CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO: 98-028

ADOPTION OF SITE CLEANUP REQUIREMENTS FOR:

ARCO PRODUCTS COMPANY,
CHEVRON U.S.A., INC.,
PHILLIPS PETROLEUM COMPANY, AND
UNION OIL COMPANY OF CALIFORNIA
CITY AND COUNTY OF SAN FRANCISCO
ESPRIT DE CORP

for the property located at

PIER 64 AND ASSOCIATED OFFSITE FACILITIES
CITY AND COUNTY OF SAN FRANCISCO

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

1. **Site Location**: The Pier 64 site ("the site") is located in the southeast section of the City and County of San Francisco in a location locally referred to as China Basin. The site is immediately adjacent to San Francisco Bay and consists of parcels owned by both the San Francisco Port Commission, a subdivision of the City and County of San Francisco ("the Port") and Esprit de Corp ("Esprit"). Historically, the site consisted of two former bulk fuel storage and distribution facilities located on assessor's parcels 3892-01 and 3940-01, on either side of 16th street between Illinois Street and Terry Francois Boulevard, and fuel pipelines running through the site and under 16th Street and east to Pier 64. Site boundaries reach to San Francisco Bay to the East, Illinois Street to the West, 17th Street to the South and Eldorado Street to the North. The site and associated pipelines are shown on the attached map titled *Bulk Oil Storage Facilities* (ENVIRON, 1997).

2. **Site History**:
   Parcel 3892-01: Associated Oil Company and its successor companies Tidewater Associated Oil Company, and Tidewater Oil Company operated a bulk fuel storage and distribution facility on assessor's parcel 3892-01 from approximately 1902 to 1966. Phillips Petroleum Company ("Phillips") operated a bulk fuel storage and distribution facility on assessor's parcel 3892-01 from approximately 1966 to 1969. In 1969 this facility had a total capacity of 4,500,000 gallons. When operational, this facility was used to store and distribute various refined petroleum products, including diesel, kerosene, solvents, gasoline and stove oil until approximately 1969. Underground pipelines connected to Pier 64 carried fuel to the site and these too were closed in 1969.

After closure in 1969, Phillips subleased the site until 1976 to various warehouse and transportation companies. Similar uses have continued to the present. Phillips and/or its subtenants installed two underground petroleum storage tanks in the 1970's. The Port of San Francisco has removed both tanks, as described below.

The State of California owned parcel 3892-01 and the land east of it, including Pier 64, until 1969. The State owned the property through the Board of State Harbor Commissioners for San Francisco Harbor from 1863 until 1957, and through the San Francisco Port Authority from 1957 until 1969. Beginning in 1921, the Board of State Harbor Commissioners had statutory authority to construct, maintain and operate freight storage space, oil tanks, and other oil containers and facilities. Neither the Board of Harbor Commissioners nor the San Francisco Port Authority exist as state agencies today. In 1969, the State transferred the property to the City and County of San Francisco under the San Francisco Port Commission.

The Port removed a 1,000 gallon gasoline tank from parcel 3892-01 in 1987. Tank integrity tests done at the time of the tank removal showed that the tank was intact and had not leaked. No soil staining was visible beneath the tank. The Port removed a second 10,000 gallon diesel tank from parcel 3892-01 in 1997. At the time of removal, the tank showed no obvious punctures or breaks.

Parcel 3940-01: Union Oil Company of California ("UNOCAL") operated a bulk fuel storage and distribution facility on assessor's parcel 3940-01 from approximately 1904 to 1970. In 1969 the facility had a total capacity of 2,200,000 gallons. This facility was used to store and distribute various petroleum products, including diesel, bunker oil, gasoline, and lubricating oil until approximately 1970. The facility included pipelines that connected to Pier 64 at a location approximately 400 feet south of 16th Street. Between 1971 and 1984, Delta Terminals, Inc. owned the property, where it operated a trucking facility. Four underground tanks were located at the property during Delta's ownership. In 1984, Esprit bought the property and presently operates a retail clothing outlet. Esprit removed the four underground tanks in 1985.

Offsite Facilities and Operations Connected to Parcels: Standard Oil Company of California, and its successor company Chevron U.S.A., Inc. ("Chevron"), used pipelines which originated from the site at Pier 64 and extended down 16th Street, to supply its bulk fuel storage facilities located on the north side of 16th Street at its intersection with 8th Street from approximately 1899 until 1974. Chevron used the pipelines to transport gasoline, kerosene, diesel and lubricating oil.

