

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 99-093
NPDES NO. CA0028185

RENEWAL OF WASTE DISCHARGE REQUIREMENTS FOR:
FAIRCHILD SEMICONDUCTOR CORPORATION
101 BERNAL ROAD, SAN JOSE
SANTA CLARA COUNTY

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

1. **Permit Application:** Fairchild Semiconductor Corporation (hereinafter the discharger) by application dated March 5, 1999, has applied for renewal of waste discharge requirements and a permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES). The discharger is currently discharging wastes pursuant to Order No. 94-120, adopted by the Board on September 21, 1994.
2. **Facility Description:** The discharger owned and operated a semiconductor manufacturing facility located at 101 Bernal Road, San Jose, Santa Clara County. The facility operated from 1977 through 1983. The property was sold to SRDC, Inc., in 1990 and was redeveloped as a retail shopping center in 1998.
3. **Cleanup Activities:** Subsurface investigations at the site detected various VOCs and SVOCs in soil and groundwater at the site. Some of these constituents are found in off-site groundwater. Since 1982 the discharger has been extracting groundwater to prevent further migration of these constituents and to remediate affected groundwater. The discharger temporarily curtailed offsite extraction in 1991 and temporarily curtailed onsite extraction in 1998. The extraction and treatment systems will be restarted if groundwater monitoring shows rising concentrations or pollutant migration.
4. **Waste Streams:** Potential discharges from the facility include the following:
 - a. Wastes 001 and 002: The onsite system includes two extraction wells, an air stripper unit, and control valves to allow discharge to the storm drain tributary to Canoas Creek (Waste 001) or to a groundwater recharge well located just outside the slurry wall at the northern corner of the site (Waste 002). The recharge well is screened in the B-aquifer, the same hydrogeologic unit from which polluted groundwater is extracted. Prior to temporary curtailment in 1998, the onsite system was extracting an average of 140,000 gallons per day and discharging all effluent to the recharge well. Discharge to the storm drain occurred only when the

recharge well and associated piping were closed for maintenance.

- b. Waste 003: The offsite system includes several extraction wells, treatment by nozzle-aeration, and discharge to a storm drain tributary to Canoas Creek. Prior to temporary curtailment in 1991, the offsite system was extracting up to 9 million gallons per day of groundwater.
5. **Chlorine Residual:** The discharger may chlorinate extraction and recharge wells in order to prevent well plugging and mechanical difficulties. Due to its toxicity to aquatic life, chlorine residual must be removed prior to any surface water discharge.
6. **Surface Water Discharges:** Wastes 001 and 003 are discharged via the City of San Jose storm drain system to Canoas Creek where it crosses Cottle Road (Latitude 37°14'7" and Longitude 121°48'11"). Canoas Creek is tributary to the Guadalupe River, which flows into South San Francisco Bay.
7. **Basin Plan:** The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (hereinafter called Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Board on July 20, 1995 and the Office of Administrative Law on November 13, 1995. The Office of Administrative Law's action is published in Section 3912 of Title 23 of the California Code of Regulations. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters.
8. **Beneficial Uses:** The Basin Plan identifies the following existing and potential beneficial uses of Guadalupe River and its tributaries:
 - a. Water contact and non-contact recreation
 - b. Wildlife habitat
 - c. Cold freshwater and warm freshwater habitat
 - d. Fish migration and spawning
 - e. Groundwater recharge

The Basin Plan identifies the following existing and potential beneficial uses of groundwater underlying and adjacent to the facility:

 - a. Industrial process water supply
 - b. Industrial service water supply
 - c. Municipal and domestic water supply
 - d. Agricultural water supply
9. **Basin Plan Prohibition:** The Basin Plan prohibits discharge of "wastewater which has particular characteristics of concern to beneficial uses": (a) "at any point at which the

wastewater does not receive a minimum initial dilution of at least 10:1, or into any nontidal water, dead-end slough, similar confined waters, or any immediate tributaries thereof' and (b) at any point in "San Francisco Bay south of the Dumbarton Bridge". The Basin Plan allows for exceptions to this prohibition if a discharge is approved as part of a groundwater clean-up project in accordance with Resolution No. 88-160, it has been demonstrated that neither reclamation nor discharge to a POTW is technically and economically feasible, and the discharger has provided certification of the adequacy and reliability of treatment facilities and a plan that describes procedures for proper operation and maintenance of all treatment facilities. The discharge qualifies for an exception to these prohibitions, because it is part of the groundwater cleanup program and because water reuse has been optimized.

