

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN FRANCISCO BAY REGION

ORDER NO. 86-78

WASTE DISCHARGE REQUIREMENTS  
(SITE CLEANUP REQUIREMENTS) FOR:

INTERSIL, INC.  
SOBRATO DEVELOPMENT CO.  
1276 HAMMERWOOD AVE.  
SUNNYVALE  
SANTA CLARA COUNTY

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

1. Intersil, Inc., hereinafter a discharger, operates a facility located at 1276 Hammerwood Ave. in Sunnyvale. At the request of the Regional Board staff, Intersil submitted a Report of Waste Discharge to the Board on August 20, 1986. The property is owned by Sobrato Development Company also considered a discharger.
2. The site consists of one main building as shown on Attachment 1, Site Plan, hereinafter a part of this Order. The site is currently used for storage only; however, in the past it housed semi-conductor production facilities.
3. Investigations at the site were initiated in May 1982 as part of the Underground Tank Leak Detection Program. One groundwater monitoring well was installed north of the neutralization system located behind the main building. The 1600 gallon neutralization system treated wastewater from the facility's industrial process and consists in part of multiple plastic tanks enclosed in a concrete vault.
4. Subsurface investigations at this site revealed the presence of chlorinated organic solvents in the soil and groundwater. Trans-1,2-dichloroethylene (DCE) was found at levels as high as 13 ppm in the soil and 5700 ppb in the groundwater. Trichloroethylene (TCE) was found at levels as high as 5.3 ppm in the soil and 3600 ppb in the groundwater. A groundwater investigation is also being conducted by Western Microwave on property bordering the Intersil site to the east.
5. The site is located on the northwestern edge of the Santa Clara Valley on alluvial deposits of recent origin (less than 10,000 years). The soils encountered beneath the Intersil property appear to be fairly laterally continuous consisting of stiff silty and sandy clays underlain by layers of silts and silty sand, which are in turn underlain by a very stiff, silty clay.

6. Groundwater was encountered at about 8 to 9 feet below the ground surface in a permeable unit approximately 3 to 6 1/2 feet thick, designated the "A" zone. The direction of groundwater movement appears to be generally to the north and northeast but may be affected by seasonal and tidal influences.
7. Four monitoring wells and one extraction well have been installed at this site. All of these wells are screened in the "A" aquifer.
8. The continued movement of organic solvents from soils and from fine-grained sediments within the saturated zone to groundwater aquifers, and the potential for continued migration of these compounds to uncontaminated waters constitutes a discharge for purposes of Water Code Section 13263(a).
9. In April 1986 Intersil submitted a proposal for additional investigation and interim remedial action that included a public and private well survey of the surrounding area, removal of the neutralization system, construction of two "A" zone extraction wells (one in the excavation of the neutralization system), construction of a "B" zone well to determine vertical extent of pollution, and an offsite investigation to determine the lateral extent of the pollutant plume. Intersil is currently in the process of completing this work.
10. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on July 21, 1982. The Basin Plan contains water quality objectives and beneficial uses for South San Francisco Bay and contiguous surface and groundwaters.
11. The beneficial uses of South San Francisco Bay and tributary water bodies are:
  - water contact recreation
  - non-contact water recreation
  - wildlife habitat
  - warm and cold fresh water habitat
  - fish migration
  - industrial service and process supply
  - navigation
  - agricultural water supply
12. The beneficial uses of the groundwaters are:
  - municipal and domestic water supply
  - industrial service and process supply
  - agricultural water supply
13. The Board has notified the dischargers and all interested agencies and persons of its intent to issue waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

14. The Board, at a public meeting, heard and considered all comments pertaining to this discharge.
15. This project constitutes a minor modification to land and such activity is thereby exempt from the provisions of the California Environmental Quality Act (CEQA) in accordance with Section 15304 of the Resources Agency Guidelines.

IT IS HEREBY ORDERED, that the dischargers, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. PROHIBITIONS:

1. The discharge of wastes or hazardous materials in a manner which will degrade water quality or adversely affect beneficial uses of the waters of the State is prohibited.
2. Further significant migration of pollutants through subsurface transport to waters of the State is prohibited.
3. Activities associated with the subsurface investigation and cleanup which will cause significant adverse migration of pollutants or adversely spread any pollutants from other sites is prohibited.

B. SPECIFICATIONS:

1. The storage, handling, treatment or disposal of polluted soil or groundwater shall not create a nuisance as defined in Section 13050(m) of the California Water Code.
2. The discharger shall conduct monitoring activities as needed to define the local hydrogeological conditions, and the lateral and vertical extent of the soil and groundwater pollution in and contiguous to the zone of known pollution. Should monitoring results show evidence of plume migration, additional plume characterization shall be required.

