CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 90-029

SITE CLEANUP REQUIREMENTS

CHEVRON LAND AND DEVELOPMENT COMPANY
CHEVRON U.S.A. INC.
3260 BLUME DRIVE
CITY OF RICHMOND
CONTRA COSTA COUNTY

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

1. Location and Site Description - Chevron Land and Development Company (hereinafter called the discharger), acting pursuant to the option to purchase agreement with the owner, Chevron U.S.A., is anticipating the development of a 310 acre site, at Hilltop West, in the City of Richmond, in the County of Contra Costa. The site is bordered by: San Pablo Avenue on the east; Chevron Chemical Company's laboratory facility and Chevron's Environmental Health Center on the southeast; Montalvin Manor residential area to the northeast; Giant Road and the Richmond Country Club on the west; and, the Leroy Heights residential area on the south. The site is owned by Chevron USA and once served the Chevron Richmond Refinery as the western portion of the 800 acre San Pablo Tank Farm. The site is intended to be developed for residential and commercial use.

2. Site History - Petroleum storage tanks were first constructed on site around 1915. Ultimately, forty-three 100-foot-diameter surface mounted metal product tanks were in use, storing crude oil, gas oil, gasoline intermediates, and diesel fuel. There was contamination of the site by petroleum hydrocarbons while the site was operated as a tank farm from the 1900s through the 1970s. Beginning in the mid-1970s, the tanks were drained and dismantled. The last tank was drained in 1983. During jmost of 1988 and early 1989, the discharger moved some of the contaminated oily soil to oily soil repositories, which were constructed under proposed roadways and under proposed open space areas at the site. The discharger has placed oily soils into repositories, some oily soils have been temporarily stockpiled, some oily soils have been left in place, and some oily soils have been excavated and used in other locations on the project as fill.

   a. Repositories - Thirteen repositories were constructed on site to contain 2.2 million cubic yards (CY) of oily soil. The discharger has submitted a Report of Waste Discharge, an amendment and several technical reports describing these repositories. Staff is reviewing the completeness of these reports in preparation of Waste Discharge Requirements for the repositories. This Site Cleanup Requirement Order is not intended to regulate the repositories.

b. Stockpiles - After the construction of the repositories, additional areas of oily soil were identified. The additional oily soil areas were excavated and three stockpiles were created on the site. The total volume of oily soil in the three stockpiles is between 505,000 CY and 545,000 CY.

c. Remaining in Place Oily Soil - After construction of the repositories and the stockpiles, areas of oily soil remained in place. These oily soil areas were identified by visual staining, organic vapor indicators, and analytical analyses. Some of the areas of oily soil remained undisturbed, other areas have been used in other locations at the site as fill.

3. Hydrogeology - The Hayward Fault, which crosses the western edge of the site, appears to act as a ground water divide and is a dominant hydrogeologic feature. Site grading, involving about 5 million CY of soil, has significantly changed the natural contours. Engineered fill has been placed in natural drainage courses and ridges and knolls have been contoured for roadways and building sites.

a. Southwest of the Hayward Fault. In this area of the site, several hundred feet of unconsolidated alluvial silty and clayey sands overlay the Francisco Assemblage. Ground water is found at about 9 to 12 feet above mean sea level and appears to be unconfined. The ground water flow is estimated to be northwest, approximately parallel to the Hayward Fault, with a hydraulic gradient of about 0.0036 foot/foot (ft/ft) and a pore water velocity of 65 feet/year. The hydraulic conductivity of the alluvial material is 5.2 x 10-3 centimeter/second (cm/sec).

b. East of the Hayward Fault. In this area of the site, colluvium of unconsolidated sandy and silty clays were located in the original natural drainage courses and was partially removed and replaced with engineered fill. Terrace deposits of silty, clayey sand and rounded gravel range in depths up to 12 feet in areas of the site. Two bedrock units are present in this area: the Orinda Formation; and, a younger Plio-Pleistocene. The Orinda Formation is mudstone interlayered with sandstone and pebble conglomerate. The Plio-Pleistocene Formation is predominately mudstone with lesser interbedded sandstone and pebble conglomerate with interbeds of siltstone and sandstone. There is a geographical divide at the site that creates two general ground water flow directions: toward the Hayward Fault where it flows to the northwest at a velocity of 2 to 29 feet/year; and, toward the north at a velocity of 0.23 to 11 feet/year. Hydraulic gradients are estimated to range from 0.033 ft/ft to 0.083 ft/ft. Hydraulic permeabilities of water bearing material are estimated to range from 2.9 x 10-5 cm/sec to 1.5 x 10-3 cm/sec.

