CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 01-010

ADOPTION OF FINAL SITE CLEANUP REQUIREMENTS AND RESCISSION OF ORDER NOS. 93-005 AND 99-008 FOR:

MONTWOOD CORPORATION AND
RIO GRANDE HOLDING, INC.

FOR THE PROPERTIES LOCATED AT

1615 AND 1625 PLYMOUTH STREET
MOUNTAIN VIEW
SANTA CLARA COUNTY

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

1. **Site Location**: The roughly eight-acre site is located in a commercial/industrial land use area in Mountain View, Santa Clara County. The site is bounded on the south by the Bayshore Expressway (U.S. Highway 101) and on the north by Plymouth Street (see attached map). The San Francisco Bay is located approximately one and a half miles north of the site.

2. **Site History**: Arrow Development Company (ADC) occupied the site from April 1960 until November 1980. During this time, the property was one parcel with the address of 1555 Plymouth Street. The only buildings in existence were those currently present at 1615 and 1625 Plymouth Street. ADC was acquired by Rio Grande Industries (RGI) in April 1971 and subsequently operated as a wholly owned subsidiary. In November 1980, the operating assets of ADC were purchased by Klaus Huss (Arrow-Huss). RGI changed its name to Rio Grande Holding, Inc., and created a holding company called Montwood Corporation (Montwood), which retained ownership of the property. Arrow-Huss, which continued the mode of operations, leased part or all of the site from Montwood until December 1981.

   The site was used as an amusement park manufacturing facility, including design, manufacturing, and assembly of amusement park rides. Specific operations included steel fabrication, machining, fiberglass application, painting, product development and warehousing of materials. Trichloroethylene (TCE) was reportedly used in small amounts in a vapor degreaser. At least four 55-gallon drums were purchased during the Rio Grande/Arrow-Huss/Montwood occupancy of the site. Several other degreasers,

strippers, and solvents were reported to have been used for which the specific ingredients are not available. Also, the chemical use history was only reviewed from 1975 to 1980; no information was available on chemical use history from 1960 to 1974.

Montwood's chemical use history indicates the existence of two underground storage tanks used to store acetone and fire retardant polyester resin, respectively. Chemical storage drums were stored in the southwest corner of the property at 1625 Plymouth Street and east of the building at this property.

South Bay Construction and Development Company (SBCDC) purchased the site in November 1982 and divided it into three parcels: 1555, 1615, and 1625 Plymouth Street.

1555 Plymouth Street – Site Description and History: SBCDC built the facility at 1555 Plymouth Street in 1983. 1555 Plymouth Street was bought by John and Liane Davila (the Davilas) in August 1983. The building was used as storage for Norcal Tech, Inc. (Norcal), a company in which the Davilas were principals. The property was sold to Sierra Greens in June 1985 and leased to Silicon Graphics, Inc., from July 1987 to the present.

1615 Plymouth Street – Site Description and History: Interaction Chemical leased 1615 Plymouth Street from SBCDC beginning in December 1982. Interaction Chemical purchased this parcel in May 1983. In 1992, the assets of Interaction Chemical were purchased by Interaction Chromatography. Interaction Chromatography moved out of the building in May 1992. The property is owned by Dr. James Benson, a former principal of Interaction Chromatography. Fusion Medical Technologies has occupied the property since 1994.

1625 Plymouth Street – Site Description and History: The Davilas purchased the 1625 Plymouth Street property in November 1982. The property was leased to Norcal from November 1982 to November 1989 and Symtron (who purchased Norcal) from November 1989 to November 1997. During this time, Norcal and Symtron manufactured printed circuit boards at the facility. In November 1997, Sanmina Corporation (Sanmina) acquired Symtron. Sanmina then purchased the property from the Davilas in 1999, thereby becoming the property owner and occupant.

In the mid-1980s, two underground storage tanks were retired on the north side of the building at 1625 Plymouth Street. These tanks contained acetone and fiberglass resin. Sand was used to backfill these tanks during closure.

3. **Named Dischargers**: Montwood Corporation and Rio Grand Holding, Inc., are named as dischargers because of evidence of chemical use and probable releases prior to 1983. The Board reserves the right to name additional dischargers for 1615 and 1625 Plymouth

Street if the named dischargers fail to comply with this Order. Given the current lack of evidence of chemical releases at what is now 1555 Plymouth Street, the Board would not consider adding Sierra Greens, Ltd., or Silicon Graphics, Inc., as dischargers.

The current property owners are not named as dischargers in this Order for the following reasons: the named dischargers have adequate financial resources to comply with this Order, and Montwood Corporation and Rio Grande Holding, Inc., have complied with the prior Order. However, the current property owners may be named in the future if these circumstances change.

If additional information is submitted indicating that other parties caused or permitted any waste to be discharged on the site where it entered or could have entered waters of the state, the Board will consider adding those parties' names to this Order.

