CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 89 - 038

SITE CLEANUP REQUIREMENTS FOR:

SIEMENS COMPONENTS, INC.
19000 HOMESTEAD ROAD
CUPERTINO
SANTA CLARA COUNTY

INTERSIL, INC.
10900 NORTH TANTAU AVE.
CUPERTINO
SANTA CLARA COUNTY

VALLCO PARK, LTD.
P. O. DRAWER V
CUPERTINO
SANTA CLARA COUNTY

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

1. **Site Description** Siemens Components, Inc. (Siemens) manufactures electronics components at a site located at 19000 Homestead Road, Cupertino. Intersil, Inc. (Intersil) formerly manufactured electronic components at a site located at 10900 North Tantau Ave., Cupertino. Siemens and Intersil lease their respective properties from Vallco Park, Ltd., the owner of the two sites. The two sites are adjacent to each other, separated by Forge Drive (Figure 1).

2. **Site History** The underground waste handling facilities formerly used at Siemens included five unvaulted waste solvent tanks and an unvaulted acid dilution basin. Four out of the five waste solvent tanks and the acid dilution basin have been excavated. The fifth waste solvent tank was removed from service in 1980. Siemens currently treats wastewater using an acid neutralization system and stores waste solvents above ground. Occupancy of the Siemens facility appears to have begun in 1968. Litronix, Inc. operated the facility from 1970 to 1978. Litronix was purchased by Siemens during the period of 1977 to 1978 and the facility has been operated by Siemens since that time.

   The underground waste handling facilities formerly used at Intersil included two vaulted and one unvaulted acid neutralization systems, two unvaulted scrubber sumps and a vaulted waste solvent tank. The acid neutralization systems were apparently designed, in part, for solvent separation. Intersil contends that high wastewater flows through the systems would result in the dissolution of any solvents trapped by the systems. A San Jose / Santa Clara Water Pollution Control Plant Inspector reviewed the design of one of the acid neutralization systems in a May 7, 1976 letter from Richard Bennett to William McBee and concluded the design

was adequate for solvent separation. All the underground facilities have been excavated. The Intersil facility was in operation from 1967 to 1988.

3. The Siemens semiconductor manufacturing operations have used various organic solvents including trichloroethene (TCE), 1,1,1-trichloroethane (TCA), methanol, isopropanol (IPA), n-butyl acetate, acetone, xylene, Freon, and commercial mixtures apparently containing trichlorobenzene (TCB), phenols and toluene. The Intersil semiconductor manufacturing operations have used various organic solvents including TCE, TCA, Freon, xylene, IPA, n-butyl acetate, acetone, ethyl benzene, and commercial mixtures apparently containing phenols and toluene.

4. **Soil Investigation** Releases of chemicals have occurred from both the Siemens and Intersil underground waste handling facilities. Initial subsurface investigations at the Siemens site have shown solvent concentrations in the soil as high as 21,000 parts per million (ppm) n-butyl acetate immediately beneath former tank 1 and 11,000 ppm TCA, 17 ppm TCE and 15,200 ppm trichlorobenzenes immediately beneath former tank 3. Investigations at the Siemens site below ten feet show solvent concentrations in the soil as high as 36 ppm TCA and 5.1 ppm TCE at 46 feet deep. TCE concentrations at Intersil have been found as high as 3.3 ppm in two soil borings at depths of 26 and 41 feet in a soil boring near the former inactive east acid neutralization system and up to 7.0 ppm at a depth of 80.5 feet in a soil boring near the former north acid neutralization system. Both companies have proposed soil-gas surveys and additional soil borings to further define the soil pollution.