C. PROVISIONS:

1. In order to comply with Specification B.2, the dischargers shall complete the following tasks according to the following compliance time schedule:

TASK	COMPLETION DATE
a. Submit an interim technical report acceptable to the Executive Officer on the results (boring logs, chemical analyses) of the following tasks:	October 20, 1986

- (1) Completion of a public and private well survey of the surrounding area to determine what use, if any, is being made of potentially affected groundwater.
- (2) Construction and sampling of a "B" zone well to determine if pollutants have migrated vertically to this depth.
- (3) Completion of an offsite soil-gas survey.

b. Submit a technical report acceptable to the Executive Officer on the results (boring logs, chemical analyses) and conclusions of the Phase III investigation including:

December 12, 1986

- (1) Construction of an "A" zone extraction well at the northeast property boundary for the purpose of performing a pump test and in order to reduce the migration of polluted groundwater offsite.
- (2) Construction and sampling of at least three "A" zone groundwater monitoring wells at locations determined from the offsite soil-gas survey to define the extent of pollutant migration in the shallow saturated zone downgradient from the site.
- (3) Monitoring of groundwater levels monthly to determine seasonal fluctuations in gradient and at closely spaced time intervals (30 minutes) for one full day during a seasonal high and low tide to determine the impact of tidal influences on the gradient.

c. Submit a technical report acceptable to the Executive Officer

February 2, 1987

describing the removal of the abandoned neutralization system and subsequent construction of an "A" zone extraction well.

- d. If the pollutant plume remains un-defined after completion of Task 1.a. complete the following tasks:

(1) Submit a technical report including a proposal and a work plan and schedule, acceptable to the Executive Officer to complete the definition of the lateral and vertical extent of the pollutant plume.

January 5, 1987

(2) Submit a technical report acceptable to the Executive Officer describing the results of the approved proposal.

Within 20 weeks after receiving Executive Officer approval of the Task 1.d(1) proposal.

2. In order to comply with Prohibitions A.1 and A.2 the dischargers shall meet the following compliance time schedule:

TASKS	COMPLETION DATE
a. Submit a technical report which evaluates interim cleanup alternatives and which contains or recommends an interim cleanup strategy for the site for the Executive Officer's consideration.	
(1) If plume definition is completed after Task 1.b. or	March 20, 1987
(2) If plume definition is completed after Task 1.d.	Three months after submission of last technical report regarding plume definition.
b. Complete construction and implement the approved interim cleanup alternative.	
(1) If plume definition is completed after Task 1.b. or	September 21, 1987
(2) If plume definition is completed after Task 1.d.	Six months after submission of Task 2.a(2) report.

3. In order to comply with Prohibition 1, the following two items will be

submitted in a report for Board consideration no later than fourteen months after completion of Tasks 2.b(1) or 2.b(2), whichever is appropriate.

- a. An evaluation of final remedial measures and a recommendation on which measures should be implemented.
- b. An evaluation of the effectiveness of the interim cleanup measures.

The technical report's evaluation of final remedial measures will include a projection of each measure's cost, effectiveness, benefits and impact on public health and welfare and the environment and will be based upon Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR, Part 300) and upon Sections 25350 and 25356.1(c) of the Health and Safety Code, and CERCLA guidance documents.

4. The dischargers shall submit to the Board quarterly reports summarizing its progress toward compliance with the Provisions specified in this Order, including specific actions taken and actions proposed prior to the next report. Reports will be submitted within 45 days of the end of each calendar quarter with the first report due by November 15, 1986. These quarterly reports will also contain the information specified in the attached self-monitoring program and any subsequent modifications of the self-monitoring program the Executive Officer may make.
5. All samples shall be analyzed by State-approved laboratories using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control records for Board review.
6. The dischargers shall permit the Board or its authorized representative in accordance with Section 13267(c) of the California Water Code:
  - a. Entry upon the Intersil, Sunnyvale, California facility premises on which any pollution sources exist, or may potentially exist, or on which any required records are kept;
  - b. Access to copy any records required to be kept under terms and conditions of this order.
  - c. Inspection of any monitoring equipment or methods required by this Order.
  - d. Sampling of any groundwater or soil which is accessible, or may become accessible to the discharger as part of any investigation or remedial action program required by this Order.
7. The dischargers shall maintain in good working order and operate, as efficiently as possible, any facility or control system installed to achieve compliance with the requirements of this Order.
8. The Board will review this Order periodically and may revise the requirements when necessary. This may include further investigation

and cleanup if warranted by monitoring results and other considerations.

I, Roger B. James, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on October 15, 1986.



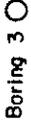
ROGER B. JAMES  
Executive Officer

**EXPLANATION**

Location of existing Neutralization System - 1600 gallon multi-compartment plastic tanks in concrete vault. Contents - waste water.