4. **Regulatory Status**: This site was subject to the following Board Orders:

   - Site Cleanup Requirements (Order No. 93-005) adopted January 20, 1993
   - Amendment to Site Cleanup Requirements (Order No. 99-008) adopted March 16, 1999

5. **Site Hydrogeology**: The two major water-yielding zones beneath the site consist of an upper aquifer and a deep aquifer. Two smaller aquifer sub-units within the upper aquifer are referred to as the shallow zone and the intermediate zone. The shallow aquifer zone is up to 10 feet thick and extends from approximately 5 feet below grade to 15 feet below grade.

   The intermediate zone extends from about 30 to about 70 feet below grade consisting of sand and gravel layers. The shallow and intermediate zones are divided by a soft blue-gray to olive-gray, fossiliferous, plastic clay and silty clay from about 15 to 30 feet below grade.

   A confining zone of approximately 80 feet of silty marine clay is below the upper aquifer and extends to approximately 150 feet below grade. The deep aquifer begins at about 150 feet below grade and continues to about 700 feet below grade.

6. **Remedial Investigation:** Three soil investigations occurred at the Plymouth Street site from 1987 to 1993. Analytical results from these investigations identified dichloroethene (DCE), tetrachloroethene (PCE), and trichloroethene (TCE) in site soils. Volatile organic compounds (VOCs) were detected in four areas at concentrations ranging from 13 micrograms per kilogram (μg/kg) to 400 μg/kg. No definitive source area was identified by the soil investigations.

Several on- and off-site groundwater investigations have been conducted at the Plymouth Street site to determine the type and extent of contamination in underlying and downgradient water-bearing zones. The most recent investigation, which was completed in November 1999, detected VOCs in on- and off-site groundwater at concentrations as high as 1,296 micrograms per liter (µg/l; Extraction Well EW-1s) and 1,580 µg/l (CPT Collection Point H-16), respectively. DCE, TCE, and vinyl chloride were detected at concentrations as high as 1,000 µg/l, 1,000 µg/l and 85 µg/l, respectively. These concentrations are substantially above drinking water standards. The most recent investigation also delineated the VOC plume area of highest concentration (i.e., greater than 1,000 µg/l). VOCs in this area are not controlled by the existing groundwater extraction systems.

Groundwater investigations have adequately delineated the groundwater plume at the Plymouth Street site. Accordingly, no additional groundwater investigation is needed at this time.

7. **Nearby Sites**: The Teledyne Semiconductor, Inc., and Spectra-Physics Lasers, Inc., (Teledyne/Spectra-Physics) Superfund site is located on the south side of Highway 101, about a quarter mile south and upgradient of the Plymouth Street site. Because the Teledyne and Spectra-Physics facilities are contiguous and have commingled releases, they are regulated jointly under Order No. 91-025.

Soil and groundwater investigation efforts at the Teledyne/Spectra-Physics site began in the early 1980s. The well-defined Teledyne/Spectra-Physics groundwater plume, which consists of chlorinated solvents, extends beneath the Plymouth Street site and commingles with its plume.

Cleanup efforts at the Teledyne/Spectra-Physics site include two off-site groundwater extraction systems: the Spring Street Extraction System (SSES) and the Northbay Shore Extraction System (NBES). The SSES includes five extraction wells located in a residential neighborhood northwest of Teledyne/Spectra-Physics. The NBES, which includes 16 groundwater wells north of Teledyne/Spectra-Physics, also partially contains the groundwater plume from the Plymouth Street site.

The 1098 Alta Avenue (Peery/Arrillaga) site is located about a quarter mile northwest of the Plymouth Street site. Waste handling and storage activities during the early 1970s at this site led to a release of chlorinated solvents to soil and groundwater. The Peery/Arrillaga site received final site cleanup requirements (Order No. 00-002) in January 2000. Cleanup efforts involve on-site and off-site groundwater extraction and treatment. Contamination from the Plymouth Street site may have impacted the Peery/Arrillaga site.

8. **Interim Remedial Measures**: Montwood has implemented groundwater interim remedial measures at this site in the form of on- and off-site groundwater extraction. Additionally, groundwater monitoring has been ongoing since February 1993.

In October 1994, Montwood began operation of the on-site Plymouth Street Extraction System (PSES). The PSES currently has three operational shallow zone wells (EW-1s, EW-8s and EW-9s). One shallow zone well and one upper-intermediate zone well were shut down in February 1997 because of relatively low VOC concentrations in extracted groundwater and the presence of nearby and more effective NBES wells. Since startup of the PSES in October 1994, about 24.2 million gallons of groundwater and 67 pounds of total VOCs have been extracted from the shallow and intermediate zones beneath the Plymouth Street site. These numbers yield an extraction efficiency of 2.8 pounds per million gallons pumped, which is generally considered marginally effective for an on-site system. Extracted groundwater is discharged to the sanitary sewer pursuant to an agreement with the City of Mountain View wastewater treatment facility.