5. **Hydrogeology** The subsurface geology beneath the Siemens and Intersil sites consists of a series of alternating coarse-grained and fine-grained units, representing stream channel deposits and associated overbank deposits. The first saturated materials, a locally perched water zone, occurs at approximately 50 to 60 feet below the surface at some locations. The first laterally extensive saturated hydrogeologic unit, termed the A-zone, occurs between 100 and 120 feet below the ground surface. The next deeper permeable zone, the B-zone, occurs between 130 and 150 feet below the ground surface. The next deeper permeable zone, the C-zone, occurs between 180 and 210 feet below the ground surface. Groundwater in the A-zone, B-zone and C-zone flows generally to the north. A downward vertical gradient exists between the hydrogeologic zones. Deep aquifers exist beneath the Siemens and Intersil sites at depths of 300 to 500 feet below the ground surface, separated from the C-zone by an aquitard.

6. **Groundwater Investigation** Groundwater investigations at the Siemens and Intersil sites have shown the on-site and off-site

A-, B-, and C-zones to be polluted with various organic solvents. A-zone monitoring wells on the Siemens site have detected TCE concentrations as high as 26,000 parts per billion (ppb). A-zone monitoring wells on the Intersil site have detected TCE concentrations as high as 33,000 ppb. B-zone monitoring wells on the Siemens site have detected TCE concentrations as high as 5080 ppb and 1,1,1-TCA concentrations as high as 1030 ppb. B-zone monitoring wells on the Intersil site have detected TCE concentrations as high as 950 ppb. C-zone monitoring wells on the Siemens site have detected less than 40 ppb organic solvents.

The groundwater pollution plumes from Siemens and Intersil have commingled in the A-zone and have migrated to the B-zone and C-zone. The off-site groundwater pollution plume extends approximately 2500 feet down gradient from the sites. The off-site plume is approximately 2500 feet wide. Both companies have proposed additional A-zone, B-zone and C-zone monitoring wells to further define the groundwater pollution.

7. **Adjacent Facility** Gould AMI Semiconductors (AMI) formerly manufactured electronic components at a site located at 3800 Homestead Road, Santa Clara. This site is immediately east of and adjacent to the Siemens and Intersil sites. The underground waste handling facilities formerly used by AMI included an acid neutralization system, a concrete sump and a steel storage tank. TCE has been detected in the A-zone beneath the Marchese property, directly northeast of the AMI site, at concentrations up to 300 ppb. Additional investigation is required to define the source and extent the TCE detected beneath the Marchese property.

8. **Deep Aquifer Investigation** The former Marchese Well No. 2, a private, deep irrigation well located approximately one-half mile down gradient from the Siemens and Intersil sites, was found to contain low levels (less than 30 ppb) of TCE, 1,1,1-TCA and Freon-113. In December 1986, this well was camera logged and sealed by the Santa Clara Valley Water District to prevent the further spread of pollutants through the well. Camera logging showed that the well was screened at three different intervals between 300 and 500 feet deep.

Siemens and Intersil have installed four deep aquifer monitoring wells to attempt to identify which of the deeper aquifers screened by the former Marchese Well No. 2 contained VOCs. Since 1987, TCE has been detected in one deep aquifer monitoring well on two separate sampling events at concentrations up to 1 ppb. TCA has been detected in three out of four deep aquifer monitoring wells at concentrations up to 1.9 ppb. Any requirement for additional deep aquifer monitoring wells will be based on the results of future

quarterly monitoring of the existing four deep aquifer monitoring wells.

9. **Municipal Water Supply** There are five active municipal wells within a one mile radius of the Siemens and Intersil sites. Three of these wells are located in apparent down gradient directions. All five wells are being monitored for volatile organic chemicals (VOCs) by the Cities of Santa Clara and Sunnyvale. City of Santa Clara well No. 24, down gradient approximately 3700 feet northeast of the site, has consistentntly shown 1 to 4.5 ppb Freon-113 and trace amounts of 1,1,1-TCA. No other pollutants have been detected in any of these wells to date.

10. **Interim Remedial Actions** Siemens has been performing soil and groundwater interim remedial actions at its site. A soil vacuum extraction system to remove volatile organics from the vadose zone has been in operation since November 1983, and is estimated to have removed approximately 16,000 pounds of VOCs. Siemens installed an A-zone groundwater extraction and treatment system in 1986. A combined A-zone and B-zone groundwater extraction and treatment system has been operating since 1987. Intersil has also been performing soil and groundwater interim remedial actions at its site. A soil vacuum extraction system has been in operation since 1988, and is estimated to have removed approximately 1,600 pounds of VOCs. An A-zone groundwater extraction and treatment system has been in operation since 1987.

