

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

ORDER NO. 95-235

SITE CLEANUP REQUIREMENTS FOR:

**U. S. NAVY (PRIMARY DISCHARGER) AND
U. S. DEFENSE SUPPLY LOGISTICS AGENCY (SECONDARY DISCHARGER)
POINT MOLATE NAVAL FUEL DEPOT
RICHMOND, CONTRA COSTA COUNTY**

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

1. **SITE DESCRIPTION:** The U. S. Defense Supply Logistics Agency, owns and the U.S. Navy (hereinafter collectively referred to as the Discharger) owns and operates, respectively Point Molate Naval Fuels Depot (hereinafter referred to as the Site). The Site is located on the eastern shore of San Francisco Bay, about one mile north of the Richmond-San Rafael Bridge near the city of Richmond (Figure 1). The facility covers approximately 300 acres in the Potrero Hills. The topography varies from flat lying, reclaimed tidal marsh along the bay front to steep hills rising to an elevation of more than 500 feet. The facility is bordered on the north, south and east by Chevron Corporation and to the west by San Pablo Bay.

2. **SITE HISTORY:** The Navy established Point Molate Fuels Depot in the early 1940s. Over 40 million gallons of fuel and oil were stored in 29 aboveground and underground tanks. The Site as it exists today was largely in place by November 1960. It was integrated with the Navy Supply Center, Oakland as a Fuel Department in 1962. Ownership of the Site was transferred to the Defense Supply Logistics Agency in 1973 as part of the Integrated Materials Management Plan for bulk petroleum storage. The Defense Supply Logistics Agency is the current owner of the Site. The site currently maintains its service under Fleet and Industrial Supply Center, Oakland, FISCO. On the Site, there are historic Winehaven Buildings and 100 acres of land nominated to the National Register of Historic Places. Any tasks that will directly or indirectly affect this historic district will require compliance with Section 106 of the National Historic Preservation Act of 1966, as amended in 1980, in accordance with the regulations for the protection of historic properties (36 CFR Part 800).

Several different fuels had been stored in the tanks over the years. Navy Special Fuel Oil (NSFO), a black viscous bunker fuel was originally stored in numerous tanks. Thereafter, diesel and jet turbine fuel and aviation gasoline as well as motor vehicle gasoline were stored in the tanks. One tank was used for ballast water storage. Previously, F-76 (Diesel Fuel Marine) and JP-5 (Jet Turbine Fuel) were stored in the tanks. The Site also operated a sanitary sewer system and a fuel reclamation/ballast treatment system. Included in the fuel reclamation/ballast are three treatment ponds which overlie a former sump pond. The facility has been slated for closure under the Base Realignment and Closure Act during the most recent round of military downsizing effort and has

been shut down as of September 30, 1995.

3. The regulation of cleanup at DoD sites is usually done pursuant to Federal Facility Agreements (for sites on the federal CERCLA Superfund list) or Federal Facility Site Remediation Agreements (for sites not on the Superfund list). These agreements, which are signed by military, Department of Toxic Substances Control (DTSC) and the Regional Board, establish a procedural framework and schedule for developing, implementing and monitoring appropriate response actions at sites. Regulation is not usually accomplished through adoption of Board orders, unless for enforcement purposes following exhaustion of administrative remedies through the dispute resolution process.
4. To streamline and consolidate California regulatory efforts with respect to cleanup of military bases, Secretary for California Environmental Protection Agency(Cal/EPA) has designated the DTSC to be the lead agency coordinating response for all Cal/EPA regulatory departments and boards so as to provide a single state position on remedial activities at military bases.
5. In August 1994, the Board adopted Resolution No. 94-100 of intent to enter into a federal facility site remediation agreement by August 1995. The Resolution also established Board's expectation of schedules for completion of investigation and remediation of fuel contamination at the site.
6. Agreement negotiation was not completed early this year due to disagreement between the Navy and DTSC on legal requirements for removal actions. To compound this problem further, Navy has indicated that no agreement will be signed unless it includes "rolling milestones" based on relative risk and budget constraints. Rolling milestones link specific cleanup actions to the availability of funds in a given federal budget year. Under the new agreement structure that the Navy prefers, milestones beyond the current budget year can be planned but will not be enforceable.
7. Due to the budget cutback on Defense Environmental Restoration Account in federal budget year 1995 and lack of "legal driver" - one of the major criteria for funding prioritization, it has resulted in significant delay in several milestones established in Board Resolution No. 94-100 with the exception of the trench construction.
8. In the absence of an agreement, a Board Order will elevate funding priority and thereby assure timely cleanup and abatement of soil, groundwater and sediment contamination. Schedules in the Order have been coordinated with DTSC as lead agency.
9. SITE GEOLOGY: The Potrero Hills form a peninsula projecting into San Francisco Bay. They are composed of fractured, interbedded, near vertical fine to medium grained sandstones and siltstones of Jurassic-Cretaceous age of the Franciscan Formation. The site is bounded by the Hayward Fault to the east and the projected San Pedro-San Pablo Fault to the west. Weathered bedrock of varying thickness overlies the hill slope areas. Bay mud on-laps the Franciscan Formation along the shoreline. Fill soils were placed on bay mud at the lower elevations along the shoreline.
10. HYDROGEOLOGY: The Site is located within the groundwater basin designated by the Department of Water Resources as the Alameda Bay Plain Basin. The basin is drained by the Guadalupe River and by the Alameda, Coyote, Redwood, and San Francisquito Creeks. Groundwater

flow occurs through the colluvium in the ancestral valleys down the hill slopes into the fill and alluvium and discharges into the bay.