Richfield Oil Corporation, and its successor company ARCO Products Company ("ARCO"), also used pipelines which originated from the site at Pier 64 and extended down 16th Street, to supply its bulk fuel storage facilities located on the south side of 16th Street at its

intersection with 8th Street from approximately 1953 until 1971. ARCO used the pipelines to transport gasoline, stove oil, diesel and bunker fuel.

Maps provided by the Port show that numerous fuel pipelines were located along an easement in 16th street, extending out to Pier 64, where they were used to off-load fuel products from vessels and to move products to the bulk storage facilities described above. Available documentation show that the pipelines still exist within this easement. A portion of the pipelines can be viewed from a utility vault located in 16th Street near the Esprit building. Port files contain photographic records of the pipelines.

In April of 1991, one of the 14 fuel pipelines located at the terminus of 16th Street at the edge of San Francisco Bay began to leak bunker fuel into San Francisco Bay. The Port cleaned up the spill and then in June of 1991 plugged the end of the leaking fuel lines with concrete. As part of its initial response to the leaking lines, the Port had its contractors pump approximately 1,250 gallons of petroleum product and some water from the lines. Additional leaks were detected in September of 1991.

In February of 1992 the Port excavated along the pipelines approximately 20 feet from the shoreline, removed the remaining product from the pipelines there, cut off and permanently capped the pipelines and constructed a containment vault around the capped pipelines. According to hazardous waste manifests retained by the Port, approximately 10,000 gallons of product was removed from the pipelines as part of this effort. The valves attached to the capped pipelines now can be accessed through a locked vault. No known leaks from the pipelines have been observed since 1991.

3. **Recent Investigations**: ENVIRON, under contract to Catellus Development Corporation ("Catellus"), recently completed a subsurface investigation of the Mission Bay area south of the China Basin Channel. The investigation included the collection and chemical analysis of soil and groundwater samples throughout the proposed Mission Bay development area, which includes the site. The subsurface investigation revealed the existence of a free product plume in the southeast corner of the site at the groundwater table, consisting of a mixture of Total Petroleum Hydrocarbons ("TPHs") in the diesel, gasoline and motor oil ranges in measurable concentrations, as shown on the attached map titled *Bulk Oil Storage Facilities* (ENVIRON, 1997). Soil samples taken within the site boundaries contained TPH in the gasoline range at levels up to 490 mg/kg, TPH in the diesel range at levels up to 12,000 mg/kg and TPH in the motor oil range at levels up to 680 mg/kg. Ground water samples taken within the site boundaries contained TPH in the gasoline range at concentrations up to 36 mg/L, TPH in the diesel range at concentrations up to 200 mg/L and TPH in the motor oil range at concentrations up to 1.9 mg/L. ERM-West, under contract to Burlington Northern Santa Fe, encountered similar levels of TPHs in soil and groundwater at the site in a number of samples collected as part of its phase II environmental site assessment of the former ATSF China Basin Railyard. (ERM, March 1997)

The presence of a free product plume presents a potentially continuing source of contamination to groundwater, and, possibly, to San Francisco Bay. This free product and the associated petroleum pipelines create or threaten to create a condition of pollution or nuisance. The mobility of the product in soil and groundwater is not known.

4. **Named Dischargers**: As stated in finding 2, the following companies either operated on or had operations affecting the site during the period when discharges occurred: ARCO Products Company, Chevron U.S.A., Inc., Phillips Petroleum Company, and Union Oil Company of California (UNOCAL). These companies (ARCO, Chevron, Phillips, and UNOCAL), are therefore named as primary dischargers. Additionally, the Board is naming these companies as primary dischargers based upon the Board's knowledge of this site and experience with similar operations throughout the Region, e.g., observation of many sites with numerous leaks and accidental spillage from both underground and above-ground storage tankage and distribution facilities typical of the operations at the site; standards of care and practices of past operations that do not meet current standards that led to discharges; weathered petroleum hydrocarbons still present in close proximity of former storage and distribution facilities several decades after they were last operated; and leakage from "abandoned" distribution pipelines.