11. **Work Plan** Siemens and Intersil submitted work plans for the completion of a remedial investigation / feasibility study and final remedial action plan on October 21, 1988. Revised work plans were submitted on January 17, 1989. Second revised work plans were submitted by the companies on March 10, 1989.

12. The site cleanup is presently being carried out under Order No. 86-48, Waste Discharge Requirements for Siemens, Order No. 86-49, Waste Discharge Requirements for Intersil and Cleanup and Abatement Order No. 87-133 issued jointly to both Companies. This Order supercedes and rescinds Orders No. 86-48, 86-49 and 87-133.

13. Siemens and Intersil are potentially responsible parties under the federal Superfund (CERCLA/SARA). Siemens and Intersil are jointly proposed as a Superfund site on the National Priorities List.

14. This Order is written as a joint Order for Siemens and Intersil because the groundwater pollution plumes from both Companies have commingled in the A-zone and because the two facilities are proposed as one site on the National Priorities List. Siemens and Intersil are encouraged to submit a joint

remedial investigation / feasibility study and final proposed plan. If joint reports are not coordinated and submitted, each company is still individually responsible for the tasks in this Order. Regional Board staff intends to present one joint proposed plan during the public comment period for Siemens and Intersil.

15. Siemens Components, Inc. (hereinafter referred to as a discharger) is a discharger because of the releases of chemicals that have resulted from its waste handling facilities. Intersil (hereinafter referred to as a discharger) is a discharger because of the releases of chemicals that have resulted from its waste handling facilities. Vallco Park, Ltd. (hereinafter referred to as a discharger) is a discharger because it is the current owner of the property where these releases have occurred. There is insufficient information at this time to make a finding concerning the relative contribution of each discharger to the groundwater pollution detected in the vicinity of the Siemens and Intersil facilities.

16. The 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.

17. The existing and potential beneficial uses of the groundwater underlying and adjacent to the facilities include:

    a. Industrial process water supply
    b. Industrial service water supply
    c. Municipal and Domestic water supply
    d. Agricultural water supply

18. The dischargers have caused or permitted, and threaten 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.

19. 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.

20. 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.

21. 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.

22. 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 Siemens Components, Inc. and Intersil, Inc. and Vallco Park, Ltd. 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 characterization of the pollutant plume may be required.

C. PROVISIONS

1. Siemens and Intersil shall submit to the Board acceptable monitoring program reports containing results of work performed according to a the attached self-monitoring program prescribed by the Board's Executive Officer.

2. This Order supercedes and rescinds the Intersil Order No. 86-49, the Siemens Order No. 86-48 and the Intersil and Siemens Order No. 87-133.

3. Siemens and Intersil shall comply with Prohibitions A.1., A.2. and A.3., Specifications B.1. and B.2. and Provisions C.1 and C.2 above immediately, except as modified in accordance with the time schedule and tasks below. Within 60 days of the Executive Officer's determination and actual notice to Vallco Park, Ltd. that Siemens and/or Intersil have failed to comply with Prohibitions A.1, A.2 and A.3, Specifications B.1 and B.2 and Provisions C.1 and C.2 of this order, Vallco Park, Ltd., as landowner, shall comply with these paragraphs and with the tasks below.