11. KNOWN AREAS OF CONTAMINATION: Basically there are five areas of concern (See Figure 2): (1) Treatment Ponds Area (Former sump pond), (2) Shoreline sediments (3) Landfill, (4) Sandblast Grit Disposal Areas, (5) Site-wide soil and groundwater contamination from unidentified sources. Past disposal practices, spills, and leaks have resulted in groundwater, soil, and sediment contamination at the site.
- (1) There are three unlined interconnected ponds which were used for the settling and evaporation of oily wastewater. The ponds are about six feet deep and were constructed within fill material placed adjacent to a large pre-existing unlined sump pond used for the disposal of petroleum fuels. These petroleum fuels and other liquid wastes have been removed from the sump pond. Chemical analysis of the treatment pond area show detections of Semi-Volatile Organics (SVOCs), Volatile Organics (VOCs), Bunker fuel, diesel, JP-5, and gasoline in soil and groundwater. The Navy recently constructed a 900 foot long extraction trench in between the ponds and the Bay to intercept free floating product and contaminated groundwater from migrating to San Pablo Bay. The free product and groundwater captured in the extraction trench will be removed of floating product, treated, and then discharged to the Bay under a NPDES Permit. Staff is presently preparing an amendment to an existing NPDES Permit for the site to address the captured groundwater.
 - (2) Sediments along the shoreline have been contaminated with different types of fuel originating from the site. However, the extent of sediment contamination has not been defined.
 - (3) A landfill is located in a ravine near the center of the fuel depot. It was used for disposal of fuel depot waste materials generated by site activities. The site was in use approximately 20 years. The waste was covered with soil and may extend as much as 50 feet below the present ground surface. The boundary of the landfill has not been defined yet. In a preliminary investigation, performed in 1990, the following contaminants were found in the landfill: VOCs, SVOCs, Pesticides, jet fuel, diesel, motor oil, and drums containing liquid foaming agents. Monitoring wells down gradient of the landfill have detected free product. Immediate corrective action will be necessary here.
 - (4) There are several sandblast grit disposal areas throughout this Site. These areas were covered with sandblast grit from past metal cleaning operations. The sandblast grit has been removed, but the residual heavy metal impacts from this disposal practice needs to be assessed.
 - (5) Numerous buried pipeline leaks, both on the hill-slopes and in the shoreline fill material, created site-wide soil and groundwater contamination. Pipelines, pipeline junctions and valve boxes were found to have had numerous leaks. Hydrocarbons have migrated downgradient through the porous pipeline bedding in the pipe trenches towards the bay. As a result, additional wells have been installed along the shoreline (south of the fuel pier) and free product plumes have been identified. Immediate corrective action is necessary to contain

and remove the free product plumes from migrating further into the Bay. Navy plans to extend the existing trench to capture additional free product. However, other more localized free product plumes need to be removed and possibly by extraction wells.

12. SOIL, SEDIMENTS AND GROUNDWATER INVESTIGATIONS: The Discharger submitted a report which includes soil and sediments chemical data along the shoreline. It indicates the linkage between the on-shore and off-shore contamination. Concurrent biological and chemical characterization of the off-shore sediments will be necessary to determine if the contamination resulted in any significant environmental impacts. Groundwater along the shoreline was monitored quarterly during 1994. New free product plumes were identified along the shoreline and thickness of the immiscible layers increased significantly during the last quarter in 1994 due to heavy rain.
13. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA) CONCERNS: USEPA, in a Site Assessment report dated July 1, 1993, recommended that the Site should undergo further investigation to determine the extent and nature of the contamination associated with this Site. USEPA identifies the same areas of concern as described in this Order (described in Finding No.6 and illustrated in Figure 2).
14. SOIL AND GROUNDWATER INTERIM CORRECTIVE ACTIONS: Because of the impact to groundwater quality posed by the contamination associated with the treatment ponds area, an Interim Corrective Action was implemented by the Navy. The Interim action involves constructing an extraction trench approximately 900 feet long to intercept the floating product and the contaminated groundwater emanating from the former sump pond area to the bay. Construction of the trench was completed August 1995, tested in October, and is now in full operation. The groundwater captured in the extraction trench will be removed of floating product, treated through the on-site wastewater treatment facility, and then discharged to the bay under a NPDES permit.
15. NPDES PERMIT: The NPDES permit was issued on January 18, 1995, for industrial and sanitary wastewater generated by the base operation. This wastestream has since ceased due to base closure in September 1995. The Navy has decided to build a new fixed film bioreactor for treatment of the groundwater. However, during the interim the groundwater will be treated by the existing pond system. Due to the significant change in flow, wastewater characteristics and treatment processes, an amendment to the existing NPDES Permit will be necessary.
16. STATE WATER RESOURCES CONTROL BOARD RESOLUTION:

State Board Resolution No. 68-16: On October 28, 1968, the State Board adopted Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality Waters in California". This policy calls for maintaining the existing high quality of the State waters unless it is demonstrated that any change would be consistent with the maximum public benefit and not unreasonably affect beneficial uses. This is based on a Legislative finding, contained in Section 13000, California Water Code, which states in part that it is State policy that "waters of the State shall be regulated to attain the highest water quality which is reasonable." The discharge of waste to the groundwater and surface waters at this Site is in violation of this policy.

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.

17. REGIONAL WATER QUALITY CONTROL BOARD RESOLUTIONS:

Regional Board Resolution No. 88-160: On October 19, 1988, the Regional Board adopted Resolution No. 88-160, "Regional Board Position on the Disposal of Extracted Groundwater from Groundwater Cleanup Projects". The Resolution strongly encourages "the dischargers of extracted groundwater from groundwater cleanup projects to reclaim their effluent to the extent technically and economically feasible" and "discharge to Public Owned Treatment Works (POTW)". Direct discharge to surface water will be authorized only when the Regional Board finds "neither reclamation nor discharge to POTW is technically and economically feasible". Due to the base closure, reuse of the treated groundwater is unlikely.

Regional Board Resolution No. 89-39: The Board adopted Resolution No. 89-39, "Incorporation of 'Sources of Drinking Water' Policy into the Water Quality Control Plan" on March 15, 1989. This policy considers "all surface and ground waters of the State to be suitable, or potentially suitable, for municipal or domestic water supply" unless where "the total dissolved solids (TDS) exceed 3,000 mg/l" and "the water source does not provide sufficient water to supply a single well capable of producing an average, sustained yield of 200 gallons per day".

TDS has not been measured as of yet at this site, however, TDS is a parameter that will be measured in future monitoring efforts to determine if the groundwater falls into the drinking water criteria.

18. BASIN PLAN: The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) dated June 21, 1995. The Basin Plan contains water quality objectives and beneficial uses for the surface waters and groundwaters that are contiguous or in the vicinity of the site.

19. BENEFICIAL USES - SURFACE WATER: The existing and potential beneficial uses of the contiguous surface water (San Pablo Bay) adjacent to the Site include:

- a. Contact and non-contact water recreation;
- b. Wildlife habitat;
- c. Fish migration and spawning;
- d. Industrial service supply;
- e. Navigation;
- f. Commercial and sport fishing;
- g. Preservation of areas of special biological significance;
- h. Estuarine habitat;
- i. Warm fresh water habitat; and
- j. Agricultural supply.

20. BENEFICIAL USES - GROUNDWATER: The existing and potential beneficial uses of groundwater in the vicinity of the site include:

- a. Municipal and domestic water supply;
 - b. Industrial process water supply;
 - c. Industrial service water supply; and
 - d. Agricultural water supply.
21. The discharger has caused or permitted, and threatens to cause or permit, waste to be discharged or deposited where it is or probably will be discharged to waters of the State and creates or threatens to create a condition of pollution or nuisance.
 22. California Environmental Quality Act (CEQA): 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, Title 14 of the California Code of Regulations.
 23. SCOPE OF THIS ORDER: This Order contains tasks for characterization of polluted groundwater, sediment and soil at the site and evaluation and implementation of the interim and final corrective actions for on-site and /or off-site pollution attributable to the Discharger. The tasks are necessary to remediate the pollution and threatened pollution of the surface water and groundwater posed by the migration of the contaminants.
 24. PUBLIC HEARING: The Board has notified the Discharger and interested agencies and persons of its intent under the 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.

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

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the U. S. Navy and the U. S. Defense Supply Logistics Agency shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

1. DISCHARGE OF WASTE: The discharge of wastes, nonhazardous or hazardous materials in a manner which will degrade, or threaten to degrade, water quality or adversely affect, or threaten to adversely affect, the beneficial uses of the waters of the State is prohibited.
2. POLLUTION MIGRATION: Migration of pollutants through surface or subsurface transport to waters of the State is prohibited.
3. POLLUTION MIGRATION CAUSED BY INVESTIGATION AND REMEDIATION: Activities associated with the subsurface investigation and cleanup, that will cause significant adverse migration of pollutants, are prohibited.