   The Board knows that the State of California was the property owner during the time of the discharge and one time or another leased the affected Petroleum Transfer Parcels to one or more of the primary dischargers. However, as of adoption of this Order it still is not clear which agency within the State (or just the State) should be named as a discharger. When it receives the appropriate information, the Board intends to amend this Order and add the State of California as an additional discharger. Recent information provided to Board staff indicates that Texaco Inc. is most likely the successor to Tidewater Associated Oil Company and its predecessors' operations on Parcel 3892-01 and should be considered also as a Primary Discharger. Staff will further review this situation and make a recommendation shortly to the Executive Officer whether to administratively name Texaco Inc. as a discharger to this Order. 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 that party's name to this order.

   The Board is naming the City and County of San Francisco and Esprit as secondarily responsible parties, as they are current owners of the site. Both parties are aware of the discharges at the site and have the ability to act to prevent continuing discharges. However, as long as the City and County of San Francisco and Esprit provide reasonable cooperation and access for investigation and cleanup, the Board will not name them as primary dischargers responsible to complete the requirements of this Order.

5. **Regulatory Status**: This site currently is not subject to Board order. A workplan to investigate the free product plume and the pipelines along 16th Street to Pier 64 has been received.

6. **Site Hydrogeology**: The site is comprised of heterogeneous artificial, man-made fill, dune sand, slope debris, serpentine fill and Bay mud which overlie rocks of the Franciscan formation, including sedimentary, volcanic and metamorphic rocks. Groundwater typically is encountered between four and nine feet below ground surface. Local groundwater flow patterns vary in this area due to the heterogeneous nature of the fill, but the overall direction of shallow groundwater flow in this area is towards San Francisco Bay and is generally northeast to east across the site. Tidal influence has been noted in groundwater monitoring wells up to 50 feet inland of the shoreline.

7. **Interim Remedial Measures**: The only known interim remedial measures taken to date were taken by the Port in 1992 and are described in Section 2, Site History, above.

8. This Order is being issued based on a commingled petroleum hydrocarbon plume in the groundwater, and its provisions assume that the Primary Dischargers will be cooperating in a joint investigation and remediation. If the Primary Dischargers are unable to agree to a joint investigation or remediation, then each of the Primary Dischargers can comply with their requirements under this Order by submitting the required technical reports covering any discharges from their facilities or operations (as discussed in Finding 2 of this Order). It is not the intent of this Order to require any Discharger to investigate and/or remediate contamination that the report of the remedial investigation, as approved by the Executive Officer, shows they did not contribute. Also, in the event that the discharger(s) can demonstrate that no remediation is necessary, based upon the remedial investigation, or fate and transport modeling and/or sampling and monitoring results, a technical report may be prepared and submitted to the Executive Officer during the tenure of this order. At that point the Executive Officer will review the recommendations made and may modify or rescind this order.

9. **Basin Plan**: 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 23 CCR 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and ground waters.

   The potential beneficial uses of groundwater underlying and adjacent to the site include:

a. Municipal and domestic water supply provided Total Dissolved Solids(TDS) are less than 3000 mg/l and more than 200 gallons a day can be pumped from a single well
b. Industrial process water supply
c. Industrial service water supply
d. Agricultural water supply
e. Freshwater replenishment to surface waters

At present, there is no known use of groundwater underlying the site for the above purposes.

10. **Other Board Policies**: 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.

    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. Shallow groundwater at this site is unlikely to be used as a drinking water source.

11. **State Water Board Policies**: State Water 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.

    State Water 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.

12. **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.

13. **Cost Recovery**: Pursuant to California Water Code Section 13304, the discharger is 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.

14. **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.

15. **Notification**: The Board has notified the discharger 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.

16. **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 Phillips, UNOCAL, ARCO and Chevron (or their agents, successors, or assigns) shall cleanup and abate the effects described in the above findings as follows~~:~~. In the event that these entities fail to comply with this Order, the Executive Officer shall inform the City and County of San Francisco and Esprit, that they shall comply with the Order beginning 60 days following such notice, provided that all due dates will be revised accordingly.

A. PROHIBITIONS

1. The discharge of wastes or hazardous substances in a manner which 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 which will cause significant adverse migration of wastes or hazardous substances are prohibited.