10. **Basis for Effluent Limits:** Effluent limitations in this order are based on the existing permit, the Basin Plan, State plans and policies, U.S. EPA guidance, best available treatment technology economically achievable, best management practices, and best professional judgment.
 - a. **VOCs:** Effluent limits for individual VOCs (except 1,1,1-TCA and Freon 113 offsite) are the more stringent of 5 ug/l or the current drinking water standard. The technology to achieve the 5 ug/l maximum is readily available and is expected to achieve concentrations at or below 0.5 ug/l (current detection limit) most of the time. For 1,1,1-TCA offsite, the effluent limits are 50 ug/l each. This limit reflects the impracticability of most treatment methods for the large flows produced by offsite extraction wells and the performance constraints of nozzle aeration; these limits are well below applicable drinking water standards. For acetone and isopropyl alcohol, the effluent limits are 500 ug/l and 700 ug/l, respectively. These limits reflect their relatively low volatility, relatively poor removal using air-stripping technology, and their relatively low toxicity for humans and aquatic life.
 - b. **Inorganics:** Effluent limits for metals are mass limits based on current mass loadings from a representative subset of groundwater-cleanup discharges in this region. In the Board's best professional judgement, these limits will result in *de minimis* mass loadings to San Francisco Bay when compared to metals loadings from municipal point sources, industrial point sources, stormwater discharges, and other non-point sources.
11. **CEQA:** 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) pursuant to Section 13389 of the California Water Code.
12. **Notice:** The Board has notified interested agencies and persons of its intent to issue general waste discharge requirements for groundwater dewatering discharges resulting

from the cleanup of groundwater polluted by VOC, and has provided them with an opportunity to submit their written views and recommendations.

13. **Hearing:** The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to 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, that Fairchild Semiconductor Corporation shall comply with the following:

A. Prohibitions

1. The discharge of waste or hazardous materials in a manner which will degrade the water quality or adversely affect beneficial uses of waters of the State is prohibited.
2. The discharge shall be limited to the waste streams described in the NPDES permit application and added anti-scaling or anti-biofouling chemicals approved by the Executive Officer which do not adversely affect the environment and comply with the requirements of this Order.
3. Discharge volume shall not exceed the following maximum flow rates (gallons per day) unless an increase is approved by the Executive Officer:

a. Waste 001 and 002 combined (onsite treated groundwater)	175,000
b. Waste 003 (offsite treated groundwater)	1,500,000

B. Effluent Limitations

The following effluent limits apply to the discharge after full treatment but before the discharger relinquishes control of the discharge (Wastes 001 and 003) or before the discharge is released to waters of the State (Waste 002).

1. Wastes 001-003 shall not contain constituents in excess of the following limits:
 - a. Organic Constituents – Concentration Limits

Constituent	Instantaneous Maximum Limit (ug/l) by Waste:		
	001	002	003

1,1,1-Trichloroethane (1)	5	5	50
Tetrachloroethylene (1)	5	5	5
Trichloroethylene (1)	5	5	5
1,1-Dichloroethylene (1)	5	5	5
1,2-Dichloroethane (1)	0.5	0.5	0.5
Vinyl Chloride (1)	0.5	0.5	0.5
1,2-Dichloroethylene (1)	5	5	5
1,1-Dichloroethane (1)	5	5	5
Methylene Chloride (1)	5	5	5
Chloroform (1)	5	5	5
Freon 113 (1)	5	5	5
Other purgeable VOCs (1)	5	5	5
Total Xylenes (2)	5	5	5
Acetone (3)	500	500	--
Isopropyl alcohol (3)	700	700	--

Notes:

1. Using EPA Method 601 or its equivalent
2. Using EPA Method 602 or its equivalent
3. Using EPA Method 625 or its equivalent

b. Inorganic Constituents – Mass Limits

Constituent	Mass Limit (grams/day) - Sum of Waste 001 and 003 (1)
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Arsenic	10
Cadmium	4
Chromium VI (2)	20
Copper	10
Lead	10
Mercury	0.5
Nickel	40
Selenium	45
Silver	10
Zinc	200

Notes:

1. Based on average flow computed from last 12 months of operation
2. Dischargers, at their option, may meet this limit as total chromium

2. Chlorine residual: Wastes 001-003 shall not contain concentrations of total

residual chlorine (free chlorine plus chloramines) in excess of 0.0 mg/l (instantaneous maximum limit).