COMPLETION DATE/TASK

SIEMENS VADOSE ZONE AND A-ZONE ON-SITE AREAS

Siemens is responsible for the following tasks a. through e.

a. 1) COMPLETION DATE: April 17, 1989

TASK: COMPLETION OF SOIL-GAS SURVEY: Evaluate and present results acceptable to the Executive Officer of the soil-gas survey pursuant to the work plan described in finding 11 as revised. Propose additional soil-gas surveys and soil borings as needed. Submit formal report in remedial investigation report (task e.).

b. 1) COMPLETION DATE: April 28, 1989

TASK: ADMINISTRATIVE RECORD: Submit a technical report acceptable to the Executive Officer containing a proposal for developing the Administrative Record as outlined in the draft EPA Interim Guidance on Administrative Records.

c. 1) COMPLETION DATE: June 16, 1989

TASK: COMPLETION OF PIEZOMETERS, MONITORING WELLS, SOIL BORINGS AND ADDITIONAL SOIL-GAS SURVEYS: Evaluate and present results acceptable to the Executive Officer of installation and sampling of piezometers, monitoring wells, soil borings and additional soil-gas surveys pursuant to the work plan described in finding 11 as revised. Propose additional borings, monitoring wells and soil gas surveys as needed. Submit formal report in remedial investigation report (task e.).

d. 1) COMPLETION DATE: August 11, 1989

TASK: COMPLETION OF ADDITIONAL BORINGS, MONITORING WELLS AND SOIL GAS SURVEYS: Evaluate and present results acceptable to the Executive Officer of installation and sampling of additional borings, monitoring wells and soil gas surveys. Submit formal report in remedial investigation report (task e.).

e. 1) COMPLETION DATE: October 31, 1989

TASK: PROPOSED FINAL CLEANUP OBJECTIVES AND ACTIONS: Submit a technical report acceptable to the Executive Officer pursuant to the work plan described in finding 11 as revised, containing the results of the remedial investigation; an evaluation of the installed interim remedial measures; a feasibility study evaluating alternative final remedial measures; and a separate technical report acceptable to the Executive Officer containing the recommended measures necessary to achieve final cleanup objectives; and the tasks and time schedule necessary to implement the recommended final remedial measures.

INTERSIL VADOSE ZONE AND A-ZONE ON-SITE AREAS

Intersil is responsible for the following tasks a. through e.

a. 1) COMPLETION DATE: April 17, 1989

TASK: COMPLETION OF SOIL-GAS SURVEY: Evaluate and present results acceptable to the Executive Officer of the soil-gas survey pursuant to the work plan described in finding 11 as revised. Propose additional soil-gas surveys and soil borings as needed. Submit formal report in remedial investigation report (task e.).

b. 1) COMPLETION DATE: April 28, 1989

TASK: ADMINISTRATIVE RECORD: Submit a technical report acceptable to the Executive Officer containing a proposal for developing the Administrative Record as outlined in the draft EPA Interim Guidance on Administrative Records.

c. 1) COMPLETION DATE: June 16, 1989

TASK: COMPLETION OF PIEZOMETERS, MONITORING WELLS, SOIL BORINGS AND ADDITIONAL SOIL-GAS SURVEYS: Evaluate and present results acceptable to the Executive Officer of installation and sampling of piezometers, monitoring wells, soil borings and additional soil-gas surveys pursuant to the work plan described in finding 11 as revised. Propose additional borings, monitoring wells and soil gas surveys as needed. Submit formal report in remedial investigation report (task e.).

d. 1) COMPLETION DATE: August 11, 1989

TASK: COMPLETION OF ADDITIONAL BORINGS, MONITORING WELLS AND SOIL GAS SURVEYS: Evaluate and present results acceptable to the Executive Officer of installation and sampling of additional borings, monitoring wells and soil gas surveys. Submit formal report in remedial investigation report (task e.).

e. 1) COMPLETION DATE: October 31, 1989

TASK: PROPOSED FINAL CLEANUP OBJECTIVES AND ACTIONS: Submit a technical report acceptable to the Executive Officer pursuant to the work plan described in finding 11 as revised, containing the results of the remedial investigation; an evaluation of the installed interim remedial measures; a feasibility study evaluating alternative final remedial measures; and a separate technical report acceptable to the Executive Officer containing the recommended measures necessary to achieve final cleanup objectives; and the tasks and time schedule necessary to implement the recommended final remedial measures.