B. SPECIFICATIONS

1. NUISANCE: 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. POLLUTION ASSESSMENT: The discharger shall conduct the investigation necessary and define the current local hydrogeologic conditions, and the lateral and vertical extent of the soil, sediment, and groundwater pollution.
3. CLEANUP GOALS- SOILS, SEDIMENTS AND GROUNDWATER: The cleanup goals for the soils, sediments, and groundwater shall be consistent with the State Board Resolutions Nos. 68-16 and 92-49, and Chapters 15 and 16 of the California Code of Regulations.

C. PROVISIONS

The discharger shall comply with all Prohibitions and Specifications in accordance with the following time schedule:

COMPLETION DATE/TASK:

1. **TASK: UNDERGROUND AND ABOVEGROUND STORAGE TANK INVENTORY**

COMPLETION DATE: January 15, 1996. Submit a technical report acceptable to the Executive Officer pursuant to the request letter dated July 5, 1995.

2. **TASK: SEMIANNUAL GROUNDWATER MONITORING REPORTS**

COMPLETION DATE: Every 6 months, starting 1996. Submit a Semiannual Groundwater Monitoring Report, acceptable to the Executive Officer, as specified in the FINAL NAVAL FUEL DEPOT POINT MOLATE SHORELINE/LANDFILL INVESTIGATIONS AND QUARTERLY GROUNDWATER SAMPLING FIELD WORK PLAN/SAMPLING ANALYSIS PLAN, dated January 27, 1994 and as may be modified by the Executive Officer. A list of monitoring wells included in the sampling efforts is attached.

3. **TASK: COMPLETION REPORT FOR CONSTRUCTION OF THE EXTRACTION TRENCH**

COMPLETION DATE: January 1, 1996. Submit a technical memorandum, acceptable to the Executive Officer, upon completion of the construction. This report shall include, but is not limited to:

- a. As-built drawings for the biopad and trench
- b. Any modifications from the approved design with rationale

4. **TASK: OPERATION, MAINTENANCE AND PERFORMANCE EVALUATION OF**

THE GROUNDWATER EXTRACTION TRENCH

COMPLETION DATE: January 1, 1996. Prepare a technical report, acceptable to the Executive Officer, which shall include but is not limited to:

- a. Operation and Maintenance Plans
- b. Performance Evaluation of the Extraction Trench: a plan to prove the effectiveness of this interim removal action (e.g. periodic sediment analysis, groundwater and surface water monitoring between the trench and the Bay)

5. **TASK: PERFORMANCE EVALUATION OF THE CURRENT WASTEWATER TREATMENT FACILITY WITH ADDITIONAL POLLUTANT AND HYDRAULIC LOADING FROM THE EXTRACTED GROUNDWATER**

COMPLETION DATE: January 1, 1996. Submit a technical report, acceptable to the Executive Officer, that includes the monitoring results of the current wastewater treatment facility with the addition of pollutant and hydraulic loading from the introduction of the extracted groundwater. The monitoring results should be obtained pursuant to Regional Board staff correspondence dated September 29, 1995. The report should include but is not limited to:

- a. Discussion of the treatment ponds performance with the addition of pollutant and hydraulic loading to the wastewater facility
- b. Specifications of current wastewater treatment facility including capacities, treatment processes, efficiencies, and current operation and maintenance plan
- c. Recommendations for modifying current wastewater treatment facility with the additional pollutant and hydraulic loading, if necessary.

6a. **TASK: DRAFT BASELINE SEDIMENT QUALITY EVALUATION WORK PLAN**

COMPLETION DATE: January 1, 1997

6b. **TASK: FINAL BASELINE SEDIMENT QUALITY EVALUATION WORK PLAN**

COMPLETION DATE: May 1, 1997

6c. **TASK: DRAFT BASELINE SEDIMENT QUALITY EVALUATION REPORT**

COMPLETION DATE: January 1, 1998. Submit a technical report, acceptable to the Executive Officer, that describes the data from the shoreline sediment analysis. The report should include but is not limited to:

- a. Chemical and biological data from the shoreline sediment analysis
- b. Discussion of chemical and biological data, data presented in tabular form and on a site map.
- c. Discussion of nature and extent of shoreline sediment contamination
- d. Feasibility study of remedial alternatives, if necessary

6d. **TASK: FINAL BASELINE SEDIMENT QUALITY EVALUATION REPORT**

COMPLETION DATE: May 1, 1998. Submit a technical report, acceptable to the Executive Officer, that describes the data from the shoreline sediment analysis. Refer to Provision No. 6c. A schedule for sediment remedial action/remedial design, if necessary, will be established by the Board following review of the Final Baseline Sediment Quality Evaluation.