3. pH: The pH of the discharge shall not exceed 8.5 nor be less than 6.5.
4. Toxicity: The survival of rainbow trout in 96-hour static renewal bioassays of the discharge shall be a three sample moving median of 90% survival and a minimum value of not less than 70% survival.

C. Receiving Water Limitations

1. Narrative Limits: The discharge 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, taste, odor, 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 that 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. Numerical Limits: The discharge 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

The 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. pH: Variation from natural ambient pH by more than 0.5 pH units.
3. Water Quality Standards: The discharge shall not cause or contribute to 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. Water Reclamation Specifications (Waste 002 only)

1. **Public Contact:** Adequate measures shall be taken to minimize public contact with reclaimed water and to prevent the breeding of flies, mosquitos, and other vectors of public health significance during the process of reuse.
2. **Cross Connections:** There shall be no cross-connection between the potable water supply and piping containing treated groundwater intended for reuse.

E. Provisions

1. **Immediate Compliance:** The discharger shall comply with all sections of this order immediately.
2. **Self-Monitoring Program:** The discharger shall comply with the Self-Monitoring Program as adopted by the Board (attached) and as may be amended by the Executive Officer.
3. **Order Modification:** This Order may be modified by the Board prior to the expiration date to include effluent limitations for toxic constituents determined to be present in significant amounts in discharge through the Self-Monitoring Program.
4. **Inorganic Limits Exceedance:** If any inorganic effluent limit in Section B is exceeded, then the discharger shall take three additional samples for that constituent(s) during the following quarter.

Case 1 - If the results of the three additional samples for the effluent **do not** exceed the effluent limit(s) the discharger shall report the results to the Executive Officer in the next Self-Monitoring Report, and shall return to the schedule of sampling and analysis in the Self-Monitoring Program.

Case 2 - If the results of **any one of the three** additional samples exceed the effluent limit(s), the discharger shall perform the following:

- a) Calculate the median and maximum concentration values for the

constituent(s) of concern, using the three recent samples **and** all samples collected and analyzed for that constituent in the previous 12 month period.

- b) Estimate the mass load discharged in the previous 12 month period for the constituent(s) of concern. Report the results in grams per day and in pounds per year, using the average flow rate for the previous 12 month period.
- c) Report the results to the Executive Officer in the next Self-Monitoring Report, and return to the schedule of sampling and analysis in the Self-Monitoring Program.

Case 3 - If the results of **two or three** of the additional samples exceed the effluent limit(s), the discharger shall perform the following:

- a) Calculate median and maximum concentration values and mass load for the constituent(s) of concern, as described in Case 2 above.
- b) Perform a cost analysis for treatment of the discharge for the constituent(s) of concern. The analysis should include, but need not be limited to, a discussion of various treatment technologies or pre-treatment filtration options, the cost and technical feasibility of increased treatment to reduce the constituent(s) of concern, and the amount of reduction in terms of concentration and average annual mass load. A joint effort may be undertaken and submitted by more than one discharger to evaluate cost and feasibility of treatment technologies or options.

If the results of the cost analysis indicates that metals treatment of the discharge does not appear to be a feasible option, then:

- c) Perform an evaluation of the potential adverse impacts to the beneficial uses of the receiving water. The evaluation should include, but need not be limited to, description of the beneficial uses specific to the receiving water, physical and chemical characteristics of the water body and sediment, and the physical, chemical, or biological effects from the constituent(s) on the beneficial uses, including effects related to total or dissolved and hardness for metals with hardness-dependent objectives.

If exceedances are only for metals with hardness-dependent objectives, then the discharger may conduct a hardness study prior to completing this task. The hardness study should assess receiving water hardness (as CaCO_3) and compute a "no effect" concentration for affected metals, using (i) the minimum of a statistically significant number of hardness samples,

and (ii) hardness-dependent formula for US EPA freshwater criteria. If effluent metals concentrations fall below the computed "no effect" concentration, then the discharger need not complete the remainder of this task.