4. Chemicals Of Concern - Contamination identified in soils consist of petroleum hydrocarbons, including benzene, toluene, ethylbenzene and xylene.

5. Ground Water Pollution - Nineteen ground water monitoring wells have been installed at the site. Three wells have contained detectable concentrations of contaminants. A ground water characterization study is needed to determine the rate and extent of ground water contamination.

6. Soil Pollution - Analytical testing has been conducted on oily soil samples from the three stockpiles of oily soil as well as the oily soil that was left in place throughout the site. A soil characterization study is needed to determine the extent of soil contamination.

   a. Stockpiles - The discharger has obtained an initial 50 randomly located soil samples from the stockpiled material, or about one sample for 10,000 CY. The limited sampling reports total petroleum hydrocarbons (TPH) as diesel as high as 3,200 milligram/kilogram (mg/kg) and total oil and grease (TOG) as high as 4,700 mg/kg. About 4% of the samples contained TPH over 1,000 mg/kg and 12% of the samples contained TOG greater than 1,000 mg/kg. Detectable concentrations of TPH were identified in about one-fourth of the samples and detectable concentrations of TOG were identified in about all of the samples. Detectable concentrations of benzene, toluene, ethylbenzene, and xylene was detected in about 20% of the samples, and the majority of the concentrations were much less than the highest concentration.

   b. Remaining in Place Oily Soil - TPH concentrations as high as 35,400 mg/kg and TOG concentrations as high as 15,900 mg/kg were measured in the oily soil left in place at the site. TPH concentrations as high as 620 mg/kg and TOG concentrations as high as 860 mg/kg were measured in oily soils excavated and used in other locations at the site. About 70% of the remaining in place oily soil sites have concentrations of less than 1000 mg/kg each of TPH and TOG. About 28% of the remaining in place oily soil sites have concentrations of TPH over 200 mg/kg and TOG over 1,000 mg/kg.

      1. Twenty nine areas of oily soil, with actual measurements or indications that TPH concentrations were in excess of 1,000 mg/kg, were identified at the bottom or sides of excavations during the site grading. In some areas, the discharger has mapped the horizontal extent of oily soil at the bottom of some excavations but the depth of the oily soil is not known; in other areas the depth of the oily soil was identified at the sides of the excavation but the horizontal extent of the oily soil is not known.

      2. In addition to the 29 areas discussed above, about 60 areas of oily soil were identified, some with actual measurements or with indications that TPH was above detection limits but less than 1,000 mg/kg and detectable levels of TOG. The remaining areas without detectable levels of TPH had detectable levels of TOG. Approximately 26 of these additional areas have been excavated and used as fill on the site. The discharger does

not known the exact location of all of the oily soils used as fill. Oily soil repositories were constructed over six areas of remaining in place oily soil. The discharger has identified the horizontal extent of the oily soil but the depth of the oily soil is unknown.

7. Surface drainage is controlled at the site and the incident rainfall is directed off the site into a storm drain system that discharges into central San Francisco Bay.

8. Ground water cleanup measures may be needed if there is continued migration of organic contaminants that poses a significant adverse threat to water quality. Ground water monitoring is required to determine whether ground water cleanup is necessary and to provide a substantive technical basis for designing and evaluating the effectiveness of any cleanup measures.

9. The existing and potential beneficial uses of central San Francisco Bay are:

   a. Industrial Process and Service Supply;
   b. Navigation;
   c. Water Contact Recreation;
   d. Non-Contact Recreation;
   e. Ocean Commercial and Sport Fishing;
   f. Wildlife Habitat;
   g. Preservation of Rare and Endangered Species;
   h. Fish Migration and Spawning;
   i. Shellfish Harvesting; and,
   j. Estuarine Habitat.