7a. **TASK: DRAFT INTERIM CORRECTIVE ACTION WORKPLAN FOR FREE PRODUCT REMOVAL FROM GROUNDWATER MONITORING WELLS THAT ARE OUTSIDE THE CAPTURE ZONE OF THE EXISTING EXTRACTION TRENCH**

COMPLETION DATE: February 1, 1996. Submit a technical report, acceptable to the Executive Officer, that evaluates corrective actions for free product removal. The report shall include but is not limited to:

Free product removal from Wells ERM-EW2, MW 10-03, ERM 10-1, MW 11-54, MW 02-07

7b. **TASK: FINAL INTERIM CORRECTIVE ACTION WORKPLAN FOR THE FREE PRODUCT REMOVAL**

COMPLETION DATE: April 1, 1996. Submit a technical report, acceptable to the Executive Officer, that recommends the preferred corrective action(s) for free product removal. The report shall include but is not limited to:

Free product removal from Wells ERM-EW2, MW 10-03, ERM 10-1, MW 11-54, MW 02-07

7c. **TASK: IMPLEMENTATION OF THE CORRECTIVE ACTION FOR THE FREE PRODUCT REMOVAL**

COMPLETION DATE: October 1, 1996. Submit a technical report, acceptable to the Executive Officer, that documents implementation of the preferred corrective action(s) for free product removal. The report shall include but is not limited to:

Free product removal from Wells ERM-EW2, MW 10-03, ERM 10-1, MW 11-54,
MW 02-07

8a. **TASK: DRAFT WORKPLAN FOR INTERIM CORRECTIVE ACTION FOR
HYDRAULIC CONTAINMENT OF CONTAMINATED GROUNDWATER**

COMPLETION DATE: February 1, 1997. Submit a technical report, acceptable to the Executive Officer, that evaluates corrective actions for hydraulic containment of contaminated groundwater beyond the capture zone of the existing trench and the trench extension.

8b. **TASK: FINAL WORKPLAN FOR INTERIM CORRECTIVE ACTION FOR
HYDRAULIC CONTAINMENT OF CONTAMINATED GROUNDWATER**

COMPLETION DATE: June 1, 1997. Submit a technical report, acceptable to the Executive Officer, that recommends the preferred corrective action(s) for hydraulic containment of contaminated groundwater beyond the capture zone of the existing trench and the trench extension.

8c. **TASK: IMPLEMENTATION OF THE INTERIM CORRECTIVE ACTION FOR
HYDRAULIC CONTAINMENT OF CONTAMINATED GROUNDWATER**

COMPLETION DATE: December 1, 1997. Submit a technical report, acceptable to the Executive Officer, that documents implementation of the preferred corrective action(s) for hydraulic containment of contaminated groundwater beyond the capture zone of the existing trench and the trench extension.

9a. **TASK: DRAFT CORRECTIVE ACTION WORKPLAN FOR THE LANDFILL**

COMPLETION DATE: February 1, 1997. Submit a technical report, acceptable to the Executive Officer, that evaluates corrective actions for soil and groundwater contamination caused by the landfill.

9b. **TASK: FINAL CORRECTIVE ACTION WORKPLAN FOR THE LANDFILL**

COMPLETION DATE: June 1, 1997. Submit a technical report, acceptable to the Executive Officer, that recommends the preferred corrective actions for soil and groundwater contamination from impact by the Landfill. A schedule for completing the preferred corrective actions will be established by the Regional Board following review of the reports required by Provision Nos. 9a and 9b.

10a. **TASK: DRAFT DESIGN OF THE BEST AVAILABLE TREATMENT
TECHNOLOGY FOR THE GROUNDWATER**

COMPLETION DATE: January 1, 1996.

10b. TASK: FINAL DESIGN OF THE BEST AVAILABLE TREATMENT TECHNOLOGY FOR THE GROUNDWATER

COMPLETION DATE: March 1, 1996

10c. TASK: COMPLETION REPORT FOR THE CONSTRUCTION AND STARTUP OF THE BEST AVAILABLE TREATMENT FOR THE GROUNDWATER

COMPLETION DATE: June 30, 1996. This completion report shall include:

- a. Operation and Maintenance Plan
- b. Performance Evaluation
- c. As-built drawings
- d. Any modifications from the approved design with rationale

11a. TASK: DRAFT DESIGN OF THE GROUNDWATER EXTRACTION TRENCH EXTENSION

COMPLETION DATE: March 30, 1996. Submit a technical report, acceptable to the Executive Officer, which should include but is not limited to:

- a. Design of the trench extension
- b. Description of any other necessary activities associated with construction of the trench extension
- c. Soil management plan for the excavated soil

11b. TASK: FINAL DESIGN OF THE GROUNDWATER EXTRACTION TRENCH EXTENSION

COMPLETION DATE: May 30, 1996. Submit a technical report, acceptable to the Executive Officer, which shall include but is not limited to:

- a. Design of the trench extension
- b. Description of any other necessary activities associated with construction of the trench extension
- c. Soil management plan for the excavated soil

11c. TASK: COMPLETION REPORT FOR CONSTRUCTION OF THE EXTRACTION TRENCH EXTENSION

COMPLETION DATE: September 30, 1996. Submit a technical report, acceptable to the Executive Officer, which shall include but is not limited to: include:

