STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

STAFF SUMMARY REPORT
STAFF: PRIYA GANGULI
MEETING DATE: March 8, 2006

ITEM: **10**

SUBJECT: **ExxonMobil, Former Terminal Operator, and the Port of San Francisco, Land Owner of the Former Mobil Bulk Terminal 04-394, 440 Jefferson Street, City and County of San Francisco – Adoption of Site Cleanup Requirements**

CHRONOLOGY: There are no existing Water Board Orders for this Site. Water Board required submittals and actions are summarized in Appendix A.

DISCUSSION: The Tentative Order (Appendix B) would establish a comprehensive plan to remediate petroleum hydrocarbon contamination in soil and groundwater at this Site. The primary purpose of the Order is to:

a) Provide a schedule for Site investigations and remedial actions;
b) Define the extent of vertical and horizontal petroleum hydrocarbon contamination in soil and groundwater;
c) Evaluate the potential for soil vapor intrusion into buildings in the Site vicinity;
d) Evaluate potential impacts to human health and the environment;
e) Identify other potential sources of petroleum hydrocarbon contamination;
f) Require the removal and/or remediation of hydrocarbon contamination from the subsurface, thereby mitigating contaminant discharge to San Francisco Bay; and
g) Establish a long-term risk management plan to prevent or minimize human exposure to contaminants managed in place.

The Former Mobil Bulk Terminal (Site) is located in San Francisco's Fisherman's Wharf area. From the 1900s to the present, industry as well as local businesses and restaurants have occupied the area around the Site. ExxonMobil's predecessor companies leased the Site from the Port of San Francisco (Port) for approximately 55 years, operating a diesel and gasoline bulk storage and dispensing facility. Gasoline was stored at the Site in an underground storage tank (UST), and diesel was stored in two above ground storage tanks (AST). Evidence of subsurface hydrocarbon contamination was first discovered in 1986 when the UST was removed. Subsurface investigations and remediation efforts began in the early 1990s following a 700 gallon surface diesel spill. The Water Board assumed regulatory oversight of cleanup activities in 1999, and required submittals and actions since then are summarized in Appendix A.

ExxonMobil is named as a Primary Discharger in the Tentative Order because ExxonMobil is responsible for petroleum hydrocarbon releases to soil and groundwater. The Port of San Francisco is named as a Secondary Discharger because the Port held title to and managed the Site property during the time of the releases and currently holds title to the Site. The Port will be responsible for compliance only if ExxonMobil fails to comply with the requirements of the Tentative Order.

Addressing subsurface contamination at the Site is challenging for many reasons, such as tight access to Site, handling fill material from the 1906 earthquake that has been impacted with heavy metals (i.e., lead), dense development, and traffic. The subsurface contamination at the Site has been the source of significant Stakeholder interest in recent years. Staff have worked closely with ExxonMobil, the Port, and Stakeholders (tenants, business owners, recreational users) to ensure that the Stakeholders' comments are considered and their questions are addressed. Staff will continue to hold public meetings and circulate submitted documents for public review throughout the cleanup process outlined in the Tentative Order.

Staff received comment letters (Appendices C and D) from:

- Members of the Fisherman's Wharf Environmental Quality Advisory Committee (made up of local Stakeholders);
- TRC (consultant) on behalf of ExxonMobil;
- The Port of San Francisco; and
- Luce Forward LLP on behalf of F. Alioto-Lazio Fish Company (leaseholder of property adjacent to Site).

Staff have provided detailed responses to all public comments (Appendix E) and have incorporated the majority of the requested revisions into the Tentative Order. Staff does not anticipate the involved parties contesting the Tentative Order.

RECOMMEN-DATION: Adoption of the Tentative Order

FILE NO. 2169.6050

APPENDICES:
A – Water Board Required Submittals and Actions
B – Tentative Order
C – Summary of Public Comments
D – Public Comment Letters
E – Water Board Staff Responses to Individual Public Comments

APPENDIX A

WATER BOARD REQUIRED SUBMITTALS AND ACTIONS

Appendix A. Water Board Required Submittals and Actions

Date Requested	Recipient	Document/Action Requested & Submittal Date
Nov 11, 2001 E-mail	ExxonMobil	Copies of Historic Reports and Site Summary Report ▪ Jan 22, 2002 Submitted & Approved
March 11, 2003 Water Code Letter	ExxonMobil	Technical Information Report: identify other potential responsible parties, characterize extent of contamination, identify potential conduits and/or barriers to contaminant migration. ▪ Apr 28, 2003 Submitted & Approved
Feb 11, 2003 Mtg & E-mail	Port of SF	Provide ExxonMobil with lease/occupancy history ▪ Feb 27, 2003 Submitted & Approved
April 10, 2003 Verbal & E-mail	ExxonMobil	Addendum to Site Summary Report ▪ Apr 11, 2003 Submitted & Approved
April 29, 2003 Verbal & E-mail	Port of SF	Use of Port's office - Site File Repository for public access in addition to Water Board's Oakland Office ▪ Apr 30, 2003 Approved
Jan 13, 2004 E-mail	Port of SF	List of Historic Land Use and Lease Information ▪ July 2, 2004 Submitted & Approved
Feb 2004 Verbal & E-mail	ExxonMobil	Coordinate Public Outreach Mtgs to Address Public Comments and Questions ▪ Mtgs held Mar 11, Oct 27, & Dec 8, 2004 (Mtg descriptions below)
Feb 19, 2004 Water Code Letter	ExxonMobil	Environmental Risk Ass'mt & Feasibility Study, and Remedial Action Plan ▪ Aug 31, 2004 Environmental Risk Ass'mt & Feasibility Study Submitted ▪ Dec 31, 2004 Deadline for Submittal of Public Comment Letters ▪ Incorporated Remedial Action Plan into SCR
Mar 11, 2004 Public Mtg	ExxonMobil	Stakeholders Meeting per Feb 2004 requirement (high attendance)
March 30, 2004 Mtg	ExxonMobil	Need for a more extensive tidal study and need to analyze samples using "silica-gel cleanup" ▪ May 14, 2004 Agreed to include silica-gel methods in next groundwater sampling event ▪ May 2004 Tidal Study included in Aug. 2004 Environmental Risk Ass'mt & Feasibility Study
Oct 27, 2004 Public Mtg	ExxonMobil	Technical Workgroup Meeting per Feb 2004 requirement (full attendance)
Dec 8, 2004 Public Mtg	ExxonMobil	Stakeholders Meeting per Feb 2004 requirement (low attendance)
Jan 4, 2005 Water Code Letter	Other PRPs	Technical Report on Site History ▪ May 2005 Submitted (some incomplete) **Complete Submittals**: - ARCO (Atlantic Richfield Co., formerly Richfield Oil Co.) - Del Monte Foods, Inc. **Incomplete Submittals** (Request for Additional Information Pending): - Shell Oil Company - Unocal - ChevronTexaco
May 6, 2005 Comment Letter	ExxonMobil	Comments and Request for Additional Information on Environmental Risk Ass'mt & Feasibility Study (Water Board Staff Response to Public Comment Letters included as attachment) ▪ June 15, 2005 Submitted & Partially Approved
Oct 26, 2005 Public Mtg	ExxonMobil	Site update meeting with Fisherman's Wharf Environmental Quality Advisory Committee (EQAC), ExxonMobil, Port, and Water Board ▪ Water Board preparation of SCR and opportunities for public involvement ▪ Port's Draft EIR for building demolition or rehabilitation
Nov 9, 2005 Public Mtg	ExxonMobil	Meeting to address public concerns regarding need for additional Site characterization and coordination between ExxonMobil's remediation efforts and Port's land use plans
Jan 5 & 11, 2006 Public Mtgs	Water Board	Public meetings to explain content and organization of Tentative Site Cleanup Requirements Order, and review comment period deadlines
Feb 16, 2006 Public Mtg	Water Board	Public meeting to review Water Board staff responses to public comment letters

APPENDIX B

TENTATIVE ORDER

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

TENTATIVE ORDER

SITE CLEANUP REQUIREMENTS FOR:

EXXONMOBIL AND THE PORT OF SAN FRANCISCO

FORMER MOBIL BULK TERMINAL 04-394

for the property located at

440 JEFFERSON STREET
CITY AND COUNTY OF SAN FRANCISCO

TABLE OF CONTENTS

ACRONYMS and DEFINITIONS

µg/L	Microgram Per Liter (also see acronym 'ppb')
ARCO	Atlantic Richfield Company
AST	Aboveground Storage Tank
Board	San Francisco Bay Regional Water Quality Control Board
BTEX	Benzene, Toluene, Ethylbenzene, and Xylene
CD	Compact Disk
CEQA	California Environmental Quality Act
DEIR	Draft Environmental Impact Report
Discharger	ExxonMobil and Port of San Francisco
DTSC	Department of Toxic Substances Control
DWQ	Division of Water Quality
EQAC	Fisherman's Wharf Environmental Quality Advisory Committee
EPA	Environmental Protection Agency
ERA/FS	Environmental Risk Assessment and Feasibility Study
ESL	Environmental Screening Level
fbg	Feet Below Grade
Fig	Figure
GP Resources	General Petroleum Resources (not affiliated with ExxonMobil predecessors)
IRAP	Interim Remedial Action Plan
LPH	Liquid Phase Hydrocarbons
NPDES	National Pollutant Discharge Elimination System
ORC	Oxygen Release Compound
OES	Office of Emergency Services
PDF	Portable Data Format
Port	Port of San Francisco
ppb	Part Per Billion (also concentrations of µg/L in water or µg/kg in sediment)
ppm	Part Per Million (also concentrations of mg/L in water or mg/kg in sediment)
Q	Quarterly
QA/QC	Quality Assurance/Quality Control
RAP	Remedial Action Plan
SCR	Site Cleanup Requirements
Site	Former Mobil Bulk Terminal at 440 Jefferson Street, San Francisco
SMP	Self-Monitoring Program
SWPPP	Storm Water Pollution Prevention Plan and Best Management Practices
TPH	Total Petroleum Hydrocarbons
TPH-d	Total Petroleum Hydrocarbons as Diesel
TPH-g	Total Petroleum Hydrocarbons as Gasoline
UST	Underground Storage Tank
VES/ARS	Vapor Extraction System/Automatic Recovery System

FINDINGS

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

1) Site Location

The Former Mobil Bulk Terminal 04-394 is located at 440 Jefferson Street in San Francisco (Site). The Site encompasses an approximately 70 by 120 foot rectangular lot between Leavenworth and Hyde Streets in the Fisherman's Wharf area. This area is zoned for industrial and commercial use. Restaurants and retail shops are located to the south and west of the Site and fish processing plants and storage facilities are located to the north and east. The shoreline of San Francisco Bay is less than 100 feet north of the Site (Fig 1).

2) Site Ownership and Operation

The shoreline area of Fisherman's Wharf, including the Site, was owned by the State of California until it was transferred to the City of San Francisco under the Burton Act of 1969. The Port, an enterprise department of the City, holds the property in trust for the people of California. Per the Burton Act, the Port has legal jurisdiction and operational control of the property and can lease the property to various businesses and companies. Site ownership and operational history is summarized below in Table 1.

Table 1. Site Ownership and Lease History

Date	Owner/ Jurisdictional Authority	Lessee	Operation	Product Storage and Capacity
Mid-1930's to 1990	***prior to 1969*** State of California ***1969 to present*** Port of San Francisco	General Petroleum (predecessor of Mobil Oil) & Mobil Oil (predecessor of ExxonMobil)	Diesel and gasoline bulk storage and dispensing facility	1,000 gallon gasoline UST (removed in 1986) 20,000 gallon diesel AST (removed in early 1990s) 150,000 gallon diesel AST (removed in early 1990s)
1990 to 1992	Port of San Francisco	*GP Resources (not affiliated with ExxonMobil) **sublease** from Mobil Oil	Marine diesel bulk storage and dispensing facility (boat fueling dock)	20,000 gallon diesel AST (removed in early 1990s) 150,000 gallon diesel AST (removed in early 1990s)
1992 to Present	Port of San Francisco	*GP Resources	Marine diesel bulk storage and dispensing facility (boat fueling dock)	Two 20,000 gallon diesel ASTs (installed in 1995)

*Note: GP Resources is not affiliated with General Petroleum, Mobil Oil, or ExxonMobil

ExxonMobil, under the predecessor names of General Petroleum and Mobil Oil, leased the Site for approximately 55 years, from the mid-1930's until 1992. ExxonMobil's predecessor companies operated the Site as a diesel and gasoline bulk storage and dispensing facility. Gasoline was stored in a steel underground storage tank (UST) (1,000 gallons) and diesel was stored in two above ground storage tanks (AST) (20,000 and 150,000 gallons) (Fig 2). From 1990 to 1992, Mobil Oil subleased the property to GP Resources (no relation to ExxonMobil or predecessor companies). The lease with the Port was formally transferred to GP

Resources in 1992. GP Resources maintains their lease to date and operates the facility as a marine diesel fueling station. Marine diesel is stored in two 20,000 gallon ASTs which were installed in 1996. Marine diesel is dispensed via pipelines to an off-site boat fueling dock. In 2001, the Port installed new double-walled piping from the GP Resources tank yard to the fuel dock at Hyde Street Harbor. Most of the Site's pipelines are now aboveground, and all piping is double-walled. The Site currently has no underground petroleum storage tanks.

3) Purpose of Order

The purpose of this Order is to:

a) Provide a schedule for Site investigations and remedial actions;

b) Define the extent of vertical and horizontal petroleum hydrocarbon contamination in soil and groundwater;

c) Evaluate the potential for soil vapor intrusion into buildings in the Site vicinity;

d) Evaluate potential impacts to human health and the environment;

e) Identify other potential sources of petroleum hydrocarbon contamination;

f) Require the removal and/or remediation of hydrocarbon contamination from the subsurface, thereby remediating the soil and groundwater and mitigating contaminant discharge to San Francisco Bay; and

g) Establish a long-term risk management plan to prevent or minimize human exposure to contaminants managed in place.

4) Site History

a) Prior to the late 1890's, the Site vicinity was located in a shallow cove of San Francisco Bay and completely submerged with three to seven feet of water. In the early 1900s, a redwood retaining wall (erroneously referred to as a "seawall" in previous documents) was constructed. After construction of the retaining wall, the area south of the wall, including the Site location, was filled with a mixture of natural backfill likely originating from local excavations and assorted urban waste and debris from building demolition associated with the 1906 earthquake.

b) ExxonMobil's predecessor company constructed a bulk storage facility at the Site sometime prior to 1935. Both USTs and ASTs were maintained on-site. In December 1986, a 1,000 gallon gasoline UST was removed. Soil samples confirmed the presence of both gasoline and diesel hydrocarbons, indicating petroleum hydrocarbons had been released. In response, one groundwater monitoring well was installed downgradient from the former UST location.

c) On February 23, 1990, during Mobil Oil's operation of the Site, an estimated 336 to 692 gallons of diesel were released at the Site when a 20,000 gallon AST was overfilled by Olympian Oil Company. According to cleanup records, approximately 295 gallons of product were recovered from the tank containment area. The subsequent Site investigation concluded that about 75 cubic yards of soil (the top one-foot of soil within the bermed area) had been impacted. According to records, the impacted soil was removed during the 1995 soil excavation activities (see Finding No. 4i, *Site History*).

d) In 1990, the Dolphin Swimming and Boating Club (Dolphin Club) and the Friends and Concerned Citizens of Aquatic Park jointly collected and submitted to the Port 114 affidavits from members of the public noting the presence of "fuel slicks

or like fluids floating on the surface of Aquatic Park", located northwest of the Site (Fig1). Photographs of oil sheens on Bay water under overhanging pipelines were also submitted.

e) In 1990 GP Resources took over Site operations and opened a marine diesel fueling station (see Finding No. 2, *Site Ownership and Operation*).

f) ExxonMobil installed twelve additional groundwater monitoring wells in 1991 and quarterly groundwater monitoring was initiated.

g) In 1992, the San Francisco Department of Public Health, through the State Water Board's Local Oversight Program, began overseeing cleanup activities at the Site.

h) In 1994 and 1995, ExxonMobil installed a vapor extraction system/automatic recovery system (VES/ARS). The system included a product recovery trench (approximately 2-ft wide and 8-ft deep) along the northern boundary of the Site, nine recovery wells, and underground piping (Fig 2). Due to the viscous nature of the subsurface hydrocarbons, the system became clogged and pumping was discontinued after a brief period of operation.

i) In 1995, ExxonMobil removed approximately 980 cubic yards (1,470 tons) of soil from the Site (Fig 2). Of this total, approximately 200 cubic yards (300 tons) was removed to install a concrete slurry wall (four to five feet wide by five to six feet deep) around the perimeter of the Site. The slurry wall was constructed to reinforce adjacent building foundations prior to excavation (not as contaminate containment wall). Approximately 780 cubic yards (1170 tons) was removed in an effort to address hydrocarbon-impacted soil. Soil was excavated to a depth of seven feet below grade (depth to groundwater). Lateral excavation north, east, and west was completed to the maximum extent allowed by the slurry wall and surrounding buildings. To the south, excavation extended until vapor and visual screening suggested soil hydrocarbon concentrations in the vadose zone were less than 100 ppm.

j) In 1995, Department of Toxic Substances Control (DTSC) approved ExxonMobil's request to reclassify a portion of the excavated Site soil from hazardous waste to nonhazardous waste. Elevated lead and arsenic concentrations were the constituents driving the original hazardous waste classification. Soil containing elevated arsenic concentrations was localized to distinct area of the Site, so ExxonMobil segregated soil from this area and disposed of it separately, as hazardous waste. DTSC evaluated the analytical data associated with soil containing elevated lead concentrations and determined that "soil waste located at the Mobil Bulk Terminal possesses mitigating physical and chemical characteristics which render it insignificant as a hazard to human health and safety, livestock, and wildlife. Therefore, the Department...grants its approval...to classify and manage the contaminated soil waste...as nonhazardous."

k) From 1992 to 2000, ExxonMobil conducted quarterly groundwater pumpouts from wells to remove liquid phase petroleum hydrocarbon. From 2000 to the present, absorbent socks have been used in groundwater wells to passively remove petroleum. Additional historic remediation efforts employed by ExxonMobil include groundwater pumpout during Site soil excavation activities described above, and, in 1997, soil vapor extraction.

l) In 1996, GP Resources installed two new 20,000 gallon ASTs. These tanks remain onsite to date.

m) In 1999, regulatory oversight of the Site was transferred from the San Francisco Department of Public Health's Local Oversight Program to the San Francisco Regional Water Quality Control Board's Above Ground Tank Program. The Water Board issued several formal (13267 Water Code Letters) and informal requirements to ExxonMobil and the Port requesting Site background information and investigation reports (see Table 3, *Water Board Required Submittals and Actions*).

n) In October 2005, the San Francisco Planning Department issued a Draft Environmental Impact Report (EIR) for Wharf J-10, located immediately north of the Site (location of "Building J-10" in Fig.1). The Wharf J-10 EIR analyzes environmental effects that could result from 1) demolition of the Wharf J-10 deck, substructure and building; 2) placement of rip rap to stabilize the shoreline; 3) constructing new fishing industry facilities by current tenants on the Wharf J-10 site; and 4) potential other future fishing industry-related facilities and buildings. The Draft EIR public comment period closed on November 29, 2005; the San Francisco Planning Department is overseeing the production of written responses to public comments prior to issuing a Final EIR. Pursuant to California Environmental Quality Act (CEQA) requirements, the Wharf J-10 EIR includes a study of alternatives to the project. One of the alternatives assumes preservation of the Wharf J-10 shed building, which would require independent bracing and stabilization of the shed structure while the deck and substructure are demolished and rebuilt. Once the Final EIR is certified as complete (targeted for Spring 2006), the Port Commission can consider the proposed demolition and rebuild options described above.

5) Named Dischargers

a) Herein, the term Discharger shall refer to ExxonMobil and the Port of San Francisco, as further described below.

b) ExxonMobil is named as a Primary Discharger because ExxonMobil is responsible for petroleum hydrocarbon releases to soil and groundwater. ExxonMobil (under the predecessor companies Mobil Oil and General Petroleum) operated a gasoline and diesel bulk storage and dispensing facility at the Site from approximately 1935 to 1990. Both gasoline and diesel releases were reported while ExxonMobil's predecessors operated the Site (see Finding Nos. 4b and 4c, *Site History*). Data demonstrate these releases have impacted soil and groundwater in the Site vicinity (Finding No. 13, *Current Extent of Hydrocarbon Contamination*).

c) The Port of San Francisco is named as a Secondary Discharger because the Port held title to and managed the Site property during the time of the releases and currently holds title to the Site. The Port will be responsible for compliance only if ExxonMobil fails to comply with the requirements of this Order. In the event ExxonMobil fails to comply with this Order, the Port shall be notified in writing of its obligation to meet the specified task(s). The Water Board will evaluate deadlines as necessary to determine whether the Port has sufficient time to comply.

d) In October 1994, the City and County of San Francisco (on behalf of the Port) and ExxonMobil signed an Access Agreement, which outlines the parties' private agreement on financial responsibility for remediation costs relating to contamination resulting from ExxonMobil's former operations at the Site.

e) If additional information is submitted indicating that other parties caused or permitted any waste to be discharged on the Site where it entered or could have entered waters of the state, the Board will consider adding those parties' names to this order (see Finding No. 10b for additional information regarding potential hydrocarbon sources).