If the receiving water study finds that the discharge is having potential adverse impacts to beneficial uses of the receiving water, then:

- d) Evaluate control measures other than treatment to reduce the constituent(s) of concern in the discharge, such as re-evaluating options for re-use, discharge to POTW, or alternatives to groundwater extraction.
- e) Within 180 days of the discharger receiving results of the consecutive sampling, report the results of tasks (a) through (d) above to the Executive Officer, including:
 - the proposed method to eliminate or minimize future non-compliance, or
 - provide a rationale for why no change to the existing program should take place, and
 - return to the schedule of sampling and analysis in the Self-Monitoring Program.

The discharger may be required to perform additional evaluations or take additional actions to minimize noncompliance, as deemed necessary by the Executive Officer.

If a violation of the same effluent limit occurs less than 60 months after completion of the required tasks in Cases 1, 2, or 3, then the Executive Officer may waive the evaluation required above. This waiver will not apply if a different inorganic constituent exceeds the effluent limit. In that case, the discharger shall perform an evaluation for that constituent.

5. **Permit Expiration:** This Order expires on October 20, 2004. The discharger must file a report of waste discharge in accordance with 23 CCR Subchapter 9 not later than 180 days before this expiration date as application for NPDES renewal.
6. **EPA Concurrence:** This Order shall serve as a general 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 the 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.

7. **Rescission of Prior Order:** The requirements prescribed by this Order supersede the requirements prescribed by Order No. 94-120. Order No. 94-120 is hereby rescinded

F. Standard Provisions

1. **No Nuisance:** Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance, as defined by Section 13050 of the California Water Code.
2. **Duty to Comply**
 - a. If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Clean Water Act, or amendments thereto, for a toxic pollutant which is present in the discharge authorized herein and such standard or prohibition is more stringent than any limitation upon such pollutant in this Order, the discharger must comply with the new standard or prohibition. The Board will revise the Order in accordance with such toxic effluent standard or prohibition and so notify the discharger.
 - b. If more stringent applicable water quality standards are approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the discharger must comply with the new standard. The Board will revise this Order in accordance with such more stringent standards.
 - c. The filing of a request by the discharger for modification or termination of permit coverage, or a notification of planned changes or anticipated non-compliance does not stay any permit condition.
3. **Duty to Mitigate:** The discharger shall take all reasonable steps to minimize or prevent any discharge in violation of this Order which has a reasonable likelihood of adversely affecting public health or the environment, including such accelerated or additional monitoring as requested by the Board or Executive Officer to determine the nature and impact of the violation.
4. **New Pollutants:** The discharger must notify the Board as soon as it knows or has reason to believe (1) that they have begun or expect to begin to use and discharge a pollutant not reported in the permit application, or (2) a discharge of toxic pollutants not limited by this permit has occurred or will occur in concentrations that exceed the limits specified in 40 CFR 122.42(a).

5. **Prohibited Constituents:** The discharge of any radiological, chemical, or biological warfare agent waste is prohibited.
6. **Property rights:** This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the discharger from liabilities under federal, state, or local laws, nor create a vested right for the discharger to continue the waste discharge, nor guarantee the discharger a capacity right in the receiving water.
7. **Inspection and Entry:** The Board or its authorized representatives shall be allowed:
 - a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of the Order;
 - b. Reasonable access to and duplication of any records that must be kept under the conditions of the Order;
 - c. To inspect at reasonable times any facility, equipment, practices, or operations regulated or required under the Order; and
 - d. To photograph, sample, and monitor at reasonable times for the purpose of assuring compliance with the Order or as otherwise authorized by the Clean Water Act any substances or parameters at any locations.
8. **Duty to Provide Information:** The discharger shall furnish, within a reasonable time, any information the Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit. The discharger shall also furnish to the Board, upon request, copies of records required to be kept by its permit.
9. **Bypass (the intentional diversion of waste streams from any portion of a treatment facility) is prohibited.** The Board may take enforcement action against the discharger for bypass unless:
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - b. There were no feasible alternatives to the bypass, such as shutting off the system, the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment down time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgement to

prevent a bypass which occurred during normal periods of equipment down time or preventative maintenance; and

- c. The discharger submitted advance notice of the need for a bypass to the Board. If the discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least 10 days before the bypass date. The discharger shall submit notice of an unanticipated bypass as required elsewhere in the Self Monitoring Program (24-hour reporting).