- a. Operation and Maintenance Plan
- b. Performance Evaluation

- c. As-built drawings for the trench extension
- d. Any modifications from the approved design with rationale

12a. **TASK: DRAFT WORKPLAN ON ASSESSMENT OF CONTAMINATION FROM PAST RELEASES**

COMPLETION DATE: February 1, 1997. Prepare a workplan, acceptable to the Executive Officer, which shall include but is not limited to:

- a. Identify sources of the contamination in soil and groundwater from past releases.
- b. Define the nature of soil and groundwater contamination
- c. Qualitative Human health risk assessment
- d. Qualitative Ecological risk assessment

12b. **TASK: FINAL WORKPLAN ON ASSESSMENT OF CONTAMINATION FROM PAST RELEASES**

COMPLETION DATE: June 1, 1997. Prepare a workplan, acceptable to the Executive Officer, which shall include but is not limited to:

- a. Identify sources of the contamination in soil and groundwater from past releases.
- b. Define the nature of soil and groundwater contamination
- c. Qualitative Human health risk assessment
- d. Qualitative Ecological risk assessment

12c. **TASK: DRAFT REPORT ON ASSESSMENT OF CONTAMINATION FROM PAST RELEASES**

COMPLETION DATE: February 1, 1998. Prepare a technical report, acceptable to the Executive Officer, which shall include, but is not limited to investigation results from Task 12b and a proposal of corrective actions.

12d. **TASK: FINAL REPORT ON ASSESSMENT OF CONTAMINATION FROM PAST RELEASES**

COMPLETION DATE: June 1, 1998. Prepare a technical report, acceptable to the Executive Officer, which shall include, but is not limited to investigation results from Task 12b and a proposal of corrective actions. Schedules for completion of corrective actions will be established following review of the reports required by Task 12d.

13a. **TASK: DRAFT BACKGROUND STUDY OF INORGANICS**

COMPLETION DATE: February 1, 1998. Submit a technical report, acceptable to the Executive Officer, that establishes background concentrations of inorganics at the Site. This report shall include but is not limited to:

- 1) Presentation of data from background investigation
- 2) Comparison of residual soils' inorganic concentrations from sandblast grit disposal areas to background inorganic concentrations.

13b. **TASK: FINAL BACKGROUND STUDY OF INORGANICS**

COMPLETION DATE: April 1, 1998. Submit a technical report, acceptable to the Executive Officer, that establishes background concentrations of inorganics at the Site. Refer to Provision No. 13a.

14a. **TASK: DRAFT CORRECTIVE ACTION WORKPLAN FOR THE SAND BLASTING AREAS**

COMPLETION DATE: July 1, 1998. Submit a technical report, acceptable to the Executive Offer, that evaluates corrective actions for soil and groundwater contamination caused by the sand blasting operation. The report shall include, but is not limited to feasibility study of different remedial alternatives.

14b. **TASK: FINAL CORRECTIVE ACTION WORKPLAN FOR THE SAND BLASTING AREAS**

COMPLETION DATE: September 1, 1998. Submit a technical report, acceptable to the Executive Officer, that recommends the preferred corrective actions for soil and groundwater contamination from impact by the sand blasting operation. A schedule for completing the preferred corrective actions will be established by the Regional Board following review of the reports required by Provision Nos. 14a and 14b.

15. The discharger shall notify the Board of the date and time of any field activity associated with compliance with this Order.
16. The dischargers may, by written request, seek modifications or revisions of this Order or any program or plan submitted pursuant to this Order at any time. This Order and any applicable program, plan, or schedule may be modified, terminated or revised by the Board.
17. If the discharger may be 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. If, for any reason, the dischargers are unable to perform any activity or submit any document within the time required under this Order, the dischargers may make a written request for a specified extension of time. The extension request shall include a justification for the delay, and shall be submitted in advance of the date on which the activity is to be performed or the document is due. The Board staff may propose an amendment to the Order and bring the matter to the Board for consideration.
18. The discharger shall submit to the Board acceptable reports on compliance with the requirements of this Order. It is not the Board's intent to duplicate any reports due under

