

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 87-084

SITE CLEANUP REQUIREMENTS FOR:

HONEYWELL INC.
AND
THE RREEF FUNDS

3050 CORONADO DRIVE FACILITY
SANTA CLARA, SANTA CLARA COUNTY

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

1. Honeywell Inc. owns Synertek Inc. as a wholly owned subsidiary. Synertek manufactured semiconductor products in Synertek Building 1, a facility located at 3050 Coronado Drive, Santa Clara, Santa Clara County, from March 1978 to February 1985. The RREEF Funds is the current owner of the property. Honeywell Inc. and The RREEF Funds are hereinafter referred to as the dischargers.
2. Site investigations have found the soil and groundwater at the site to be contaminated with organic solvents including trichloroethylene (TCE), 1,1,1-trichloroethane (TCA), 1,1-dichloroethane (DCA), 1,1-dichloroethylene (DCE), trans-1,2-dichloroethylene (TDCE), 1,1,2-trichloro-1,2,2-trifluoroethane (freon 113) and vinyl chloride. These compounds have been detected in the groundwater at a total concentration greater than 12 parts per million.
3. Groundwater monitoring data indicates that the plume extends vertically to a depth of at least 45 feet and horizontally a distance of at least 700 feet from the suspected source. Further studies are required to define the vertical and lateral extent of pollution.
4. Honeywell Inc. is currently operating a groundwater treatment system designed to handle up to 50 gallons per minute to contain and cleanup the onsite contaminant plume. Groundwater is currently pumped at a rate of 30 gallons per minute from three extraction wells and treated by two air strippers connected in series and discharged to the storm sewer under an NPDES permit.

5. Remedial activities at this site have included the removal of underground tanks and contaminated soils. A 200 gallon solvent tank, installed in 1976 to store TCE and TCA, was removed along with contaminated soils in February 1985. A three-tank neutralization system installed in 1974 was associated with the wastewater treatment system and might have received miscellaneous solvents carried in the plant's wastewater stream. The neutralization system and contaminated soils were removed in April 1985. It is believed that the excavation of the tanks and a substantial portion of the contaminated soils has removed a majority of the source of further groundwater contamination.
6. Honeywell Inc. has located an abandoned agricultural water-supply well, 6S1W28K04, within approximately 150 feet of the plume of contamination that may be a potential conduit to deeper aquifers. The well log indicates that the well has multiple aquifer perforations and is 465 feet deep. Honeywell Inc.'s investigation indicates that the well was probably filled with gravel and soil materials and covered with a 10 inch concrete cap. There is no indication of the existence of a sanitary seal. Well sealing or other effective measures are needed to prevent migration of pollutants to lower aquifers via this abandoned well.
7. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (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.
8. The existing and potential beneficial uses of the groundwater underlying and adjacent to the facility include:
 - a. Industrial process water supply
 - b. Industrial service water supply
 - c. Municipal and Domestic water supply
 - d. Agricultural water supply
9. The dischargers have 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.
10. 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

California Environmental Quality Act, CEQA, pursuant to Section 15321 of the Resources Agency Guidelines.

11. Onsite and offsite interim containment and cleanup measures need to be implemented to alleviate the threat to the environment posed by the continued migration of the groundwater plume of organic solvents and to provide a substantive technical basis for designing and evaluating the effectiveness of final cleanup alternatives.
12. 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 dischargers and has provided them with the opportunity for a public hearing and an opportunity to submit their written views and recommendations.
13. 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 soil or groundwater containing pollutants 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 shall be required.

C. PROVISIONS

1. The dischargers shall submit to the Board acceptable monitoring program reports containing results of work performed according to a program prescribed by the Board's Executive Officer.
2. The dischargers shall comply with Prohibitions A.1., A.2., and A.3., and Specifications B.1. and B.2. above, in accordance with the following time schedule and tasks:

COMPLETION DATE/TASK:

- a. COMPLETION DATE: July 17, 1987

TASK: COMPLETION OF ONSITE INTERIM REMEDIAL ACTIONS FOR GROUNDWATER: Submit a technical report acceptable to the Executive Officer which documents the commencement of the hydraulic control system necessary to contain and treat the contaminated groundwater beneath the site.

- b. 1) COMPLETION DATE: July 31, 1987

TASK: GROUNDWATER POLLUTION CHARACTERIZATION: Submit a technical report acceptable to the Executive Officer containing a proposal to define the horizontal and vertical extent of groundwater pollution.