10. The potential beneficial uses of the ground water in the area are:

   a. Municipal Supply
   b. Industrial Process and Service Supply
   c. Agricultural Supply

11. Ground water at the site is not utilized for drinking water purposes. Five ground water wells are located near the site. Two are used as monitoring wells, one may soon be abandoned and two are reportedly shallow supplementary irrigation water wells installed during the drought and no longer in service but could be used in the future.

12. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on August 19, 1987. The Basin Plan contains water quality objectives and beneficial uses for San Francisco Bay and contiguous surface and ground water. This Order implements the water quality objectives for the central San Francisco Bay as stated in the Basin Plan.

13. The adoption of this Order is exempt from the provisions of Chapter 3 (commencing with Section 2100) of Division 13 of the Public Resources Code (California Environmental Quality Act) due to the categorical exemption

Section 15321, Title 14, California Code of Regulations.

14. The Board has notified the discharger 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 to submit their written views and recommendations.

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

IT IS HEREBY ORDERED, pursuant to Sections 13304 and 13267 of the California Water Code, that the discharger 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 of California is prohibited.

2. Further significant migration of pollutants through subsurface transport to waters of the State of California is prohibited.

3. Activities, associated with the subsurface investigation and site cleanup, that cause significant adverse migration of pollutants are prohibited.

B. SPECIFICATIONS

1. The storage, handling, treatment or disposal of soil or ground water containing pollutants shall not create a nuisance as defined in Section 13050(m) of the California Water Code.

2. The discharger shall conduct a soil and ground water characterization that shall include, but not be limited to: site investigation; soil and ground water sampling; as needed to: define the current local hydrogeologic conditions; to define the lateral and vertical extent of soil and ground water pollution; and, to provide information necessary to identify a method to remediate soil and ground water pollution. For the purposes of the soil and ground water characterization, the extent of soil pollution and ground water pollution shall be defined in concentrations acceptable to the Executive Officer.

3. The discharger shall conduct a evaluation of remediation alternatives, which shall include, but not be limited to: a summary of the soil and ground water characterization; an evaluation of remediation alternatives; and, selection of an apparent best alternative. The discharger shall conduct a comprehensive evaluation of remediation alternatives, which shall include a summary of soil and ground water characterization, evaluation of placement of stockpiled material, placement of excavated oily soil left in place,

modification and/or monitoring of repositories, evaluation and alternatives of oily soil left under repositories and remediation alternatives of the area west of the Hayward Fault Zone, and selection of best alternatives. In the evaluation of remediation alternatives, alternatives shall be evaluated based upon achieving levels of contaminants acceptable to the Executive Officer and may consider the cost and efficiency of achieving cleanup levels greater than non-detectable concentrations.

4. If ground water extraction and treatment is considered as an alternative, the feasibility of water reuse, reinjection, and disposal to the sanitary sewer must be evaluated. Based on the Regional Board Resolution 88-160, the discharger shall optimize, with a goal of 100%, the reclamation or reuse of ground water extracted as a result of cleanup activities. The discharger shall not be found in violation of this Order if documented factors beyond the discharger's control prevent the discharger from attaining this goal, provided the discharger has made a good faith effort to attain this goal. If reuse or reinjection is part of a proposed alternative, an application for Site Cleanup Requirements may be required. If discharge to waters of the State is part of a proposed alternative, an application for an NPDES permit must be completed and submitted, and must include the evaluation of the feasibility of water reuse, reinjection, and disposal to the sanitary sewer.

C. PROVISIONS

1. The discharger shall, in a timely manner, submit work descriptions and draft technical reports to Board staff for all technical reports required in these Provisions. The discharger may be assessed monetary penalties for late or incomplete technical reports required by these Provisions.

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

   a. SOIL AND GROUND WATER CHARACTERIZATION:

      Submit a soil and ground water characterization report, acceptable to the Executive Officer, that includes (but is not limited to):

      i. The rate and extent of migration of contaminants in the ground water;

      ii. The extent of soil contamination and the concentrations of the contaminants in the soil, including the stockpiled material and the remaining in place soils but excluding the oily soils in the repositories;

      iii. The concentrations of contaminants in the ground water;

iv. A description of the number and placement of additional ground water monitoring wells and/or additional soil borings that may be required; and,

v. The sampling and analysis plan used in the soil and ground water characterization report.