6) Regulatory Status

No prior Waste Discharge Requirement or Site Cleanup Requirement orders have been issued for the Site. The Port maintains a Storm Water Pollution Prevention Plan and Best Management Practices (SWPPP) for the Hyde Street Commercial Fishing Harbor, San Francisco, California, which includes the Site. The SWPPP, which was updated in 2002, was prepared in response to the requirements of the State Water Resources Control Board's General Permit Number CAS000001 for storm water runoff from industrial sites.

7) Geology

The elevation of the Site is approximately ten feet above mean sea level. The topography is generally flat and regionally rises offsite to the south. The Site is constructed on approximately 17 feet of fill material consisting of a mixture of clays, silts, sands, and gravels, as well as debris, such as woodchips, bricks, and glass from building demolition associated with the 1906 earthquake and fire. Loose sands and silty clays underlie the fill, which are underlain by approximately 125 feet of undifferentiated Quaternary sediments (bay mud) consisting of interbedded sands, clays, and sandy clays. The bay mud lies nonconformably on the highly deformed Franciscan basement.

8) Surface Water

The Site is located within the San Francisco Bay Central Basin, approximately 100 feet south of San Francisco Bay. In the early 1900s, a redwood retaining wall (erroneously referred to as a "seawall" in previous documents) was constructed along the shoreline north of the Site. The retaining wall is considered to be permeable to water, and it is assumed groundwater from the Site discharges to the Bay. The shoreline is covered with rip-rap.

9) Groundwater

The Site is located within the San Francisco Sand Dune Area Basin, which is a part of the San Francisco Bay Basin. Groundwater is tidally influenced and fluctuates from approximately four to nine feet below grade (fbg). Groundwater flow direction is north, toward the Bay.

10) Petroleum Hydrocarbon Sources

a) Groundwater and soil data indicate that petroleum hydrocarbon contamination persists at the Site and a hydrocarbon plume emanates from the Site (see Finding No. 13, *Current Extent of Hydrocarbon Contamination*).

b) Groundwater data suggest there may be additional offsite sources of petroleum hydrocarbon that commingle with the Site plume. Based on a review of historic maps, the Discharger identified the following potential additional hydrocarbon sources in the Site vicinity:
   - Aboveground storage tanks (ASTs) that existed east of the Site;
   - Underground storage tanks (USTs) west of the Site at Hyde Street Pier;
   - Former AST farm and UST located east of Leavenworth Street;
   - Former AST farm located on the southeast corner of Jefferson and Leavenworth Streets;
   - Former tanks located on the southwest corner of Jefferson and Leavenworth Streets;
   - Former Coal Wharf that included a 41,000-gallon oil AST;
   - Former Equitable Gaslight Company (town gas site) that included two 180,000 cubic feet gas holder ASTs;
   - Former California Fruit Canners Association Cannery (Del Monte);
   - Former UST located across Jefferson Street south of the site; and
   - Underground petroleum pipelines (not related to the site) along the retaining wall and in Jefferson Street.

   There is limited Information regarding the identity of historic operators for many of potential sources named above. The Port was able to provide lease records for four (4) petroleum companies (ARCO, Shell Oil, Unocal, and ChevronTexaco) and Del Monte Foods Inc., all of which had historic operations in the vicinity of Mobil's former terminal. The Water Board required these companies to submit Site History Reports documenting their activities in the Site vicinity. Currently, there is insufficient evidence to name additional dischargers. The Board will request additional information from those parties who submitted incomplete reports (see Table 3). If additional information indicates other parties caused or permitted waste to be discharged on or near the Site where it entered or could have entered waters of the State, the Board will consider adding those parties' names to this order. However, such an action would in no way alleviate ExxonMobil's responsibility to remediate the petroleum hydrocarbon plume associated with its discharges or to meet the tasks outlined in this Order.

11) Site Investigations

The Discharger has submitted several reports detailing Site investigations and assessments (see Table 4 for a complete list). Most Site reports were submitted prior to Water Board oversight (November 1999). All report findings are based on the interpretations of the Discharger and/or the consultant or members of the public. The descriptions below provide a summary of key report findings and do not constitute Water Board approval or rejection of report findings.

a) Site Investigation Reports Following 1986 Tank Removal

   Soil and groundwater investigations at the Site began in 1986, following the removal of an underground storage tank. Soil samples collected from within the tank excavation cavity contained TPH concentrations of up to 230 ppm. Data indicated there had been both gasoline and diesel releases from the Site. Groundwater downgradient from the Site was found to contain TPH-d (25 ppb), TPH-g (620 ppb), benzene (300 ppb), toluene (440 ppb) and xylenes (4,200 ppb). No remedial actions were taken.

b) On-Site Investigation Following 1990 Surface Diesel Release
Following the 1990 release of 336 to 692 gallons of diesel fuel, the Discharger hired a consultant to conduct a site investigation study inside the bermed area. The consultant concluded that 75 cubic yards of soil in the top 12 inches was contaminated as a result of the diesel release. Records indicate the impacted soil was removed during the 1995 soil excavation efforts (see Finding No. 11h, *1995 Soil Excavation Status Report*).

c) June 1990 Off-Site Investigation Following Surface Diesel Release
Per the Discharger's request, the consultant completed a subsurface investigation of contamination outside the bermed area of the Site. The consultant submitted an Interim Report, stating that:
- Groundwater samples contained TPH-g (160 to 130,000 ppb), TPH-d (90 to 210,000 ppb), and the presence of all benzene, toluene, ethylbenzene, and xylene (BTEX) components;
- Well AW-3 (Fig 1) contained between two and 18 inches of floating hydrocarbons;
- The recovered product appeared to be weathered;
- All soil samples contained petroleum hydrocarbons, with concentrations ranging from 420 to 4100 ppm; and
- There were potential offsite TPH sources based on, but not limited to, the presence of hydrocarbons in wells cross gradient from the Site, differences in profile of hydrocarbons across Site, vertical pattern of contamination, and presence of fill material.

d) September 1990 Site Investigation and Characterization Report
According to this report, TPH-d, the primary constituent of concern, was concentrated in the northern half of the Site. TPH-g soil contamination in the tank area exceeded 550 ppm. The report also stated that offsite hydrocarbon contamination appeared to be concentrated northeast of the tank yard in the capillary fringe and saturated zone. Three liquid phase hydrocarbon (LPH) plumes appeared to be present: 1) inside the tank bermed area, 2) along the retaining wall (erroneously referred to as a "seawall" in previous documents) north of the tank area; and 3) along Leavenworth Street north of Jefferson Street. The plume along Leavenworth Street was hypothesized to come from an offsite source. The investigation was unable to fully define the dissolved hydrocarbon plume, but it appeared to be widespread and was assumed to be the result of past releases from several sources over years. The report stated that no further investigation for site characterization was warranted at the time.

e) Quarterly Monitoring Reports
In 1991, the Discharger began conducting quarterly groundwater monitoring. Recent quarterly monitoring reports include:
- Sampling Schedule;
- Summary of Groundwater Levels and Chemical Analysis Results;
- Site Maps, including Groundwater Elevations and Hydrocarbon Concentrations;
- Well Purging and Groundwater Sampling Protocol;
- Monitoring Well Sampling Forms and Sampled Time vs. Tide Cycle; and
- Analytical Laboratory Data Sheets (including Chain of Custody forms).

f) 1992 Soil Assessment Report
An area of significant diesel contamination within the tank farm was delineated, however, no significant gasoline contamination was identified. Soil was found to have lead concentrations above hazardous waste limits. The lead source was assumed to be from the fill material on which the Fisherman's Wharf area is constructed.

g) 1994 Remedial Action Work Plan
The consultant proposed to excavate all soil within the tank farm to six feet below ground surface and to a maximum practical depth where soil was most extensively contaminated. Additionally, the report recommended installation of wells and a recovery trench.

h) 1995 Soil Excavation Status Report
In an effort to remediate hydrocarbon-impacted soil, the Discharger excavated approximately 980 cubic yards (1470 tons) of soil from within the tank yard (Fig 2). A VES/ARS groundwater extraction and treatment system was also installed (see Finding No. 4h). The report concluded that remedial excavation activities had effectively removed soil hydrocarbons onsite. However the report also stated that removing hydrocarbon-impacted soil below the groundwater table by excavation was not practical and further lateral excavation was not feasible due to the presence of building structures and a slurry wall.

i) 2003 Technical Information Report
The Technical Information Report included an evaluation of existing Site data and proposal for additional sampling. The intent of the report was to outline a means to identify other potential sources of contamination, characterize the vertical and lateral extent of the petroleum hydrocarbon plume(s) in soil and groundwater, and to identify potential conduits and/or barriers for contaminant migration. Additionally, the report identified potential receptors to contaminants.

j) 2004 Environmental Risk Assessment and Feasibility Study
In the Tier 1 Environmental Risk Assessment, the Discharger's consultant concluded that although soil at the Site is contaminated with respect to petroleum hydrocarbons, residual impacts that could potentially pose health or ecological risks at the Site are limited to those reported in groundwater. The potential for current or future vapor intrusion was reported to be unlikely given the predominantly heavier grade petroleum hydrocarbons identified in soil and groundwater (note that soil vapor analysis and an updated risk assessment are required per Task Nos. 2 and 6). Tier 1 Environmental Screening Levels (ESLs) were proposed as preliminary contaminant remediation goals. The referenced screening levels were developed for use at the San Francisco Airport under Regional Water Board Order No. 99-045 (SFBRWQCB 1999), as cited in the Water Board Document, *Water Board Interim Final, Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Volumes 1 and 2* (SFBRWQCB 2005)

(http://www.waterboards.ca.gov/rwqcb2/esl.htm).

In the Feasibility Study, the consultant evaluated several remedial technologies. The recommended remedial action included installation of a slurry wall to create an impermeable barrier between groundwater and the Bay. The proposed design included permeable reactive sidewalls to treat groundwater that bypassed the slurry wall. Simultaneous injection of oxygen release compound (ORC) was

proposed to enhance microbial degradation of upgradient residual petroleum hydrocarbons. At the time of this Order, potential remedial alternatives are still under consideration by the Water Board and involved parties.

12) Need for Additional Site Characterization

Despite past efforts to remove hydrocarbon impacted soil and groundwater, contamination persists to date. Additional site characterization is needed to accurately assess current onsite and offsite conditions to enable the Water Board and involved parties to evaluate proposed remediation strategies and to determine if additional hydrocarbon contaminant sources exist. Furthermore, the Site is located in a densely populated business district adjacent to San Francisco Bay. The local community includes business owners, employees, swimmers, tourists, and San Francisco residents involved with historical aspects of Fisherman's Wharf. Public concerns must be considered and addressed. This includes evaluating potential soil vapor intrusion into buildings by analyzing both subsurface vapor under buildings and ambient air conditions inside buildings. In addition, potential exposure of recreational users (e.g., swimmers) to contaminants in groundwater discharged to the Bay must be evaluated. This information shall be included in an Updated Environmental Risk Assessment (Task No. 6).

13) Current Extent of Hydrocarbon Contamination

Maximum reported concentrations for most hydrocarbon constituents at the Site occurred during the early to late 1990's. While contaminant concentrations have generally declined at the Site over time, recent petroleum hydrocarbon data from soil and groundwater confirm the need for additional cleanup efforts. Eighteen groundwater monitoring wells are sampled quarterly at the Site (Fig 1). There have been a total of 134 groundwater samples collected in the past eight quarters of sampling (December 2003 to September 2005). During this two-year time period, LPH was encountered 16 times in three wells (AW3, AW8, RW9), prohibiting groundwater analyses of dissolved phase hydrocarbons (Table 2A). Of the analyzed groundwater samples, TPH-d concentrations (the primary constituent of concern) ranged from 120 µg/L to 100,000 µg/L. Twelve samples contained TPH-d exceeding the 5,000 µg/L solubility limit of diesel, suggesting there may have been LPH entrained in the sample. Table 2B below summarizes the concentration range for various hydrocarbon petroleum constituents during the past eight quarters of monitoring. TPH-d concentrations are reported for all samples above the solubility limit of diesel to note areas with persistently elevated concentrations. A Site map is provided in Figure 1.

Table 2A. Wells Containing Liquid Phase Hydrocarbons (LPH): PAST EIGHT QUARTERS December 2003 to September 2005

Constituent	Well	Dates of Occurrence
LPH (groundwater not collected for laboratory analysis)	AW-3	09/20/04 (1) 12/06/04 (2) 03/21/05 (3) 06/06/05 (4) 09/09/05 (5)
LPH (groundwater not collected for laboratory analysis)	AW-8	03/05/04 (6) 06/18/04 (7) 09/20/04 (8) 12/06/04 (9) 03/20/05 (10)

		06/06/05 09/09/05	(11) (12)
LPH (groundwater not collected for laboratory analysis)	RW-9	12/31/03 03/05/04 03/20/05 06/06/05	(13) (14) (15) (16)

Table 2B. Groundwater Contaminant Concentration Ranges: PAST EIGHT QUARTERS December 2003 to September 2005

Constituent	Concentration (µg/L; ppb)	Date Sampled	Well(s) Containing Max Concentration
TPH-d	≥5,000 (5,400 to 100,000)	09/09/05 09/09/05 06/06/05 06/06/05 12/06/04 12/06/04 09/20/04 06/18/04 06/18/04 03/05/04 12/31/03 12/31/03	AW-7 RW-9 AW-7 AW-5 AW-7 RW-9 RW-9 RW-9 AW-5 RW-7 RW-6 RW-8
TPH-g	ND to 1200	09/09/05	RW-3
Benzene	ND to 47	09/09/05	RW-3
Toluene	ND to 8	09/09/05	RW-3
Ethylbenzene	ND to 2.3	06/18/04	RW-1
Total Xylenes	ND to 13	09/09/05	RW-3
MTBE	ND to 9.3	12/31/03	RW-6

TPH-d = Total Petroleum Hydrocarbons, Diesel (expected solubility in water <5,000 ppb)
TPH-g = Total Petroleum Hydrocarbons, Gasoline (expected solubility in water <150,000 ppb)
ND = Not Detected

14) Basin Plan and Resolutions

a) San Francisco Bay Basin Plan
The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) represents the Board's master water quality control planning document. Among other things, the Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters.

b) State Board Resolution No. 68-16
State Water Resources Control 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 shall 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

c) State Board Resolution No. 92-49
State Water Resources Control Board Resolution No. 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under California Water Code Section 13304," establishes policies and procedures to be used by the Regional Board when:

i) Determining when a person is required to investigate, cleanup, or abate a discharge;

ii) Concurring with the Discharger's selection of cost-effective investigation and remedial measures;

iii) Overseeing implementation of investigation and remedial measures; and

iv) Determining schedules for investigation and remedial measures.

d) Board Resolution No. 89-39
The Basin Plan provides that all groundwaters are considered suitable, or potentially suitable, for municipal or domestic water supply (MUN) and that, in making any exceptions, the Board will consider the criteria referenced in Board Resolution No. 89-39, "Sources of Drinking Water", where:

i) The total dissolved solids exceed 3,000 mg/l (5,000 µS/cm, electrical conductivity), and it is not reasonably expected by the Board that the groundwater could supply a public water system, or

ii) There is contamination, either by natural processes or human activity (unrelated to the specific pollution incident), that cannot reasonably be treated for domestic use using best management practices or best economically achievable treatment practices, or

iii) 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.

e) Basis for California Water Code Section 13304 Order
The Discharger has caused or permitted, causes or permits, or threatens to cause or permit 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 contamination or nuisance.

15) Beneficial Uses of Groundwater and Surface Water

a) Groundwater
The Site resides within the boundaries of the San Francisco Sand Dune Area Basin, as defined in the Basin Plan. The existing and potential beneficial uses identified for groundwater in this basin, according to the Basin Plan, include:
- Municipal and domestic water supply (MUN);
- Industrial process water supply (PROC);
- Industrial service water supply (IND); and
- Agricultural supply (AGR).

b) Surface Water
The Site resides within the boundaries of the San Francisco Bay Central surface water basin, as defined in the Basin Plan. The existing and potential beneficial uses identified for surface water in this basin, according to the Basin Plan, include:
- Ocean, commercial, and sport fishing (COMM);
- Esturine habitat (EST);
- Industrial service supply (IND);
- Fish migration (MIGR);
- Navigation (NAV);
- Industrial process supply (PROC);
- Preservation of rare and endangered species (RARE);

- Water contact recreation (REC-1);
- Noncontact water recreation (REC-2);
- Shellfish harvesting (SHELL);
- Fish spawning (SPWN); and
- Wildlife habitat (WILD).

16) California Environmental Quality Act (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 CEQA pursuant to Section 15321 of the CEQA Guidelines**.**

17) 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.

18) Public Hearing

The Board, at a public meeting, heard and considered all comments pertaining to this discharge.

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

PROHIBITIONS

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

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

3) As required by State Water Resources Control Board Water Quality Order No. 97-03-DWQ National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001 for the Discharge of Storm Water Associated with Industrial Activities, the discharge of contaminant-impacted stormwater from the Site, including sediment, is prohibited.

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

5) 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).

TASKS

1) **SITE-SPECIFIC SAMPLING AND ANALYSIS PLAN**

COMPLIANCE DATE: APRIL 3, 2006

The Discharger shall submit a Site-Specific Sampling and Analysis Plan, acceptable to the Executive Officer, detailing standard procedures followed for sample collection and analysis. Procedures and methods for sample collection and analysis of groundwater, soil, and soil vapor shall be detailed, including procedures for coordinating sampling events with the Site property owner to ensure that groundwater monitoring wells are accessible at the time of sampling. The plan shall also document any applicable requirements specified in the Self-Monitoring Program associated with this Order. All subsequent reports presenting data and/or data interpretations relating to Site samples shall include a certification statement indicating that monitoring was conducted in accordance with the procedures and requirements established in this Order and associated the Site-Specific Sampling Plan.

2) **ADDITIONAL SITE CHARACTERIZATION WORK PLAN**

COMPLIANCE DATE: APRIL 3, 2006

The Discharger shall submit an Additional Site Characterization Work Plan, acceptable to the Executive Officer, to complete additional investigative work that is necessary to further characterize the Site contamination, identify other potential petroleum sources, evaluate potential human health and environmental impacts, and support selection and design of a remedial action (see Finding No. 12). The Additional Site Characterization Work Plan shall be comprehensive, including an update on work in-progress as well as a proposal for additional sample collection and analysis. While the report shall include descriptions of investigations that are in-progress but not yet submitted, this Order does not alter pre-established deadlines. At a minimum, the Additional Site Characterization Work Plan shall include the following sections:

a) **Soil, Groundwater, and Soil Vapor**:

i) **Delineation**: The Discharger shall propose additional sampling necessary to delineate the horizontal and vertical extent of both free-phase and dissolved-phase contamination in soil and groundwater associated with the Site plume. The plan shall identify the proposed sampling parameters.

ii) **Soil Vapor Sampling and Analysis**: Soil vapor shall, at a minimum, be analyzed for TPH-g, TPH-d, naphthalene, methane, and BTEX. Sample locations shall be identified to evaluate the potential for soil vapor intrusion into buildings in the Site vicinity. In addition to an analysis of soil gas in subsurface soil under buildings, ambient air shall be sampled from inside buildings. Data shall be incorporated into the Revised Environmental Risk Assessment (Task No. 6) and used to evaluate potential impacts to building occupants. Additionally, data shall be used to evaluate potential impacts to food processing activities.

iii) **Source Identification**: Groundwater analysis shall include forensic analysis of the composition of the petroleum mixture in free-phase and dissolved-phase hydrocarbons in groundwater near the Site where additional hydrocarbon contaminant sources are suspected. This evaluation shall include a determination of the relative composition of different hydrocarbon compounds within a specified range (i.e., TPH as gasoline or TPH as diesel) and include an evaluation of the nature of the original source petroleum, products released, the amount of biodegradation and/or weathering that the mixtures have experienced, and the similarities and/or dissimilarities between samples collected from different locations.

b) **Evaluation of Heath Risks Posed to Swimmers**: The Additional Site Characterization Work Plan shall include a proposal to complete a study to evaluate heath risks posed to swimmers exposed to petroleum that may discharge to surface water. The report shall include screening levels for TPH-d, TPH-g, BTEX, and naphthalene. At a minimum, persons and organizations who frequent the swimming area adjacent to the subject Site shall be contacted to ensure that appropriate exposure assumptions are used. The screening levels shall then be compared to Site groundwater data in consideration of reasonably anticipated dilution of groundwater upon discharge to the Bay and include a quantitative assessment of potential health threats to swimmers.

c) **Tidal Influence Study**: The Additional Site Characterization Work Plan shall include elements necessary to complete a Tidal Influence Study. The Tidal Influence Study shall, include a minimum of 72 consecutive hours of groundwater well elevation data. The Tidal Influence Study shall include actual measured groundwater elevations, rather than relative values. If this information is available from the Discharger's 2004 Tidal Influence Study, the Water Board will consider accepting a resubmittal of that data. The study shall also include a narrative evaluation of the data, including comparison to previous tidal influence studies.

d) **Detailed Work Schedule**
The Discharger shall propose a detailed work schedule to complete the tasks required in the Additional Site Characterization Report. At a minimum, the schedule shall be presented in chart format, preferably as a Gantt Chart, and shall include time estimates to obtain property access agreements, required permits, sample collection, sample analysis, data compilation, and report preparation.

