

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 88-015

SITE CLEANUP REQUIREMENTS

TRW INC. ;
F E I MICROWAVE INCORPORATED ;
AND
TECH FACILITY 1 INCORPORATED

825 STEWART DRIVE FACILITY
SUNNYVALE, SANTA CLARA COUNTY

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

1. TRW Microwave, Inc. manufactured microwave devices and components at a facility on 825 Stewart Drive, Sunnyvale from July 1974 to August 1987. FEI Microwave, Inc. purchased certain assets from TRW Microwave, Inc. and Tech Facility 1, Inc. purchased from TRW Microwave, Inc. the facility on 825 Stewart Drive in Sunnyvale in August 1987, but TRW Inc., the parent corporation of TRW Microwave, Inc. has agreed to assume full responsibility to complete all necessary investigations and remedial action programs related to the subject property. The current owner of the property is Tech Facility 1, Inc. and the current operator of the facility is FEI Microwave, Inc. All three parties are named as dischargers; however, FEI Microwave and Tech Facility 1, Inc. have responsibilities for plume investigation and cleanup only in the event that TRW fails to comply with investigation and cleanup provisions of the Order.
2. Subsurface investigations initiated by TRW Microwave, Inc. in early 1983 revealed significant levels of organic chemical pollution in soils and groundwater beneath the site. Initial groundwater concentrations were as high as 1,000 ppm. The current average groundwater concentrations are 1 to 5 ppm. Field data indicated that some of the pollution originated from a former waste solvent tank, but that pollutants had also migrated onsite from upgradient sources. Principal pollutants included trichloroethylene, and perchloroethylene. .
3. Investigations undertaken by TRW Inc. in cooperation with Advanced Micro Devices, Inc. (AMD) and Signetics Corporation indicated that chemicals from all three sites had migrated

in the groundwater to form a merged plume of pollution extending to a depth of 75 feet and a lateral distance of approximately 2,000 feet downgradient of the subject property.

4. On September 18, 1985, the Board adopted Order No. 85-107 prescribing Waste Discharge Requirements for TRW Microwave, Inc., AMD, and Signetics establishing tasks and a time schedule to complete definition of the extent of offsite pollutant and implement interim remedial action. Modification of these requirements is needed to further address onsite pollution and to further update the schedule to complete final investigations and remedial action.
5. The discharger(s) has undertaken independent remedial action to address onsite pollution and has undertaken joint remedial action with AMD and Signetics to address offsite pollution. These activities have been conducted pursuant to Order No. 85-107.
6. Onsite soil removal action consisted of the removal of an approximately 200 cubic yards of highly polluted soils. Additional studies are needed to more precisely define the extent of soil pollution and evaluate alternatives for remedial action.
7. Onsite groundwater cleanup action consisted of installing eight extraction points which currently remove about 45,000 gallons per day (GPD), treat it with an air stripping tower and discharge it to a storm drain tributary to Calabazas Creek and San Francisco Bay. Discharge is regulated by a NPDES Permit (Order No. 85-120) adopted by the Board on October 16, 1985.
8. The discharger(s) have undertaken joint investigations with AMD and Signetics Corporation to define the extent of pollution in the offsite downgradient areas. The offsite pollution plume has been adequately defined. Joint offsite remedial measures implemented to date include installation of nine offsite groundwater extraction wells along Duane Avenue to remove pollutants from A, B1, B2, B3 and B4 aquifers. The three companies are also in the process of installing additional hydraulic containment systems along Alvarado Avenue (approximately 1,500 feet north of Duane Avenue) and Highway 101 to prevent further pollutant migration north of Highway 101. Discharges from the Duane Avenue and Alvarado Avenue facilities are regulated by an NPDES Permit (Order No.85-034) adopted by the Board on April 30, 1985.

9. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 17, 1986. The Basin Plan contains water quality objectives and beneficial uses for South San Francisco Bay and contiguous surface and groundwaters.
10. The existing and potential beneficial uses of the groundwater underlying and adjacent to the facility include:
 - a. Industrial process water supply
 - b. Industrial service supply
 - c. Municipal and Domestic supply
 - d. Agricultural supply
11. The discharger(s) has caused or permitted, and threatens to cause or permit waste to be discharged or deposited where it is or probably will be discharged to waters of the State and creates or threatens to create a condition of pollution or nuisance.
12. This action is an order to enforce the laws and regulations administered by the Board. This action is categorically exempt from the provisions of the CEQA pursuant to Section 15321 of the Resources Agency Guidelines.
13. Additional interim containment and cleanup measures along Alvarado Avenue need to be implemented to alleviate the threat to the environment posed by the continued migration of pollutants and to provide a substantive technical basis for designing and evaluating the effectiveness of final cleanup alternatives.
14. The Board has notified the dischargers and interested agencies and persons of its intent under California Water Code Section 13304 to prescribe Site Cleanup Requirements for the discharge and has provided them with the opportunity for a public hearing and an opportunity to submit their written views and recommendations.
15. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the dischargers shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