The discharger may allow a bypass to occur that does not cause effluent limitations to be exceeded, but only if it is for essential maintenance to assure efficient operation. In such cases, the above bypass conditions are not applicable.

10. Continuation of Expired Permit: This permit continues in force and effect until a new permit is issued or the Board rescinds the permit.
11. Treatment Reliability: The discharger shall, at all times, properly operate and maintain all facilities which are used by the discharger to achieve compliance with this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. All of these procedures shall be described in an Operation and Maintenance manual. The discharger shall keep in a state of readiness all systems necessary to achieve compliance with the conditions of this Order. All systems, both those in service and reserve, shall be inspected and maintained on a regular basis. Records shall be kept of the tests and made available to the Board for at least five years.
12. Errata: Should the discharger discover that it failed to submit any relevant facts or that it submitted incorrect information in any report, it shall promptly submit the missing or correct information.
13. False Reporting: Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall be subject to enforcement procedures as identified below.
14. Transfers: Coverage by this permit is not transferable to any person except after notice to the Executive Officer. The Executive Officer may require modification of the discharge authorization letter to change the name of the permittee and incorporate such other requirements as may be necessary under the Clean Water Act.
15. Planned Changes: The discharger shall file with the Executive Officer an

amended permit application at least 60 days before making any material change in the character, location, or volume of the discharge.

16. Enforcement: The provisions of this section shall not act as a limitation on the statutory or regulatory authority of the Board.
 - a. Any violation of the permit constitutes violation of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act and regulations adopted thereunder, and is the basis for enforcement action, revocation of permit coverage, denial of an application for continued permit coverage, or a combination thereof.
 - b. The Board may impose administrative civil liability, may refer a discharger to the state Attorney General to seek civil monetary penalties, may seek injunctive relief or take other appropriate enforcement action as provided in the California Water Code or federal law for violation of this Order.
 - c. It shall not be a defense for a discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order.
 - d. A discharger seeking to establish the occurrence of an upset has the burden of proof. A discharger who wishes to establish the affirmative defense of any upset in an action brought for non-compliance shall demonstrate through properly signed contemporaneous operating logs or other relevant evidence that: (i) an upset occurred and the permittee can identify the cause of the upset, (ii) the permitted facility was being properly operated at the time of the upset, (iii) the discharger submitted notice of the upset as required, and (iv) the discharger complied with any remedial measures required.

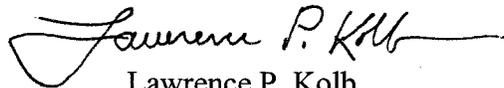
No determination made before an action for non-compliance, such as during administrative review of claims that non-compliance was caused by an upset, is final administrative action subject to judicial review.

17. Definitions

- a. Bypass means the intentional diversion of waste streams from any portion of the treatment facility.
- b. Overflow means the intentional or unintentional spilling or forcing out of untreated or partially treated wastes from a transport system upstream from any part of the treatment facility.

- c. Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. It does not mean economic loss caused by delays in production.
- d. Toxic pollutant means any pollutant listed as toxic under Section 307(a) of the Clean Water Act or implementing regulations.
- e. Upset means an exceptional incident in which there is unintentional temporary non-compliance with technology-based effluent limits in the Order because of factors beyond the reasonable control of the discharger. It does not include non-compliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.
- f. Waste, waste discharge, discharge of waste, and discharge are used interchangeably in this Order. The requirements of this Order apply to the entire volume of water, and the material therein, which is disposed of to surface and ground waters of the State of California.

I, Lawrence P. Kolb, Assistant 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 November 18, 1999.



Lawrence P. Kolb
Assistant Executive Officer

Attachment: Self-Monitoring Program

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

FAIRCHILD SEMICONDUCTOR CORP.
101 BERNAL ROAD
SAN JOSE, SANTA CLARA COUNTY

NPDES NO. CA0028185
ORDER NO. 99-093

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 and the Environmental Protection Agency's Discharge Monitoring Report (Form 3320-1).

The principal purposes of a monitoring program by a waste discharger, also referred to as self-monitoring program, 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 40 CFR 136 or other methods approved and specified by the Executive Officer of this Regional Board.

Water and waste analyses shall be performed by a laboratory approved for these analyses by the State Department of Health Services (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.