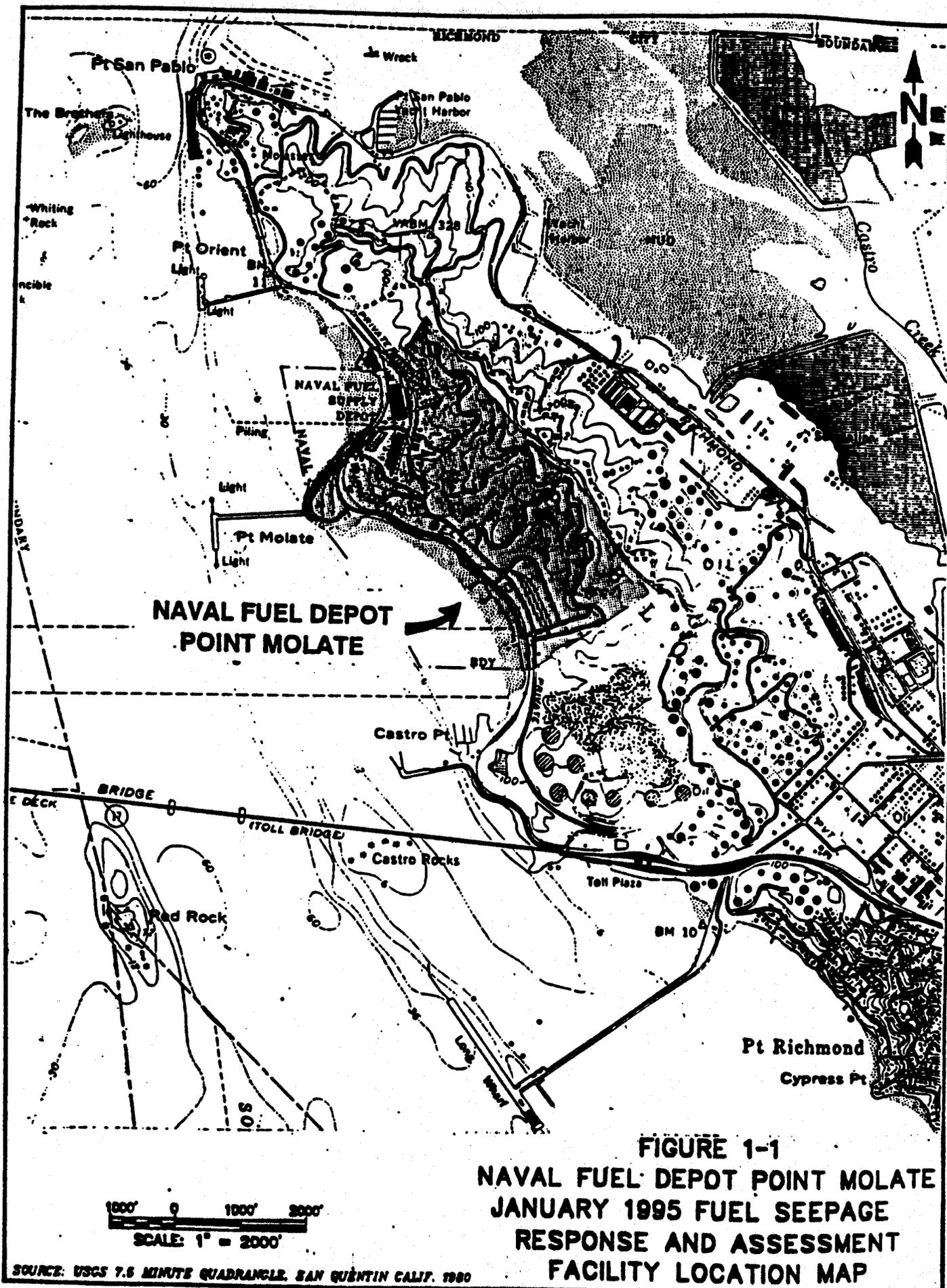
- other Orders therefore any reports due concurrently under this Order may be combined.
19. The discharger is responsible for distributing copies of the documents requested in this Order to the Board, Department of Toxic Substances Control, Department of Fish and Game, Contra Costa Health Department, and to other interested agencies.
 20. The discharger shall file with the Board a report of any material change in the character, location, or quantity of waste discharge. For the purpose of these requirements, this includes any proposed change in boundaries, contours or ownership.
 21. The discharger shall maintain a copy of this Order at the site so as to be available at all times to site operating personnel.
 22. The Board considers the property owner and site operator to have continuing responsibility for correcting any problems within their reasonable control which arise in the future as a result of this Order.
 23. 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 discharge of waste without appropriate federal, state or local permits, authorizations, or determinations.
 24. The Board will review this Order periodically and may revise the requirements 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 December 13, 1995.


Loretta K. Barsamian
Executive Officer

Attachments:

- Figure 1: Location/Site Map
Figure 2: Areas of Concern/Site Map
Table 1: List of Monitoring Wells in the Sampling Plan
Table 2: Comparison between UST and CERCLA Terminology