3) **ADDITIONAL SITE CHARACTERIZATION REPORT**

COMPLIANCE DATE: MAY 15, 2006

The Discharger shall submit a Additional Site Characterization Report, acceptable to the Executive Officer, that provides the results of investigations proposed in the Additional Site Characterization Work Plan prepared in accordance with Task No. 2. In addition to the sections described in Task No. 2, the Additional Site Characterization Report shall include boring logs, laboratory analyses, updated cross-sections, isoconcentration maps showing laboratory analysis data, a Site conceptual model, and conclusions. If any of the collected data or studies are

inconclusive, recommendations for further site characterization work and a proposed timeline for submittal shall be included**.**

4) **INTERIM REMEDIAL ACTION PLAN**

COMPLIANCE DATE: MAY 15, 2006

The Discharger shall prepare an Interim Remedial Action Plan (IRAP) and schedule acceptable to the Executive Officer for the remediation of petroleum hydrocarbon-impacted soil and groundwater at the Site. The IRAP shall include a proposed remedial alternative, implementation plan, an evaluation of potential risks that may result from the proposed remedial action (e.g., risks to Port tenants and the public), and a detailed work schedule (preferably presented in Gantt chart format). The IRAP shall be an immediately executable plan, independent of existing and proposed future land use (e.g., demolition, rehabilitation, and/or construction activities) (see Finding No. 4n, *Site History*). The IRAP may be expanded pending findings from additional site characterization report (Task Nos. 2 and 3). Any fine-tuning of Site monitoring well locations or source area definition may be completed concurrently, but shall not delay the preparation of this plan.

If the proposed IRAP has the potential of altering surface water or groundwater flow, the discharger shall also complete an Interim Hydrologic Evaluation of Site Conditions, as outlined in Task No. 7j.

5) **IMPLEMENTATION OF INTERIM REMEDIAL ACTION PLAN**

COMPLIANCE DATE: 45 days following approval of the IRAP

Once the IRAP has been approved by the Executive Officer, the remedial alternative shall be constructed and implemented within 45 days. Any additional investigative work can be completed concurrently, but shall not delay the construction and implementation of the remediation system. An evaluation of the implemented interim remedial action shall be included in subsequent quarterly Groundwater Self-Monitoring Reports. Evidence of plume stability shall be documented and may consist of information such as reduction of aerial plume extent or decreasing contaminant concentrations in soil and groundwater.

6) **UPDATED ENVIRONMENTAL RISK ASSESSMENT**

COMPLIANCE DATE: JUNE 1, 2006

The Discharger shall submit an Updated Environmental Risk Assessment, acceptable to the Executive Officer, to incorporate new data collected during additional Site characterization (Task Nos. 2 and 3) and to evaluate exposure pathways not evaluated in the August 2004 Environmental Risk Assessment. The Updated Environmental Risk Assessment shall be based on applicable data collected per Task No. 2 (Additional Site Characterization Work Plan) and Task No. 3 (Additional Site Characterization Report) and shall include:

a) An evaluation of human health risks associated with potential vapor intrusion into buildings in the Site vicinity. This evaluation shall consider both subsurface soil vapor and ambient air conditions inside buildings. This section of the Updated

Environmental Risk Assessment shall incorporate data collected per Task No. 2a.ii (Additional Site Characterization Work Plan, Soil Vapor Sampling and Analysis);

b) An evaluation of human health and environmental risks associated with groundwater discharges to the Bay. This section of the Updated Environmental Risk Assessment shall incorporate data collected per Task No. 2b (Additional Site Characterization Work Plan, Evaluation of Heath Risks Posed to Swimmers). Potential impacts to aquatic life and the environment shall also be evaluated;

c) An evaluation of risks posed to food processing activities in buildings in the Site vicinity. This section of the Updated Environmental Risk Assessment shall take into account all Site data collected to date and describe potential implications related to Food and Drug Administration regulations.

d) An evaluation of human health and environmental risks associated with the proposed remedial action, including potential risks associated with:

   i) Material that may be placed or injected;

   ii) Contaminants associated with material that may be excavated (the August 2004 Environmental Risk Assessment focused only on hydrocarbon contaminants associated with the Discharger's release);

   iii) Any byproducts that may be produced as a result of remedial activities;

   iv) Groundwater discharge to the Bay (e.g., change in anticipated discharge and implications on contaminant release, including contaminants in addition to hydrocarbons); and

   v) Soil vapor intrusion into buildings (e.g., change in anticipated soil vapor pressure and/or change in soil vapor constituents).

7) **FINAL REMEDIAL ACTION PLAN**

COMPLIANCE DATE: JULY 3, 2006

The Discharger shall prepare a final Remedial Action Plan (RAP) and schedule acceptable to the Executive Officer for the remediation of hydrocarbon-impacted soil and groundwater at the Site. The final RAP shall, at a minimum, include:

a) A proposed remedial alternative that is compatible with the IRAP and with existing and future land use, including fishing industry uses (e.g., maintenance, demolition, rehabilitation, and/or construction activities) (see Finding No. 4n, *Site History*);

b) An evaluation of potential risks that may result from the proposed remedial action (e.g., risks to Port tenants and the public);

c) Proposed hydrocarbon cleanup levels, including target final concentrations and a method for evaluating success (e.g., point of compliance wells);

d) An evaluation of the longevity of the proposed remedial system based on an estimate of the volume of groundwater to be treated prior to meeting cleanup levels;

e) A long-term solution to eliminate the discharge of hydrocarbon-impacted groundwater to San Francisco Bay;

f) An evaluation of the potential for recontamination from offsite sources;

g) Design elements to meet applicable standards for seismic and structural stability;

h) An implementation plan. In addition to the technical aspects of implementation, this section shall address long-term maintenance, including a cost analysis for initial and annual maintenance;
i) A detailed work schedule, including a timeline, preferably presented in Gantt chart format;
j) A hydrologic investigation to evaluate potential changes in surface water and groundwater flow in response to the proposed final RAP. The hydrologic investigation shall model *various* potential Site conditions, including the 100-year storm event in conjunction with the highest high tide data. The hydrologic investigation shall also evaluate any of the following concerns that may be related to the proposed remediation technology:
   i) The degree to which the proposed RAP may cause groundwater mounding (include a Site vicinity map);
   ii) Potential effects on flooding due to groundwater mounding;
   iii) The potential of contaminated upgradient and side-gradient groundwater to bypass the remedial system;
   iv) The proposed remedial system's ability to capture and/or contain contaminated groundwater (if relevant, include physical dimensions of the system); and
   v) The proposed remedial system's ability to treat contaminated groundwater (e.g., ability to control hydraulic gradient; sufficient density of extraction wells and/or injection points; adequacy of treatment wall dimensions, etc.).

If any of the required items above does not pertain to the proposed final RAP, the Discharger shall address the point by explaining why it does not apply.

8) **IMPLEMENTATION OF ADDITIONAL REMEDIAL ACTION PLAN**

COMPLIANCE DATE: 90 days following approval of the RAP

Once the RAP has been approved by the Executive Officer, the Discharger shall construct and implement the remedial alternative within 90 days. Any additional investigative work may be completed concurrently, but shall not delay the construction and implementation of the remediation system.

An evaluation of the implemented remedial action shall be included in subsequent quarterly Groundwater Self-Monitoring Reports. Evidence of plume stability shall be documented and may consist of information such as reduction of aerial plume extent or decreasing contaminant concentrations in soil and groundwater. Any fine-tuning of Site monitoring well locations or source area definition may be completed concurrently, but shall not delay the preparation of this plan.

9) **PROPERTY USE RESTRICTIONS**

COMPLIANCE DATE: SEPTEMBER 1, 2006

The Discharger shall submit a technical report acceptable to the Executive Officer documenting procedures to be used by the Discharger to prevent or minimize human exposure to soil and groundwater contamination associated with historic hydrocarbon releases from the Former Mobil Bulk Terminal 04-394. This report shall include:

a) Procedures to ensure that the current property owner records a deed restriction for the Site prohibiting the use of onsite shallow groundwater as a source of drinking water;
b) Procedures to ensure that the current property owner periodically notify any affected downgradient property owners and/or tenants regarding hydrocarbon contaminated groundwater originating from the Site; and
c) A Risk Management Plan that shall:
    i. Include the following information for each risk:
        1. A unique identifier for each risk;
        2. A description of each risk, including a description of what activities could result in a risk and how the risk will affect the project;
        3. An assessment of the likelihood each risk will occur and the possible seriousness/impact if it does occur (low, medium, high);
        4. A grading of each risk according to a risk assessment table;
        5. Include a description of proposed mitigation actions (preventative and contingency); and
        6. Include a cost estimate for each mitigation strategy.
    ii. Describe how the Discharger shall coordinate with the property owner, including a detailed description of responsibilities and protocols;
    iii. Establish long-term management measures adequate to protect human health and the environment, and prevent nuisance conditions;
    iv. Describe how the Discharger shall ensure compatibility with federal, state and local laws and guidelines;
    v. Describe how the Discharger shall coordinate with the property owner to ensure compatibility with current and future land use (i.e., risk management activities cannot interfere with future use or development);
    vi. Describe how the Discharger shall assume long-term responsibility, including financial responsibility, to manage any hydrocarbon contamination associated with the Site that is allowed to be left in place;
    vii. Establish deadlines for response actions that the Discharger shall take whenever contaminated soil or groundwater is or is anticipated to be encountered so that operation, maintenance or construction activities at affected property are not unreasonably impacted;
    viii. Describe how the Discharger shall notify persons at risk;
    ix. Include a description of oversight and enforcement responsibilities;
    x. Describe how the Discharger shall ensure the Risk Management Plan is available to the public (including all tenants, contractors, or others operating at or occupying the affected area);
    xi. Describe how the Discharger shall ensure implementation of and compliance with the Risk Management Plan.
    xii. Include written notice of acceptance of its terms by the Port or its successor in interest in the property. In the event that the Port or its successor does not accept the Risk Management Plan, the Discharger shall submit a technical report to the Executive Officer, on or before the task deadline, explaining why the Port's (or its successor's) withholding of its acceptance is unreasonable. The Executive Officer will ultimately determine whether the Risk Management Plan is acceptable.

In the event a construction or redevelopment project is proposed to occur in the area impacted by hydrocarbon associated with the Site, prior to adoption of the Risk

Management Plan described above, the Discharger shall complete a project-specific Risk Management Plan to identify management measures to prevent adverse impacts from the proposed project. This requirement for a project-specific Risk Management Plan does not apply to the Discharger's ongoing monitoring or additional site assessment activities.

10) **IMPLEMENTATION OF PROPERY USE RESTRICTIONS**

COMPLIANCE DATE: **60 days after Executive Officer approval of proposed Property Use Restrictions and Risk Management Plan**

The Discharger shall submit a technical report acceptable to the Executive Officer documenting that the proposed institutional constraints have been implemented.

PROVISIONS

1) Modifications to Remedial Action Plan

The Discharger shall notify the Executive Officer at least 60 days prior to any proposed modification to the approved Remedial Action Plan or remediation system. The notification shall include the rational for any proposed modification.

2) 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 of the delay and reason for the delay and the Board may consider revisions to this Order.

3) Operation and Maintenance (O&M)

The Discharger (as applicable) 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.

4) Discharges

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:

a) Report such discharge to the Office of Emergency Services (OES); and
b) File a written report with the Board within five working days that shall contain information relative to the following:
   i) The nature of waste or pollutant;
   ii) The quantity involved and the duration of incident;
   iii) The cause of the spill;
   iv) The estimated size of the affected area;
   v) The corrective measures that have been taken or planned, and a schedule of these measures;
   vi) The persons/agencies notified; and
   vii) A copy of the OES notification report.

5) Stormwater

The Discharger shall comply with the State's General Stormwater Permits for both industrial activities and construction activities (Order Numbers 97-03-DWQ and 99-08-DWQ, respectively).

6) Contractor/Consultant Qualifications

All technical documents shall be signed by and stamped with the seal of a California professional geologist, a California certified professional geologist or hydrogeologist, or a California registered civil engineer.

7) Lab Qualifications

All samples shall be analyzed by State-certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control (QA/QC) records for Board review. This provision does not apply to analyses that can only reasonably be performed onsite (e.g. temperature).

8) Document Distribution

Copies of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the following entities:

a) San Francisco Bay Regional Water Quality Control Board;
b) City and County of San Francisco Department of Public Health;
c) Port of San Francisco; and
d) Fisherman's Wharf Environmental Quality Advisory Committee (EQAC) (documents stored and available for public review at the Port's office).

The Executive Officer may modify this distribution list as needed.

9) Electronic Reporting

a) Geotracker Requirements

The State Board recently adopted regulations requiring electronic report and data submittal to Geotracker. The text of the regulations can be found at the following website address:

http://www.waterboards.ca.gov/ust/cleanup/electronic_reporting/docs/final_electronic_regs_dec04.pdf

Starting July 1, 2005, parties responsible for cleanup of pollution at sites overseen by the Regional Water Board's Spills, Leaks, Investigations, and Cleanup Program (SLIC) are required to submit over the internet, the following information electronically:

i) Groundwater analytical data;
ii) Surveyed locations of monitoring wells;
iii) Boring logs describing monitoring well construction; and
iv) Portable data format (PDF) copies of all reports (the document, in its entirety [signature pages, text, figures, tables, etc.] shall be saved as a single PDF file).

Note that the Discharger is still responsible for submitting one hard copy of all reports pursuant to this Order. Individual Water Boards may require direct submittal of electronic reports and correspondence in addition to the State Board's Geotracker requirements.

10) Self-Monitoring Program

The Discharger shall comply with the Self-Monitoring Program (SMP) attached to this Order (Table A2) and as may be amended by the Executive Officer. Data tables shall include the following information:

a) Date of sampling
b) Date of analysis;
c) Current analytical results by constituent of concern (including detection limits for each constituent);
d) Historical analytical results (including the past five years unless otherwise requested);
e) Well designations;
f) Well location coordinates (latitude and longitude);
g) Well construction (including top of well casing elevation, total well depth, screen interval, depth below ground surface, and screen interval elevation);
h) Groundwater depths and elevations (water levels); and
i) Phase-separated product thicknesses and elevations.

11) Access to Site and Records

In accordance with California Water Code Section 13267(c), in conducting an investigation pursuant to subdivision 13267(a), the regional board may inspect the facilities of any person to ascertain whether the purposes of this division are being met and waste discharge requirements are being complied with. The inspection shall be made with the consent of the owner or possessor of the facilities or, if the consent is withheld, with a warrant duly issued pursuant to the procedure set forth in Title 13 (commencing with Section 1822.50) of Part 3 of the Code of Civil Procedure. However, in the event of an emergency affecting the public health or safety, an inspection may be performed without consent or the issuance of a warrant.

12) Cost Recovery

The Discharger (as applicable) shall be liable, pursuant to California Water Code Section 13304 and Health and Safety Code Section 25270.9 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 (as applicable) over reimbursement amounts or methods used in that program shall be consistent with the dispute resolution procedures for that program.

13) Reporting of Changed Owner or Operator

The Discharger (as applicable) shall file a report on any changes in Site occupancy or ownership associated with the property described in this Order.

14) San Francisco Regional Water Quality Control Board Resolution No. 88-160

Board Resolution No. 88-160 allows discharges of extracted, treated groundwater from site cleanups to surface waters only if it has been demonstrated that neither

reclamation nor discharge to the sanitary sewer is technically and economically feasible.

15) Periodic Site Cleanup Requirements (SCR) Order Review

The Board will review this SCR Order periodically and may revise it when necessary. The Discharger (as applicable) may request revisions and upon review the Executive Officer may recommend that the Board revise these requirements.

I, Bruce H. Wolfe, 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 _____.

_____
Bruce H. Wolfe
Executive Officer

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

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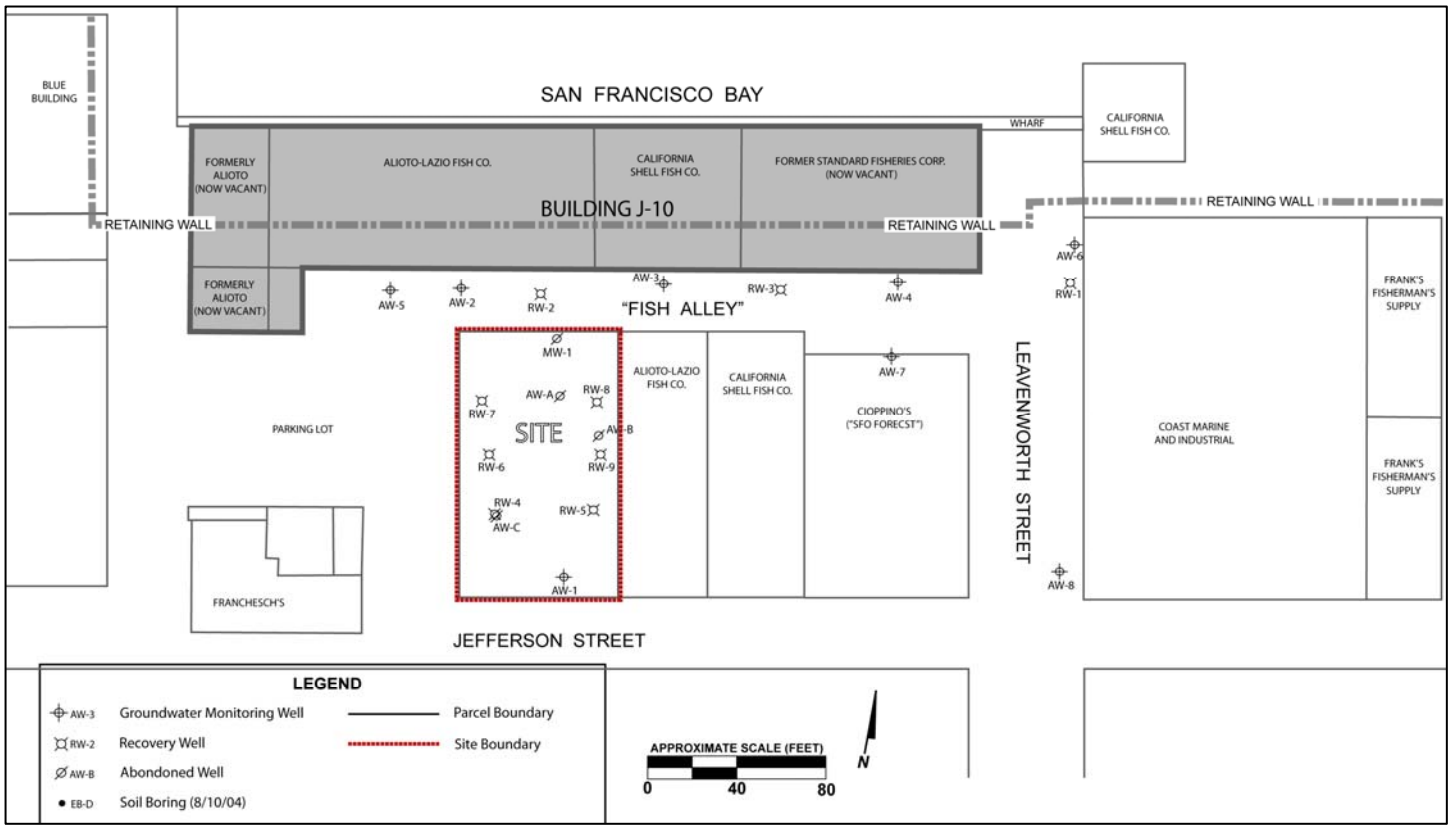
Attachments:
Figure 1. Site Plan and Vicinity Maps
Figure 2. 1995 Soil Remedial Excavation Area
Table 3. Water Board Required Submittals and Actions
Table 4. Site Reports and Investigations
Self-Monitoring and Reporting Program

Figure 1. Site Plan and Vicinity Maps

(Site Plan based on Site figures from TRC Quarterly Monitoring Reports)
(Site Vicinity Map based on Figure 1 from City and County of SF's October 2005 Draft EIR)