C. DEFINITION OF TERMS

1. A ***grab sample*** is defined as an individual sample collected in a short period of time not exceeding 15 minutes. Grab samples shall be collected during normal peak loading conditions for the parameter of interest, which may or may not be during hydraulic peaks. It is used primarily in determining compliance with daily maximum limits and ***instantaneous maximum*** limits. Grab samples represent only the condition that exists at the time the wastewater is collected.
2. A ***flow sample*** is defined as the accurate measurement of the average daily flow volume using a properly calibrated and maintained flow measuring device.
3. ***Duly authorized representative*** is one whose:
 - a. Authorization is made in writing by a principal executive officer or ranking elected official;
 - b. Authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as general partner in a partnership, sole proprietor in a sole proprietorship, the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
4. ***Instantaneous maximum*** is defined as the highest measurement obtained for the calendar day.
5. ***Median*** of an ordered set of values is that value below and above which there is an equal number of values, or which is the arithmetic mean of the two middle levels, if there is no one middle value

D. SPECIFICATIONS FOR SAMPLING AND ANALYSES

The discharger is required to perform sampling and analyses according to the schedule in Table A in accordance with the following conditions:

1. **Effluent**

- a. Samples of effluent and receiving waters shall be collected on days coincident with influent sampling unless otherwise stipulated. The Board or Executive Officer may approve an alternative sampling plan if it is demonstrated to the Board's satisfaction that expected operating conditions for the facility warrant a deviation from the standard sampling plan.
- b. Grab samples of effluent shall be collected during periods of maximum peak flows and shall coincide with influent sample days.
- c. Fish bioassay samples shall be collected on days coincident with effluent sampling. The fish species to be used for compliance in the 96-hour percent survival static or static renewal fish toxicity bioassay shall be rainbow trout.
- d. Verification of analytical results:
 - 1) If analytical results are received showing any instantaneous maximum limit is exceeded for any *organic* constituent, a confirmation sample shall be taken within 24 hours and results known within 24 hours of the sampling.
 - 2) If analytical results indicate any instantaneous maximum limit is exceeded for any *inorganic* constituent, actions shall be taken and reported as stipulated in Provision E.4 of the permit.
- e. If the final or intermediate results of any single bioassay test indicate a threatened violation (i.e., the percentage of surviving test organisms is less than the required survival percentage), a new test will begin and the discharger shall investigate the cause of the mortalities and report the finding in the next self-monitoring report.
- f. When any type of bypass occurs, grab samples shall be collected on a daily basis for all constituents at all affected discharge points which have effluent limits for the duration of the bypass.

2. Receiving Waters

- a. Receiving water sampling shall be conducted on days coincident with sampling of effluent.
- b. In tidally-influenced receiving waters, samples shall be collected at each station on each sampling day during the period within 1 hour following low slack water. Where sampling at lower slack water period is not

practical, sampling shall be performed during higher slack water period. Samples shall be collected within the discharge plume and downcurrent of the discharge point so as to be representative, unless otherwise stipulated.

- c. Samples shall be collected within one foot below the surface of the receiving water body, unless water depth is less than one foot, in which case a mid-depth sample shall be taken.

E. DESCRIPTION OF SAMPLING STATIONS

Stations	Description
1. Influent	
I-001/002	At a point in the onsite groundwater treatment system immediately prior to treatment.
I-003	At a point in the offsite groundwater treatment system immediately prior to treatment (may be more than one point for multiple treatment units).
2. Effluent	
E-001/002	At a point in the onsite groundwater treatment system immediately following treatment but before any discharge or reuse.
E-003	At a point in the offsite groundwater treatment system immediately following treatment but before any discharge or reuse (may be more than one point).
3. Receiving Waters	
C-001	At a point in Canoas creek at least 100 feet downstream from the point where waste from the onsite and offsite groundwater treatment systems discharges to the creek.

F. STANDARD OBSERVATIONS

- 1. Receiving Water**
 - a. 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.

- b. Discoloration and turbidity: description of color, source, and size of affected area.
- c. Odor: presence or absence, characterization, source, distance of travel, and wind direction.

2. **Waste Treatment Facilities**

- a. Odor: presence or absence, characterization, source, and distance of travel.
- b. Weather condition: wind direction and estimated velocity.
- c. Deposits, discolorations, and/or plugging in the treatment system (stripping tower, carbon filters, etc.) which could adversely affect the system reliability and performance.
- d. Operation of the float and/or pressure shutoff valves installed to prevent system overflow or bypass.

