

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 85-107

WASTE DISCHARGE REQUIREMENTS

ADVANCED MICRO DEVICES, INC.  
SIGNETICS CORPORATION  
TRW MICROWAVE  
SUNNYVALE, SANTA CLARA COUNTY

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

1. Advanced Micro Devices, Inc., owns and operates electronic component manufacturing facilities at 901 Thompson Place, Sunnyvale.
2. Signetics Corporation, owns and operates a electronic component manufacturing facility at 811 Arques Avenue, Sunnyvale.
3. TRW Microwave, Inc., owns and operates a electronic component manufacturing facility at 825 Stewart Drive, Sunnyvale.
4. The three above named companies are hereinafter referred to jointly as the dischargers.
5. Subsurface investigations initiated at these above sites in early 1982 revealed significant levels of organic chemical pollution (primarily TCE and TCA) in both soil and groundwater, caused primarily by leaking tanks. The hazardous materials used on-site, either currently or historically, include trichloroethene (TCE), 1,1,1-trichloroethane (TCA), and other organic solvents.
6. The dischargers have undertaken investigations to define the extent of pollution and implement remedial measures on their respective sites. Onsite remedial measures implemented to date include soil excavation, installation of onsite groundwater extraction wells, infiltration trenches, and removal of underground tanks and sumps which have stored hazardous materials.

7. To assure that the offsite contaminant plume definition and remedial action program would be carried out in a timely manner, Cleanup and Abatement Order #84-004 was issued on June 21, 1984. This order required the three dischargers to develop a joint comprehensive monitoring program and remedial action plan for areas of concern.
8. As of May 30, 1985, the dischargers have installed approximately 170 monitoring wells and conducted a "soil gas" survey to evaluate the lateral and vertical extent of groundwater contamination. These studies indicate that the contaminant plume has migrated north of Duane Avenue.
9. On May 3, 1985 and May 24, 1985 dischargers submitted the final proposed work plans for installation and monitoring of test wells for areas south of Duane Avenue and work plan for additional groundwater monitoring and installation of test wells for areas north of Duane Avenue. The dischargers have proposed to implement the following investigative and remedial action plan.
  - a. Install and monitor five test wells (three wells in the "A" aquifer will be constructed to depth of 15 to 25 feet and two wells in the "B" aquifer will be constructed to depths of 30 to 45 feet deep) to further define the extent of contamination and hydrogeologic condition for areas south of Duane Avenue. Subsequently, the five test wells will be converted to extraction purposes to prevent further contaminant migration down gradient area north of Duane Avenue.
  - b. Install additional monitoring wells in areas north of Duane Avenue in the "A", "B" and "C" aquifer zone to further define the lateral and vertical extent of contamination and hydrogeologic condition.
  - c. Based on result from findings #9b, the dischargers will develop a detailed remedial action plan and additional off-site monitoring plan (if necessary) to contain and cleanup the polluted groundwater in the area of concern.
10. The tasks outlined in Finding #9 are necessary to prevent the continued migration of contaminants to unaffected groundwater in a manner which could adversely affect potential beneficial uses.

11. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on July 21, 1982. The Basin Plan contains water quality objectives for groundwater.
12. The existing and potential beneficial uses of the groundwater underlying the facility include:
  - a. Municipal Water Supply
  - b. Domestic Water Supply
  - c. Agricultural Water Supply
  - d. Industrial Service and Process Water Supply
13. The Board has notified the discharger and interested agencies and persons of its intent to prescribe water discharge requirements and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
14. 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 15104 of the Resources Agency Guidelines.
15. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, that the discharger, 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 waste or hazardous materials in a manner which degrades the water quality or adversely affect beneficial uses of the groundwaters of the State is prohibited.
2. Further significant migration of pollutants through or subsurface transport to usable groundwaters is prohibited.

3. Methods employed to investigate, contain, and/or cleanup the polluted groundwaters shall not cause the uncontrolled spread of pollution.