Additional hydraulic control of the Plymouth Street site's groundwater plume is provided by the off-site NBES, which is operated and maintained by Teledyne and Spectra-Physics. Montwood provides financial support for this system. There are four NBES wells near the Plymouth Street site that affect its groundwater plume (E-1, E-2, E-3 and E-10).

The groundwater budget for the Plymouth Street site suggests that most of the shallow zone groundwater flow is captured by the combined efforts of the PSES and the NBES; however, additional remedial measures are needed to effectively contain and monitor the off-site plume in the area northwest of the site.

Remedial measures for soil have not been pursued to date because soil contamination has not been detected above the established cleanup standard of one milligram per kilogram.

9. **Feasibility Study**: Montwood's feasibility study is presented in its April 2000 report titled *Evaluation of Remedial Alternatives and Final Site Remediation Plan*. This report evaluates six remedial alternatives on the basis of benefits and impacts to public health, welfare and the environment; effectiveness; implementability; and projected cost. The six remedial alternatives considered included the following:

1) No action
2) Continued on- and off-site hydraulic control
3) Removal by additional vertical extraction wells and continued hydraulic control
4) Removal by horizontal extraction well and continued hydraulic control
5) Removal by circulation wells and continued hydraulic control
6) Removal by chemical oxidation and continued hydraulic control

Based on the results of the aforementioned evaluation, Montwood selected the sixth alternative as a final remedy for the Plymouth Street site. This alternative was also selected because (1) it has the potential to substantially decrease remediation time by reducing VOC mass and concentrations in groundwater; (2) it can significantly reduce long-term remedial costs; and (3) it is capable of treating VOC-impacted groundwater beneath buildings and structures.

10. **Cleanup Plan**: The cleanup plan consists of continued operation of the PSES, continued reliance on the NBES for partial plume control, and removal of VOCs by injection of potassium permanganate (a chemical oxidant) into shallow groundwater at on- and off-site locations. Potassium permanganate will be injected in a manner that concentrates treatment in an area northwest of the site where VOC concentrations in shallow zone groundwater generally exceed 1,000 μg/l. VOCs in this area are not controlled by the existing groundwater extraction systems.

    The cleanup plan calls for the completion of a field pilot study of chemical oxidation treatment. Results of this study will be used to design full-scale implementation and estimate the duration of remediation.

11. **Risk Assessment**: Montwood completed a risk assessment for the Plymouth Street site as part of its report titled *Evaluation of Remedial Alternatives and Final Site Remediation Plan*. The primary objectives of the risk assessment were to (1) evaluate potential health risks from current conditions at the site; and (2) evaluate potential health risks from post-cleanup conditions anticipated at the site. The risk assessment included a data evaluation, toxicity assessment, exposure assessment, and risk characterization.

    Toxicity Assessment: The chemicals of concern present in groundwater, and therefore considered in the risk assessment, are chloroform, cis-1,2-DCE, trans-1,2-DCE, PCE, TCE and vinyl chloride. Of these, cis-1,2-DCE and TCE account for about 97 percent of VOCs present in shallow zone groundwater. Chloroform, PCE, TCE and vinyl chloride are classified as carcinogens. Based on EPA's classification, vinyl chloride is a class A carcinogen, indicating sufficient human evidence. Chloroform, PCE and TCE are Class B2 carcinogens, indicating evidence from animal experiments. Cis-1,2-DCE and trans-1,2-DCE are currently considered non-carcinogens (EPA Class D).

    Exposure Assessment: The Montwood risk assessment included discussions of potential exposure pathways, potentially exposed populations, and estimated exposure point concentrations. The only complete pathway identified was inhalation of VOCs released from groundwater into ambient air or indoor air. Task C.1 of this order requires that a revised risk assessment be submitted to provide further documentation for the indoor air pathway.

Several VOCs are currently detected in shallow groundwater at the site at concentrations above maximum contaminant levels (MCLs); however, this water-bearing zone is currently not being used for drinking water. Accordingly, exposure to VOCs by groundwater ingestion is not considered a complete exposure pathway.

Baseline Risk: The Plymouth Street site is currently used for commercial/industrial purposes, a land use that is not likely to change in the near future; however, in the interest of conducting a conservative risk assessment, Montwood assumed a residential land-use scenario where shallow groundwater was used as domestic water supply. Under this worst-case scenario, the non-carcinogenic hazard index and carcinogenic risk were estimated at 3.1 and 4×10^{-4}, respectively. For comparison, the Board considers the following risks to be potentially acceptable at remediation sites: a hazard index of 1.0 or less for non-carcinogens, and an excess cancer risk of 10^{-4} to 10^{-6}, depending on the proposed land use and other site-specific considerations.