G. **REPORTS TO BE FILED WITH THE REGIONAL BOARD**

1. **Self-Monitoring Reports**

Written reports shall be submitted semi-annually not later than 45 days following the last day of the semi-annual period (i.e. February 15 and August 15). 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:

- 1) Identification of all violations of waste discharge requirements found during the reporting period,
- 2) Details of the magnitude, frequency, and dates of all violations,
- 3) The cause of the violations, and

- 4) Discussion of the corrective actions taken or planned and the time schedule for completion. 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 a principal executive officer or ranking elected official of the discharger, or by a *duly authorized representative* of that person.

The letter shall contain the following certification:

"I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- b. **Compliance Evaluation Summary**
The report format shall be a format that is acceptable to the Executive Officer.
- 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** The report format shall be a format that is acceptable to the Executive Officer.
 - 1) If the discharger monitors any pollutant more frequently than required by this permit using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Self-Monitoring Report.
 - 2) Calculations for all limitations that require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

- 3) The report shall also include a table identifying by method number the analytical procedures used for analyses. Any special methods shall be identified and should have prior approval of the Board's Executive Officer.
- 4) Lab results shall be summarized in tabular form but do not need to be included in the report.

e. **List of Approved Analyses**

- 1) Listing of analyses for which the discharger is approved by the State Department of Health Services.
- 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).
- 3) List of "waived" analyses, as approved by the Executive Officer.

f. **Flow and Mass Removed Data**

- 1) The tabulation pursuant to Section H.2.
- 2) An estimate of the VOC mass removal in pounds.

- g. **Operation Status** Summary of treatment system status during the reporting period (e.g. in operation/on standby) and reason(s) for non-routine treatment system shut down.

2. **Annual Reporting**

By February 15 of each year, the discharger shall submit an annual report to the Regional Board covering the previous calendar year. The annual report shall contain all data required for the second semi-annual period in addition to summary data required for annual reporting. This report may be submitted in lieu of the second semi-annual monitoring report.

The report shall contain tabular summary 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.

3. **Spill Reports**

If any hazardous substance is discharged in or on any waters of the state, or discharged and deposited where it is, or probably will be discharged in or on any waters of the state, the discharger shall report such a discharge to this Regional Board, at (510) 622-2300 on weekdays during office hours from 8 a.m. to 5 p.m., and to the Office of Emergency Services at (800) 852-7550 during non-office hours. A written report shall be filed with the Regional Board within five (5) working days and shall contain information relative to:

- a. nature of waste or pollutant,
- b. quantity involved,
- c. duration of incident,
- d. cause of spilling,
- e. Spill Prevention, Control, and Countermeasure Plan (SPCC) in effect, if any,
- f. estimated size of affected area,
- g. nature of effects (i.e., fish kill, discoloration of receiving water, etc.),
- h. corrective measures that have been taken or planned, and a schedule of these activities, and
- i. persons/agencies notified.

4. **Reports of Treatment Unit Bypass and Permit Violation**

In the event the discharger violates or threatens to violate the conditions of the waste discharge requirements and prohibitions or intends to permit a treatment unit bypass due to:

- a. Maintenance work, power failures, or breakdown of waste treatment equipment,
- b. accidents caused by human error or negligence,
- c. the self-monitoring program results exceed effluent limitations,
- d. any activity that would result in a frequent or routine discharge of any toxic pollutant not limited by this Order, or
- e. other causes, such as acts of nature;

The discharger shall notify the Board within one day as soon as the discharger or its agents have knowledge of the incident and confirm this notification in writing within 5 working days of the initial notification. The written report shall include

time, date, duration and estimated volume of waste bypassed, method used in estimating volume and person notified of the incident. The report shall include pertinent information explaining reasons for the noncompliance and shall indicate what steps were taken to prevent the problem from recurring.

If a violation of INSTANTANEOUS MAXIMUM LIMITS should occur (and be confirmed), the discharge shall be directed to a holding tank and contained, or the extraction and treatment system shall be shut down. The content of the holding tank shall be retreated until the retreated effluent is in compliance, or be disposed in accord with the provisions of Chapter 15, Title 23, California Code of Regulations.