SIEMENS B-ZONE AND DEEPER ZONES ON-SITE AREAS AND B-ZONE AND DEEPER ZONES OFF-SITE DOWN GRADIENT AREAS
INTERSIL B-ZONE AND DEEPER ZONES ON-SITE AREAS AND B-ZONE AND DEEPER ZONES OFF-SITE DOWN GRADIENT AREAS
INTERSIL AND SIEMENS OFF-SITE A-ZONE

Siemens and Intersil are responsible for the following tasks a. through f.

a. 1) COMPLETION DATE: April 28, 1989

TASK: ADMINISTRATIVE RECORD: Submit a technical report acceptable to the Executive Officer containing a proposal for developing the Administrative Record as outlined in the draft EPA Interim Guidance on Administrative Records.

b. 1) COMPLETION DATE: May 30, 1989

TASK: HYDRAULIC TESTING WORK PLAN: Submit a technical report acceptable to the Executive Officer containing a hydraulic testing work plan for wells in areas where further interim remedial measures are being evaluated.

c. 1) COMPLETION DATE: June 16, 1989

TASK: COMPLETION OF PIEZOMETERS AND MONITORING WELLS: Evaluate and present results acceptable to the Executive Officer of installation and sampling of piezometers and monitoring wells pursuant to the work plan described in finding 11 as revised. Propose additional monitoring wells as needed. Submit formal report in remedial investigation report (task f.).

d. 1) COMPLETION DATE: July 31, 1989

TASK: INTERIM REMEDIAL ACTIONS: Submit a technical report acceptable to the Executive Officer which contains an evaluation of interim remedial alternatives, a recommended plan for interim remediation, and an implementation time schedule. This report shall evaluate water reuse and water reclamation.

e. 1) COMPLETION DATE: August 11, 1989

TASK: COMPLETION OF ADDITIONAL MONITORING WELLS: Evaluate and present results acceptable to the Executive Officer of installation of installation and sampling of additional monitoring wells. Submit formal report in remedial investigation report (task f.).

f. 1) COMPLETION DATE: October 31, 1989

TASK: PROPOSED FINAL CLEANUP OBJECTIVES AND ACTIONS: Submit a technical report acceptable to the Executive Officer pursuant to the work plan described in finding 11 as revised, containing the results of the remedial investigation; an evaluation of the installed interim remedial measures; a feasibility study evaluating alternative final remedial measures; and a separate technical report acceptable to the Executive Officer containing the recommended measures necessary to achieve final cleanup objectives; and the tasks and time schedule necessary to implement the recommended final remedial measures.

4. 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 be consistent with 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 Investigation, 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".

5. 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.

6. Technical reports on compliance with the Prohibitions, Specifications, and Provisions of this Order shall be submitted monthly to the Board commencing on April 15, 1989 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.3. 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 March monthly report due April 15, 1989, the monthly reports shall include, but need not be limited to, updated water table and piezometric surface maps for all affected water bearing zones and appropriately scaled and detailed base maps showing the location of all monitoring wells and extraction wells, and identifying adjacent facilities and structures. When appropriate, due to new data, and upon request by the Executive Officer, new geologic data shall

be incorporated in cross-sectional geological maps describing the hydrogeological setting of the site.

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, where available, 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 Cupertino and City of Sunnyvale
    d. State Department of Health Services/TSCD
    e. U. S. Environmental Protection Agency, Region IX (T-4-5)

    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 a local repository for public use.

11. Within 60 days of the Executive Officer's determination and actual notice to Vallco Park, Ltd. that Siemens and/or Intersil have failed to comply with any portion of Provisions 1 through 10 of this Order, Vallco Park, Ltd., as landowner, shall comply with these Provisions.

12. Siemens, Intersil and Vallco Park, Ltd. 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 consistent with the site Health and Safety Plan, 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 discharger.

13. Vallco Park, Ltd. shall file a report on any changes in site occupancy and ownership associated with the facility described in this Order.