The current VOC concentrations in groundwater pose significant non-carcinogenic and carcinogenic risks if used as domestic water supply. Institutional constraints are therefore appropriate to limit on-site exposure to acceptable levels. Institutional constraints include a deed restriction that notifies future owners of subsurface contamination and prohibits the use of shallow groundwater beneath the site as a source of drinking water until cleanup standards are met.

Post-Remediation Risk: Attainment of MCL cleanup standards will protect human health in the event that shallow groundwater is used for domestic purposes, and also from potential impacts to indoor air arising from VOC emission from groundwater. Under this scenario, the non-carcinogenic hazard index and carcinogenic risk were estimated at 0.9 and 5×10^{-5}, respectively. The Board considers these risks within acceptable ranges.

12. **Basis for Cleanup Standards:** State Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," applies to this discharge and requires attainment of background levels of water quality, or the highest level of water quality which is reasonable if background levels of water quality cannot be restored. Cleanup levels other than background must be consistent with the maximum benefit to the people of the State, not unreasonably affect present and anticipated beneficial uses of such water, and not result in exceedance of applicable water quality objectives. The previously cited cleanup plan confirms the Board's initial conclusion that background levels of water quality cannot be restored in the near term. This conclusion is based on the complexity of site hydrogeology and limitations in current cleanup technology. This Order and its requirements are consistent with Resolution No. 68-16.

State Board Resolution No. 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304," applies to this

discharge. This Order and its requirements are consistent with the provisions of Resolution No. 92-49, as amended.

Beneficial Uses: The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources Control Board and the Office of Administrative Law on July 20, 1995, and November 13, 1995, respectively. A summary of regulatory provisions is contained in Title 23, California Code of Regulations, Section 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater.

Board Resolution No. 89-39, "Sources of Drinking Water," defines potential sources of drinking water to include all groundwater in the region, with limited exceptions for areas of high TDS, low yield, or naturally high contaminant levels. Groundwater underlying and adjacent to the site qualifies as a potential source of drinking water.

The Basin Plan designates the following potential beneficial uses of groundwater underlying and adjacent to the site:

- Municipal and domestic water supply
- Industrial process water supply
- Industrial service water supply
- Agricultural water supply

At present, there is no known use of shallow aquifer zone groundwater underlying the Plymouth Street site for the above purposes.

Basis for Groundwater Cleanup Standards: The groundwater cleanup standards for the site are based on applicable water quality objectives and are the more stringent of EPA and California MCLs. Cleanup to this level will result in acceptable residual risk to humans.

13. **Future Changes to Cleanup Standards**: The goal of this remedial action is to restore the beneficial uses of groundwater underlying and adjacent to the site. Results from other sites suggest that full restoration of beneficial uses to groundwater as a result of active remediation at this site may not be possible. If full restoration of beneficial uses is not technologically nor economically achievable within a reasonable period of time, then the discharger may request modification to the cleanup standards or establishment of a containment zone, a limited groundwater pollution zone where water quality objectives are exceeded. Conversely, if new technical information indicates that cleanup standards can be surpassed, the Board may decide that further cleanup actions should be taken.

14. **Reuse or Disposal of Extracted Groundwater**: Board Resolution No. 88-160 allows discharges of extracted, treated groundwater from site cleanups to surface waters only if it has been demonstrated that neither reclamation nor discharge to the sanitary sewer is technically and economically feasible.

15. **Basis for 13304 Order**: The dischargers have caused or permitted waste to be discharged or deposited where it is or probably will be discharged into waters of the State and creates or threatens to create a condition of pollution or nuisance.

16. **Cost Recovery**: Pursuant to California Water Code Section 13304, the dischargers are hereby notified that the Board is entitled to, and may seek reimbursement for, all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order.

17. **CEQA**: This action is an Order to enforce the laws and regulations administered by the Board. As such, this action is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15321 of the Resources Agency Guidelines.

18. **Notification**: The Board has notified the dischargers and all 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 an opportunity to submit their written comments.

19. **Public Hearing**: The Board, at a public meeting, heard and considered all comments pertaining to this discharge.

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

A. PROHIBITIONS

1. The discharge of wastes or hazardous substances in a manner that will degrade water quality or adversely affect beneficial uses of waters of the State is prohibited.

2. Further significant migration of wastes or hazardous substances through subsurface transport to waters of the State is prohibited.

3. Activities associated with the subsurface investigation and cleanup that will cause significant adverse migration of wastes or hazardous substances are prohibited.

B. CLEANUP PLAN AND CLEANUP STANDARDS

1. **Implement Cleanup Plan**: The dischargers shall implement the cleanup plan described in finding 10.

2. **Groundwater Cleanup Standards**: The following groundwater cleanup standards shall be met in all wells identified in the Self-Monitoring Program:

Constituent	Standard (µg/l)	Basis
Chloroform	100	California MCL
Cis-1,2-Dichloroethene	6	California MCL
Trans-1,2-Dichloroethene	10	California MCL
Tetrachloroethene	5	EPA/California MCL
Trichloroethene	5	EPA/California MCL
Vinyl chloride	0.5	California MCL
MCL - Maximum Contaminant Level		

C. TASKS

1. **REVISED RISK ASSESSMENT**

COMPLIANCE DATE: March 16, 2001

Submit a technical report acceptable to the Executive Officer containing a revised risk assessment that addresses comments contained in Board staff's January 3, 2001, letter.