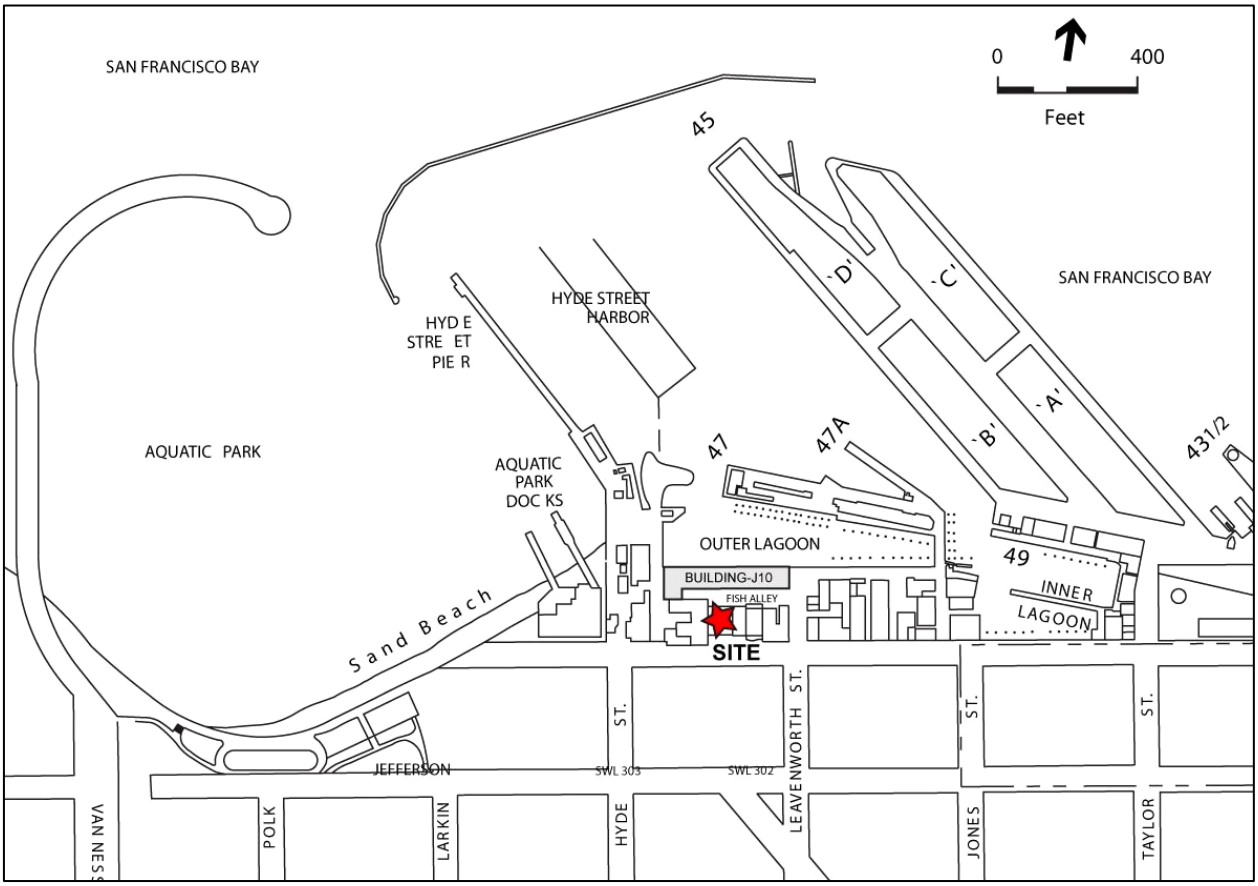


Figure 2. 1995 Soil Remedial Excavation Area

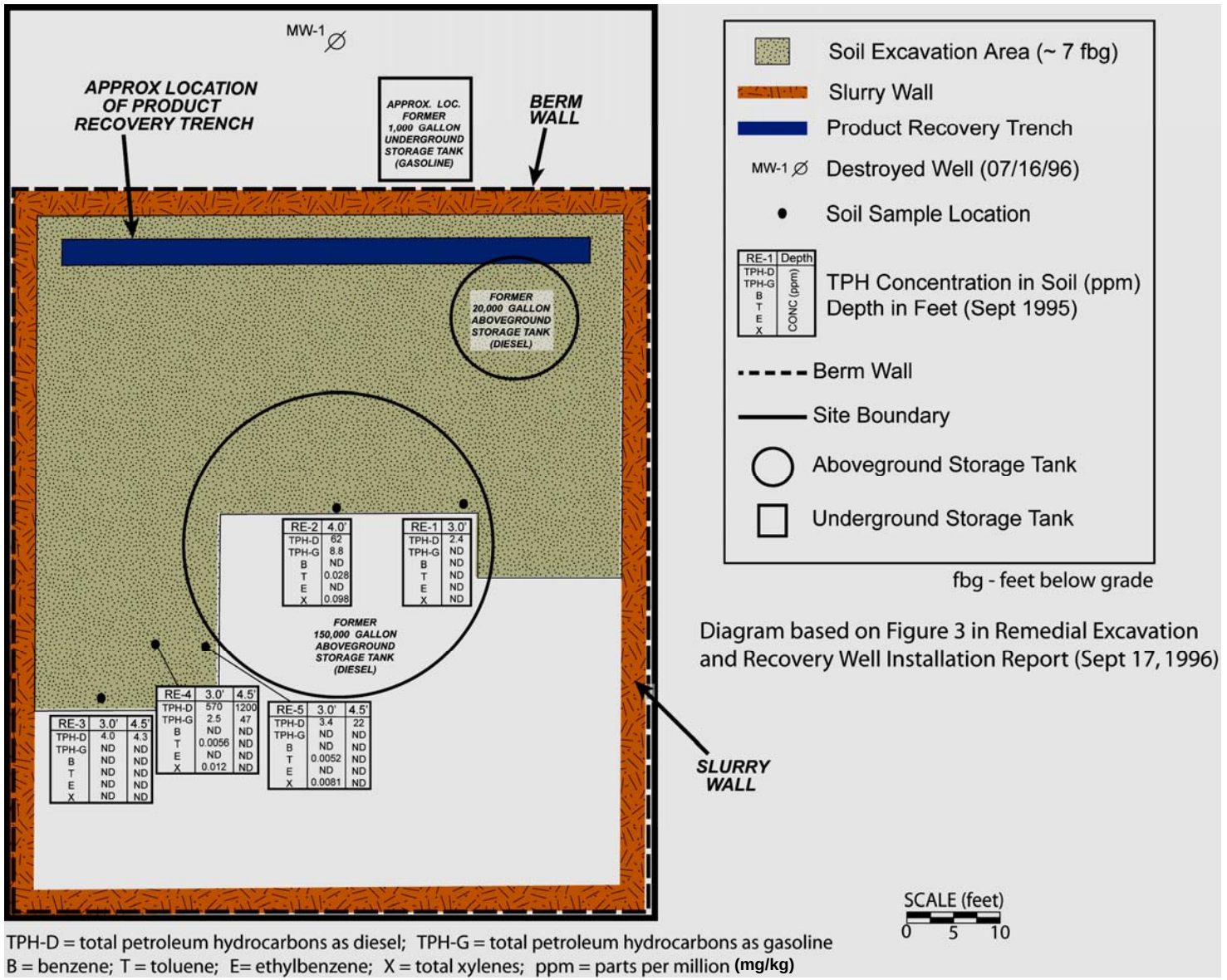


Table 3. Water Board Required Submittals and Actions

Date Requested	Recipient	Document/Action Requested & Submittal Date
Nov 11, 2001 E-mail	ExxonMobil	Copies of Historic Reports and Site Summary Report ▪ Jan 22, 2002 Submitted & Approved
March 11, 2003 Water Code Letter	ExxonMobil	Technical Information Report: identify other potential responsible parties, characterize extent of contamination, identify potential conduits and/or barriers to contaminant migration. ▪ Apr 28, 2003 Submitted & Approved
Feb 11, 2003 Mtg & E-mail	Port of SF	Provide ExxonMobil with lease/occupancy history ▪ Feb 27, 2003 Submitted & Approved
April 10, 2003 Verbal & E-mail	ExxonMobil	Addendum to Site Summary Report ▪ Apr 11, 2003 Submitted & Approved
April 29, 2003 Verbal & E-mail	Port of SF	Use of Port's office - Site File Repository for public access in addition to Water Board's Oakland Office ▪ Apr 30, 2003 Approved
Jan 13, 2004 E-mail	Port of SF	List of Historic Land Use and Lease Information ▪ July 2, 2004 Submitted & Approved
Feb 2004 Verbal & E-mail	ExxonMobil	Coordinate Public Outreach Mtgs to Address Public Comments and Questions ▪ Mtgs held Mar 11, Oct 27, & Dec 8, 2004 (Mtg descriptions below)
Feb 19, 2004 Water Code Letter	ExxonMobil	Environmental Risk Ass'mt & Feasibility Study, and Remedial Action Plan ▪ Aug 31, 2004 Environmental Risk Ass'mt & Feasibility Study Submitted ▪ Dec 31, 2004 Deadline for Submittal of Public Comment Letters ▪ Incorporated Remedial Action Plan into SCR
Mar 11, 2004 Public Mtg	ExxonMobil	Stakeholders Meeting per Feb 2004 requirement (high attendance)
March 30, 2004 Mtg	ExxonMobil	Need for a more extensive tidal study and need to analyze samples using "silica-gel cleanup" ▪ May 14, 2004 Agreed to include silica-gel methods in next groundwater sampling event ▪ May 2004 Tidal Study included in Aug. 2004 Environmental Risk Ass'mt & Feasibility Study
Oct 27, 2004 Public Mtg	ExxonMobil	Technical Workgroup Meeting per Feb 2004 requirement (full attendance)
Dec 8, 2004 Public Mtg	ExxonMobil	Stakeholders Meeting per Feb 2004 requirement (low attendance)
Jan 4, 2005 Water Code Letter	Other PRPs	Technical Report on Site History ▪ May 2005 Submitted (some incomplete) **Complete Submittals**: - ARCO (Atlantic Richfield Co., formerly Richfield Oil Co.) - Del Monte Foods, Inc. **Incomplete Submittals** (Request for Additional Information Pending): - Shell Oil Company - Unocal - ChevronTexaco
May 6, 2005 Comment Letter	ExxonMobil	Comments and Request for Additional Information on Environmental Risk Ass'mt & Feasibility Study (Water Board Staff Response to Public Comment Letters included as attachment) ▪ June 15, 2005 Submitted & Partially Approved
Oct 26, 2005 Public Mtg	ExxonMobil	Site update meeting with Fisherman's Wharf Environmental Quality Advisory Committee (EQAC), ExxonMobil, Port, and Water Board ▪ Water Board preparation of SCR and opportunities for public involvement ▪ Port's Draft EIR for building demolition or rehabilitation
Nov 9, 2005 Public Mtg	ExxonMobil	Meeting to address public concerns regarding need for additional Site characterization and coordination between ExxonMobil's remediation efforts and Port's land use plans
Jan 5 & 11, 2006 Public Mtgs	Water Board	Public meetings to explain content and organization of Tentative Site Cleanup Requirements Order, and review comment period deadlines
Feb 16, 2006 Public Mtg	Water Board	Public meeting to review Water Board staff responses to public comment letters

Table 4. Site Reports and Investigations

- Water Board correspondence is recorded in Table 3 and is not listed below.
- Documents are available for public review at the Water Board's office and at the Port's office.
- Quarterly Monitoring began in 1991. Quarterly Monitoring Reports are not listed below.

	Author	Report Title	Date
1	Kaprealian Engineering	Site soil investigation	DEC 14, 1987
2	Mobil Oil	Letter to DPH proposing addition investigation	JAN 19, 1988
3	Olympian Oil Co.	[1*] Accutite's Proposal	APR 23, 1990
4	Alton Geoscience	[1] Interim Report	JUN 22, 1990
5	Alton Geoscience	Site Investigation	SEP 20, 1990
6	Alton Geoscience	Feasibility Study and Remedial Work Plan	OCT 18, 1990
7	Alton Geoscience	Additional Soil Sampling	JUN 14, 1991
8	Alton Geoscience	Workplan for Soil Remediation and Aquifer Testing	JAN 23, 1992
9	Alton Geoscience	Preliminary Soil Assessment Report	JUL 31, 1992
10	Alton Geoscience	Proposed Excavation and Source Removal	JUL 27, 1993
11	Alton Geoscience	Letter Defining Proposed Source Removal	AUG 03, 1993
12	Alton Geoscience	Remedial Excavation Workplan	APR 21, 1994
13	Alton Geoscience	Remedial Action Workplan	SEP 08, 1994
14	Port of San Francisco	Mobil/Port Access Agreement	OCT 26, 1994
15	Alton Geoscience	Well Abandonment Report	JAN 02, 1995
16	DTSC	Reclassification of Contaminated Soils	JUL 07, 1995
17	Alton Geoscience	Soil Excavation Status Report	OCT 06, 1995
18	Alton Geoscience	Wastewater Discharge Permit Application	JUL 31, 1996
19	Alton Geoscience	Remedial Excavation and Recovery Installation Report	SEP 23, 1996
20	Alton Geoscience	Workplan to Perform Risk Assessment and Revised Feasibility Study/Corrective Action Plan	MAR 26, 1997
21	TRC	[2] Site Summary Report	JAN 21, 2002
22	Port of San Francisco	Notification of Discovery of Contaminated Soil and Groundwater	NOV 18, 2002
23	Trans Pacific Geotechnical Consultants, Inc.	Progress Report- Geotechnical Investigation for Proposed Wharf J-10 Replacement Structure	DEC 31, 2002
24	TRC	[1*] Addendum to Jan 21, 2002 Site Summary Report	APR14, 2003
25	TRC	Technical Information Report	APR 28, 2003
26	Port of San Francisco	Additional Info on Historic Use and Occupancy	JUL 02, 2004
27	TRC	Environmental Risk Assessment and Feasibility Study	AUG 31, 2004
28	Port of San Francisco	Comment Letter Re: Envir Risk As. & Feasibility Study	OCT 26, 2004
29	Other Potentially Responsible Parties	Technical Reports on Site History (some submittals incomplete – see Table 3)	MAY 2005
30	TRC	Response to Comments and Additional Site Assessment Workplan	JUN 16, 2005
31	Port of San Francisco	Comments on Response to Comments and Additional Site Assessment Workplan (TRC, June 15, 2005)	AUG 09, 2005
32	Port of San Francisco	Dec 1999 Mechanical Layout of New Fuel Lines at Wharf J10	SEP 23, 2005
33	City and County of SF	Draft Environmental Impact Rpt for Wharf J-10	OCT 15, 2005
34	ExxonMobil	Ltr from ExxonMobil to Port committing to complete environmental assessment under Wharf J-10 bld	NOV 14, 2005
35	ExxonMobil	Ltr from ExxonMobil to Port committing to initiate site investigations on accelerated schedule, clarify source of offsite petroleum contaminates and facilitate future development of Wharf J-10 site	NOV 28, 2005

1* Reference specifically cites 336 to 692 gallons diesel released while filling a 20,000 gallon above ground tank
1 Reference cites diesel release during product delivery to a 20,000 gallon above ground tank
2 Reference contains error citing 20,000 gallon release

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

TENTATIVE SITE CLEANUP REQUIREMENTS
SELF-MONITORING PROGRAM

FOR

EXXONMOBIL AND THE PORT OF SAN FRANCISCO

FORMER MOBIL BULK TERMINAL 04-394

440 JEFFERSON STREET,
CITY AND COUNTY OF SAN FRANCISCO

ORDER NO. R2-2006-XXXX

A. AUTHORITY AND PURPOSE

The Board requests the technical reports required in this Self-Monitoring Program (SMP) pursuant to Water Code Sections 13267 and 13304. This SMP is intended to document compliance with Board Order No. R2-2006-XXXX (Site Cleanup Requirements).

B. MONITORING REQUIREMENTS

The Discharger shall conduct monitoring of groundwater, surface water, and any other environmental media, structures, devices, or facilities as specified in Table A2. Table A2 specifies monitoring locations, frequency, parameters, and methods. Figure 1 illustrates monitoring well locations.

1. All groundwater sample collection and surface water observations shall be completed during low tide conditions.
2. Groundwater elevation measurements and surface water observations shall be completed within one hour.
3. Groundwater elevation data shall include actual groundwater elevation referenced to feet above mean sea level.
4. Water samples shall be processed using silica-gel cleanup methods performed prior to extractable petroleum hydrocarbon analysis only.
5. The Discharger shall follow established protocols, as described in the Site-Specific Sampling and Analysis Plan, to coordinate with the Site property owner to ensure that groundwater monitoring wells are accessible at the time of sampling.

Sample collection, storage, and analyses shall be performed according to the most recent version of EPA Standard Methods or in accordance with an approved sampling and analysis plan. Water and waste analyses shall be performed by a California State approved laboratory for the required analyses. 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 Board. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

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

C. REPORTING REQUIREMENTS

Each monitoring report shall include the following information:

1. **Transmittal Letter**: A letter transmitting essential points shall be included in each monitoring report. The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall also certify the completion of all monitoring requirements. The letter shall be signed by the Discharger's principal executive officer or his/her duly authorized representative, and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.

2. **Compliance Evaluation Summary**: A compliance evaluation summary containing the following information:
   a. A summary and certification of completion of all monitoring as specified in this SMP;
   b. A graphic presentation of the gradient and direction of groundwater flow, based upon the past and present water level elevations (referenced to feet above mean sea level) and other factors that may influence groundwater movement;
   c. Map(s) or aerial photograph(s) showing all monitoring locations;
   d. A tide cycle chart clearly identifying tide elevations for the start and end of the sampling event, including the time period required to record groundwater elevation (reflected in the first hour) and collect groundwater samples; and
   e. The signature of the laboratory director whose name appears on the laboratory certification, indicating that he/she has supervised all analytical work in his/her laboratory.
3. **Appendices:** Include the following information in appendices:
   a. New boring and well logs;
   b. Method and time of water level measurements;
   c. Purging methods and results including the type of pump used, pump placement in the well, pumping rate, equipment and methods used to monitor field pH, temperature, and conductivity, calibration of the field equipment, pH, temperature, conductivity, and turbidity measurements, well recovery time, and method of disposing of the purge water;
   d. Sampling procedures, 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 relevant observations; and
   e. Documentation of laboratory results, analytical methods, detection limits, and Quality Assurance/Quality Control (QA/QC) procedures for the required sampling, including:
      (i) Laboratory statements of results of analyses;
      (ii) Descriptions of analytical methods used (note, if methods other than EPA approved methods or Standard Methods are used, the exact methodology shall be submitted for review and approval by the Executive Officer prior to use);
      (iii) Actual detection limits for each sample results (note, ***detection limits shall be appropriate for the expected concentrations***);
      (iv) Laboratory quality assurance/quality control (QA/QC) information and results including analytical methods, detection limits, recovery rates, explanations for low recovery rates (less than 80%), equipment and method blanks, spikes and surrogates, and QA/QC sample frequency; and
      (v) Monitoring results shall be provided in table format, and upon request, provided in electronic format, preferably in Excel® format. Tables shall include the following information:
         (1) Groundwater analytical data;
         (2) Well designations;

(3) Well location coordinates (latitude and longitude);
(4) Well construction (including top of well casing elevation, total well depth, screen interval depth below ground surface, and screen interval elevation);
(5) Groundwater depths and elevations (water levels);
(6) Phase-separated product thicknesses and elevations;
(7) Current analytical results by constituent of concern (including detection limits for each constituent);
(8) Historical analytical results (including the past five years unless otherwise requested); and
(9) Measurement dates.

D. ANNUAL REPORTING

The Discharger shall submit an annual self-monitoring report to the Board covering the previous calendar year. The annual report shall summarize all monitoring, investigation, and remedial activities that have occurred in the previous year. The annual report shall include the following information, in addition to the transmittal letter and appendices described in Sections C.1 and C.3:

1. **Graphic Presentation**: Include Site maps (plot plans) for <u>each</u> aquifer or water-bearing zone monitored that are drawn to a scale that remains constant from reporting period to reporting period. These maps shall include the following information:
   a. Known or probable contaminant sources;
   b. Well locations;
   c. Groundwater elevation contours;
   d. Inferred groundwater flow direction(s);
   e. Extent of non-aqueous phase liquid (NAPL);
   f. Extent of dissolved chemical constituents (e.g., isoconcentration maps);
   g. Appropriate analytical results (line or bar graphs are helpful to illustrate variations in groundwater elevations, phase-separated product thickness, and dissolved chemical concentrations with time); and
   h. Geologic cross sections are required if new data is available and/or the previous interpretation of subsurface conditions has changed. When required, geologic cross sections shall include the following:
      (i) Vertical and lateral extent of contamination;
      (ii) Contaminant sources;
      (iii) Geologic structures;
      (iv) Soil lithology;
      (v) Water table/piezometric surfaces;
      (vi) Sample locations;
      (vii) Sample analytical results; and
      (viii) Subsurface utilities and any other potential natural or manmade conduits for contaminant migration.