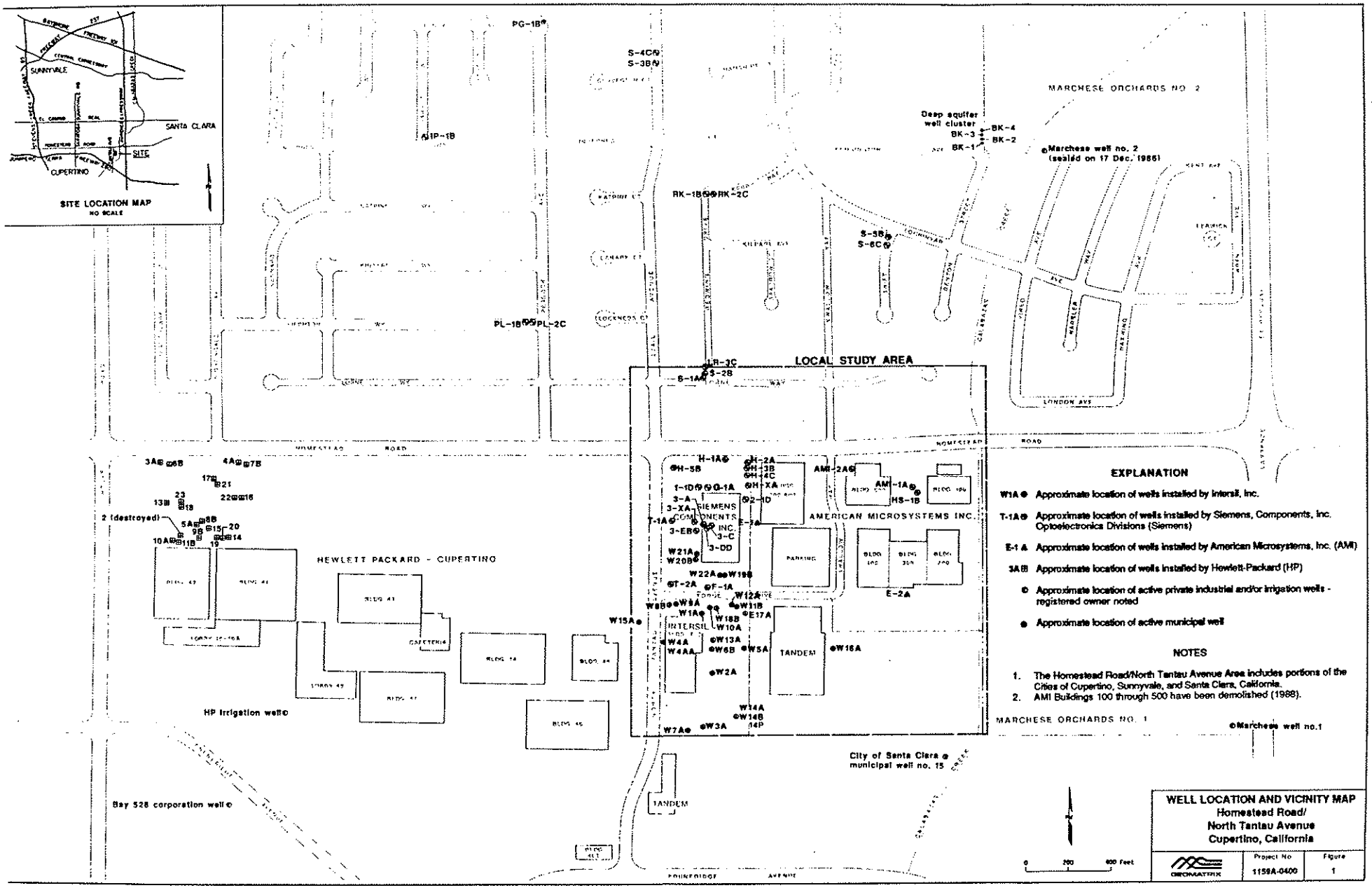
14. If any hazardous substance, as defined pursuant to Section 25140 of the California Health and Safety Code, is discharged in or on any waters of the state, or discharged and deposited where it is, or probably will be discharged in or on any waters of the state, the discharger shall report such discharge 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 effect, corrective measures that have been taken or planned, and a schedule of these activities, and persons/agencies notified.