2. **IMPLEMENTATION OF CHEMICAL OXIDATION PILOT STUDY**

COMPLIANCE DATE: June 1, 2001

Submit a technical report acceptable to the Executive Officer documenting completion of necessary tasks identified in Montwood's April 2000 workplan for the chemical oxidation pilot study, and August 2000 workplan amendment. The report shall provide a preliminary assessment of the effectiveness of chemical oxidation treatment as applied to Plymouth Street site conditions.

3. **WORKPLAN FOR FULL-SCALE CHEMICAL OXIDATION TREATMENT**

COMPLIANCE DATE: June 1, 2001

Submit a workplan acceptable to the Executive Officer for full-scale chemical oxidation treatment by injection of potassium permanganate. The workplan shall describe all significant implementation steps and shall include an implementation schedule. If the chemical oxidation pilot study fails to demonstrate the efficacy of this treatment method, then Task 3 will not be required.

4. **IMPLEMENTATION OF FULL-SCALE CHEMICAL OXIDATION TREATMENT**

COMPLIANCE DATE: February 1, 2002

Submit a technical report acceptable to the Executive Officer documenting completion of necessary tasks specified in the Task 3 workplan. This report shall document installation of the chemical oxidation injection points, injection of oxidation chemicals, and monitoring of chemical oxidation performance parameters. If the chemical oxidation pilot study fails to demonstrate the efficacy of this treatment method, then Task 4 will not be required.

5. **TWO-YEAR STATUS REPORT ON FULL-SCALE CHEMICAL OXIDATION TREATMENT**

COMPLIANCE DATE: February 1, 2004

Submit a technical report acceptable to the Executive Officer evaluating the effectiveness of the full-scale chemical oxidation treatment process. This report may be included in a regular quarterly monitoring report at the dischargers'

discretion. If the chemical oxidation pilot study fails to demonstrate the efficacy of this treatment method, then Task 5 will not be required.

6. PROPOSED INSTITUTIONAL CONSTRAINTS

COMPLIANCE DATE: February 23, 2001

Submit a technical report acceptable to the Executive Officer documenting procedures to be used by the dischargers to prevent or minimize human exposure to soil and groundwater contamination prior to meeting cleanup standards. Such procedures shall include a deed restriction prohibiting the use of shallow groundwater as a source of drinking water.

7. IMPLEMENTATION OF INSTITUTIONAL CONSTRAINTS

COMPLIANCE DATE: 120 days after Executive Officer approval of Task 6 report

Submit a technical report acceptable to the Executive Officer documenting that the proposed institutional constraints have been implemented.

8. FIVE-YEAR STATUS REPORTS ON CLEANUP PLAN EFFECTIVENESS

COMPLIANCE DATE: December 20, 2005, and every five years thereafter until site closure.

Submit a technical report acceptable to the Executive Officer evaluating the effectiveness of the approved cleanup plan. The report should include:

- Summary of effectiveness in controlling contaminant migration and protecting human health and the environment
- Comparison of contaminant concentration trends with cleanup standards
- Comparison of anticipated versus actual costs of cleanup activities
- Performance data (e.g. groundwater volume extracted, chemical mass removed, mass removed per million gallons extracted)
- Cost effectiveness data (e.g., cost per pound of contaminant removed)
- Summary of additional investigations (including results) and significant modifications to remediation systems
- Additional remedial actions proposed to meet cleanup standards (if applicable) including time schedule.

If cleanup standards have not been met and are not projected to be met within a reasonable time, the report should assess the technical practicability of meeting cleanup standards and may propose an alternative cleanup strategy.

9. WORKPLAN FOR ALTERNATIVE CLEANUP PLAN

COMPLIANCE DATE: 90 days after requested by Executive Officer

Submit a workplan acceptable to the Executive Officer for selection of an alternative cleanup strategy that does not involve chemical oxidation. The workplan shall describe a cleanup plan that removes and controls VOCs in groundwater northwest of the site, in the area currently unaffected by existing groundwater extraction systems. The workplan shall also describe all significant implementation steps and shall include an implementation schedule. This task provides a contingency in the event that chemical oxidation fails to demonstrate efficacy despite reasonable efforts.

10. IMPLEMENTATION OF ALTERNATIVE CLEANUP METHOD

COMPLIANCE DATE: 300 days after Executive Officer approval of Task 9 workplan

Submit a technical report acceptable to the Executive Officer documenting completion of necessary tasks specified in the Task 9 workplan.

Implementation of this task would require access agreements with third party property owners, which is the reason for providing a significant period for task completion.