COMPLETION DATE: No later than June 1, 1990

b. EVALUATION OF REMEDIATION ALTERNATIVES:

Submit a technical report, acceptable to the Executive Officer, that includes (but is not limited to):

i. A summary of the results of the soil and ground water characterization study;

ii. An evaluation of the best apparent alternative and other alternative remedial measures. The alternatives shall include (but not be limited to) soil bioremediation as well as creation of a Class II landfill for the oily soil. The evaluation of alternatives shall include estimated capital and operation and maintenance costs, efficiency and dependability, benefits, and impact on public health, welfare, environment, the tasks and time schedule necessary to implement any alternative, and any remedial work on the oily soil repositories;

iii. An evaluation of the alternatives shall describe the reuse of extracted ground water, if any, and evaluate the removal and/or cleanup of polluted soils, and evaluate the removal and/or cleanup of polluted ground water;

iv. Alternatives shall be capable of achieving interim cleanup limits and may propose other cleanup limits based on efficiency or cost; and,

v. The tasks and time schedule necessary to implement the recommended final remedial measures.

COMPLETION DATE: No later than August 1, 1990

3. The discharger shall maintain a copy of this order at the project field office so as to be available at all times to project personnel.

4. The discharger's technical reports under subparagraph 2.b. hereof shall include a projection of the cost, effectiveness, benefits, and impact on public health, welfare, and environment of each alternative measure. The reports shall consider the guidance provided by 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. Technical reports, submitted by the discharger, in compliance with the Prohibitions, Specifications, and Provisions of this Order shall be submitted to the Board on the schedule specified herein. These reports shall consist of a letter report that includes the following:

   a. A summary of work completed since submittal of the previous report and work projected to be completed by the time of the next report;

   b. Identification of any obstacles which may threaten compliance with the schedule of this Order and what actions are being taken to overcome these obstacles;

   c. In the event of non-compliance with any Prohibition, 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; and,

   d. In the first self-monitoring report, an evaluation of the current ground water monitoring system and a proposal for modifications as appropriate.

6. All submittals of hydrogeological plans, specifications, reports, and documents (except quarterly progress and self-monitoring reports), shall be signed by and stamped with the seal of a registered geologist, registered engineering geologist, or registered professional engineer.

7. All samples shall be analyzed by State certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control records for Board review.

8. 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.

9. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order, submitted by the discharger, shall also be provided to the following agencies:

   a. City of Richmond, Planning Department;
   b. Contra Costa County Health Department; and,
   c. State Department of Health Services, TSCD.

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

    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 all 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; and,

    d. Sampling of any ground water or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the discharger.

11. The discharger shall file with this Board a report of any material change or proposed change in the character, location, or quantity of this waste discharge. For the purpose of these requirements, this includes any proposed change in the boundaries, contours, or ownership of the disposal areas.

12. The Board considers the property owner and site operator to have a continuing responsibility for correcting any problems within their reasonable control which arise in the future as a result of this waste discharge or water applied to this property during subsequent use of the land for other purposes.

13. These requirements do not authorize the commission of any act causing injury to the property of another or of the public, do not convey any property rights, do not remove liability under federal, state or local laws, and do not authorize the discharge of waste without the appropriate federal, state or local permits, authorizations, or determinations.

14. If any hazardous substance is discharged in or on any waters of the state, or discharged and deposited, or probably will be discharged in or on any waters of the state, the discharger shall report such discharge to the following:

    a. This Regional Board at (415) 464-1255 on weekdays during office hours from 8 a.m. to 5 p.m.; and,

    b. The Office of Emergency Services at (800) 852- 7550.

    A written report shall be filed with the Regional Board within five working days and shall contain information relative to the following:

    c. The nature of waste or pollutant;

d. The quantity involved and the duration of incident;
e. The cause of spill;
f. The estimated size of affected area;
g. The corrective measures that have been taken or planned, and a schedule of these measures; and,
h. The persons/agencies notified.