1. The discharge of wastes or hazardous materials in a manner which will degrade water quality or adversely affect the 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 are 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 dischargers shall conduct monitoring activities as needed to define the current local hydrogeologic conditions, and the lateral and vertical extent of soil and groundwater pollution. Should monitoring results show evidence of plume migration, additional plume characterization may be required.

C. PROVISIONS

1. TRW Inc., Tech Facility 1, Inc. and FEI Microwave, Inc., shall comply with prohibition A.1., Specification B.1., and Provisions 11, 12, 13, and 14.
2. In addition to the requirements of Provision C.1., TRW, Inc. shall comply with Prohibitions A.2. and A.3., Specification B.2. and Provisions 2 through 10. Within 60 days of the Executive Officer's determination and actual notice to Tech Facility 1, Inc. and FEI Microwave, Inc. that TRW Inc. have failed to comply with the portion of the Order specified in this paragraph, Tech Facility 1, Inc. and FEI Microwave, Inc., shall comply with all requirements of this Order.

COMPLETION DATE/TASK:

- a. COMPLETION DATE: April 1, 1988

TASK: Submit a technical report satisfactory to the Executive Officer which evaluates the effectiveness of the existing onsite hydraulic containment system to prevent any contaminant migration from the former TRW Microwave Inc. facility. Such an evaluation shall include, but need not be limited to, confirmation of the flow capture zone of the extraction wells, establishment of the cones of depression by field measurements, and presentation of chemical monitoring data. Specific modifications to the system and an implementation time schedule shall be proposed in the event that the hydraulic control system is demonstrated not to be effective in containing and cleaning up the onsite pollutant plume.

- b. COMPLETION DATE: February 1, 1988

TASK: Submit a technical report containing a summary of existing information that describes the source and the magnitude and extent of soil contamination, and the risks posed by the presence of any such pollution and containing a detailed proposal, including Sampling and Analysis Plan, to complete the definition of the extent of onsite soil pollution.

- c. COMPLETION DATE: May 1, 1988

TASK: Submit a technical report satisfactory to the Executive Officer documenting completion of the necessary tasks identified in the technical report submitted for 2.b.

- d. COMPLETION DATE: August 1, 1988

TASK: Submit a technical report satisfactory to the Executive Officer which evaluates the effectiveness of the hydraulic containment system on Duane Avenue and Alvarado Avenue. Such an evaluation shall include, but need not be limited to, an estimation of the flow capture zone of the extraction wells, establishment of the cones of

depression by field measurements, and presentation of chemical monitoring data. Specific modifications to the system and an implementation time schedule shall be proposed in the event that the hydraulic control system is demonstrated not to be effective in containing and cleaning up the offsite pollutant plume.

e. COMPLETION DATE: July 1, 1989

TASK: Submit a technical report acceptable to the Executive Officer containing the result of the remedial investigation; an evaluation of the installed interim remedial measures; a feasibility study evaluating alternative final remedial measures; the recommended measures necessary to achieve final cleanup objectives; and the tasks and time schedule necessary to implement the recommended final remedial measures.

3. The submittal of technical reports evaluating proposed interim and final remedial measures will include a projection of the cost, effectiveness, benefits and impact on public health, welfare, and environment of each alternative measure. The remedial investigation and feasibility study shall be consistent with guidance provided by Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300); Superfund Amendments and Reauthorization Act of 1986; CERCLA/SARA guidance documents with reference to Remedial Investigations and Feasibility Studies; and the State Water Resources Control Board's Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California."
4. If the discharger(s) is delayed, interrupted or prevented from meeting one or more of the completion dates specified in this Order, the discharger(s) shall promptly notify the Executive Officer. In the event of such delays, the Board may consider modification of the task completion dates established in this Order.
5. Technical reports on compliance with the Prohibitions, Specifications, and Provisions of this Order shall be submitted monthly to the Board commencing on April 15, 1988. On a monthly basis thereafter, these reports shall consist of a brief letter report that, (1) summarizes work completed since submittal of the

previous report, and work projected to be completed by the time of the next report, (2) identifies any obstacles which may threaten compliance with the schedule of this Order and what actions are being taken to overcome these obstacles, and (3) includes, in the event of non-compliance with Provisions of this Order, written notification which clarifies the reasons for non-compliance and which proposes specific measures and a schedule to achieve compliance. This written notification shall identify work not completed that was projected for completion, and shall identify the impact of non-compliance on achieving compliance with the remaining requirements of this Order.