11. WORKPLAN FOR REPLACEMENT OF NORTH BAYSHORE EXTRACTION SYSTEM

COMPLIANCE DATE: 90 days after requested by Executive Officer

Submit a workplan acceptable to the Executive Officer that describes a method of removing and controlling the VOC plume northeast of the site. The workplan shall describe all significant implementation steps and shall include an implementation schedule. This task provides a contingency in the event that the NBES is shut down and therefore no longer available as a component of the cleanup plan.

12. **IMPLEMENTATION OF ALTERNATIVE CLEANUP METHOD**

COMPLIANCE DATE: 180 days after Executive Officer approval of Task 11 workplan

Submit a technical report acceptable to the Executive Officer documenting completion of necessary tasks specified in the Task 11 workplan.

13. **PROPOSED CURTAILMENT**

COMPLIANCE DATE: 60 days prior to proposed curtailment

Submit a technical report acceptable to the Executive Officer containing a proposal to curtail remediation. Curtailment includes system closure (e.g., well abandonment), system suspension (e.g., cease extraction but wells retained), and significant system modification (e.g., major reduction in extraction rates, closure of individual extraction wells within extraction network). The report should include the rationale for curtailment. Proposals for final closure should demonstrate that cleanup standards have been met, contaminant concentrations are stable, and contaminant migration potential is minimal.

14. **IMPLEMENTATION OF CURTAILMENT**

COMPLIANCE DATE: 60 days after Executive Officer approval of Task 13 workplan

Submit a technical report acceptable to the Executive Officer documenting completion of the tasks identified in Task 13.

15. **EVALUATION OF NEW HEALTH CRITERIA**

COMPLIANCE DATE: 90 days after requested by Executive Officer

Submit a technical report acceptable to the Executive Officer evaluating the effect on the approved cleanup plan of revising one or more cleanup standards in response to revision of drinking water standards, maximum contaminant levels, or other health-based criteria.

16. **EVALUATION OF NEW TECHNICAL INFORMATION**

COMPLIANCE DATE: 90 days after requested by Executive Officer

Submit a technical report acceptable to the Executive Officer evaluating new technical information that bears on the approved cleanup plan and cleanup standards for this site. In the case of a new cleanup technology, the report should evaluate the technology using the same criteria used in the feasibility study. Such technical reports shall not be requested unless the Executive Officer determines that the new information is reasonably likely to warrant a revision in the approved cleanup plan or cleanup standards.

17. **Delayed Compliance**: If the dischargers are delayed, interrupted, or prevented from meeting one or more of the completion dates specified for the above tasks, the dischargers shall promptly notify the Executive Officer and the Board may consider revision to this Order.

D. PROVISIONS

1. **No Nuisance**: The storage, handling, treatment, or disposal of polluted soil or groundwater shall not create a nuisance as defined in California Water Code Section 13050(m).

2. **Good O&M**: 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.

3. **Cost Recovery**: The dischargers shall be liable, pursuant to California Water Code Section 13304, to the Board for all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order. If the site addressed by this Order is enrolled in a State Board-managed reimbursement program, reimbursement shall be made pursuant to this Order and according to the procedures established in that program. Any disputes over reimbursement amounts or methods used in that program shall be consistent with the dispute resolution procedures for that program.

4. **Access to Site and Records**: In accordance with California Water Code Section 13267(c), the dischargers shall permit the Board or its authorized representative:

a. Entry upon premises in which any pollution source exists, 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 requirements of this Order.

c. Inspection of any monitoring or remediation facilities installed 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.

5. **Self-Monitoring Program**: The dischargers shall comply with the Self-Monitoring Program as attached to this Order and as may be amended by the Executive Officer.

6. **Contractor / Consultant Qualifications**: All technical documents shall be signed by and stamped with the seal of a California registered geologist, a California certified engineering geologist, or a California registered civil engineer.

7. **Lab Qualifications**: 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 (QA/QC) records for Board review. This provision does not apply to analyses that can only reasonably be performed on-site (e.g., temperature).

8. **Document Distribution**: Copies of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the following agencies:

   - City of Mountain View - City Manager's Office
   - Santa Clara Valley Water District

   The Executive Officer may modify this distribution list as needed.

9. **Reporting of Changed Owner or Operator**: The dischargers shall file a technical report on any changes in site occupancy or ownership associated with the property described in this Order.

10. **Reporting of Hazardous Substance Release**: If any hazardous substance is discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, the dischargers shall report such discharge to the Regional Board by calling (510) 622-2300 during regular office hours (Monday through Friday, 8:00 to 5:00).

    A written report shall be filed with the Board within five working days. The report shall describe: the nature of the hazardous substance, estimated quantity involved, duration of incident, cause of release, estimated size of affected area, nature of effect, corrective actions taken or planned, schedule of corrective actions planned, and persons/agencies notified.