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

16. If the discharger is delayed, interrupted or prevented from meeting one or more of the completion dates specified in this Order, the discharger shall promptly notify the Executive Officer and the Board shall consider revision to this Order.

I, Steven R. Ritchie, 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 February 21, 1990.

Steven R. Ritchie
Executive Officer

Attachments:
Figure 1: Site Map
Self Monitoring Program

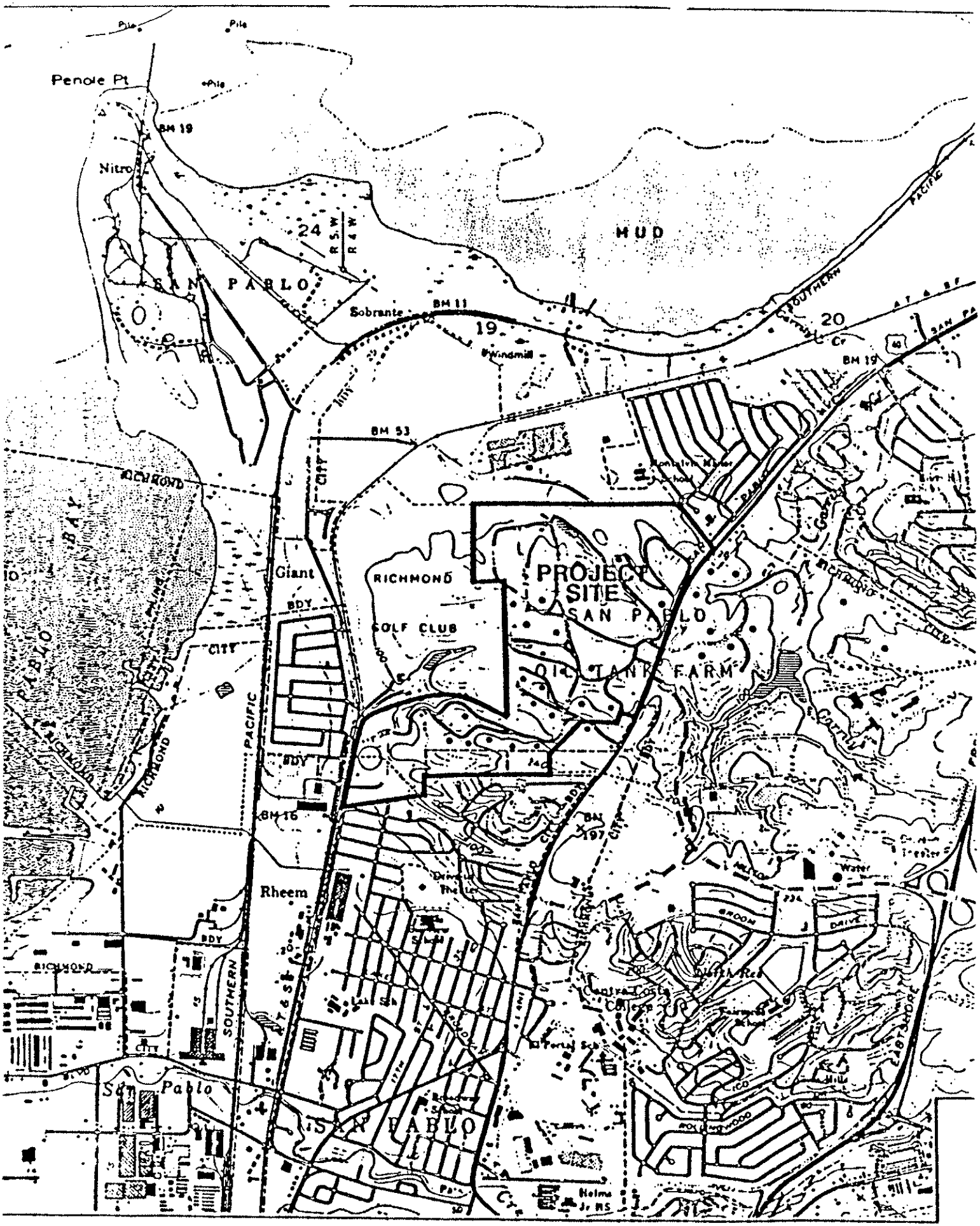

Figure 1, Site Map

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

CHEVRON LAND AND DEVELOPMENT COMPANY

CHEVRON USA

3260 BLUME DRIVE, SUITE 100

RICHMOND, CONTRA COSTA COUNTY

SITE CLEANUP REQUIREMENTS
ORDER NO. 90-029

CONSISTS OF

PART A

AND

PART B

PART A

A. General

1. Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No.73-16.