B. TASKS

1. REMEDIAL INVESTIGATION WORKPLAN ADDENDUM

COMPLIANCE DATE: 15 days from adoption of order.

Submit a workplan addendum acceptable to the Executive Officer to determine:

a. The current status of all petroleum pipelines and facilities associated with petroleum storage and distribution, including the vertical and lateral extent of soil and groundwater pollution.

b. The workplan addendum shall investigate the petroleum pipeline(s) located in the southeast corner of the site that end at 3rd and Mariposa Streets.

2. **COMPLETION OF REMEDIAL INVESTIGATION**

COMPLIANCE DATE: 60 days after adoption of the order

The discharger shall implement the "Workplan" dated February 5, 1998 and Addendum as specified in Task 1 above, pursuant to the time schedule proposed and as approved by the Executive Officer. The February 5, 1998 "Workplan" addresses the areal extent of the free product plume that has been detected on the site. Additionally, the "Workplan" should evaluate the impacts of pipelines along 16th Street to Pier 64. The technical report shall define the vertical and lateral extent of pollutants in soil and groundwater.

3. **INTERIM REMEDIAL ACTION WORKPLAN**

COMPLIANCE DATE: Within 60 days of completion of task 2.

Submit a workplan acceptable to the Executive Officer that includes the following major components:

a. Evaluate different treatment approaches for addressing both the free product and petroleum transfer pipeline issues.

b. Recommend an interim remedial response based on this evaluation. Justifications for the selection of a remedial option shall be included. Area of potential remediation shall be delineated clearly on a reasonably scaled map. With respect to the pipelines, the remedial work shall permanently remove the potential for future releases of petroleum hydrocarbons from the old transfer pipelines to soil, surface water, or groundwater. Concerning the free product plume, the remedial action shall reasonably remove free product from the site and ensure that dissolved or free product hydrocarbons are not discharged to the Bay and do not pose a threat to the Bay or public health.

c. Propose any pilot tests necessary or appropriate for implementation of the interim remedial action. These tests shall be designed to demonstrate the viability of the proposed remedial measure.

d. Treatment and discharge options shall be identified. If groundwater extraction is selected as a remedial action, then one task will be the completion of an NPDES permit application for discharge of extracted, treated groundwater to waters of the

State. The application must demonstrate that neither reclamation nor discharge to the sanitary sewer is technically or economically feasible.

e. A plan for monitoring any ongoing migration of dissolved or free product petroleum into the Bay shall be clearly defined.

f. The workplan shall specify a proposed time schedule.

4. **COMPLETION OF INTERIM REMEDIAL ACTIONS**

COMPLIANCE DATE: Within 90 days of completion of task 3.

Submit a technical report acceptable to the Executive Officer documenting completion of necessary tasks identified in the Task 3 workplan. For ongoing actions, such as soil vapor extraction or groundwater extraction, the report shall document start-up as opposed to completion.

5. **PROPOSED FINAL REMEDIAL ACTIONS AND CLEANUP STANDARDS**

COMPLIANCE DATE: Within 13 months from adoption of order.

Submit a technical report acceptable to the Executive Officer containing:
a. Results of the remedial investigation
b. Evaluation of the installed interim remedial actions
c. Feasibility study evaluating alternative final remedial actions
d. Risk assessment for current and post-cleanup exposures
e. Recommended final remedial actions and cleanup standards
f. Implementation tasks and time schedule

Item c shall include projections of cost, effectiveness, benefits, and impact on public health, welfare, and the environment of each alternative action.

Items a through c should consider the guidance provided by Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300), CERCLA guidance documents with respect to remedial investigations and feasibility studies, Health and Safety Code Section 25356.1(c), and State Board Resolution No. 92-49 as amended ("Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304").

C. 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 Operation and Maintenance (O&M)**: 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.

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 raised by the discharger 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 discharger 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 discharger.

5. **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.

6. **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).

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

   a. City and County of San Francisco Department of Public Health

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

9. **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 discharger shall report such discharge to the Regional Board by calling (510) 286-1255 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.

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

11. **Periodic SCR Review and Changes of Ownership and Responsibility**: The Board will review this Order periodically and may revise it when necessary. The discharger may request revisions and upon review the Executive Officer may recommend that the Board revise these requirements. The dischargers shall inform the Board of any changes in ownership or operation of the site covered by this order that they are aware of.