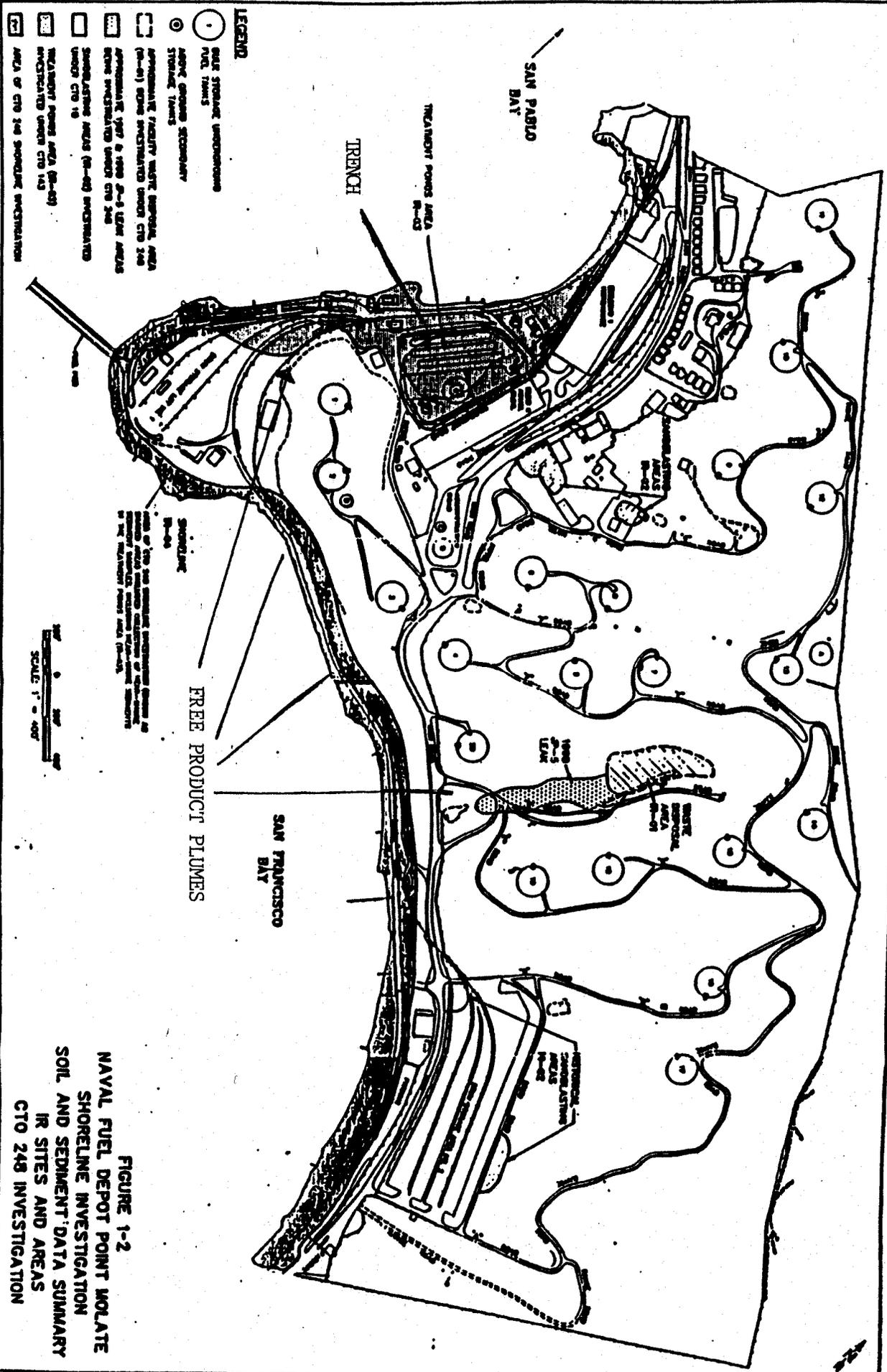


Table 1 List of Monitoring Wells in the Sampling Plan

Well ID	Reason for Monitoring
MW11-02	Background condition at the north end
MW11-92	Trench performance evaluation
MW11-13	Trench performance and BTEX plume definition
MW11-93	Trench performance evaluation
MW11-54	Source control performance evaluation and trench extension determination
MW11-57	BTEX plume definition and verification of solvent detection
MW10-03	Source control performance evaluation
ERM10-1	Source control performance evaluation
ERM-EW2	Source control performance evaluation
MW02-07	Source control performance evaluation
MW10-08	Source control performance evaluation
ERM10-01	Source control performance evaluation
MW10-15	Background condition at the south end
MW11-20	Biopad detection monitoring
MW11-22	Biopad detection monitoring
MW11-23	Biopad detection monitoring

Table 2 Comparison between UST and CERCLA Terminology

UST Terminology used in the Order	Equivalent CERCLA Terminology
Completion Report for Construction of the Extraction Trench	Removal Action Tech Memo for the Extraction Trench
Operation, Maintenance and Performance Evaluation of the Groundwater Extraction Trench	Long Term Operation/Maintenance and Monitoring
Interim Corrective Action for Free Product Removal	Time-Critical Removal Action
Corrective Action Plan for the Landfill	Feasibility Study
Design of the Groundwater Extraction Trench Extension	Design of an Interim Removal Action
Completion Report for Construction of the Extraction Trench Extension	Removal Action Tech Memo for the Extraction Trench Extension
Characterization of Contamination from Past Releases	Remedial Investigation