    This reporting is in addition to reporting to the Office of Emergency Services required pursuant to the Health and Safety Code.

11. **Rescission of Existing Orders**: This Order supercedes and rescinds Order Nos. 93-005 and 99-008.

12. **Periodic SCR Review**: The Board will review this Order periodically and may revise it when necessary.

I, Loretta K. Barsamian, 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 24, 2001.

Loretta K. Barsamian

Loretta K. Barsamian
Executive Officer

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FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS ORDER MAY SUBJECT YOU TO ENFORCEMENT ACTION, INCLUDING BUT NOT LIMITED TO: IMPOSITION OF ADMINISTRATIVE CIVIL LIABILITY UNDER WATER CODE SECTIONS 13268 OR 13350, OR REFERRAL TO THE ATTORNEY GENERAL FOR INJUNCTIVE RELIEF OR CIVIL OR CRIMINAL LIABILITY

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Attachments: Site Map
Self-Monitoring Program

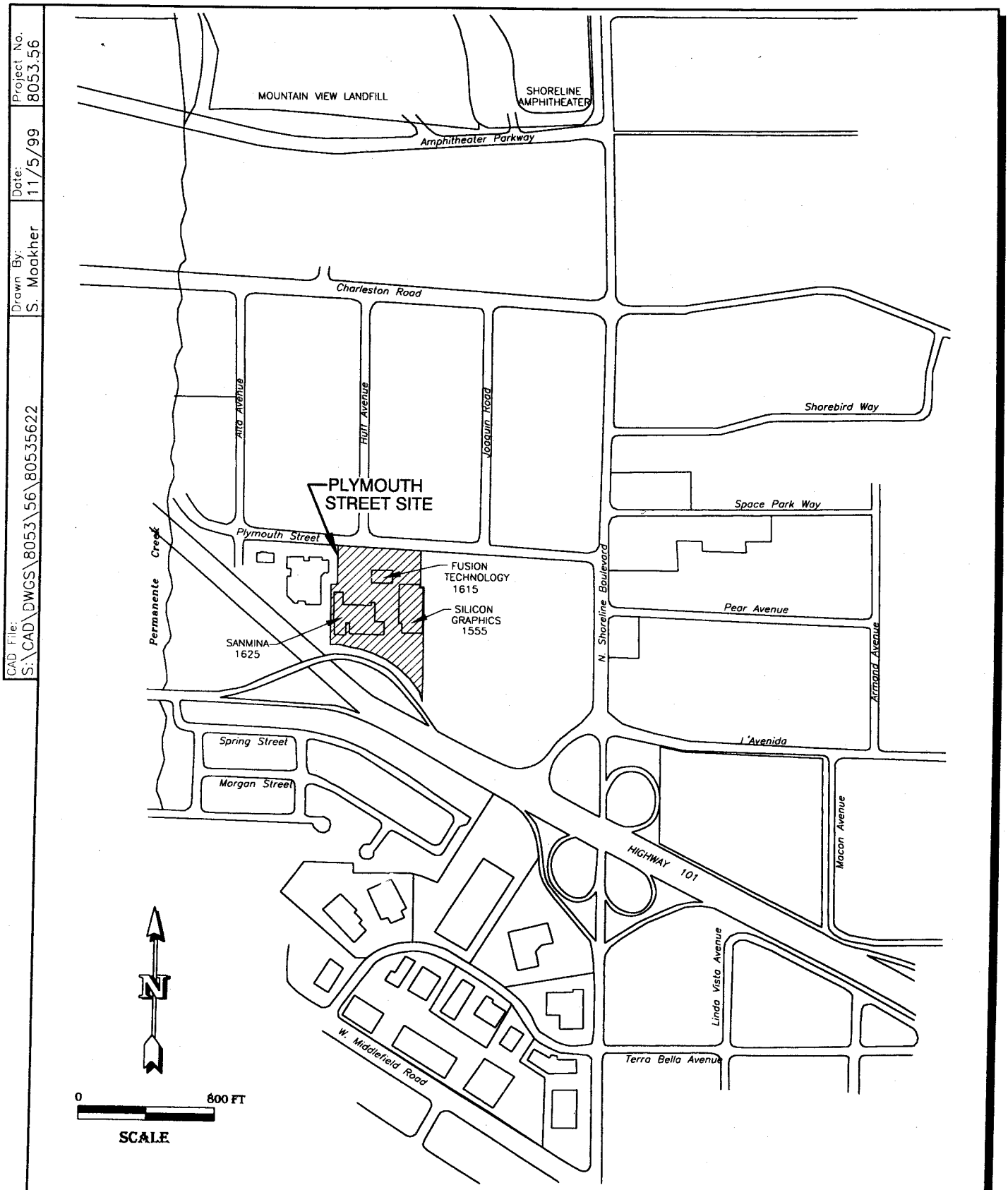

Figure 1-1

Location Map-North Bayshore Area
Mountain View, California

ERM *11/5/99*

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM FOR:

MONTWOOD CORPORATION AND
RIO GRANDE HOLDING, INC.