2. **Tabular Presentation**: Present all of the following data in one or more tables to show a chronological history and allow quick and easy reference:
   a. Well designations;

b. Well construction (including top of well casing elevation, total well depth, screen interval depth below ground surface, and screen interval elevation);
c. Groundwater depths (depth below ground surface);
d. Groundwater elevations (height relative to mean sea level);
e. Horizontal groundwater gradients;
f. Phase-separated product elevations;
g. Phase-separated product thickness;
h. Analytical results (including analytical method and detection limits for each constituent);
i. Clearly distinguish between water samples that were processed using silica-gel cleanup and those that were not;
j. Measurement dates;
k. Groundwater extraction, if applicable, including:
   (i) Average daily extraction rate;
   (ii) Total volume extracted for monitoring period; and
   (iii) Cumulative total volume extracted since system inception.
l. Contaminant mass removal, if applicable, including:
   (i) Average daily removal rate;
   (ii) Total mass removed for monitoring period; and
   (iii) Cumulative total mass removed since system inception.

3. **Discussion**: Provide a discussion of the field and laboratory results that includes the following information:
   a. Data Interpretations;
   b. Conclusions;
   c. Recommendations;
   d. Newly implemented or planned investigations and remedial measures;
   e. Data anomalies;
   f. Variations from protocols; and
   g. Conditions of wells.
4. **Public Outreach**: Provide a summary of public outreach activities including attendance at community meetings. This summary shall also include a description of correspondence received from the public and the Discharger's response.

E. ELECTRONIC REPORTING

1. Geotracker Requirements
   The State Board adopted regulations requiring electronic report and data submittal to Geotracker. The text of the regulations can be found at the following URL:
   http://www.waterboards.ca.gov/ust/cleanup/electronic_reporting/docs/final_electronic_regs_dec04.pdf
   Starting July 1, 2005, parties responsible for cleanup of pollution at sites overseen by the Water Board's Spills, Leaks, Investigation, and Cleanups Program are required to submit over the internet, the following information electronically:
   a. Groundwater analytical data;
   b. Surveyed locations of monitoring wells;
   c. Boring logs describing monitoring well construction; and

d. Portable data format (PDF) copies of all reports (the document, in its entirety [signature pages, text, figures, tables, etc.] shall be saved as a single PDF file).

Note that the Discharger is still responsible for submitting one hard copy of all reports pursuant to this Order. Individual Water Boards may require direct submittal of electronic reports and correspondence in addition to the State Board's Geotracker requirements.

F. CONTINGENCY REPORTING

1. **Violation Reports**: The Discharger shall notify the Board by telephone as soon as practicable whenever requirements in this Order are violated. Board staff may, depending on violation severity, require the Discharger to submit a separate technical report on the violation within five working days of the telephone notification.
2. **Other Reports**: The Discharger shall notify the Board in writing prior to any Site activities, such as construction or removal work, that have the potential to cause further migration of contaminants or provide new opportunities for site investigation.

G. MAINTENANCE OF WRITTEN RECORDS

Information required pursuant to this Self Monitoring Program shall be maintained by the Discharger for a minimum of five years. The five-year period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Board.

H. REPORTING SCHEDULE

The Discharger shall submit self-monitoring reports per the schedule indicated in Table A1. Reports due at the same time may be combined into one report for convenience, as long as monitoring activities and results pertaining to each monitoring period are clearly distinguishable. All monitoring reports shall be submitted to the Board no more than 30 days after the end of the monitoring period as indicated in Table A1.

Table A1 Monitoring Periods and Reporting Due Dates

Monitoring Periods	Reporting Due Dates
First Quarter (Winter) (Jan 1 – Mar 31)	May 1
Second Quarter (Spring) (Apr 1 – Jun 30)	August 1
Third Quarter (Summer) (Jul 1 – Sep 30)	November 1
Fourth Quarter (Fall) (Oct 1 – Dec 31)	February 1
Annual (Jan 1 – Dec 31)	February 1

I, Bruce H. Wolfe, Executive Officer, hereby certify that the foregoing Self-Monitoring and Reporting Program was adopted by the Board on _____.

_____
Bruce H. Wolfe
Executive Officer

Attachments: Table A2 – Groundwater Self-Monitoring Program

TABLE A2
GROUNDWATER SELF-MONITORING PROGRAM SAMPLING PARAMETERS
EXXONMOBIL FORMER BULK TERMINAL, SAN FRANCISCO

			1	2	3	4	5	6	7	8	9	10	11	12	13
		Parameter Method	TOC Elevation	Depth to Water	LPH Thickness	GW Elevation	Change in Elevation	TPH-D 8015M / DHS LUFT	TPH-G 8015M / DHS LUFT	Benzene 8260B	Toluene 8260B	Ethyl-benzene 8260B	Total Xylenes 8260B	MTBE 8260B	TBA 8260B
	Well No.	Area Monitored													
1	AW-1	Tank Block - S	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
2	AW-2	NW of Tank Block	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
3	AW-3	NE of Tank Block	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
4	AW-4	far NE of Tank Block	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
5	AW-5	NW of Tank Block	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
6	AW-6	far NE of Tank Block	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
7	AW-7	E of Tank Block	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
8	AW-8	far SE of Tank Block	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
9	AW-9	N of Tank Block	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
10	RW-1	far NE of Tank Block	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
11	RW-2	N of Tank Block	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
12	RW-3	NE of Tank Block	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
13	RW-4	Tank Block – SW	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
14	RW-5	Tank Block – SE	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
15	RW-6	Tank Block – W Ctrl	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
16	RW-7	Tank Block – NW	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
17	RW-8	Tank Block – NE	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
18	RW-9	Tank Block – E Ctrl	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
19	SURFACE WATER	N of Tank Block	**QUARTERLY -**					**OBSERVE SURFACE WATER CONDITIONS ADJACENT TO RIPRAP ALONG WHARF J-10 DURING LOW TIDE CONDITIONS. NOTE PRESENCE OR ABSENCE OF SHEEN. IF SHEEN IS PRESENT, ESTIMATE SIZE AND SUBMIT PHOTO DOCUMENTATION.**							

Q = Quarterly

1. All groundwater elevation measurements, surface water observations, and groundwater sample collection shall be completed during low tide conditions.
2. All groundwater elevation measurements and surface water observations shall be completed within one hour.
3. Groundwater elevation data shall include actual groundwater elevation referenced to feet above mean sea level.
4. Tide elevation data shall be provided for each monitoring event (beginning and ending tide elevations as well as lowest elevation for the tidal cycle in which sampling occurred).
5. Water samples shall be processed using silica-gel cleanup methods, performed prior to extractable petroleum hydrocarbon analysis only.
6. Submitted data tables shall clearly distinguish between water samples that were processed using silica-gel cleanup and those that were not (e.g., superscript notation next to value).

APPENDIX C

SUMMARY OF PUBLIC COMMENTS

APPENDIX C. Summary of Comments Received

Water Board staff (staff) received four comment letters during the public review period for the Tentative Order. The letters included over 100 separate comments or requested revisions. (Staff responses to individual comments are included as Appendix E of this Board package.) Two letters were from public citizens; one representing an individual business with a leasehold adjacent to the Site; the other representing members of the Fisherman's Wharf Environmental Quality Advisory Committee (EQAC), a stakeholders group comprised of business owners, leaseholders, and recreational users of the Bay. ExxonMobil and the Port of San Francisco (Port), the named dischargers in the Tentative Order, also submitted comment letters.

The letters from public citizens primarily expressed the importance of ensuring that ExxonMobil work collaboratively with the community throughout the remediation process. Additionally, several concerns were raised regarding the adequacy of the ExxonMobil's August 2004 Environmental Risk Assessment with respect to human health. The public is concerned about potential soil vapor intrusion into buildings in the Site vicinity and subsequent health impacts to building occupants and to food processing activities. Additionally, the public requested that ExxonMobil evaluate potential impacts to recreational users (especially swimmers) in Bay waters near the Site. Water Board staff have addressed these concerns in the attached Tentative Order, requiring ExxonMobil to submit an Updated Environmental Risk Assessment. Soil vapor contaminant concentrations and indoor ambient air contaminant concentrations will be used to assess potential human health impacts to building occupants. Additionally, ExxonMobil is required to complete an assessment to evaluate potential contaminant discharges to the Bay and impacts to recreational users in the Site vicinity. Some members of the public are also concerned about impacts to human health that may exist if ExxonMobil excavates fill material that underlies the Site. Staff noted that ExxonMobil will be required to evaluate and mitigate for risks associated with fill material if the approved remedial action plan requires soil excavation.

The comment letter from the Port expressed many of the same concerns raised in the citizen comment letters. The Port also requested several clarifications and/or additions to the Site history, report findings, and required submittals (Tasks), most of which staff incorporated into the attached Tentative Order. The most significant revision the Port requested was related to the Risk Management Plan (Task 9c, Land Use Restrictions). The Risk Management Plan essentially outlines post-remediation management requirements for the Site to ensure that human health and the environment are not impacted by future land use activities, especially in the event residual contaminants are managed in place. The Port requested several additions to this task to broaden the scope of the Risk Management Plan and to clarify all Discharger responsibilities. Following negotiations between the Port and ExxonMobil, the majority of the Port's requested revisions were incorporated into the Tentative Order, and both parties have indicated agreement with the final language.

The comment letter from ExxonMobil included a range of suggested clarifications and requested revisions to the Tentative Order. Staff accepted approximately half of ExxonMobil's comments. Staff included a more detailed description of potential sources of hydrocarbon contamination in the Site area, and noted that an additional purpose of the Tentative Order is to determine if sources in addition to ExxonMobil exist. Staff also accepted ExxonMobil's request to change the sequence in which reports are submitted. Staff did not accept requests to incorporate language suggesting that ExxonMobil is a suspected discharger rather than a confirmed discharger or that existing groundwater contamination does not discharge to the Bay. In addition, staff did not incorporate a discussion of extraneous activities and/or access

issues that may impact ExxonMobil's ability to meet required deadlines (e.g., the Port's EIR process, obtaining access from leaseholders, etc.). The Board will evaluate submittal deadlines as necessary.

Following is a one page summary of each comment letter, presented in the order received. For each letter, comments are sorted according to the categories described below, indicating whether or not the comment was incorporated into the Tentative Order. Note that many of the comments and requested revisions are generalized. (Detailed staff responses to each comment received are included as Appendix E of this Board Package).

C1: Comments from members of the Fisherman's Wharf Environmental Quality Advisory Committee (EQAC) (public stakeholders organization)
C2: Comments from TRC (consultant) on behalf of ExxonMobil (including those received following the Feb 16, 2005 Public Meeting)
C3: Comments from the Port of San Francisco (Port) (including those received following the Feb 16, 2005 Public Meeting)
C4: Comments from Luce Forward LLP on behalf of F. Alioto Fish Company, dba Alioto-Lazio Fish Company (lessee in property adjacent to Former Mobil Bulk Terminal)

Comments for each letter are divided into one of the following categories based on staffs' response:

Acknowledged
Staff acknowledge the comment and have provided feedback as appropriate, but the comment does not request a specific revision to the Tentative Order.

Accepted
Staff accept the requested revision and have updated the Tentative Order as stated in the comment.

Conditionally Accepted
Staff conditionally accept the requested revision and have updated the Tentative Order to include some portion(s) of comment (staff responses to individual comments are included in Appendix E).

Not Accepted
Staff do not accept the requested revision, and the Tentative Order was not edited per the comment (staff responses to individual comments are included in Appendix E).

General Questions Regarding Future Site Activities and Water Board Oversight Practices
Staff acknowledge the comment and have provided answers to inquiries regarding future Site activities and Water Board oversight practices, but the comment does not request a specific revision to the Tentative Order (staff responses to individual comments are included in Appendix E).

C1: Comments from members EQAC (public stakeholders organization)

"EQAC was formed in 1996 by the Port's Executive Director to address broad-based concerns about the waterfront environment in Fisherman's Wharf, and specifically in land and water in the areas..."

The citizen members of EQAC expressed the following primary concerns and recommended revisions, organized below into categories of "Acknowledged", "Accepted", and "Conditionally Accepted" by Water Board staff:

Acknowledged

- The need for ExxonMobil to pro-actively engage the community affected by historic and ongoing contamination related to ExxonMobil's operations at the Site;
- The need for additional Site characterization as required in the Tentative Order;
- The importance that ExxonMobil complete subsurface investigations that may be possible given the Port's potential future demolition plans;
- The need for ExxonMobil to work collaboratively with stakeholders during additional Site characterization activities and evaluation/implementation of remedial designs;
- The need for ExxonMobil to use pre-existing hydrologic modeling data to evaluate remedial design options (staff verified this data has been transmitted from the Port and received by ExxonMobil).

Accepted

- Include a description of documents submitted by members of the public (e.g., data, photographs, observations, affidavits of eye-witness accounts, etc.).

Conditionally Accepted

- Strong reservations regarding the proposed remedial action described by ExxonMobil in its August 2004 Environmental Risk Assessment and Feasibility Study (installation of an impermeable slurry wall with reactive permeable side walls at the upland-Bay interface and simultaneous injection of oxygen release compound at the upgradient source);
    - need for further site characterization prior to considering remedial options
    - need for structure to be self-supporting
    - size and location
    - ability to withstand tidal action, storm events, and groundwater flow
    - compatibility with existing and future land use
- The need for Site records to be maintained indefinitely to avoid potential future data gaps.

C2: Comments from TRC (consultant) on behalf of ExxonMobil

ExxonMobil's consultant expressed the following primary concerns and recommended revisions, organized below into categories of "Accepted", "Conditionally Accepted", or "Not Accepted" by Water Board staff.

Accepted

- Include a list of all potential source areas in the Site Vicinity (not just names of potential responsible parties);
- Note that an additional purpose of the Order is to determine if other sources exist at the Site;
- Edit the task submittal schedule to require additional Site characterization prior to implementation of an interim remedial action plan;
- Update additional Site characterization activities to include forensic analysis of petroleum to identify other potential sources;
- Edit data tables and text to clarify distinction between number of *wells* with elevated contaminant concentrations versus number of *samples* with elevated contaminant concentrations and add a table showing wells containing free phase hydrocarbons;
- Revise sampling requirements to indicate that all groundwater level measurements must be completed within one hour (not all sample collection);
- Correct sample analysis method names.

Conditionally Accepted

- Incorporate several clarifications regarding Site history;
- Add additional information to several summaries of Site investigation reports.

Not Accepted

- Reference to ExxonMobil as "the Discharger" implies that ExxonMobil was the sole discharger when other potentially responsible parties exist in the Site vicinity;
- Throughout the Order, change references to ExxonMobil's petroleum releases to state "suspected releases";
- State that there is no evidence to verify discharges to the Bay are occurring;
- Add the current facility operator's name to the Order title to indicate the Site is still an active petroleum distribution facility;
- Make Site groundwater exempt from municipal and domestic water supply;
- State that the Port's CEQA process and access issues with Port tenants may impact ExxonMobil's ability to meet specified deadlines;
- Eliminate the requirement of collection of blanks and duplicates during sample collection;
- Rephrase description of EQAC (stakeholders) submittal to eliminate perception observed sheen is from pipelines.

C3: Comments from the Port of San Francisco (Port)

The Port expressed the following primary concerns and recommended revisions, organized below into categories as "Accepted", "Conditionally Accepted", or "Not Accepted" by Water Board staff.

Accepted

- Incorporate several clarifications regarding Site history;
- Change all references of "seawall" to "retaining wall";
- Update description of Port's EIR to reflect current status;
- Clarify that soil gas monitoring will be used to assess risks associated with inhalation of indoor air;
- Clarify that additional Site characterization is needed to complete the Site risk assessment with respect to risks from exposure to indoor air and from exposure to Bay water (i.e., recreational users);
- Add a table showing wells containing free phase hydrocarbons;
- Clarify that additional Site characterization tasks do not change pre-existing deadlines;
- Include petroleum forensic analysis to Site characterization requirements;
- Require submittal of a completed Environmental Risk Assessment to incorporate data collected per "Additional Site Characterization" task;
- Require analysis of any secondary impacts to both the Port and tenants that may result from proposed remedial actions;
- Clarify that proposed remedial actions must be consistent with both existing and future land use plans;
- Include a list of data, observations, and/or eye-witness accounts submitted by the public;
- Require submittal of a Site Monitoring Program defining sample collection and analysis procedures;
- Include a certification statement in all sampling reports indicating that the Site Monitoring Program (above) was followed;
- Include a requirement that the Port be notified prior to sampling to ensure access to all groundwater wells.

Conditionally Accepted

- Clarify which tasks the Port is specifically responsible for as the property owner;
- State the Port will notified in writing and given reasonable time to comply in the event the Port becomes responsible for and Order tasks;
- Revise summary descriptions of Site investigation reports to state findings are based on the interpretation of consultant/discharger;
- Include additional submittals to document successful implementation of remediation actions;
- Include several revisions to the Risk Management Plan requirements to more clearly define ExxonMobil's long-term post-remediation responsibilities.

Not Accepted

- Specify for each task whether Primary or Secondary Discharger is responsible.

C4: Comments from Luce Forward LLP on behalf of Alioto-Lazio Fish Company (Lessee in property adjacent to Former Mobil Bulk Terminal)

Alioto-Lazio Fish Company's representative expressed the following primary concerns and recommended revisions, organized below into categories of "General Questions....", "Acknowledged", "Accepted", and Conditionally Accepted" by Water Board staff:

General Questions Regarding Future Site Activities and Water Board Oversight Practices

- Explain how ExxonMobil will required to address presence of arsenic in the soil and potential human health risks;
- Explain whether the Port's plans for demolition and reconstruction allow for additional soil removal;
- Provide information as to whether or not ExxonMobil will be allowed to stockpile soil at the Site and, if so, what measures the Water Board will take to eliminate dust and stormwater runoff;
- Describe how the Water Board enforces dust control and stormwater runoff measures;
- Describe how potential health risks associated with arsenic will be addressed;
- Explain how the Water Board's risk assessment guidance compares to the DTSC Interim Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air, December 14, 2004 and verify that Site risk assessments will be conducted in a manner consistent with the DTSC guidelines;
- Describe the potential of creating toxic breakdown products from the injection of oxygen release compound;
- Describe how ExxonMobil will protect buildings in the Site vicinity from potential soil vapor intrusion.

Accepted

- Include information regarding presence of arsenic at the Site;
- Include potential impacts of naphthalene from both groundwater and soil vapor intrusion in the Site risk assessment;
- Include a requirement that potential secondary impacts resulting from any proposed remedial action be evaluated and mitigated;
- The Site risk assessment should include an evaluation of potential soil vapor intrusion impacts on workers and others in buildings in the Site vicinity;
- The Site risk assessment should be consistent with DTSC guidance;
- The Site risk assessment should include an evaluation of potential impacts to food processing activities and compliance with Food and Drug Administration specifications;
- The Final Remedial Action Plan should include actions to eliminate any unacceptable risks from vapor intrusion to building occupants and potential impacts to food processing activities, as well as any risks community members who engage in recreational activities;
- Clarify that future land use activities include potential construction plans of leaseholders.

Not Accepted

- Require ExxonMobil to obtain agreements with any neighboring businesses [understood to be leaseholders in Site vicinity].

APPENDIX D

PUBLIC COMMENT LETTERS

January 25, 2005

Priya Ganguli
California Regional Water Quality Control Board
Groundwater Protection and Waste Containment Division
1515 Clay Street, Suite 1400
Oakland, CA 94612
By Email Only: pganguli@waterboards.ca.gov

RE: Tentative Order- Site Cleanup Requirements, Former Mobil Bulk Terminal 04-394, Located at 440 Jefferson Street, City and County of San Francisco.

Dear Priya:

The undersigned present these comments in connection with the referenced Tentative Order as citizen members of the Port of San Francisco's Fisherman's Wharf Environmental Quality Advisory Committee (EQAC). EQAC was formed in 1996 by the Port's Executive Director to address broad-based concern about the waterfront environment in Fisherman's Wharf, and specifically in land and water the areas including the Wharf J-10 project site.

Water Board staff Response No.

Our comments relate to the following topics of interest and concern:

1

1. **Tentative Order in General:** We applaud the Water Board's oversight efforts as reflected in the Tentative Order. Exxon-Mobil or its predecessors has operated hydrocarbon storage and dispensing facilities in the area of Wharf J-10 for over half a century. The Tentative order reflects that, as early as 1986 while removing a tank, Exxon-Mobil gathered soil samples indicating that there had been both gas and diesel releases from the site and the presence of elevated levels of both, as well as benzene, toluene and xylenes. Now, a full 20 years later, these conditions persist in soil and ground water. Despite patient community requests, Exxon-Mobil has not yet fully characterized and mitigated the impacts of its operations.

   The Tentative Order has become necessary in light of immediate community needs for pro-active engagement by Exxon-Mobil to address not only the contaminants attributable to its operations, but also the impacts of those conditions on neighboring operations, the proposed and future development on Wharf J10 and on other areas and activities adjacent to the Exxon-Mobil leasehold.

2

2. **Tidal Data:** For purposes of evaluating tidal influences in the project area, and Aquatic Park and health risks posed to swimmers, we suggest that Exxon-Mobil obtain and evaluate the hydrologic modeling and relevant supporting raw data as needed, developed under the direction of EQAC by Philip Williams Associates for the Port of San Francisco. The model is based on real time, in-water tidal data and may help inform a variety of decision-making and assumptions regarding

Water Board staff Response No.

tidal action, flow and water exchange between Bay water in the project area and Aquatic Park.