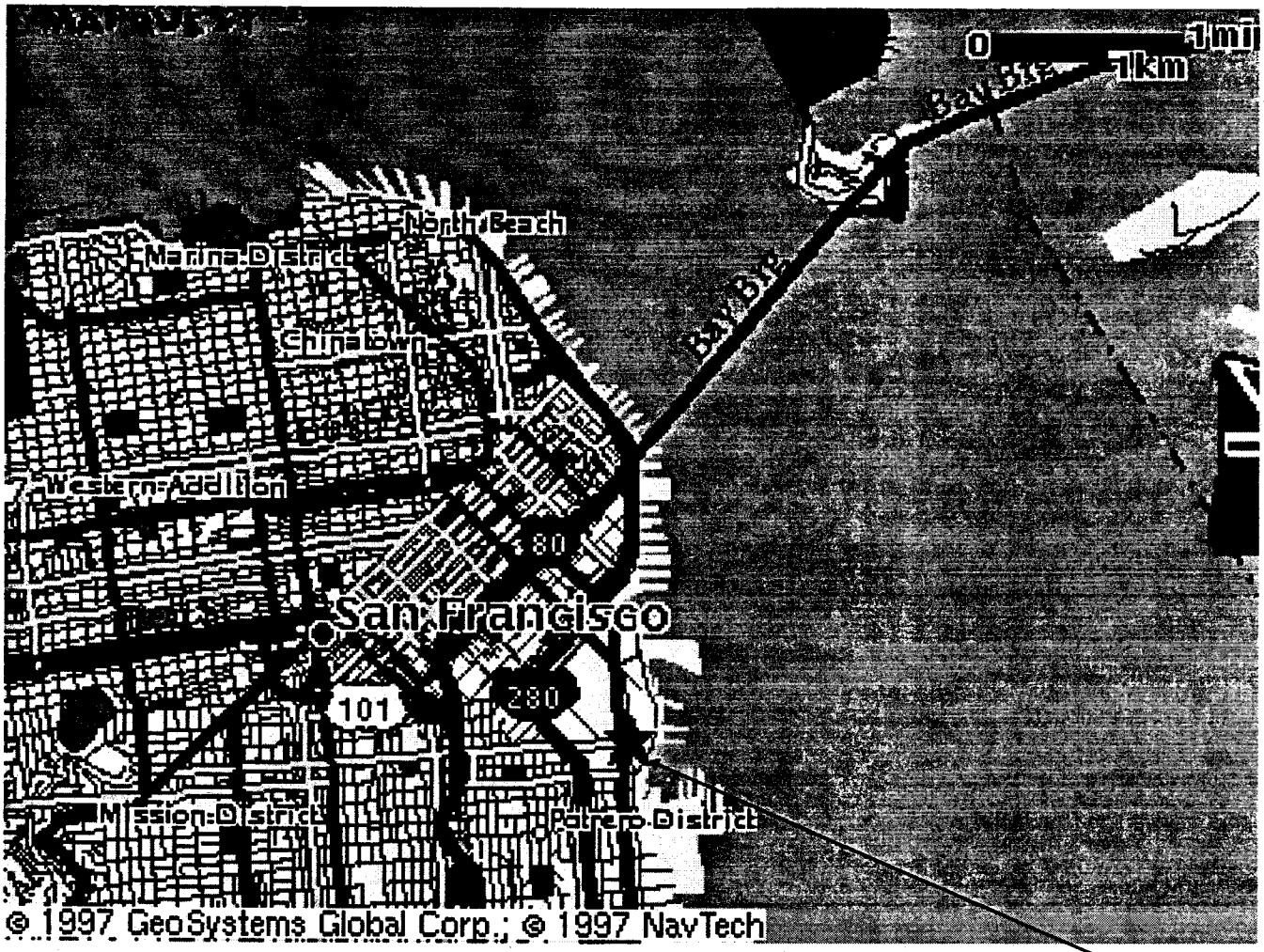
I, Lawrence P. Kolb, Acting Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on April 15, 1998.

Lawrence P. Kolb
Acting Executive Officer

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

Attachments: Bulk Oil Storage Facilities Map

Appendix C (Site Map)



Petroleum Hydrocarbon Investigation & Remediation @ Mission Bay Vicinity Pier 64 and 16th Street