(Self-Monitoring Program, Part A, NPDES Permits; dated August 1993.)

AND

PART B

SELF-MONITORING PROGRAM
PART B

FOR
WICKLAND OIL COMPANY
SELBY WASTEWATER TREATMENT PLANT

I. DESCRIPTION OF SAMPLING STATIONS

Station	Description
A. INFLUENT	
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	
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. (May be the same as E-001-D).
E-001-D	At any point in the disinfection facilities for Waste E-001 at which adequate contact with the disinfectant is assured.
E-001-S	At any point in the disposal facilities following dechlorination.
C. RECEIVING WATERS	
C-1	At a point in San Pablo Bay directly above the center of the discharge diffuser.
C-2	At a point in San Pablo Bay located 200 feet southerly from the geometric center of the discharge diffuser.
C-3	At a point in San Pablo Bay located 200 feet northerly from the geometric center of the discharge diffuser.
C-4	At a point in San Pablo Bay located 200 feet easterly from the geometric center of the discharge diffuser.
C-5	At a point in San Pablo Bay located 200 feet westerly from the geometric center of the discharge diffuser.

C-6	At a point in San Pablo Bay located 2000 feet northerly from the geometric center of the discharge diffuser.

D. LAND OBSERVATIONS

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 annual report).

E. OVERFLOWS AND BYPASSES

O-1 thru O-'n'	At points in the collection system including manholes, pump stations, or any other location where overflows or bypasses occur.

II. SCHEDULE OF SAMPLING, MEASUREMENTS, AND ANALYSIS

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

III. REPORTING REQUIREMENTS

A. General Reporting Requirements are described in Section E of the Board's "Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits", dated August 1993.

B. A Self-Monitoring Report shall be submitted for each calendar month. The report shall be received no later than the 15th day of the following month. The required contents of these reports are described in Section F.4 of Part A.

C. An Annual Report shall be submitted for each calendar year. The report shall be submitted to the Board by January 30 of the following year. The required contents of the report are described in Section F.5 of Part A. The report shall also include information regarding the amount of sludge disposed of, and the landfill(s) to which it was sent.

D. Any overflow, bypass or significant non-compliance incident that may endanger health or the environment shall be reported in accordance with Sections F.1 and F.2 of Part A, and any additional reporting guidance as may be provided by Board staff. The date, time, duration, location, estimated volume of wastewater discharged, and corrective actions taken for these events shall be reported in the monthly Self-Monitoring Reports.

IV. MODIFICATION OF PART A (AUGUST 1993)

A. This monitoring program does not include the following sections of Part A:

C.2.d; C.2.f; C.3; C.4; C.5; D.4; and E.3.

I, Loretta K. Barsamian, 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 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 98-037.

2. 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.

3. Is effective as of May 20, 1998.

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for Loretta K. Barsamian
Executive Officer

Attachment: Table I - Schedule for Sampling, Measurements and Analyses

TABLE 1
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS [1] [8]

Sampling Station:	A-001		E-001			E-001-S		O	P	C
Type of Sample:	C-24	Co	G	C-24	Co	C-24	G	Ob	Ob	G
Parameter (units) [notes]										
Flow Rate (mgd) [2]					D					
BOD_5 (mg/L & kg/d)	M			M						
Chlorine Residual (mg/L) [3]							Co/2h			
Settleable Matter (ml/L-hr)			W							
TSS (mg/L & kg/d)	2W			2W						
Oil & Grease (mg/L & kg/d) [4]			M							
Total Coliform (MPN/100 ml)							W			
Acute Toxicity (% Surv.) [5]						M				
Ammonia Nitrogen(mg/L & kg/d)						M[6]				
Nitrate Nitrogen (mg/L & kg/d)										
Nitrite Nitrogen (mg/L & kg/d)										
Total Organic Nitrogen (mg/L & kg/d)										
Turbidity (NTU)										
pH (units)			D				D [6]			
D.O. (mg/L & % Sat)			D				D [6]			
Temperature (° C)			D				D [6]			
Apparent Color (color units)										
Total & Dissolved Sulfides (mg/L) [7]			D							
Arsenic (µg/L & kg/d)				Q						
Cadmium (µg/L & kg/d)				Q						
Chromium IV (µg/L & kg/d)				Q						
Copper (µg/L & kg/d)				Q						
Cyanide (µg/L & kg/d)				Q						
Silver (µg/L & kg/d)				Q						
Lead (µg/L & kg/d)				Q						