2. The principal purposes of a self-monitoring program by a waste discharger are the following:

   a. To document compliance with Site Cleanup Requirements and prohibitions established by the Board;

   b. To facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge;

   c. To develop or assist in the development of standards of performance, toxicity standards and other standards; and,

   d. To prepare water and wastewater quality inventories.

B. Sampling And Analytical Methods

1. Sample collection, storage, and analyses shall be performed according to the most recent version of Standard Methods for the Analysis of Wastewater, and Test Methods for Evaluating Solid Waste EPA Document SW-846, or other EPA approved methods and in accordance with an approved sampling and analysis plan.

2. Water and waste analysis (except total suspended solids) shall be performed by a laboratory approved for these analyses by the State Department of Health. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Board.

3. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. Definition Of Terms

1. A grab sample is a discrete sample collected at any time.

2. Duly authorized representative is a duly authorized representative may thus be either a named individual or any individual occupying a named position such as the following:

   a. Authorization is made in writing by a principal executive officer; or,

b. Authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as general partner in a partnership, sole proprietor in a sole proprietorship, the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company.

D. Schedule Of Sampling, Analysis, And Observations

1. The discharger is required to perform sampling, analysis, and observations according to the schedule specified in Part B, and the requirements in Article 5 of Subchapter 15.

2. A statistical analysis shall be performed and reported annually as described in the current revision of Appendix II of Subchapter 15.

E. Records To Be Maintained By The Discharger

1. Written reports shall be maintained by the discharger for ground water monitoring and wastewater sampling, and shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Board. Such records shall show the following for each sample:

a. Identity of sample and sample station number;
b. Date and time of sampling;
c. Method of composite sampling (See Section C-Definition of Terms);
d. Date and time that analyses are started and completed, and name of the personnel performing the analyses;
e. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used. A reference to a specific section of a reference required in Part A Section B is satisfactory;
f. Calculation of results;
g. Results of analyses, and detection limits for each analyses; and,
h. Chain of custody forms for each sample.

F. Reports To Be Filed With The Board

1. Ground water monitoring results shall be filed monthly until the schedule allows quarterly samples, then reports shall be quarterly. Written self-monitoring reports shall be filed no later than 45 calendar days following the end of the report period. In addition an annual report shall be filed as indicated. The reports shall be comprised of the following:

a. Letter of Transmittal - A letter transmitting the essential points in each self-monitoring report should accompany each report. Such a letter shall include a discussion of any requirement violations found during the last report period, and actions taken or planned for correcting the violations, such as, operation and/or facilities modifications. If the discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred in the last report period this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct. The letter shall contain the following certification:

"I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

b. Each monitoring report shall include a compliance evaluation summary sheet. Until the Order's amended to specify ground water protection standards, the following shall apply and the compliance sheet shall contain:

i. The method and time of water level measurement, the type of pump used for purging, pump placement in the well, method of purging, pumping rate, equipment and methods used to monitor field pH, temperature, and conductivity during purging, calibration of the field equipment, results of the pH, temperature conductivity and turbidity testing, well recovery time, and method of disposing of the purge water; and,

ii. Type of pump used, pump placement for sampling, a detailed description of the sampling procedure; number and description of equipment, field and travel blanks; number and description of duplicate samples; type of

sample containers and preservatives used, the date and time of sampling, the name and qualifications of the person actually taking the samples, and any other observations; the chain of custody record.

c. A summary of the status of any remediation work performed during the reporting period. This shall be a brief and concise summary of the work initiated and completed as follows:

   i. As interim corrective action measures; and,

   ii. To define the extent and rate of migrations of waste constituents in the soil and ground water at the site.