If the treatment system is shut down for more than 120 consecutive hours after the start up period (maintenance, repair, violations, etc.) the reason(s) for shut down, proposed corrective action(s) and estimated start up date shall be orally reported to the Board within five days of shut down and a written submission shall also be provided within 15 days of shut down.

If feasible, the corrective action(s) taken and the proposed start up procedures shall be reported to the Board at least 15 days before start up.

5. **Construction Projects:** The discharger shall file a written technical report to be received at least 30 days prior to advertising for bid (or 60 days prior to construction) on any construction project which would cause or aggravate the discharge of waste in violation of requirements; said report shall describe the nature, cost, and scheduling of all action necessary to preclude such discharge. In no case will any discharge of wastes in violation of permit and order be permitted unless notification is made to the Executive Officer and approval obtained from the Regional Board.
6. **Chemical Additives:** A report describing the need, method of chemical application and disposal shall be submitted to the Board at least 30 days before the use of any new chemicals in the treatment, or operation and maintenance of the treatment units, is to begin. This report shall include toxicity data. The Executive Officer must approve the use of any chemicals prior to the usage of any chemicals in the treatment, operation, and/or maintenance of the treatment units.

H. **RECORDS TO BE MAINTAINED**

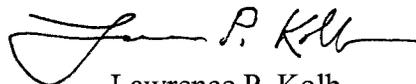
1. Written reports, strip charts, calibration and maintenance records, and other records shall be maintained by the discharger and accessible (at the waste treatment plant), and retained for a minimum of five years. This period of retention shall be extended during the course of any unresolved litigation

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. Method of sampling (See Section C - Definition of Terms).
 - d. Type of fish bioassay test (96 hour static or flow-through bioassay)
 - e. Date and time that analyses are started and completed, and name of personnel performing the analyses.
 - f. Complete procedure used, including method of preserving sample and identity and volumes of reagents used. A reference to a specific section of *Standard Methods* is satisfactory.
 - g. Calculations of results.
 - h. Results of analyses and/or observations.
2. Weekly discharge flow volume shall be recorded, as well as totalized quarterly and annual flow.
 3. A tabulation reflecting bypassing and accidental waste spills shall be maintained.

I, Lawrence P. Kolb, Assistant Executive Officer, do hereby certify the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in the 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. 99-093.
2. Was adopted by the Board on November 18, 1999.
3. May be revised by the Executive Officer pursuant to U.S. EPA regulations (40 CFR 122.36); other revisions may be ordered by the Board.



Lawrence P. Kolb
Assistant Executive Officer

Attachment: Table A

TABLE A - SCHEDULE FOR SAMPLING, MEASUREMENT, AND ANALYSIS

Parameter or Constituent	I-001 I-002	E-001 E-002	I-003	E-003	C-001
Flow rate (gpm and gpd)		M		M	
pH (units)		M		M	A
Dissolved oxygen (mg/l and % saturation)					A
Temperature (°C)		M		M	A
Hardness (mg/l as CaCO ₃)		A		A	A
Turbidity (NTU)		A		A	
Total dissolved solids (mg/l)		A		A	A
Total chlorine residual (mg/l) (1)		M		M	
Fish toxicity (% survival in 96 hour bioassay)		A		A	
VOCs (ug/l, EPA Method 8260 or equivalent) (2)	M	M	M	M	
SVOCs (ug/l, EPA Method 625 or equivalent method) (3)	A	A			
Metals (ug/l) (4)		A		A	
Standard observations (5)		M		M	A

Key: I = Intermittent
M = Monthly

D = Daily
Q = Quarterly

2W = Every 2 weeks
A = Annually

Notes:

- Monitoring only required during periods when chlorine is used in extraction wells or treatment units tributary to the sampling station.
- The discharger may use EPA Methods 601 and 602 in lieu of EPA Method 8260.
- SVOC monitoring may be limited to acetone and isopropyl alcohol.
- Metals samples shall be unfiltered and maximum method detection limits shall be: arsenic 5 ug/l, cadmium 2 ug/l, chromium 5 ug/l, copper 5 ug/l, lead 5 ug/l, mercury 0.2 ug/l, nickel 5 ug/l, selenium 5 ug/l, silver 5 ug/l, and zinc 10 ug/l.
- See section F for station-specific observations.
- All samples shall be grab samples.
- Sampling is only required at influent and effluent stations if there is a discharge for that sampling interval.