6. On a quarterly basis, commencing on April 15, 1988, the technical report shall include, but need not be limited to, updated water table and piezometric surface contour maps, pollution concentration contour maps for all affected water bearing zones, cross-sectional geological maps describing the hydrogeological setting of the site, and appropriately scaled and detailed base maps showing the location of all monitoring wells and extraction wells, and identifying adjacent facilities and structures shall be prepared as needed but at least semi-annually.
7. All hydrogeological plans, specifications, reports, and documents shall be signed by or stamped with the seal of a registered geologist, engineering geologist or professional engineer.
8. All samples shall be analyzed by State certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control records for Board review.
9. The discharger(s) 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.
10. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order, shall be provided to the following agencies:
 - a. Santa Clara Valley Water District
 - b. Santa Clara County Health Department

- c. City of Sunnyvale
- d. State Department of Health Services/TSCD
- e. Environmental Protection Agency

The Executive Officer may additionally require copies of correspondence, reports and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order to be provided to the U.S. Environmental Protection Agency, Region IX, and to a local repository for public use.

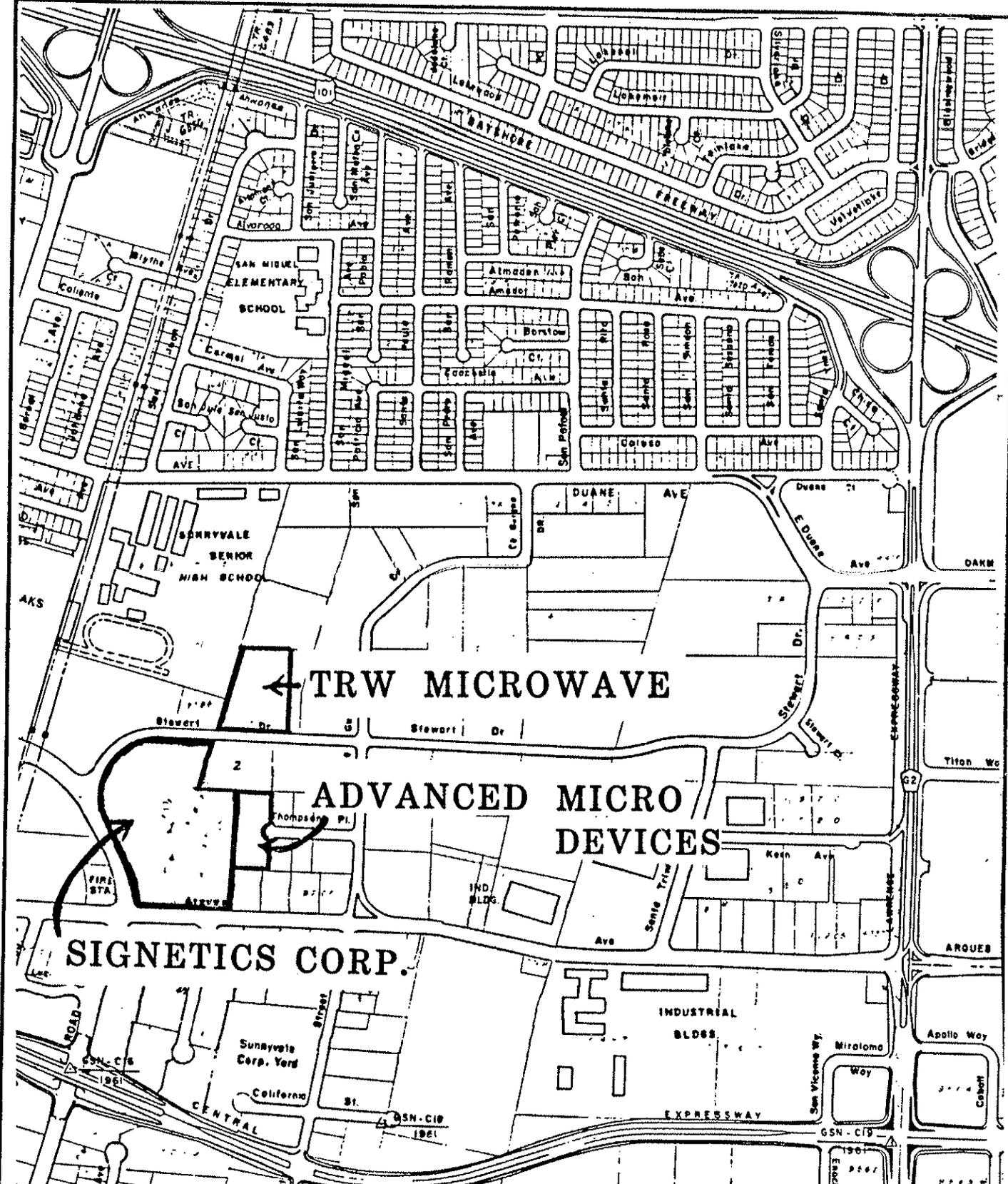
- 11. The discharger(s) shall permit the Board or its authorized representative, in accordance with Section 13267(c) of the California Water Code:
 - a. Entry upon premises in which any pollution sources exist, or may potentially exist, or in which any required records are kept, which are relevant to this Order.
 - b. Access to copy any records required to be kept under the terms and conditions of this Order.
 - c. Inspection of any monitoring equipment or methodology implemented in response to 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 undertaken by the dischargers.
- 12. The discharger(s) shall file a report on any changes in site occupancy and ownership associated with the facility described in this Order.
- 13. 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 dischargers shall report such a discharge to this Regional Board, at (415) 464-1255 on weekdays during officer 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 within five (5) working days and shall contain information relative to: the nature of waste or pollutant, quantity involved, duration of incident, cause of spill, Spill Prevention, Control and