- 2) COMPLETION DATE: February 15, 1988

TASK: COMPLETION OF GROUNDWATER POLLUTION CHARACTERIZATION: Submit a technical report acceptable to the Executive Officer which defines the horizontal and vertical extent of groundwater pollution.

c. 1) COMPLETION DATE: September 15, 1987

TASK: a) EVALUATE INTERIM ONSITE HYDRAULIC CONTAINMENT AND SOIL REMOVAL MEASURES: Submit a technical report acceptable to the Executive Officer which evaluates the effectiveness of the interim onsite hydraulic containment system. 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. This report shall also evaluate the removal of polluted soils that was completed as part of the interim remedial actions.

b) MODIFICATION TO INTERIM ACTIONS: Specific modifications to the system and an implementation time schedule shall be proposed in the event that the soil remediation or hydraulic control system is demonstrated not to be effective in containing and removing the onsite pollutants.

2) COMPLETION DATE: December 15, 1987

TASK: COMPLETION OF MODIFICATIONS TO INTERIM ACTIONS: Submit a technical report acceptable to the Executive Officer documenting completion of the necessary tasks identified in the technical report submitted for Task 2.c.1)b).

d. COMPLETION DATE: October 15, 1987

TASK: COMPLETION OF ACTIONS FOR POTENTIAL DEEP WELL CONDUIT: Submit a technical report acceptable to the Executive Officer which documents that well sealing in accordance with Santa Clara Valley Water District procedures or other effective measures were taken to prevent migration of pollutants to lower aquifers via abandoned well 6S1W28K04.

- e. 1) COMPLETION DATE: March 15, 1988

TASK: OFFSITE INTERIM REMEDIAL ACTIONS: Submit a technical report acceptable to the Executive Officer which contains an evaluation of offsite interim remedial alternatives, a recommended plan for offsite interim remediation, and an implementation time schedule. This report shall evaluate alternative hydraulic control systems to contain and to initiate cleanup of polluted groundwater; and include a completed NPDES application to discharge to surface waters, if such discharge is an element of the plan.

- 2) COMPLETION DATE: September 15, 1988

TASK: COMPLETION OF INTERIM REMEDIAL ACTIONS: Submit a technical report acceptable to the Executive Officer documenting completion of the necessary tasks identified in the technical report submitted for Task 2.e.1).

- f. 1) COMPLETION DATE: December 15, 1988

TASK: a) EVALUATE INTERIM OFFSITE HYDRAULIC CONTAINMENT: Submit a technical report acceptable to the Executive Officer which evaluates the effectiveness of the interim offsite hydraulic containment system. 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.

b) MODIFICATION TO INTERIM ACTIONS: 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 removing the offsite pollutants.

2) COMPLETION DATE: March 15, 1989

TASK: COMPLETION OF MODIFICATIONS TO INTERIM ACTIONS: Submit a technical report acceptable to the Executive Officer documenting completion of the necessary tasks identified in the technical report submitted for Task 2.f.1)b).

g. COMPLETION DATE: September 15, 1989

TASK: PROPOSED FINAL CLEANUP OBJECTIVES AND ACTIONS: Submit a technical report acceptable to the Executive Officer containing the results 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 immediate, 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 consider the guidance provided by Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300); Section 25356.1 (c) of the California Health and Safety Code; CERCLA guidance documents with reference to Remedial Investigations, Feasibility Studies, and Removal Actions; 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 dischargers are delayed, interrupted or prevented from meeting one or more of the completion dates specified in this Order, the dischargers shall promptly notify the Executive Officer and the Board may consider revision to 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 August 15, 1987, and covering the previous month. On a monthly basis thereafter, these reports shall consist of a 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 Provision C.2. or any other Specification or Provision 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.

On a quarterly basis, commencing with the monthly report due September 15, 1987, the monthly reports shall include, but need not be limited to: updated water table, piezometric surface maps and 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.

6. The dischargers shall submit to the Board, according to the schedule shown below, technical reports acceptable to the Executive Officer containing Site Sampling Plans and Site Safety Plans. Site Sampling Plan and Site Safety Plan formats and contents shall consider CERCLA regulations and guidance documents.

| <u>Technical Report</u> | <u>Date Due</u> |
|---|-----------------|
| a. Site Sampling Plan for Quarterly Monitoring | August 15, 1987 |
| b. Site Safety Plan for Quarterly Monitoring | August 15, 1987 |

Site Sampling Plans and Site Safety Plans shall be submitted for all future technical proposals.

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 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 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.
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 Santa Clara
 - d. State Department of Health Services/TSCD

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 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, 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 dischargers 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 discharge to this Regional Board, at (415) 464-1255 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-business hours. A written report shall be filed with the Regional Board 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/agencies notified.
14. 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 July 15, 1987.



Roger B. James
Executive Officer