TABLE 1 (continued)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station:	A-001		E-001			E-001-S		O	P	C
Type of Sample: / **Parameter** (units) [notes]	C-24	Co	G	C-24	Co	C-24	G	Ob	Ob	G
Mercury (µg/L & kg/d)				Q						
Nickel (µg/L & kg/d)				Q						
Selenium (µg/L & kg/d)				Q						
Zinc (µg/L & kg/d)				Q						
Phenols (µg/L & kg/d)				Q						
PAHs (µg/L & kg/d)										
Applicable Standard Observations			D					E	W	
Unionized Ammonia (mg/L as N										

LEGEND FOR TABLE 1:

Types of Stations:

A = treatment facility influent
E = treatment facility effluent
O = overflow and bypass points
P = treatment facility perimeter
C = receiving water

Types of Samples:

C-24 = composite sample, 24 hours
Co = continuous sampling
G = grab sample
Ob = observation

Frequency of Sampling:

D = once each day
W = once each week
2W = once every two weeks
3/W = three times each week (on separate days)
M = once each month
2/M = twice each month (with at least two week intervals)
Q = once each calendar quarter (with at least two month intervals)
E = each occurrence
Co/2h = continuous or every two hours

FOOTNOTES FOR TABLE 1

[1] BYPASS MONITORING

During any time when bypassing occurs from any treatment process (primary, secondary, chlorination, dechlorination, etc.) in the treatment facilities, the self-monitoring program shall include the following sampling and analyses in addition to the Table 1 schedule:

a. When bypassing occurs from any primary or secondary treatment unit(s), composite samples on an hourly basis for the duration of the bypass event for BOD and TSS analyses, grab samples at least daily for Settleable Matter, and continuous monitoring of flow.

b. When bypassing the chlorination process, grab samples at least daily for Total Coliform analyses; and continuous monitoring of flow.

c. When bypassing the dechlorination process, grab samples hourly for chlorine residual; and continuous monitoring of flow.

[2] FLOW MONITORING

Flows shall be measured continuously, and recorded and reported Daily. For effluent flows, the following information shall also be reported, monthly:

Average Daily Flow	(mgd)
Maximum Daily Flow	(mgd)
Minimum Daily Flow	(mgd)

[3] Chlorine Residual - Monitor dechlorinated effluent continuously or, at a minimum, once every two hours. Report, on a daily basis, both maximum and minimum concentrations, for samples taken following dechlorination. If a violation is detected, the maximum and average concentrations and duration of each non-zero residual event shall be reported, along with the cause and corrective actions taken.

[4] Oil and Grease - Each Oil and Grease sample shall consist of three grab samples taken at two hour intervals during the sampling day, with each being collected in a glass container. The grab samples shall be composited for analysis. 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.

[5] Fish Toxicity shall be determined using 96-hour flow through or static renewal bioassays using 24-hour composite samples representative of the discharged effluent. Effluent used for fish bioassays must be undiluted, disinfected, dechlorinated effluent.

[6] These parameters shall be tested for only on the sample stream used for the flow-through bioassays, beginning at the start of the bioassay and then daily for the duration of the bioassay test (i.e. at 0,24, 48, 72, and 96 hours from the start of the bioassay test). Ammonia nitrogen shall be tested once during the bioassay.

[7] Testing Total & Dissolved Sulfides only if DO < 2.0 mg/l.

[8] Grab samples shall be taken on day(s) of composite sampling.