Countermeasure Plan (SPCC) in effect, if any, estimated size of affected area, nature of effects, corrective measures that have been taken or planned, and a schedule of these activities, and persons notified. The dischargers are responsible for reporting from their respective operations.

14. This Order supercedes Order No. 85-107. Order No. 85-107 was rescinded by Board on December 16, 1987.
15. The Board will review this Order periodically and may revise the requirements when necessary.

I, Roger B. James, 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 January 20, 1988.


Roger B. James
Executive Officer



ADDRESSES:

- TRW Microwave Inc.,
825 Stewart Drive, Sunnyvale
- Advanced Micro Devices Inc.,
901 Thompson Place, Sunnyvale
- Signetics Corporation
811 E. Arques Avenue, Sunnyvale

STATE OF CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SAN FRANCISCO BAY REGION		
LOCATION MAP: Advanced Micro Devices Inc., Sunnyvale Signetics Corporation, Sunnyvale TRW Microwave Inc., Sunnyvale		
DRAWN BY:	DATE: 2/2/87	DRWG. NO.

17000 21

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

RESOLUTION NO. 88-016

ADOPTION OF INCOMPATIBLE ACTIVITIES STATEMENT

WHEREAS, California Government Code Section 19990 requires each appointing power to adopt an incompatible activities statement governing its employees, and

WHEREAS, the Regional Board is an appointing power, and

WHEREAS, the State Board adopted a revised Incompatible Activities Statement on March 20, 1986 which includes both State and Regional Board officers and employees in its coverage, and

WHEREAS, this statement was subsequently adopted by this Regional Board on May 21, 1986, and

WHEREAS, Government Code Section 19990 was amended, effective January 1, 1987. The amendments have necessitated revisions in the Incompatible Activities Statement adopted by the Regional Board, and

WHEREAS, on July 16, 1987 the State Board adopted a revised statement in conformity with Government Code Section 19990, as amended, and

WHEREAS, the State Board circulated its revised statement to all State and Regional Board officers and employees and responded to all comments which were received prior to adopting the statement on July 16, and

WHEREAS, the Regional Board has reviewed the July 16 statement adopted by the State Board and finds that it is appropriate for the Regional Board to adopt this statement for its officers and employees.

THEREFORE, BE IT RESOLVED, that the revised Incompatible Activities Statement adopted by the State Board on July 16, 1987 is hereby adopted by this Regional Board.

I Roger B. James, Executive Officer, do hereby certify the foregoing as a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on January 20, 1988.

ROGER B. JAMES
Executive Officer