d. The discharger shall describe, in the quarterly report, the reasons for significant increases in a pollutant concentration at a well onsite. The description shall include the following:

   i. The source of the increase;

   ii. How the discharger determined or will investigate the source of the increase; and,

   iii. What source removal measures have been completed or will be proposed.

e. A map or aerial photograph showing observation and monitoring station locations, and plume contours for each chemical in each aquifer shall be included as part of the quarterly Self-Monitoring Report.

f. Laboratory statements of results of analyses specified in Part B must be included in each report. The director of the laboratory whose name appears on the laboratory certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Board. The following information shall be provided:

   i. The methods of analyses and detection limits must be appropriate for the expected concentrations. Specific methods of analyses must be identified. If methods other than EPA approved methods or Standard Methods are used, the exact methodology must be submitted for review; and,

   ii. In addition to the results of the analyses, laboratory quality control/quality assurance (QA/QC) information must be included in the monitoring report. The laboratory QA/QC information should include the method, equipment and analytical detection limits; the recovery rates; an explanation for any recovery rate that is less than 80%; the results of equipment and method blanks; the

results of spiked and surrogate samples; the frequency of quality control analysis; and the name and qualifications of the person(s) performing the analyses.

g. By January 31 of each year the discharger shall submit an annual report to the Board covering the previous calendar year. This report shall contain:

i. Tabular and graphical summaries of the monitoring data obtained during the previous year;

ii. A comprehensive discussion of the compliance record, and the corrective actions taken or planned which may be needed to bring the discharger into full compliance with the Site Cleanup Requirements; and,

iii. A written summary of the ground water analyses indicating any change in the quality of the ground water.

G. In the event the discharger violates of threatens to violate the conditions of the Site Cleanup Requirements and prohibitions or intends to experience a plant bypass or treatment unit bypass due to:

1. Maintenance work, power failures, or breakdown of waste treatment equipment, or;
2. Accidents caused by human error or negligence, or;
3. Other causes, such as acts of nature.

The discharger shall notify the Regional Board office by telephone as soon as he or his agents have knowledge of the incident and confirm this notification in writing within 7 working days of the telephone notification. The written report shall include time and date, duration and estimated volume of waste bypassed, method used in estimating volume and person notified of the incident. The report shall include pertinent information explaining reasons for the noncompliance and shall indicate what steps were taken to prevent the problem from recurring.

In addition, the waste discharger shall promptly accelerate his monitoring program to analyze the discharge at least once every day. Such daily analyses shall continue until such time as the effluent limits have been attained, until bypassing stops or until such time as the Executive Officer determines to be appropriate. The results of such monitoring shall be included in the regular Self-Monitoring Report.

Part B

A. Description Of Observation Stations And Schedule Of Observations

1. The observation stations shall consist of the 19 ground water monitoring wells located near the oily soil repositories and any additional ground water monitoring wells added during the soil and ground water characterization evaluation of remediation alternatives work.

2. The schedule of well observations and grab sampling shall be monthly through June 1989, and shall be conducted quarterly after June 1989 within the months of January, April, July and October.

B. Observations and Test Procedures

1. The ground water well observations shall consist of the following:

   a. Water elevation reported to the nearest 0.1 inch for both depth to water from the ground surface and the elevation of the ground water level;

   b. Ground water temperature measured at the time of sampling and reported in degrees Fahrenheit;

   c. Ground water conductivity measured at the time of sampling as per Standard Methods 205 using potentiometric methodology;

   d. Ground water pH measured at the time of sampling as per Standard Methods 423 using potentiometric methodology; and,

   e. Ground water turbidity measured at the time of sampling.

2. The test procedures for the ground water samples and soil samples shall consist of the following:

   a. Volatile aromatic compound analysis using the EPA Method 5030/8020;

   b. Total Petroleum Hydrocarbons and Fuel Hydrocarbons using the EPA Method 5030/8015 (Modified); and,

   c. Total Oil and Grease (TOG) using Standard Methods 418.1, infrared analysis.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program is as follows:

1. Developed in accordance with the procedures set forth in this Board's Resolution No. 73-16;

2. Effective on the date shown below; and,

3. May be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer, or request from the discharger.

Steven R. Ritchie
Executive Officer

February 21, 1990
Date Ordered