CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 85-109

WASTE DISCHARGE REQUIREMENTS
(SITE CLEANUP REQUIREMENTS) FOR:

PRECISION MONOLITHICS, INC.
SPACE PARK DRIVE FACILITY
CITY OF SANTA CLARA
SANTA CLARA COUNTY

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

1. Precision Monolithics, Inc., hereinafter called the discharger, owns and operates an integrated circuits manufacturing facility located at 1500 Space Park Drive in the City of Santa Clara, Santa Clara County, approximately 1/2 mile southeast of the intersection of Route 101 and Montague Expressway.

2. Subsurface investigations initiated in January 1983 detected high levels of various industrial solvents, including trichloroethane, trichloroethylene, dichloroethylene, benzene derivatives, ketones, and alcohols, in both soils and groundwaters beneath the facility. The above chemicals, which are associated with the type of manufacturing operations conducted presently and in the past by the discharger, were found localized on the discharger's site with no evidence of off site migration accounting for their presence.

3. As of March 1985, discharger studies indicated that the solvent contamination extended vertically to a sand and gravel aquifer to a depth of approximately 40 feet and horizontally a distance of about 500 feet downgradient from the area of greatest chemical concentrations which were found on the discharger's property. Onsite groundwater samples have detected trichloroethylene, dichloroethylene, trichloroethane, and chlorobenzene at concentrations exceeding 1000 parts per billion.

4. Remedial actions to date include removal of two solvent waste tanks, and installation of an onsite groundwater extraction system.

5. The groundwater pollution from the facility is of concern because of the toxicity of the chemicals, and because of the potential for the continued migration of pollutants to usable groundwaters.

6. The Board finds that remedial action is necessary to prevent the continued migration of contaminants to unaffected groundwaters and to preclude potential loss of beneficial uses of said waters.

7. The Board adopted a revised Water Quality Control Plan (Basin Plan) for the San Francisco Bay Region on July 21, 1982. The Basin Plan contains water quality objectives for groundwater.

8. The existing and potential beneficial uses of the groundwater underlying the facility below an approximate depth of 150 feet include:

   a. Municipal Water Supply
   b. Domestic Water Supply
   c. Agricultural Water Supply
   d. Industrial Service and Process Water Supply

9. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the proposed discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

10. 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.

11. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, that Precision Monolithics, Inc., Space Park Drive facility, Santa Clara, in order to meet the provisions contained in Division 7 of the California Water Code and the regulations adopted thereunder, shall comply with the following:

A. Prohibitions

1. The discharge of waste or hazardous materials in a manner which will degrade the water quality or adversely affect beneficial uses of the groundwaters of the State in a manner inconsistent with the State Water Resources Control Board's Nondegradation Policy Resolution No. 68-16 is prohibited.

2. Further significant migration of pollutants through subsurface transport to usable groundwaters is prohibited.

3. Methods employed to investigate, contain, and/or clean up the polluted groundwaters shall not cause the spread of pollution in an adverse manner.

B. Specifications

1. The treatment or disposal of waste 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 hydrogeologic 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. The discharger shall submit to the Board technical reports on self-monitoring work performed according to a program approved by the Executive Officer.

2. The discharger shall comply with Prohibitions A.1, A.2, and A.3, and Specifications B.1 and B.2 above, in accordance with the following tasks and time schedule:

	Task	Completion Date
a.	Complete the installation and sampling of additional offsite monitoring wells to further characterize the pollutant plume, and assist in developing offsite containment and cleanup measures.	Nov. 11, 1985
b.	Submit a technical report which evaluates the effectiveness of the onsite extraction system. Such an evaluation shall include but need not be limited to, an estimation of the flow capture zones of the wells, establishment of the cones of depression by field measurements, and presentation of chemical monitoring data. Specific modifications to the system shall be proposed in the event that the system is demonstrated not to be effective in containing and cleaning up the pollutant plume.	Dec. 2, 1985
c.	Submit a technical report which describes the results of the investigation required by Provision 2.a above and proposes specific measures to address the offsite pollutant plume.	Feb. 7, 1986

Task	Completion Date
d. Submit a technical report which: (1) documents the installation of offsite extraction wells (2) identifies the proposed method of treatment of the extracted offsite groundwaters (3) describes the measures taken and/or proposed to be taken to monitor and evaluate the adequacy of the system to contain and cleanup the offsite pollutant plume.	June 1, 1986
e. Complete the installation of facilities necessary to treat the extracted groundwaters from offsite and commence operation of the extraction and treatment systems.	Aug. 1, 1986
f. Submit a technical report which evaluates the effectiveness of the offsite extraction system. Such an evaluation shall include, but need not be limited to, an estimation of the flow capture zones of the wells, establishment of the cones of depression by field measurements, and presentation of chemical monitoring data. Specific modifications to the system shall be proposed in the event that the system is demonstrated not to be effective in containing and cleaning up the pollutant plume.	Oct. 1, 1986

3. Reports submitted pursuant to Specification B.2 and Provisions C.1 and C.2 of this Order shall include, but need not be limited to, groundwater gradient contour maps, pollution concentration contour maps, and updated cross-sectional geologic maps describing the hydrogeologic setting of the site. Appropriately scaled and detailed base maps shall be produced to show the location of monitoring and extraction wells, and identify adjacent facilities and structures.

4. The discharger shall submit bi-monthly progress reports beginning on January 3, 1986, to the Regional Board demonstrating compliance with the Prohibitions, Specifications, and Provisions of this Order. In the event of non-compliance, with the tasks and time schedule of Provision C.2 of this Order, the discharger shall clarify the reasons for non-compliance and shall propose specific measures to be taken to achieve compliance.

5. The Board will update the compliance dates specified in Provision 2 above if compliance with said dates is not achieved and the discharger demonstrates to the satisfaction of the Board that the delays were caused by the actions or lack of necessary action by any party other than the discharger or is delayed by any event beyond the control of the discharger.

6. 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.

7. The discharger shall permit the Board or its authorized representative, in accordance with Section 13267(c) of the California Water Code:

   a. Entry upon premises where any pollution source exists, or may potentially exist, or in which any required records are kept;

   b. Access at reasonable times 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 discharger.

8. The discharger shall file a report on any material changes in the nature, quantity, or transport of polluted groundwater associated with the pollution described in this Order.

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

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.

Terry Wu

for ROGER B. JAMES
Executive Officer