3

3. **Scope of "the Site" for Purposed of Exxon-Mobil Site Assessment and Remediation to Date**: Findings in the Tentative Order do an excellent job of summarizing Exxon-Mobil's site investigations to date, and rightly conclude that despite past efforts, soil and groundwater contamination persists. We find the following portion of the Tentative Order of critical importance (pg. 11): *Additional site characterization is needed to accurately assess current on site and offsite conditions to enable the Water Board and involved parties to evaluate proposed remediation strategies. Additionally, the Site is located in a densely populated business district adjacent to San Francisco Bay. The local community includes business owners, employees, swimmers, tourists, and San Francisco residents involved in the historical aspects of Fisherman's Wharf. Public concerns must be considered and addressed. This includes actions such as completing an analysis of soil gas impacts to assess subsurface conditions in buildings constructed over the Site plume and evaluating potential impacts to swimmer in San Francisco Bay.*

   To date, Exxon-Mobil has conducted very limited site characterization in areas adjacent to its former leasehold, notwithstanding data indicating three groundwater plumes and soil contamination outside its leasehold. In addition, the area underlying and adjacent to the former Exxon-Mobil fuel line leading from the primary tank farm to the fuel dock has not been assessed. We interpret the above-cited section of the Tentative Order literally and broadly, and believe that Exxon-Mobil must proactively engage with the Port, neighboring tenants, and the concerned community to design and implement a thorough site investigation beyond the area assessed to date. In addition, we request that further data and analysis be presented in a manner that can be easily understood and embraced by those impacted.

   Further, the planned demolition of Wharf J10 and fisheries facilities north of the Exxon-Mobil presents an excellent opportunity for Exxon-Mobil to conduct needed further appropriate site investigation in that area.

4

4. **Remedial Action Plan- Interim vs. Long-Term**. The Tentative Order summarizes Exxon-Mobil's currently proposed remedial action plan as follows (pg11):

   The recommended remedial action included installation of a slurry wall to create an impermeable barrier between groundwater and the Bay (Fig 3). The proposed design included permeable reactive sidewalls to treat groundwater that bypassed the slurry wall. Simultaneous injection of oxygen release compounds (ORC) was proposed to enhance microbial degradation of up gradient residual petroleum hydrocarbons. At the time of this Order, potential remedial alternatives are still under consideration by the Water Board and involved parties.

Water Board staff Response No.

The Tentative Order (pg 15) calls for an Interim Remedial Action Plan (IRAP) that is immediately executable, independent of proposed future land use (e.g. demolition, rehabilitation, and/or construction activities), and provides for expansion of the IRAP pending findings from additional site characterization. The Tentative Order (pp 16-17) further calls for a Final Remedial Action Plan (RAP) and outlines minimum RAP requirements including that the RAP be "compatible with the IRAP and with future land use (e.g., demolition, rehabilitation, and/or construction activities)…."

We believe that until the area impacted by Exxon-Mobil operations is fully characterized, it would be premature to draw conclusions regarding the adequacy of Exxon-Mobil's proposed remedial action plan as either an interim or a final remedial action plan.

In any case, data and analysis are currently insufficient to support a conclusion that the proposed slurry wall, reactive sidewalls and OCR would achieve the stated goal of preventing contaminant discharges to the Bay. The proposed wall appears to be too small (both laterally and vertically) to prevent discharges of contaminants to the Bay, but may well redirect discharges.

Contaminated groundwater in the area is subject to tidal influence. The impermeable wall that is proposed may well cause contaminants to "bottle up" behind the wall and travel laterally—potentially spreading contaminants rather than treating them.

Further, the proposed action presents flooding concerns. The area lies at the bottom of a watershed that receives and discharges significant amounts of storm water to the Bay. It is typical during late December and January storms to see 7 foot tides combined with rain events of 3 inches or more. Any solution that alters groundwater and/or storm water flows poses flooding concerns for this low-lying area, and would require careful hydrologic analysis.

In this regard, we find the hydrologic and other requirements regarding the slurry wall set forth in the Tentative Order (p. 17 Task 5 i) to be excellent guidance to Exxon-Mobil regarding these concerns.

5

5. **Permanent and Compatible Remedial Solution**: If Exxon-Mobil proposes to contain and treat contaminants on site, we note that the proposed slurry wall with reactive ends and ORC is neither a permanent nor a compatible solution (as is required by the Tentative Order (p 17 Task 5). The reactive ends require periodic maintenance and, the wall itself likely has a finite life span.

As noted below, Wharf J10 and the associated significant historic fisheries facility north of the former Exxon Mobil leasehold is scheduled for demolition and reconstruction. Proposed and future reconstruction of fisheries facilities at Wharf

Water Board staff Response No.

J10/Fish Alley will require soil disturbance as well as significant structural support. The obvious likely location of any effective Exxon-Mobil containment structure will be at waters edge and will sit below and adjacent to planned and future construction.

It is problematic that the proposed slurry wall is not self-supporting. Rather, Exxon-Mobil presumes that the Port of San Francisco will provide subjacent soil support and an undisturbed environment for the wall—a presumption that conflicts with both near and long-term land use plans for the area.
To be effective, it is likely that any permanent containment structure will need to be located at water's edge, likely in the location of the existing redwood timber retaining wall (aka seawall). Therefore, Exxon-Mobil's containment structure will need to be
(a) self-supporting;
(b) designed and constructed to interface over the long-term with Bay water and withstand the buffeting and erosion effects of waves and tides;
(c) designed as an integral component of the structural support system that will be necessary for planned and future construction at Wharf J10/Fish Alley, and to be otherwise compatible with planned and future uses; and
(d) designed in a manner that does not disrupt existing tidal groundwater and storm water flows.

In short, we believe that Exxon-Mobil should propose a significantly more robust containment structure that meets the four criteria described above. For example, an impermeable concrete seawall with intermittent reactive treatment areas that allow sufficient flow to avoid the flooding and "bottle up" effects discussed above might be appropriate.

6

6. Collaborative Approach to Site Characterization and a Permanent and Compatible Remedial Action Plan:

During the past 20 years, Exxon-Mobil pointed to the presence of improvements on adjoining lands as a reason to curtail the location and scope of site characterization, remediation and other mitigation efforts. Now, the facts and circumstances are markedly different- The entire area north of the Exxon-Mobil leasehold, commonly called Wharf J10 or "Fish Alley" is slated for demolition and reconstruction. This work is critical to the continued viability of the globally significant San Francisco Fisherman's Wharf fisheries industry. The ripple effect of a loss of fisheries facilities and industry at Wharf J10 would be felt by retail, restaurant and other businesses throughout the greater Fisherman's Wharf area, and may profoundly impact the level of tourism in this location.

We suggest that, if the Port of San Francisco concurs, Exxon-Mobil take the lead in conducting the following work at its expense as soon as the environmental impact report (EIR) for demolition and reconstruction at Wharf J10 is certified:

Water Board staff Response No.

a. **Demolition:** Conduct the demolition associated with the projects described in the EIR. (There is a possibility that the historic structure will need to be preserved. In that case it will likely need to be protected and removed).
b. **Site Characterization:** Conduct appropriate investigation and site characterization in the Wharf J10/Fish Alley project area.
c. **Develop Remedial Action Plan:** Based on site characterization results develop a RAP. If containment and treatment is proposed, the containment structure must meet the four criteria described in Section 5 above.
d. **Implement Remedial Action Plan In Coordination With Other Land Uses:** Timing, design, etc. will need to be coordinated with and compatible with pending and future land use plans.

7

7. **Record Keeping:** Table A2, Section G of the Tentative Order requires Exxon-Mobil to maintain Self Monitoring Program records for a 5 year period. There are existing data gaps in prior records. For example, absence of records related to the presumed removal of 12 inches (approx 75 cu yds) of soil after the 1990 surface diesel release; absence of product quantity recovery records related to the claimed ground water pumping in response to the 1990s discovery of 18 inches of liquid phase hydrocarbons on ground water in the area. To avoid future data gaps, we suggest that the order require Exxon-Mobil to keep records indefinitely.

Very truly yours,

Meg Reilly, Dolphin Club
530 Chestnut Street #407
San Francisco, CA 94133

Tom Creedon
Scoma's Restaurant
Al Scoma Way
San Francisco, CA 94109

TRC
Customer-Focused Solutions

January 26, 2006

California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street
Suite 1400
Oakland, California 94612

ATTN: MS. PRIYA GANGULI

SITE: FORMER MOBIL BULK TERMINAL 04-394
GP RESOURCES MARINE DIESEL BULK STORAGE FACILITY
440 JEFFERSON STREET
SAN FRANCISCO, CALIFORNIA

RE: COMMENTS ON TENTATIVE SITE CLEANUP REQUIREMENTS

Water Board staff Response No.

Dear Ms. Ganguli:

On behalf of ExxonMobil Oil Corporation (ExxonMobil), TRC submits the following comments to the California Regional Water Quality Control Board (CRWQCB) December 19, 2005 Tentative Site Cleanup Requirements for the above referenced site. Comments are as follows:

Global Comments

8 1. Site should be identified as "Former Mobil Bulk Terminal 04-394 GP Resources Marine Diesel Bulk Storage Facility" in the document. This more accurately describes the site since it remains an active facility and is consistent with prior reports.

9 2. Although ExxonMobil is the only potentially responsible party (PRP) that has taken the lead on the site assessment and remedial activities at this site, other potential dischargers exist. Referring to ExxonMobil as "the Discharger" on ExxonMobil specific tasks infers that ExxonMobil is the sole discharger at the site. For references to ExxonMobil and tasks that are the responsibility of ExxonMobil, replace "the discharger" with "ExxonMobil." The "discharger" term for general requirements in the Order for a discharger is acceptable.

10 3. For the distribution list:
   a. Refer to TRC as TRC and not TRC Solutions.
   b. Cory O'Donnell works for Bingham McCutchen LLP.

11 4. During the January 11, 2006 meeting, the Port indicated it was not accurate to term the wall that is located north of the site a "seawall" and it should be called a "retaining wall". However, in the Port's UTILITIES Drawing Number 6508-403A-2, the lots located south of this wall are termed "Seawall Lots".

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Water Board staff Response No.

Comments on Tentative Site Cleanup Requirements
Former Mobil Bulk Terminal 04-394
GP Resources Marine Diesel Bulk Storage Facility
January 26, 2006

12 Acronyms and Definitions
For "Site", also include current operator. See Item #1 under Global Comments.

13 Item #2, Page 5
Clarify the distinction between General Petroleum and GP Resources.

14 Table 1, Page 5
Table refers to the presence of 1,000-gallon UST, 20,000-gallon diesel AST, and 150,000-gallon diesel AST from the mid-1930s to 1990. The UST was removed in 1986 and the two ASTs were in-place until the early-1990s. Table also refers to two 20,000-gallon ASTs being present from 1992 to present. Based on review of site history, the 150,000-gallon AST was removed in 1994/1995 time frame and the two ASTs were installed in 1995.

15 Item #3, Page 6
An additional purpose of the assessment work is to determine if other sources may exist at the site.

16 Item 4, Pages 6 and 7
The Site History should include the following: quarterly LPH pumpouts (1992 to 2000), groundwater pumpouts related to soil excavations (early to mid-1990's), interim soil vapor extraction activities (1997), and the current use of hydrocarbon absorbent soakies in LPH wells (2000 to present). The information was documented in previous progress reports and the October 27, 2004 TRC presentation materials.

17 Item #4a, Page 6
Based on review of historical Sanborn Fire Insurance Maps and aerial photographs that were provided in the 2003 Technical Information Report, the seawall just north of the site was installed sometime between 1913 and 1935. Fill material relating to the 1906 earthquake was placed on and near the site starting just after the earthquake. The exact date the placement of fill material in this area was complete is unknown.

18 Item #4b, Page 6
Revise the third and fourth sentences in this item to state "Soil samples confirmed the presence of both gasoline and diesel-range hydrocarbons. The suspected source of the petroleum hydrocarbons is the 1,000-gallon UST".

19 Item #4c, Page 6
Revised the first sentence in this item to end with "…AST was overfilled by Olympian Oil Company" (Accutite, April 23, 1990).

Water Board staff Response No.

Comments on Tentative Site Cleanup Requirements
Former Mobil Bulk Terminal 04-394
GP Resources Marine Diesel Bulk Storage Facility
January 26, 2006

20 Item #4h, Page 7
Although the slurry wall was not specifically designed as a contaminate containment wall, based on the construction of this wall, it likely does act as a barrier to groundwater flow thus inhibiting migration of any hydrocarbons that may be present.

21 Item #5b, Page 7
Revise the first sentence in this item to state, "ExxonMobil is named as a primary discharger because ExxonMobil is suspected to be responsible for an unknown portion of the petroleum hydrocarbons detected in soil and groundwater at the site.

22 Revise the third sentence in this item to start with "Both suspected gasoline and diesel releases…".

23 There is no mention of other possible PRPs/sources in this item. Other possible sources identified in past reports are as follows:

- Aboveground storage tanks (ASTs) that existed just east of the site.
- Underground storage tanks (USTs) located west of the site at the Hyde Street Pier.
- Former AST farm and UST located just east of Leavenworth Street.
- Former AST farm located on the southeast corner of Jefferson and Leavenworth Streets
- Former tanks located on the southwest corner of Jefferson and Leavenworth Streets.
- Former Coal Wharf that included a 41,000-gallon oil AST, Former Equitable Gaslight Company (town gas site) that included two 180,000 cubic ft gas holder ASTs, Former California Fruit Canners Association Cannery, and a former UST located across Jefferson Street just south of the site.
- Underground petroleum pipelines (not related to the site) running along the seawall and in Jefferson Street.

24 Item #5d, Page 8
Revise the first sentence in this item to end with "…for remediation costs relating to contamination resulting from ExxonMobil's former operations at the Site".

25 Item #8, Page 8
The CRWQCB states that the seawall was installed over 100 years ago. This statement should be changed as indicated previously. The CRWQCB also states that "the seawall is

26 considered to be permeable to water, and it is assumed groundwater from the Site discharges to the Bay". Please add a sentence after this that indicates "However, to date, no evidence has been produced to verify discharges to the Bay are occurring".

27 Item #10a, Page 8
Revise sentence in item to state "Groundwater and soil data indicate that petroleum hydrocarbon contamination has been detected at the site and the hydrocarbon

TRC

concentrations detected outside the boundaries of the Site may have resulted from releases from the Former Mobil Bulk Terminal 04-394".

28 Item #10b, Page 9
Additional potential sources not listed include ASTs that existed just east of the site, USTs located west of the site at the Hyde Street Pier, the former Coal Wharf that included a 41,000-gallon oil AST, former Equitable Gaslight Company (town gas site) that included two 180,000 cubic ft gas holder ASTs, former California Fruit Canners Association Cannery, former UST located across Jefferson Street just south of the site, and former AST farm located on the southeast corner of Jefferson and Leavenworth Streets (see comment to Item #5b). Other potential sources are related to the other four petroleum companies listed in the CRWQCB Tentative Order under this item.

29 Item #11a, Page 9
Revise third sentence in this item to end with "…both suspected gasoline and diesel releases from the Site".

30 Discussion of groundwater concentrations in this item not complete. Does not mention up- and cross-gradient hydrocarbon detections as well as LPH detected in upgradient Well AW-8.

31 Item #11c, Last Bullet, Page 10
Revise the last bullet to state "There were potential offsite TPH sources based on, but not limited to, the presence of hydrocarbons located more then 150 feet cross-gradient from the, differences in the profile of hydrocarbons across the site, vertical pattern of hydrocarbon contamination detected in prior borings, the presence of fill material known to be a source of the metals and much of the polynuclear aromatic hydrocarbon (PAH) contamination, and historical pattern of LPH detections (i.e., detection of product in Well AW-8).

32 Item #11f, Page 10
Indicate that hydrocarbon detections frequently correlated with fill material (brick fragments, wood, etc.).

33 Item #11h, Page 10
Replace "Discharger" in the first sentence with "ExxonMobil".

34 Item #11i, Page 11
Discussion of information in the Technical Information Report should be expanded here or in another location of the Tentative Order. The history in this document is invaluable in the understanding of site conditions and subsurface impacts from other sources.

35 Item #11j, Page 11
Replace "the Discharger's" in the first sentence with "ExxonMobil's".

Water Board staff Response No.

Comments on Tentative Site Cleanup Requirements
Former Mobil Bulk Terminal 04-394
GP Resources Marine Diesel Bulk Storage Facility
January 26, 2006

36

Item #12, Page 11
Revise second sentence in this item to end with "…proposed remediation strategies and determine if other sources exist".

37a

Item #13, Pages 11 and 12
Presentation of groundwater data and LPH occurrence data from December 2003 to September 2005 should be clarified. Text in this item gives the impression that 12 different wells have consistently had concentrations exceeding the solubility of diesel. However, TPH-D groundwater concentrations exceeded the solubility of diesel in only 6 wells from December 2003 to September 2005. See the summary table below:

WELL WITH TPH-D ≥5,000 µg/l	DATE OF TPH-D ≥5,000 µg/l
AW-5	6/04 & 6/05
AW-7	6/05 & 9/05
RW-6	12/03
RW-7	3/04
RW-8	12/03
RW-9	6/04, 9/04, 9/05, & 12/05

37b

Currently, TPH-D groundwater concentrations exceeded the solubility of diesel in only one well (Well RW-9).

37c

Trace LPH has been detected in 3 wells from December 2003 to December 2005. Currently, trace LPH is detected in two wells (AW-3 and AW-8). See the summary table below:

WELL W/ SHEEN/TRACE LPH	DATES OF LPH DETECTION
AW-3	9/04 to 12/05
AW-8	3/04 to 12/05
RW-9	12/03, 3/04, 3/05, & 6/05
AW-9	Unknown (no access since 6/01)

It is unknown whether Well AW-9 might contain LPH because we have had no access to this well since June of 2001 because the unsafe condition of the Wharf J-10 building. When Well AW-9 was sampled in June of 2000 and June of 2001, it did not contain LPH. Currently, a trace of LPH is detected in two wells (Wells AW-3 and AW-8.

38

Item #14d, Page 13
TRC has sampled the 17 site wells for TDS and 3,000 mg/l was exceeded in one well (AW-6). Based on the close proximity of the wells to the Bay and the fact the wells were sampled when the tide was coming in, the seawall may be acting as a barrier and the exchange between groundwater and Bay water not a prevalent as stated by the CRWQCB and others. Aquifer test data presented in Section 10.2.4 of the August 30, 2004 TRC Environmental Risk Assessment and Feasibility Study suggests the transmissivity (T) of the shallow water bearing zone at the site to be 0.02 ft^2/min which is at the 200 gallons per day threshold. However, actual yield from wells used to extract groundwater during

Water Board staff Response No.

Comments on Tentative Site Cleanup Requirements
Former Mobil Bulk Terminal 04-394
GP Resources Marine Diesel Bulk Storage Facility
January 26, 2006

the previous GWP&T system was below 200 gallons per day. In addition, any impact to groundwater from metals from the fill material (unrelated to the former bulk terminal operations) likely could not be reasonably or economically treated for domestic use.

39

Item #16, Page 14
Refer to the current CEQA process taking place for the Wharf J-10 building and how that has and can impact the project schedule.

40

Comments on Task Order and Schedule, Pages 15 to 18

1. Based on the need to collect additional assessment data prior to recommending interim and final remedial action, we recommend the following revised order and schedule for the tasks specified in the Tentative Order:

RECOMMENDED TASK ORDER	RECOMMENDED COMPLIANCE DATE
Additional Site Characterization Workplan	February 10, 2006
Final Additional Site Characterization Report and Interim Remedial Action Plan	April 28, 2006
Implementation of Interim Remedial Action Plan	45 days following approval of the IRAP.
Final Revised Remedial Action Plan	July 3, 2006
Implementation of Final Remedial Action Plan	90 days following approval of the RAP.
Property Use Restrictions	September 1, 2006
Implementation of Property Use Restrictions	60 days after Executive Officer approval of proposed Property Use Restrictions and Risk Management Plan

41

It should be noted that the schedule assumes no access issues and that the CRWQCB is aware that ExxonMobil's consultant has been currently delayed over one month negotiating access with a Port tenant.

42

2. The Additional Site Characterization Workplan should be an amendment to the approved TRC Workplan dated June 15, 2005 and approved by the CRWQCB on November 7, 2005. The amended workplan will incorporate the additional assessment tasks outlined in Items 3a, 3b, 3c, and 3d on Pages 15 and 16 in the Tentative Order. Indicate the CRWQCB understands that the completion of the tasks discussed in the original and amended workplans is dependant on ExxonMobil's consultant gaining the required access.

43

3. Other additional site characterization scope items that will be completed but not discussed in the Tentative Order includes forensic analysis of LPH detected in wells and the ambient air sampling to be completed inside buildings, on the bulk terminal site, and a background location.

44

4. On January 17, 2006, to address Item #3b on Page 16 of the Tentative Order, information was requested from the Dolphin Club in writing regarding the areas/routes used by swimmers and hours in the water. Evaluation of health risks posed to swimmers will need to be based on hypothetical scenarios since no data currently exists that demonstrates that hydrocarbons relating to releases from the Former Mobil Bulk Terminal 04-394 GP Resources Marine Diesel Bulk Storage Facility are entering the Bay.