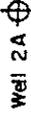
Location of boring for Phase I Investigation.



Location of monitoring well for Phase I Investigation.



Location of Monitoring Well installed for Phase II Investigation.



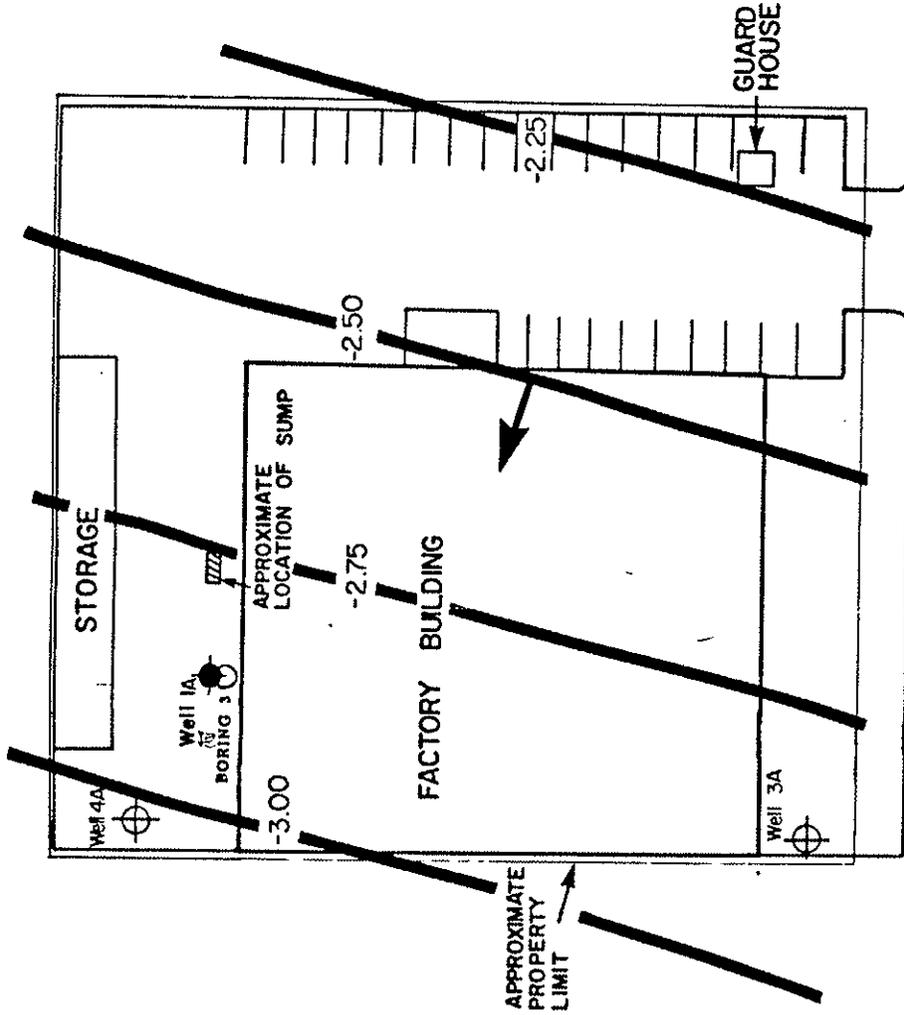
Contour of Equal Groundwater Elevation. Contour interval is 0.25 feet.



Approximate Direction of Groundwater Movement.



Well 2 A

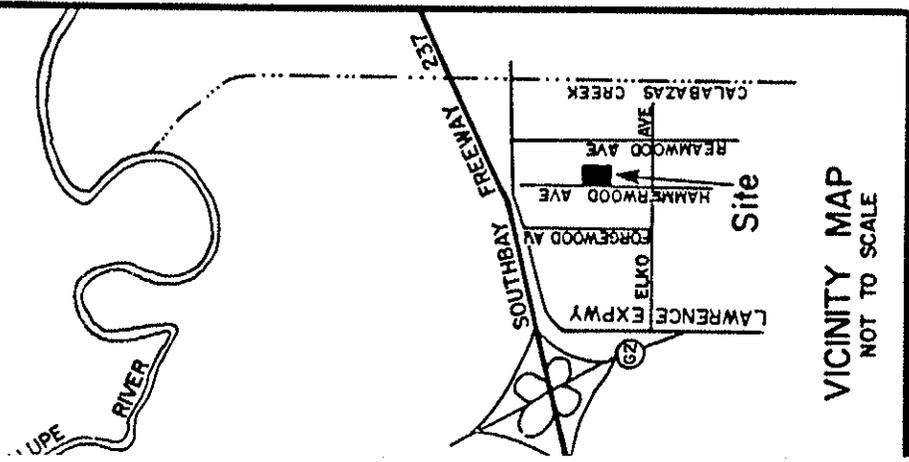


HAMMERWOOD AVENUE

**NOTES:**

1. References: RWOCB Facility Questionnaire for the Hammerwood Avenue Facility, dated 5/28/82

2. Field Survey by Ruth and Going, Inc., 1-16-86. Benchmark; 3" Brass Disk in concrete at the centerline of Mountain view and Alviso Rd, 28 ft. West of the West end of Bridge over Calabazas Creek per Santa Clara Valley Water District Durham, Elev. 16.43 ft.