B. Specifications

1. The discharger shall take action to prevent additional migration of groundwater pollutants in the common plume to areas north of Duane Avenue.
2. The discharger shall conduct investigative and monitoring activities as needed to define the current local hydrogeologic conditions and the lateral and vertical extent of soil and groundwater pollution in and at the boundaries of the zone of known pollution.
3. The dischargers shall take action to prevent migration of groundwater pollutants beyond the areas of high contamination near San Miguel School.
4. Private wells in the areas north of Duane Avenue shall be monitored periodically according to a program approved by the Executive Officer, if access to such wells is granted by property owners and if coordination of access is provided by the Santa Clara County Health Department.

C. Provisions

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 dischargers shall submit to the Board technical reports on self-monitoring work performed according to a program approved by the Board's Executive Officer.
3. In order to comply with specification B.1 the discharges shall meet the following compliance time schedules:

<u>Task</u>	<u>Compliance Date</u>
a. Submit a detailed monitoring program to verify the effectiveness of the groundwater treatment systems	November 29, 1985

- b. Submit the summary report on aquifer testing and chemical analysis for the five extraction wells. The report shall include a plan and schedules for construction of a groundwater cleanup system December 27, 1985
  - c. Startup the groundwater clean-up system March 21, 1986
  - d. Submit to the Regional Board a performance evaluation report on the groundwater cleanup system July 17, 1986
4. In order to comply with specification B.2, the dischargers, to the extent responsible, shall complete definition of the vertical and lateral extent of groundwater contaminant plume migration in areas north of Duane Avenue by May 1, 1986.
5. In order to comply with specification B.3 the discharger shall meet the following compliance time schedules:

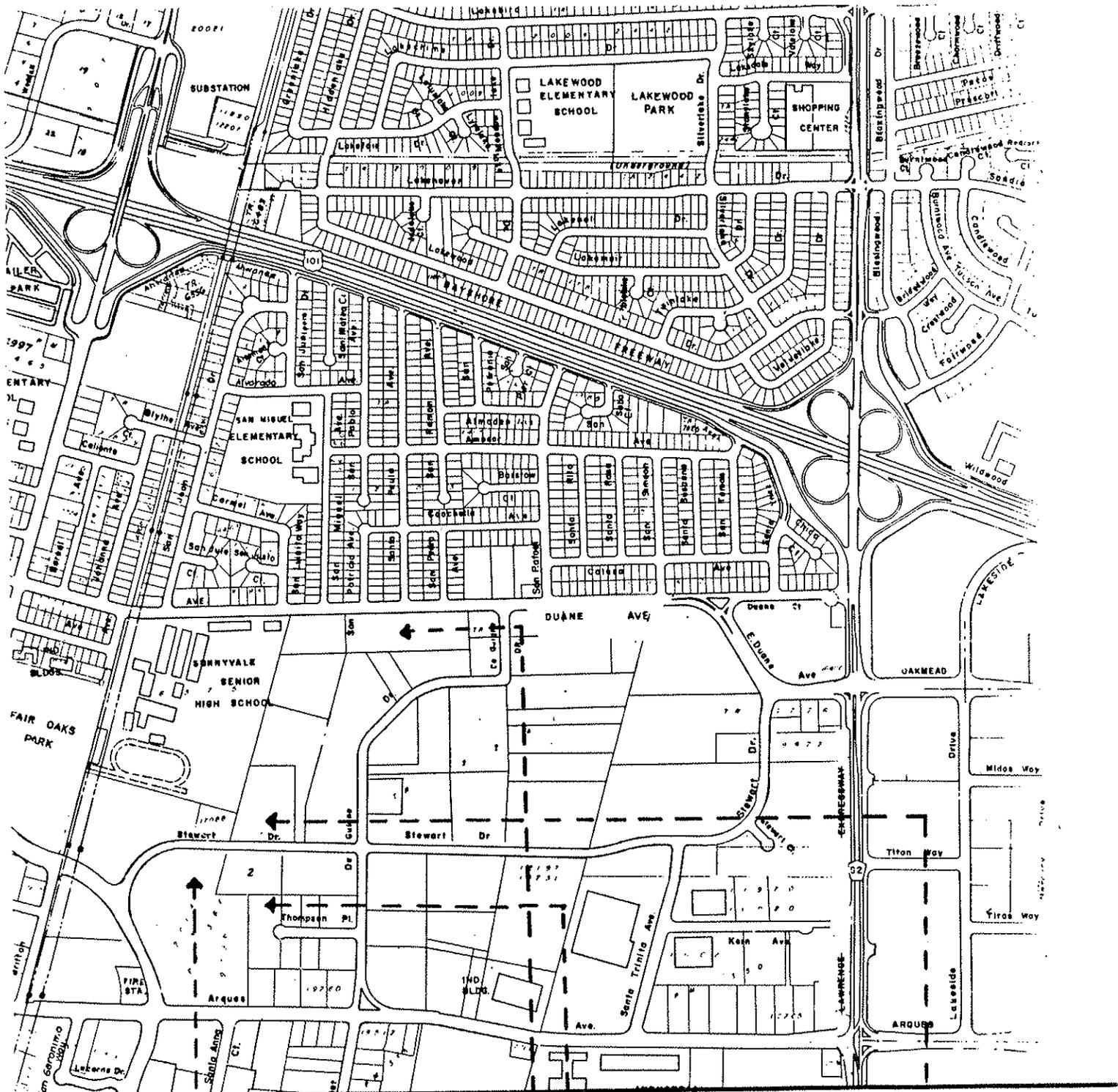
<u>Task</u>	<u>Compliance Date</u>
a. Install and develop test wells in "A" and "B" aquifer or "C" aquifer (if, necessary). Sample test wells for chemical analysis and conduct appropriate hydrologic tests (e.g. aquifer pump tests, permeability tests, and geophysical logging).	January 3, 1986
b. Submit results of sampling and aquifer testing. Also, based on the findings #5.b, the report shall include a detailed engineering evaluation of effectiveness of the off-site groundwater extraction systems and detailed recommendations for additional cleanup programs (if necessary) for uncontained area	February 21, 1986