15. The Board will review this Order periodically and may revise the requirements when necessary.

I, Steven R. Ritchie, 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 March 15, 1989.

Steven R. Ritchie
Executive Officer

Attachments:
Self-Monitoring Program
Site Map


SITE LOCATION MAP
NO SCALE
SUNNYVALE
SANTA CLARA
CUPERTINO
SITE
LOCAL STUDY AREA
MARCHESE ORCHARDS NO. 2
Deep aquifer well cluster
BK-4
BK-3
BK-2
BK-1
Marchese well no. 2 (sealed on 17 Dec. 1985)
PG-1B
S-4C
S-3B
A1P-1B
RK-1B
RK-2C
S-5B
S-6C
PL-1B
PL-2C
R-3C
S-2B
S-1A
HOMESTEAD ROAD
HEWLETT PACKARD - CUPERTINO
HP irrigation well
Bay 528 corporation well
AMERICAN MICROSYSTEMS INC.
SIEMENS COMPONENTS INC.
INTERSIL
TANDEM
PARKING
CAFETERIA
City of Santa Clara municipal well no. 15
MARCHESE ORCHARDS NO. 1
Marchese well no.1
EXPLANATION
W1A Approximate location of wells installed by Intersil, Inc.
T-1A Approximate location of wells installed by Siemens, Components, Inc. Optoelectronics Divisions (Siemens)
E-1 A Approximate location of wells installed by American Microsystems, Inc. (AMI)
3A Approximate location of wells installed by Hewlett-Packard (HP)
Approximate location of active private industrial and/or irrigation wells - registered owner noted
Approximate location of active municipal well
NOTES
1. The Homestead Road/North Tantau Avenue Area includes portions of the Cities of Cupertino, Sunnyvale, and Santa Clara, California.
2. AMI Buildings 100 through 500 have been demolished (1988).
0 200 400 Feet
WELL LOCATION AND VICINITY MAP
Homestead Road/
North Tantau Avenue
Cupertino, California
GEOMATRIX
Project No. 1158A-0400
Figure 1

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

Siemens Components, Inc.
19000 Homestead Road
Cupertino, Santa Clara County

Intersil, Inc.
10900 North Tantau Ave.
Cupertino, Santa Clara County

Vallco Park, Ltd.
P. O. Drawer V
Cupertino, Santa Clara County

ORDER NO. 89 - 038

CONSISTS OF

PART A, Dec. 1986
As Modified by SBTD, 1/23/87
With Appendices A-E

and

PART B, adopted
March 15, 1989

PART B

Siemens Components, Inc.
19000 Homestead Road
Cupertino, Santa Clara County

Intersil, Inc.
10900 North Tantau Ave.
Cupertino, Santa Clara County

Vallco Park, Ltd.
P. O. Drawer V
Cupertino, Santa Clara County

I. DESCRIPTION OF SAMPLING STATIONS

All existing and future perched, A-, B-, C- and deeper zone monitoring and extraction wells as appropriate. See Table 2 (attached) for list of monitoring wells.

II. MISCELLANEOUS REPORTING. None.

III. SCHEDULE OF SAMPLING AND ANALYSIS

The schedule of sampling and analysis shall be that given in Table 1 (attached).

IV. MODIFICATIONS TO PART A.

A. Delete Sections B, D, E, F.2, F.3, G.1, G.4.b, G.4.e, and G.4.g.

B. In Section G.2, delete the first sentence of the third paragraph:

In addition, the waste discharger shall promptly accelerate his monitoring program to analyze the discharge at least once every day (Section D.2.h.).