VICINITY MAP  
NOT TO SCALE



DESIGNED BY: DPO	DATE
DRAWN BY: HP	1-29-86
APPROVED BY:	1-29-86
REVISED BY: HP	2-20-86

**PHASE II GROUNDWATER QUALITY INVESTIGATION**  
Interwell  
1276 Hammerwood Ave  
Sunnyvale Calif.

**GENERALIZED POTENTIOMETRIC SURFACE MAP: A ZONE**  
DECEMBER 1985, JANUARY 1986  
SCALE 1" = 40'

JOB NO. 1526-B3	PLATE NO. 7
DATE 1/29/86	

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

T E N T A T I V E  
SELF-MONITORING PROGRAM  
FOR

Intersil, Inc.

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Sobrato Development Co.

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WDR NO. 86-78

ORDER NO. \_\_\_\_\_

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

A. GENERAL

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

The principal purposes of a 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, discharger prohibitions national standards of performance, pretreatment and toxicity standards, and other standards, and (4) to prepare water and wastewater quality inventories.

B. SAMPLING AND ANALYTICAL METHODS

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

C. REPORTS TO BE FILED WITH THE REGIONAL BOARD

1. Violations of Requirements

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

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

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

The discharger shall file a written technical report at least 15 days prior to advertising for bid on any construction project which would cause or aggravate the discharge of waste in violation of requirements; said report shall describe the nature, costs and scheduling of all action necessary to preclude such discharge.

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

## 2. Bypass Reports

Bypassing reporting shall be an integral part of regular monitoring program reporting. A report on bypassing of untreated units shall be made which will include cause, time and date, duration and estimated volume bypassed, method used in estimating volume, and persons and agencies notified. Notification to the Regional Board shall be made immediately by telephone (415-464-1255), followed by a written account within 15 days.

## 3. Self-Monitoring Reports

### a. Reporting Period:

Written reports shall be filed regularly for each quarter within 45 days of the end of each calendar quarter.

### b. Letter of Transmittal:

A letter transmitting self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period and actions taken or planned for correcting any requirement violation. If the discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to this correspondence will be satisfactory.

Monitoring reports and the letter transmitting reports shall be signed by either a principal executive officer or his duly authorized employee. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true and correct.

c. Data Results:

- (1) Results from each required analysis and observation shall be submitted in the monthly self-monitoring report. Results shall also be submitted for any additional analyses performed by the dischargers at the specific request of the Board for parameters for which effluent limits have been established and provided to the dischargers by the Board.
- (2) The report shall include a discussion of unexpected operational changes which could affect performance of the treatment system, such as flow fluctuations, maintenance shutdown, etc.
- (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 should be copied and submitted as an appendix to the regular report.
- (5) A map shall accompany the report, showing sampling locations and flow path to receiving waters.
- (6) The report shall include an annual waste summary by month for the current year for each parameter of the attached Table I, showing the minimum, maximum and average for the month. The report for December shall include minimum, maximum and average for the year.

D. DESCRIPTION OF SAMPLING STATIONS

EFFLUENT

E-1, E-2	Discharge from groundwater extraction well.
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GROUNDWATER

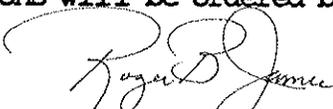
<u>Station</u>	<u>Description</u>
1A, 2A, 3A, 4A and additional monitoring wells as appropriate	Points on the edge of the pollutant plume.

E. SCHEDULE OF SAMPLING AND ANALYSIS

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

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 86-48.
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 dischargers and revisions will be ordered by the Executive Officer.

  
ROGER B. JAMES  
Executive Officer

Effective Date: October 15, 1986

Attachment: Table I

TABLE 1  
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	E-1 E-2	1A, 2A, 3A 4A								
TYPE OF SAMPLE										
EPA 601	M	Q								
EPA 624/625	Y	Y								

LEGEND FOR TABLE

- G = grab sample
- D = once each day
- M = once each month
- Q = quarterly, once in March, June, September and December
- M/Q = monthly for three months at startup of operation; reduced to quarterly thereafter
- Y = once each year.