- c. Complete the construction of groundwater remedial action facilities in the areas north of Duane Avenue August 1, 1986
- d. Submit report evaluating the effectiveness of containment achieved by facilities constructed pursuant to 5.d above November 1, 1986
6. The dischargers shall submit monthly reports on their progress toward compliance with the Provisions specified in this Order, including specific actions taken and action proposed prior to the next report.
7. All samples shall be analysed by State certified laboratories using approved EPA method 601 (full scan) for volatile organics, except the 1st set of groundwater sample obtain from all new monitoring well should be analysed by EPA method 624 (full scan). In addition, at least one groundwater sample from monitoring wells Com 1A, 1B and Com 5A should be analyzed by EPA method 624. All laboratories shall maintain quality assurance/quality control records for Board review.
8. The dischargers shall permit the Board or its authorized representative, in accordance with Section 13267(c) of the California Water Code:
- a. Entry upon premises in which any pollution sources exist, or may potentially exist, or in 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 as part of any investigation or remedial action program, to the dischargers. Sampling wells and, access to offsite facilities by the Board or its representatives shall be coordinated through the dischargers or their representatives in accordance with discharger security procedures and with access agreements between the dischargers and offsite property owners.

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 September 18, 1985.

*Richard H. Whitford*  
for  
ROGER B. JAMES  
Executive Officer

Attachments



SIGNETICS CORPORATION  
(811 Arques Avenue)

ADVANCED MICRO  
DEVICES INC.

TRW MICROWAVE INC.  
(825 Stewart Drive)

\*\* 901 Thompson Pl.

\*\* 915 Deguigue Drive

FIGURE: SITES MAP ----- CITY OF SUNNYVALE