FOR THE PROPERTIES LOCATED AT

1615 AND 1625 PLYMOUTH STREET
MOUNTAIN VIEW
SANTA CLARA COUNTY

1. **Authority and Purpose**: The Board requests the technical reports required in this Self-Monitoring Program pursuant to Water Code Sections 13267 and 13304. This Self-Monitoring Program is intended to document compliance with Board Order No. 01-010 (site cleanup requirements).

2. **Monitoring**: The dischargers shall measure groundwater elevations quarterly in all monitoring wells, and shall collect and analyze representative samples of groundwater according to the following table:

TABLE 1

Well No.	Sampling Frequency	Analyses	Well No.	Sampling Frequency	Analyses
Shallow Zone Wells					
MW-1s	Q	8021	MW-9s	Q	8021
MW-3s	SA	8021	MW-10	SA	8021
MW-4s	SA	8021	MW-11	SA	8021
MW-5s	SA	8021	NB-2	SA	8021
MW-6a	SA	8021	NB-4	SA	8021
MW-7s	SA	8021	RWB-1	SA	8021
MW-8s	Q	8021	W-21s	SA	8021

TABLE 1
(Continued)

Well No.	Sampling Frequency	Analyses	Well No.	Sampling Frequency	Analyses
Intermediate Zone Wells					
MW-1	SA	8021	MW-8	SA	8021
MW-3	SA	8021	MW-9	SA	8021
MW-4	SA	8021	NB-1	SA	8021
MW-5	SA	8021	NB-3	SA	8021
MW-6	SA	8021	W-1	SA	8021
MW-7	SA	8021			

Key: Q = Quarterly
SA = Semi-Annually
8021 = EPA Method 8021 or equivalent

The dischargers shall sample any new monitoring or extraction wells quarterly and analyze groundwater samples for the same constituents as shown in the above table. The dischargers may propose changes in the above table. Any proposed changes are subject to Executive Officer approval.

3. **Quarterly Monitoring Reports**: The dischargers shall submit quarterly monitoring reports to the Board no later than 30 days following the end of the quarter. The first quarterly monitoring report shall be due on April 30, 2001. The reports shall include:

a. Transmittal Letter: The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall be signed by the dischargers' principal executive officer or his/her duly authorized representative, and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.

b. Groundwater Elevations: Groundwater elevation data shall be presented in tabular form, and a groundwater elevation map should be prepared for each

monitored water-bearing zone. Historical groundwater elevations shall be included in the fourth quarterly report each year.

c. Groundwater Analyses: Groundwater sampling data shall be presented in tabular form, and an isoconcentration map should be prepared for one or more key contaminants for each monitored water-bearing zone, as appropriate. The report shall indicate the analytical method used, detection limits obtained for each reported constituent, and a summary of QA/QC data. Historical groundwater sampling results shall be included in the fourth quarterly report each year. The report shall describe any significant increases in contaminant concentrations since the last report, and any measures proposed to address the increases. Supporting data, such as lab data sheets, need not be included (however, see record keeping below).

d. Groundwater Extraction: If applicable, the report shall include groundwater extraction results in tabular form, for each extraction well and for the site as a whole, expressed in gallons per minute and total groundwater volume for the quarter. The report shall also include contaminant removal results, from groundwater extraction wells and from other remediation systems (e.g. soil vapor extraction), expressed in units of chemical mass per day and mass for the quarter. Historical mass removal results shall be included in the fourth quarterly report each year.

e. Status Report: The quarterly report shall describe relevant work completed during the reporting period (e.g., site investigation, interim remedial measures) and work planned for the following quarter.

5. **Violation Reports**: If the dischargers violate requirements in the Site Cleanup Requirements, then the dischargers shall notify the Board office by telephone as soon as practicable once the dischargers have knowledge of the violation. Board staff may, depending on violation severity, require the dischargers to submit a separate technical report on the violation within five working days of telephone notification.

6. **Other Reports**: The dischargers shall notify the Board in writing prior to any site activities, such as construction or underground tank removal, which have the potential to cause further migration of contaminants or which would provide new opportunities for site investigation.

7. **Record Keeping**: The dischargers or their agent shall retain data generated for the above reports, including lab results and QA/QC data, for a minimum of six years after origination and shall make them available to the Board upon request.

8. **SMP Revisions**: Revisions to the Self-Monitoring Program may be ordered by the Executive Officer, either on his/her own initiative or at the request of the dischargers. Prior to making SMP revisions, the Executive Officer will consider the burden, including costs, of associated self-monitoring reports relative to the benefits to be obtained from these reports.

I, Loretta K. Barsamian, Executive Officer, hereby certify that this Self-Monitoring Program was adopted by the Board on January 24, 2001.

Loretta K. Barsamian
Executive Officer