Water Board staff Response No.

Comments on Tentative Site Cleanup Requirements
Former Mobil Bulk Terminal 04-394
GP Resources Marine Diesel Bulk Storage Facility
January 26, 2006

45 5. Since it will be possible to complete the interim remedial action plan (IRAP) following completion of the additional assessment activities, the IRAP can be included with the Final Site Characterization Report.

46 6. When referring to the IRAP and interim remedial action, it should be termed "Additional IRAP" and "additional interim remedial action" since interim remedial action has taken place at the site in the past (LPH pumpouts, interim soil vapor extraction (SVE), soakies, etc.) and currently are taking place at the site (soakies).

47 7. When referring to the Final RAP, it should be termed "Revised Final RAP" since previous RAPs have been submitted.

48 8. Indicate under Item #5a on Page 17 of the Tentative Order that the final future land use (other than what is discussed under Phases 1 and 2 on Pages 20 through 24 of the draft EIR) has not been determined.

49 9. Revise the sentence under Item #5e on Page 17 of the Tentative Order to state "A long-term solution to eliminate possible discharge of hydrocarbon-impacted groundwater to San Francisco Bay". As previously stated, no data currently exists that demonstrates that hydrocarbons relating to releases from the Former Mobil Bulk Terminal 04-394 GP Resources Marine Diesel Bulk Storage Facility are entering the Bay.

50 10. Under Item #7 on Page 18 of the Tentative Order, indicate the Port will be responsible for recording deed restrictions and notifying tenants regarding the soil and groundwater conditions. Based on the extent of property the Port owns in the area and assessment data, other property owners do not appear affected.

51 Item #B2, Page 29
Based on the number of wells at the site, the tasks related to proper groundwater sampling of these wells, and access issues at the site, it is unreasonable to request that all the wells and surface water observations be "completed within one hour". Currently, water levels in the existing wells are collected within an hour and the sampling requires approximately 3 to 4 hours to complete.

52 Item #C1, Page 29
The groundwater monitoring reports include a cover letter and an additional information section on the summary page that follows the cover letter. Issues encountered during the sampling event and the proposed corrective actions are described in the cover letter and/or the additional information section on the summary page that follows the cover letter.

53 Item #C2d, Page 30
Based on the slow recovery of the wells and the fact wells are purged prior to sampling, elevation data collected after the completion of sampling would not be representative of the static water level. In addition, the sampling time is determined based on tide cycle charts produced by the Tide Tool program to ensure we are sampling the wells at the point in the tide cycle requested by the CRWQCB. Water level data collected prior to purging.

Water Board staff Response No.

Comments on Tentative Site Cleanup Requirements
Former Mobil Bulk Terminal 04-394
GP Resources Marine Diesel Bulk Storage Facility
January 26, 2006

54 Item #C3d, Page 30
To date blanks and duplicates have not been required. Review of lab data would suggest blanks and duplicates are not necessary at this time.

55 Item #C3e(v), Page 30
Analytical data is provided electronically to TRC in a database format from the laboratory. Tables created for the TRC groundwater reports are created by merging the database file from the lab with TRC's database. These files are not compatible with Excel®.

56 Item #D1a, Page 31
Please provide additional explanation of the requirements for the "Known or probable contaminant sources" map for the Annual Report.

57 Item #D2f, Page 32
This item is not applicable to the Former Mobil Bulk Terminal 04-394 GP Resources Marine Diesel Bulk Storage site.

58 Table A2, Page 35
1. Method for TPH-D and TPH-G should be listed as 8015M/DHS LUFT.
59 2. Method for benzene, toluene, ethylbenzene, xylenes, MTBE, and TBA (VOCs) should be listed as 8260B.
60 3. Comment on Note 4 - Based on the slow recovery of the wells and the fact wells are purged prior to sampling, elevation data collected after the completion of sampling would not be representative of the static water level. See response to Item #C2d, Page 30 on the previous page.

Please call Mr. Steve Pao, ExxonMobil Project Manager (310-212-1877) or the undersigned at (949-753-0101) if you have questions or need additional information.

Sincerely,

Jeff Hensel, RG, REAII
Project Manager

cc: Carol Bach, Port of San Francisco (2 copies)
Steve Pao, ExxonMobil
Cory O'Donnell, Bingham McCutchen LLP

TRC

January 26, 2006

Ms. Priya Ganguli
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94623

Subject: **Tenative Order, Site Cleanup Requirements (RWQCB, December 19, 2006)**
Former Mobil Bulk Plant 04-394
440 Jefferson Street, San Francisco

Dear Ms. Ganguli:

Water Board staff Response No.

Thank you for the opportunity to review and comment on the above-referenced draft order (Order). The Port of San Francisco's comments are offered below, following the format of the Order for ease of reference.

Findings

61 **2) Site Ownership and Operation, Table 1 and next paragraph**. From 1990 to 1992, the Lessee was GP Resources, operating under a sublease from Mobil Oil. GP Resources has no relationship to General Petroleum, which was a predecessor of Mobil Oil and Exxon/Mobil. In 2001 the Port installed double-walled piping from the GP Resources tank yard to the newly-constructed fuel dock at Hyde Street Harbor; Both the buried piping and the piping hung from the pier, which extends from the wharf face to the fuel dock, are double-walled.

62 **4) Site History**. Beginning with the first mention of the "redwood seawall", in section 4a, and subsequently throughout of the document and figures, the term "retaining wall" should replace "seawall" wherever the term is used to refer to the redwood retaining wall.

63 **4) Site History, k)**. This item could be revised to reflect the current status of the Environmental Impact Report (DEIR) process and scope: In October 2005, the San Francisco Planning Department issued a Draft Environmental Impact Report (EIR) for Wharf J-10, located immediately north of the Site. The Wharf J-10 EIR analyzes environmental effects that could result from 1) demolition of the Wharf J-10 deck, substructure and building; 2) placement of rip rap to stabilize the shoreline; 3) construct new fishing industry facilities by current tenants on the Wharf J-10 site; and 4) potential other future fishing industry-related facilities and buildings. The DEIR public comment period closed on November 29, 2005; the San Francisco Planning Department is overseeing the production of written responses to public comments prior to issuing a Final EIR. Pursuant to California Environmental Quality Act (CEQA) requirements, the Wharf J-10 EIR includes a study of alternatives to the project. One of the alternatives

Water Board staff Response No.

assumes preservation of the Wharf J-10 shed building, which would require independent bracing and stabilization of the shed structure while the deck and substructure are demolished and rebuilt. Once the Final EIR is certified as complete (targeted for Spring 2006), the Port Commission can consider the proposed demolition and rebuild options described above.

64 **5) Named Dischargers, e)**. The Port requests that this section clarify that the Port will be responsible for any task that identifies the property owner (i.e. secondary discharger) as the party responsible for execution, and that the Port would only become responsible for tasks assigned to the primary discharger (ExxonMobil), if ExxonMobil fails to comply with the requirements of the Order, and after written notice to the Port by the Regional Board and a reasonable time period to comply.

65 **11) Site Investigations, d)**. This section summarizes statements made in the subject site investigation report (TRC, September 1990), including the assertion that three distinct and separate liquid-phase hydrocarbon (LPH) plumes are present. The Port has commented previously on this interpretation of the existing data in its letters to the RWQCB dated 10/26/04 and 8/9/05, and maintains that the conclusion that there are three separate areas of contamination rather than one LPH plume is not demonstrated by the data collected to date. The additional site characterization requested by the RWQCB will help delineate the LPH plume beneath the site, but until there is sufficient data to support the assertion that there are three separate plumes, the Port requests that the Findings identify the statement as an interpretation rather than a statement of fact.

66 **11) Site Investigations, j.)**. This section summarizes a conclusion made in the *Environmental Risk Assessment and Feasibility Study* ("RA/FS', TRC, August 2004) that the potential for health risk associated with vapor intrusion is unlikely. The Port suggests that this sentence be revised to clarify that soil gas monitoring will be required in order to assess risks associated with inhalation of indoor air.

67 **12) Need for Additional Site Characterization**. The Port requests that this section be revised to explicitly clarify the fact that additional site characterization is needed not only to assess soil and groundwater conditions with respect to remediation strategy, but also to complete the risk assessment by evaluating potential exposure of current on-site workers to indoor air, and potential exposure of recreational users to contaminants in groundwater discharged to the bay.

68 **13) Current Extent of Hydrocarbon Contamination**. Table 2 summarizes the ranges of petroleum hydrocarbons over the past eight quarters of monitoring. We suggest that this table include instances where free product was encountered in a well and, as a result, a groundwater sample was not collected for laboratory analysis.

Tasks

69 **General Comment**: Please indicate at the beginning of each task whether the primary discharger or secondary discharger/property owner is responsible for implementation.

Water Board staff Response No.

70 **2) Implementation of Interim Remedial Action Plan**. The Port suggests requiring a submittal documenting successful implementation of the interim remedial action.

71 **3) Additional Site Characterization Work Plan**. Please clarify how this requirement relates to the work plan for additional investigation that ExxonMobil has proposed in its *Response to Comments and Additional Site Assessment Workplan* ("Response to Comments", TRC, 6/15/05), and approved by RWQCB staff (with conditions) on November 7, 2005. The description of this task could be revised to clarify that this requirement is for a comprehensive work plan including the investigation previously proposed and underway, incorporating the approval conditions, as well as any additional site characterization work required to fully characterize the nature and extent of petroleum contamination beneath or emanating from the former ExxonMobil facility site, evaluate potential human health or environmental risks, or support selection and design of a remedial action. The list of parameters to be investigated should include soil gas. The description of this task should clarify that the requirement for a comprehensive additional site characterization work plan should not delay execution of the work previously proposed and approved.

72 **3) Additional Site Characterization Work Plan, a)**. ExxonMobil has suggested previously that the hydrocarbon size distribution found in soil indicates contribution from other contaminant sources. The Port maintains that existing data do not clearly support such a conclusion. In order to obtain data that effectively clarify the extent to which hydrocarbons in groundwater result from the former Mobil Bulk Plant or from offsite sources, the Port suggests that the additional groundwater sampling and analysis include forensic analysis of the composition of the petroleum mixture in free-phase and dissolved hydrocarbons in groundwater near the bulk plant and at locations east and west of the source area where off-site sources are suspected. This evaluation should include a determination of the relative composition of different hydrocarbon compounds within a specified range (ie. TPH as gasoline or TPH as diesel) and be performed by an expert in petroleum chemistry who could provide opinions as to the nature of the original source petroleum products released, the amount of biodegradation/weathering that the mixtures have experienced, and the similarities/dissimilaritiesbetween samples collected from different locations.

73 **5) Final Remedial Action Plan, a)**. This sentence should be revised to specify that the proposed remedial alternative should be compatible with the Interim Remedial Action Plan, and with future land use, including fishing industry uses. Maintenance should also be added to the list of examples of current and future uses given in parentheses. The criteria for the Final Remedial Action Plan should specify that it must meet applicable standards for seismic and structural stability.

74 **5) Final Remedial Action Plan, b)**. This section references a "completed Environmental Risk Assessment", presumably the RA/FS. The Port suggests considering requiring a revised comprehensive environmental risk assessment and report that incorporates the new data collected during the additional site characterization effort and exposure pathways not evaluated in the

Water Board staff Response No.

previous risk assessment (see comment on Finding 12). This assessment seems to be a prerequisite to identifying cleanup levels as required by Task 5.c).

75 **6) Implementation of Final Remedial Action Plan**. The Port suggests requiring a submittal documenting successful implementation of the final remedial action.

76 **7) Property Use Restrictions, b)**. This section should require notice to occupants as well as owners.

77 **7) Property Use Restrictions, c)**. The Port recommends that this section, describing the requirements of a Risk Management Plan (RMP) for the site, also describe the intent and overall performance standards for the document, in addition to listing specific issues that the RMP should include. We suggest that this section include the following performance standards: a) The RMP should establish long-term management measures adequate to protect human health and the environment, and prevent nuisance conditions; b) the RMP must be compatible with federal, state and local laws and guidelines, and current and future land use, and cannot interfere with future use or development; c) The RMP should clearly demonstrate how the primary discharger will take long-term responsibility, including financial responsibility, to manage any contamination allowed to be left in place, and set forth responsibilities, detailed protocols for coordinating with the property owner, and deadlines for response actions that the Discharger will take whenever contaminated soil or groundwater is or is anticipated to be encountered so that operation, maintenance or construction activities at affected property are not impacted; and d) The RMP should be required to have the written approval of the property owner. The Executive Officer of the RWQCB will ultimately determine whether the RMP is acceptable. Specifically, we suggest that the Order make clear what activities could result in a risk ((c)(iii)); how this will be communicated to the persons at risk; and that ExxonMobil is responsible for managing the risk ((c)(v)), including the cost of any mitigation strategy ((c)(vii)). The RMP should also include a description of oversight and enforcement responsibilities.

78 **7) Property Use Restrictions**. The Port suggests addition of new sections to: d) require that if any activity, construction, or redevelopment is proposed to occur prior to adoption of the RMP, the primary discharger will complete a project-specific RMP to identify and describe management measures to prevent adverse impacts from the proposed project; e) require the property owner make the RMP available to the public and provide the RMP to all tenants, contractors, or others operating at or occupying the affected area; and f) specify how the Dischargers will ensure notification regarding the RMP and ensure its implementation.

79 **Figure 3, Site Plan**. The Port suggest omitting this figure from the Order to avoid confusion about the fact that the slurry wall remains a conceptual-level proposal, and has not been approved by the RWQCB as an interim or final remedial action.

80 **Table 4, Site Reports and Investigations**. This table is missing the Port's October 26, 2004 comment letter regarding the *Environmental Risk Assessment and Feasibility Study* (TRC, August 2004).

Water Board staff Response No.

81 **Site Monitoring Program**. The Port suggests adding a new requirement for submittal of a site-specific sampling and analysis plan, subject to the approval of the Executive Officer, documenting how groundwater samples will be collected in a consistent manner, meeting all the requirements specified by the Self-Monitoring Program.

82 **Self-Monitoring Program, B. Monitoring Requirements**. The Port requests that this section clarify that the primary discharger will coordinate with the Port and take measures as agreed with the Port to ensure that monitoring wells are accessible at the time of the quarterly sampling, and that the presence of a temporary obstacle, such as a parked car, does not constitute sufficient justification for not sampling. Due to the number of wells, the allowable time period for sampling could be reasonably increased to sampling within two hours before and after the low tide (also applies to Table A2, footnote 2). Please clarify that silica gel cleanup should be performed prior to extractable petroleum hydrocarbon analysis only (also applies to Table A2, footnote 2).

83 **Self-Monitoring Program, C. Reporting Requirements**. Each monitoring report should include a certification statement indicating that monitoring was conducted in accordance with the unique procedures and requirements set forth in the Order and site-specific sampling and analysis plan.

Finally, the Port greatly appreciates the effort and attention to detail that is evident in this draft Order, and your efforts to engage the interested parties in the public participation process. We would like to discuss with you, at your convenience, how we can assist you in obtaining additional information regarding other sources of petroleum contamination and other potentially responsible parties. If you have any questions about the Port's comments, please feel free to contact me at (415)274-0568 or carol.bach@sfport.com.

Sincerely,
PORT OF SAN FRANCISCO

Carol Bach
Environmental and Regulatory Affairs Manager
Planning and Development

cc: Terry Seward, RWQCB

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Meg Reilly, Doplhin Swimming Club
Tom Creedon, Scoma's
Angela Cincotta, Alioto Lazio

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January 26, 2006

31374-1

VIA E-MAIL AND U.S. MAIL

Ms. Priya Ganguli
SFB Regional Water Quality Control Board
1515 Clay St., Suite 1400
Oakland, CA 94612

Re: Former Mobil Bulk Terminal 04-394/Comments on Tentative Site Cleanup Requirements

Dear Ms. Ganguli:

Water Board staff Response No.

This letter is submitted on behalf of F. Alioto Fish Company, Inc., dba Alioto-Lazio Fish Company ("Alioto-Lazio") regarding the Tentative Order of the San Francisco Bay Regional Water Quality Control Board ("Regional Board") for site cleanup requirements for the Former Mobil Bulk Terminal 04-394, located at 440 Jefferson Street, San Francisco ("Site"). Alioto-Lazio appreciates the opportunity to comment on this Tentative Order.

Findings, ¶ 4.h) Site History (p. 7):

84

1. This subparagraph refers to the removal of soil from the Site, but does not refer to the characterization of such soil as containing arsenic. The Tentative Order does not address the presence of arsenic at the Site and, potentially, in other areas where excavation might be undertaken. Will ExxonMobil be required to address the issues of arsenic in the soil and the potential health hazards that might be created by its remediation activities?

85

2. This subparagraph states that "[l]ateral excavation to the north, east and west was completed to the maximum extent allowed by the slurry wall and surrounding buildings." This statement implies that the levels of contamination in the soil were high enough to suggest further excavation, but that this excavation was limited due to potential construction impacts or a risk of removal of lateral support for adjacent structures. Does the Port's current plans for demolition and, ultimately, reconstruction allow for additional soil removal by ExxonMobil? Will ExxonMobil be required to consider the Port's plans and the plans of leaseholders in the area (including Alioto-Lazio) in developing their remediation plan?

86

Water Board staff Response No.

86a Findings, ¶ 5.d) Named Dischargers (p. 8): This subparagraph refers to an Access Agreement between the City and County of San Francisco and ExxonMobil. That agreement contained a requirement that no soil would be stockpiled at the Site. However, a 1996 report states that soil was stockpiled at the Site with plastic sheeting. Will ExxonMobil be allowed to stockpile soil at the Site? If so, why, and will the Regional Board require measures to eliminate dust and potential storm water runoff? How will any such requirements be enforced?

86b

Findings, ¶ 10.h) Petroleum Hydrocarbon Sources (p. 10):

87 1. Again, soil removal is referenced, but there is no reference to the Reclassification of Soils report and the existence of arsenic. Will the presence and potential health effects of arsenic be addressed by ExxonMobil?

2. See comment 2 on Finding 4.h) above regarding excavation.

88 Findings, ¶ 11.j) Site Investigations (p. 11): This paragraph refers to a Tier 1 Environmental Risk Assessment that reported "[t]he potential for current or future vapor intrusion . . . to be unlikely given the predominantly heavier grade of petroleum hydrocarbons."

89 1. Is the Tier 1 risk assessment, or any other assessment, regarding soil vapor intrusion consistent with recent Department of Toxic Substances Control Interim Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air, December 14, 2004? If not, will an assessment consistent with that guidance be conducted?

90 2. Was the potential exposure to naphthalene considered in the Tier I risk assessment? Why is ExxonMobil continuing to conduct soil vapor testing? Is it only for the purpose of characterizing ground water, or will it include an evaluation of the risk of soil vapor intrusion?

91 3. Injection of oxygen release compound was proposed to enhance microbial degradation of residual petroleum hydrocarbons. Has the potential impact on the generation of toxic compounds and the potential for soil vapor intrusion been considered? If so, how?

92 4. Will ExxonMobil be required to consider soil vapor extraction to enhance remediation and protection of buildings from any soil vapor intrusion?

Findings, ¶ 12) Need for Additional Site Characterization (p. 11): This paragraph refers to the need to complete "an analysis of soil gas impacts to assess subsurface conditions in buildings constructed over the Site plume and evaluating potential impacts to swimmers in San Francisco Bay."

Water Board staff Response No.

93 1. Why are only "subsurface conditions" in buildings referenced? The evaluation should include an assessment of the potential for soil vapor intrusion and the impact of such intrusion on workers and others in those buildings.

94 2. Findings ¶ 1 recognizes that this area is one where food processing is conducted. Why is ExxonMobil not being required to consider the potential impacts on that activity, including any potential impact on compliance with Food and Drug Administration specifications and other health regulations related to food processing?

95 Tasks 1) Interim Remedial Action Plan (p. 15): The Interim Remedial Action Plan ("IRAP") refers only to the remediation of the soil and groundwater. Should there not also be a requirement to reassess the potential for health impacts from soil vapor intrusion and to implement measures to eliminate any unacceptable risks to human health? See comments on Finding ¶ 11.j), above.

96 Tasks 3) Additional Site Characterization: See comments on Findings ¶¶ 11.j) and 12), above.

97 1. The evaluation should include an assessment of the potential for soil vapor intrusion and the impact of such intrusion on workers and others in those buildings, in a manner consistent with DTSC guidance.

98 2. The evaluation should include the potential impacts on food processing, including compliance with Food and Drug Administration specifications and other health regulations.

Tasks 5) Final Remedial Action Plan:

99 1. See comment on Tasks 1) and 3), above. The Final Remedial Action Plan ("RAP") should include actions to eliminate any unacceptable risks of vapor intrusion, the potential for human health effects (swimmers, building occupants, etc.), and any potential effects upon food processing activities.