C. The first paragraph of Section G.4 shall be changed to read as follows:

Written reports shall be filed with the Regional Board regularly for each calendar quarter (unless otherwise specified) and filed no later than the fifteenth day of the following month. The reports shall be compromised of the following:

D. Section G.4.a.1.) shall be changed to read as follows:

1) Identification of all violations of the site cleanup order and self-monitoring program found during the reporting period.

E. Insert section G.4.a.5) to read as follows:

Time periods during which the soil vapor extraction system or groundwater treatment system was not operating for greater than one day. Time periods during which the individual groundwater extraction wells were not operating for greater than one week.

F. The first paragraph of Section G.4.d. should be changed to read as follows:

Tabulations of the results from each required analysis specified in Part B by date, time, type of sample and detection limit and station. The report format will be prepared using the examples shown in APPENDIX B.

G. Section G.4.d.4) shall be changed to read as follows:

4) Lab results shall be signed by the laboratory director, copied, and submitted as an appendix to the regular report.

H. Insert Section G.4.d.5) to read as follows:

The EPA Method 8240 analyses shall include tentative identification and semi-quantified concentrations of non-priority pollutant substances of greatest apparent concentration, to be followed by identification and confirmation of peaks of greatest concentration.

I. Insert a new section G.4.g. to read as follows:

For each individual vapor extraction well, the total soil vapor extraction system and the groundwater extraction system; a monthly tabulation showing the average air and groundwater flow rate, the average influent air and groundwater concentration, and estimates of the average chemical mass removal rate from soil and groundwater and the cumulative mass of chemicals removed from soil and groundwater since startup. Include the above monthly tabulations from startup, where available, through the current reporting quarter. Include concentration and mass data for TCE, TCA, any other individual main constituents, and total volatile organic compounds.

J. The third sentence of Section G.5 shall be changed to read as follows:

In addition, the report shall contain a comprehensive discussion of the compliance record and all corrective action taken or planned which may be needed to bring the discharger into full compliance with the site cleanup Order and self-monitoring requirements.

I, Steven R. Ritchie, 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 site cleanup requirements established in Regional Board Order No. 89 - 038.

2. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be ordered by the Executive Officer or Regional Board.

3. Was adopted by the Board on March 15, 1989.

3/20/89
DATE

Steven R. Ritchie
Executive Officer

Attachments: Table I
Table II

TABLE 1
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

SAMPLING STATION >>>>	All existing and future perched, A-, B-, C- and deeper zone monitoring and extraction wells as listed in Table 2.			
TYPE OF SAMPLE	G			
EPA 8010/8020 for: purgeable priority pollutants	Q			
In addition to: Freon 113	Q			
GC/MS (EPA 8240) Open Scan	1/Y*			

LEGEND FOR TABLE 1

G = grab sample
Q = quarterly
1/Y = once per year

* EPA 8010/8020 not required for months when EPA 8240 is performed.

Intersil's sampling and analysis shall be consistent with Intersil's QAPP. Siemens' sampling and analysis shall be consistent with Siemens' QAPP.

TABLE 2

MONITORING WELLS TO BE SAMPLED AS REQUIRED IN TABLE 1

INTERSIL, INC.

Quarterly
W4A, W5A, W10A, W12A, E17A, W18B, W19B, W20B, W21A,
W22A, BK-4

Semi-annual

W2A, W3A, W6B, W7A, W8B, W9A, W11B, W13A, W14A, W14B, W15A,
W16A, PG-1B

SIEMENS COMPONENTS, INC.

Quarterly
1-1D, 2-1D, 3-DD, 3-XA, AMI-1A, AMI-2A, F-1A, G-1A
H-2A, H-XA, S-1A, 3-EB, H-3B, H-5B, PL-1B, S-2B, S-5B,
LR-3C, RK-2C, BK-1, BK-2, BK-3

Semi-annual
H-1A, T-1A, T-2A, HS-1B, IP-1B, RK-1B, S-3B, H-4C, PL-2C
S-4C, S-6C

Note
Additional wells shall be included in Table 2 as installed.
This table is not intended to specify which company samples which
wells. The table lists the wells installed by each company.