100 2. Subparagraph a) references "future land use," but only cites to Port activities in Finding 4.k). While this reference is not necessarily limited to Port activities, the reference to "future land use" should more clearly include consideration of the future land use plans of leaseholders (including, for example, Alioto-Lazio) to reduce the potential for a remedial plan that is not cost-effective and might be inconsistent with future development.

101 3. As RAP implementation will necessarily impact neighboring businesses, ExxonMobil should be required to have agreements in place, contingent upon RAP approval, with those businesses to ensure the implementability of its plan.

LUCE FORWARD
ATTORNEYS AT LAW • FOUNDED 1873
LUCE, FORWARD, HAMILTON & SCRIPPS LLP

Thank you again for the opportunity to comment upon the proposed Tentative Order. If you have any questions or need any further information, please contact the undersigned or Angela Cincotta at 415-673-5866. We look forward to your consideration of the above comments.

Very truly yours,

Steven P. McDonald
of
LUCE, FORWARD, HAMILTON & SCRIPPS LLP

cc: Ms. Angela Cincotta
Ms. Monique Moyer

From: Carol Bach <Carol.Bach@sfport.com>
To: <pganguli@waterboards.ca.gov>
Date: 2/16/2006 5:24:03 PM
Subject: Fw: j-10 comments

Priya - following are the Port's comments as discussed during our meeting today, and for which you requested an e-mail submittal to document the comments.

I think the only thing that remains to discuss from the Port's perspective is our comments on the requirements for the RMP. I would like to have Rona Sandler in on that conversation. I had suggested a conference call between the three of us, but I will be on vacation until Thursday the 23rd, so if you are trying to get this finished before then, please feel free to discuss with Rona directly and finalize based on her input. She is intimately familiar with the Port's concerns on this topic and can adequately represent the Port's position with respect to comments on the RMP task. Her contact info is:

Rona H. Sandler
Deputy City Attorney
City & County of San Francisco
Direct: (415) 554-4690
Fax: (415) 554-4757
Email: Rona.Sandler@sfgov.org

By the way, I'd love to get a pdf of the sign-up sheet from the meeting today if it's not too much trouble. Thanks, again, for attention to the technical issues around this project and the care you've taken to ensure that all parties are heard.

Water Board staff Response No.

Comments from Meeting on 2-16-06

As result of and as discussed at our meeting today, the City has the additional few comments on the draft order:

102 On Tasks 1 and 5, specify that remedial actions must be consistent with existing land uses (as well as future).

103 On Tasks 1 and 5, require an evaluation of risks posed by any proposed remedial action, including any risks to Port tenants and the public. We would not want the remedy to create additional or increased risks over the existing contaminated conditions.

104 Please include a list of data, observations and/or eye-witness accounts submitted by members of the public, either in the findings or in an attachment. We understand that Ms. Reilly has submitted such documentation and believe that it should be documented in the order.

CC: Rona Sandler <Rona.Sandler@sfgov.org>

Water Board staff Response No.

From: "Hensel, Jeff" <jhensel@TRCSOLUTIONS.com>
To: "Priya Ganguli" <pganguli@waterboards.ca.gov>
Date: 2/24/2006 3:25:18 PM
Subject: RE: Draft Revisions - TRC Comments

Priya,

Here are my comments after my brief review of the revised draft Tentative Order:

105 1) Page 3 - Take out reference to Figure 3. Looks like the CRWQCB removed this figure from the order.

106 2) TRC used the word "seawall" based on Port of SF figures and past correspondence. Past figures referred to land by this wall as "seawall lots" and this wall was referred to as a "seawall" in past correspondence we have received from the Port.

107 3) Page 7, Item g - Add period at end of item.

108 4) Page 10, Last Bullet - Add the word "and" between the words wall and inn near the end of the sentence.

109 5) Page 11, Item e - Statement misleading. Statement suggest sheen was related to pipelines which is not true.

110 6) Pages 13 & 14 - Recommend using format for TPH-D >5,000 and LPH detection tables in TRC's January 26, 2006 Comments Letter. Easier to follow.

111 7) Pages 17 to 23 - Don't agree with the order of deliverables or the timing. We need to base the IRAP on the additional site assessment findings. Recommend using schedule and order of deliverables in TRC's January 26, 2006 Comments Letter.

112 8) Need to make a statement indicated schedule is dependant on ExxonMobil receiving timely access to complete the work.

Please call me with any questions.

Regards,
Jeff Hensel, RG, REAII
TRC
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APPENDIX E

WATER BOARD STAFF RESPONSES TO INDIVIDUAL COMMENTS

California Regional Water Quality Control Board
San Francisco Bay Region

Alan C. Lloyd, Ph.D.
Agency Secretary

1515 Clay Street, Suite 1400, Oakland, California 94612
(510) 622-2300 • Fax (510) 622-2460
http://www.swrcb.ca.gov/rwqcb2

Arnold Schwarzenegger
Governor

APPENDIX E

March 1, 2006
File No. 2169.6050 (PG)

Subject: Response to Comments on the Tentative Site Cleanup Requirements Order for the Former Mobil Bulk Terminal 04-394, 440 Jefferson Street, City and County of San Francisco.

Dear Interested Parties:

Thank you for submitting comments on the subject Tentative Order. Attached are Water Board staff's response to individual comments (Attachments E1, E2, E3, E4, and E5), presented in the order received. Staff responses, shown within the box under each comment, are numbered consecutively throughout the document (1 to 112). Also attached is the revised Tentative Order, incorporating those comments that were accepted.

The Tentative Order will be brought before the Water Board for consideration at its Wednesday, March 8, 2006 meeting, which begins at 9:00 AM. Water Board staff will give a brief presentation to introduce the Tentative Order to the Board. The meeting agenda can be accessed at our website at:
http://www.waterboards.ca.gov/sanfranciscobay/agenda_mar_06.htm
Directions to the Elihu M. Harris State Building are available via the "Location" link located on the left side of the website.

If you have any questions, please feel free to contact me, or my supervisor, Terry Seward, by phone or by e-mail (Priya Ganguli - 510-622-2427, pganguli@waterboards.ca.gov; Terry Seward - 510-622-2416, tseward@waterboards.ca.gov).

Sincerely,

Priya Ganguli
Engineering Geologist
Groundwater Protection and Waste Containment Division
San Francisco Bay Regional Water Quality Control Board

Attachments:

Attachment E1: Comment letter from members of the Fisherman's Wharf Environmental Quality Advisory Committee (EQAC)

Attachment E2: Comment letter from TRC (consultant) on behalf of ExxonMobil

Attachment E3: Comment letter from the Port of San Francisco

Attachment E4: Comment letter from Luce Forward LLP on behalf of F. Alioto-Lazio Fish Company (Lessee of property adjacent to Former Mobil Bulk Terminal)

Attachment E5: Comments sent following February 16, 2006 Public Meeting

Electronic cc:

Distribution List (sent electronically unless noted*)**:**

(EQAC = Fisherman's Wharf Environmental Advisory Committee)

Jay Ach, Port of San Francisco
*Angela Alioto, Esq., Law Offices of Mayor Joseph L. Alioto & Angela Alioto
Noreen Ambrose, Deputy City Attorney
*Mamdouh Awwad, San Francisco Department of Public Health
Alessandro Baccari, EQAC
Carol Bach, Port of San Francisco
Mohammad Bazargani, TRC
*Mary Blevins, USEPA
Eugene Bugatto, California Shellfish Company & EQAC
John C. Callan, Jr., Luce, Forward, Hamilton & Scripps LLP
Paul Capurro, Franceschi's Restaurant & EQAC
*Sejal Choksi, Bay Keeper
Angela Cincotta, Alioto-Lazio Fish Co. & EQAC
David Cincotta, Law Offices of David Cincotta
Tom Creedon, Scomas Restaurant & EQAC (Chair)
Lynn Cullivan, San Francisco Maritime National Park & EQAC
Francisco Da Costa, Environmental Justice Advocacy
Harry Forest, Forest and Associates
Jeff Hensel, TRC
Lydia Huang, Baseline Environmental
Lucas Kary, National Park Service
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Steven McDonald, Luce, Forward LLP
Bob Miller, San Francisco Crab Boat Owners' & EQAC
Savannah Morgan, CA Dept. of Fish and Game
Cory Odonnell, Bingham McCutchen LLP
Diane Oshima, Port of San Francisco
Aaron Peskin, City & County of SF Board of Supervisors & EQAC
Timothy Przygocki, San Francisco Maritime NHP & EQAC
Meg Reilly, Dolphin Club (President) & EQAC
Michael Rubenstein, Esq., Michael Rubenstein Law Offices
Rona Sandler, Deputy City Attorney
Terry Seward, SFB Water Board
*Norman Shopay, DTSC
Todd Stanford, TRC
Don Tarantino, SP Tarantino Insurance Brokerage, Inc.
Sal Tarantino, S.P. Tarantino Insurance Brokerage, Inc.
Annette Traverso, Alioto-Lazio Fish Co. & EQAC
John West, SFB Water Board
Darryll White, Adventure Bike & EQAC
Phil Williamson, Port of San Francisco
Dan Wynne, EQAC

ATTACHMENT E1. Comment Letter from Members of EQAC and Water Board Staff Responses

Dear Priya:

The undersigned [Meg Reilly of the Dolphin Club and Tom Creedon of Scoma's Restaurant] present these comments in connection with the referenced Tentative Order as citizen members of the Port of San Francisco's Fisherman's Wharf Environmental Quality Advisory Committee (EQAC). EQAC was formed in 1996 by the Port's Executive Director to address broad-based concern about the waterfront environment in Fisherman's Wharf, and specifically in land and water the areas including the Wharf J-10 project site.

Our comments relate to the following topics of interest and concern:

1. **Tentative Order in General:** We applaud the Water Board's oversight efforts as reflected in the Tentative Order. Exxon-Mobil or its predecessors has operated hydrocarbon storage and dispensing facilities in the area of Wharf J-10 for over half a century. The Tentative order reflects that, as early as 1986 while removing a tank, Exxon-Mobil gathered soil samples indicating that there had been both gas and diesel releases from the site and the presence of elevated levels of both, as well as benzene, toluene and xylenes. Now, a full 20 years later, these conditions persist in soil and ground water. Despite patient community requests, Exxon-Mobil has not yet fully characterized and mitigated the impacts of its operations.

   The Tentative Order has become necessary in light of immediate community needs for pro-active engagement by Exxon-Mobil to address not only the contaminants attributable to its operations, but also the impacts of those conditions on neighboring operations, the proposed and future development on Wharf J10 and on other areas and activities adjacent to the Exxon-Mobil leasehold.

1. Comment Noted.

2. **Tidal Data:** For purposes of evaluating tidal influences in the project area, and Aquatic Park and health risks posed to swimmers, we suggest that Exxon-Mobil obtain and evaluate the hydrologic modeling and relevant supporting raw data as needed, developed under the direction of EQAC by Philip Williams Associates for the Port of San Francisco. The model is based on real time, in-water tidal data and may help inform a variety of decision-making and assumptions regarding tidal action, flow and water exchange between Bay water in the project area and Aquatic Park.

2. Comment Noted. The Port of San Francisco has provided ExxonMobil/TRC with a copy of the hydrologic model described above.

3. **Scope of "the Site" for Purposed of Exxon-Mobil Site Assessment and Remediation to Date**: Findings in the Tentative Order do an excellent job of summarizing Exxon-Mobil's site investigations to date, and rightly conclude that despite past efforts, soil and groundwater contamination persists. We find the following portion of the Tentative Order of critical importance (pg. 11):
   Additional site characterization is needed to accurately assess current on site and offsite conditions to enable the Water Board and involved parties to evaluate proposed

remediation strategies. Additionally, the Site is located in a densely populated business district adjacent to San Francisco Bay. The local community includes business owners, employees, swimmers, tourists, and San Francisco residents involved in the historical aspects of Fisherman's Wharf. Public concerns must be considered and addressed. This includes actions such as completing an analysis of soil gas impacts to assess subsurface conditions in buildings constructed over the Site plume and evaluating potential impacts to swimmer in San Francisco Bay.

To date, Exxon-Mobil has conducted very limited site characterization in areas adjacent to its former leasehold, notwithstanding data indicating three groundwater plumes and soil contamination outside its leasehold. In addition, the area underlying and adjacent to the former Exxon-Mobil fuel line leading from the primary tank farm to the fuel dock has not been assessed. We interpret the above-cited section of the Tentative Order literally and broadly, and believe that Exxon-Mobil must proactively engage with the Port, neighboring tenants, and the concerned community to design and implement a thorough site investigation beyond the area assessed to date. In addition, we request that further data and analysis be presented in a manner that can be easily understood and embraced by those impacted.

Further, the planned demolition of Wharf J10 and fisheries facilities north of the Exxon-Mobil presents an excellent opportunity for Exxon-Mobil to conduct needed further appropriate site investigation in that area.

3. Comment noted. In a letter dated November 14, 2005 and signed by Steve Pao of ExxonMobil, ExxonMobil states "After demolition of the Wharf J-10 building....ExxonMobil agrees to perform an environmental assessment of the area under the former Wharf J-10 building. If necessary, based on the findings of the assessment and in consultation with the appropriate regulatory agencies, ExxonMobil will take appropriate corrective action to address any contamination related to its former operations in order to protect human health and the environment so that future uses and redevelopment of the property are not impeded."

Water Board staff will meet with stakeholders as future site investigations and remedial actions are completed to gain input from community members and to field questions. Staff will solicit comments from stakeholders on reports submitted by ExxonMobil.

4. **Remedial Action Plan- Interim vs. Long-Term**. The Tentative Order summarizes Exxon-Mobil's currently proposed remedial action plan as follows (pg11):

The recommended remedial action included installation of a slurry wall to create an impermeable barrier between groundwater and the Bay (Fig 3). The proposed design included permeable reactive sidewalls to treat groundwater that bypassed the slurry wall. Simultaneous injection of oxygen release compounds (ORC) was proposed to enhance microbial degradation of up gradient residual petroleum hydrocarbons. At the time of this Order, potential remedial alternatives are still under consideration by the Water Board and involved parties.

The Tentative Order (pg 15) calls for an Interim Remedial Action Plan (IRAP) that is immediately executable, independent of proposed future land use (e.g. demolition, rehabilitation, and/or construction activities), and provides for expansion of the IRAP pending findings from additional site characterization. The Tentative Order (pp 16-17) further calls for a Final Remedial Action Plan (RAP) and outlines minimum RAP requirements including that the RAP be "compatible with the IRAP and with future land use (e.g., demolition, rehabilitation, and/or construction activities)…."

We believe that until the area impacted by Exxon-Mobil operations is fully characterized, it would be premature to draw conclusions regarding the adequacy of Exxon-Mobil's proposed remedial action plan as either an interim or a final remedial action plan.

In any case, data and analysis are currently insufficient to support a conclusion that the proposed slurry wall, reactive sidewalls and OCR would achieve the stated goal of preventing contaminant discharges to the Bay. The proposed wall appears to be too small (both laterally and vertically) to prevent discharges of contaminants to the Bay, but may well redirect discharges.

Contaminated groundwater in the area is subject to tidal influence. The impermeable wall that is proposed may well cause contaminants to "bottle up" behind the wall and travel laterally—potentially spreading contaminants rather than treating them.

Further, the proposed action presents flooding concerns. The area lies at the bottom of a watershed that receives and discharges significant amounts of storm water to the Bay. It is typical during late December and January storms to see 7 foot tides combined with rain events of 3 inches or more. Any solution that alters groundwater and/or storm water flows poses flooding concerns for this low-lying area, and would require careful hydrologic analysis.

In this regard, we find the hydrologic and other requirements regarding the slurry wall set forth in the Tentative Order (p. 17 Task 5 i) to be excellent guidance to Exxon-Mobil regarding these concerns.

4. The remediation strategy recommended by ExxonMobil in the August 2004 Environmental Risk Assessment and Feasibility Study (ERA/FS) was not intended to provide construction details, but to propose a potential remedial action plan based on an evaluation of feasible options. Water Board staff do not object to the proposed remediation strategy conceptually. Impermeable slurry walls and reactive treatment walls have been used to successfully address groundwater contamination at other sites adjacent to the Bay. The figure presented by ExxonMobil in the ERA/FS and reproduced as Fig. 3 in the Tentative Site Cleanup Requirements Order (SCR) is not meant to represent a final design. The proposed slurry wall with reactive side walls has not been officially approved by Water Board staff, so we will remove Fig. 3 from the updated Tentative SCR to eliminate the potential misconception that the figure is final.

5. **Permanent and Compatible Remedial Solution**: If Exxon-Mobil proposes to contain and treat contaminants on site, we note that the proposed slurry wall with reactive ends and ORC is neither a permanent nor a compatible solution (as is required by the Tentative Order (p 17 Task 5). The reactive ends require periodic maintenance and, the wall itself likely has a finite life span.

   As noted below, Wharf J10 and the associated significant historic fisheries facility north of the former Exxon Mobil leasehold is scheduled for demolition and reconstruction. Proposed and future reconstruction of fisheries facilities at Wharf J10/Fish Alley will require soil disturbance as well as significant structural support. The obvious likely location of any effective Exxon-Mobil containment structure will be at waters edge and will sit below and adjacent to planned and future construction.

   It is problematic that the proposed slurry wall is not self-supporting. Rather, Exxon-Mobil presumes that the Port of San Francisco will provide subjacent soil support and an undisturbed environment for the wall—a presumption that conflicts with both near and long-term land use plans for the area.
   To be effective, it is likely that any permanent containment structure will need to be located at water's edge, likely in the location of the existing redwood timber retaining wall (aka seawall). Therefore, Exxon-Mobil's containment structure will need to be
   (a) self-supporting;
   (b) designed and constructed to interface over the long-term with Bay water and withstand the buffeting and erosion effects of waves and tides;
   (c) designed as an integral component of the structural support system that will be necessary for planned and future construction at Wharf J10/Fish Alley, and to be otherwise compatible with planned and future uses; and
   (d) designed in a manner that does not disrupt existing tidal groundwater and storm water flows.

   In short, we believe that Exxon-Mobil should propose a significantly more robust containment structure that meets the four criteria described above. For example, an impermeable concrete seawall with intermittent reactive treatment areas that allow sufficient flow to avoid the flooding and "bottle up" effects discussed above might be appropriate.

5. Water Board staff appreciate stakeholders' concerns regarding potential maintenance needs for remedial alternatives. However, given the limited subsurface access in the area, the need to avoid groundwater mounding behind an impermeable barrier, the conceptual model proposed by ExxonMobil (impermeable slurry wall combined with reactive treatment walls) is a potential remedial alternative under consideration for the site. At this stage, detailed design elements, such as size, exterior support elements, etc., have not yet been presented, and therefore have not been evaluated by Water Board staff.

6. **Collaborative Approach to Site Characterization and a Permanent and Compatible Remedial Action Plan:**

   During the past 20 years, Exxon-Mobil pointed to the presence of improvements on adjoining lands as a reason to curtail the location and scope of site characterization, remediation and other mitigation efforts. Now, the facts and circumstances are markedly

different- The entire area north of the Exxon-Mobil leasehold, commonly called Wharf J10 or "Fish Alley" is slated for demolition and reconstruction. This work is critical to the continued viability of the globally significant San Francisco Fisherman's Wharf fisheries industry. The ripple effect of a loss of fisheries facilities and industry at Wharf J10 would be felt by retail, restaurant and other businesses throughout the greater Fisherman's Wharf area, and may profoundly impact the level of tourism in this location.

We suggest that, if the Port of San Francisco concurs, Exxon-Mobil take the lead in conducting the following work at its expense as soon as the environmental impact report (EIR) for demolition and reconstruction at Wharf J10 is certified:

a. **Demolition:** Conduct the demolition associated with the projects described in the EIR. (There is a possibility that the historic structure will need to be preserved. In that case it will likely need to be protected and removed).
b. **Site Characterization:** Conduct appropriate investigation and site characterization in the Wharf J10/Fish Alley project area.
c. **Develop Remedial Action Plan:** Based on site characterization results develop a RAP. If containment and treatment is proposed, the containment structure must meet the four criteria described in Section 5 above.
d. **Implement Remedial Action Plan In Coordination With Other Land Uses:** Timing, design, etc. will need to be coordinated with and compatible with pending and future land use plans.

6. Water Board staff do not have the authority to designate which party is responsible for demolition, reconstruction, or rehabilitation activities associated with Wharf J10. ExxonMobil is named as the primary discharger responsible for site characterization and for development and implementation of a remedial action plan. ExxonMobil is aware of potential future land use plans and the need to coordinate closely with the Port, tenants, and other area Stakeholders.

Record Keeping: Table A2, Section G of the Tentative Order requires Exxon-Mobil to maintain Self Monitoring Program records for a 5 year period. There are existing data gaps in prior records. For example, absence of records related to the presumed removal of 12 inches (approx 75 cu yds) of soil after the 1990 surface diesel release; absence of product quantity recovery records related to the claimed ground water pumping in response to the 1990s discovery of 18 inches of liquid phase hydrocarbons on ground water in the area. To avoid future data gaps, we suggest that the order require Exxon-Mobil to keep records indefinitely.

7. The Water Board cannot require ExxonMobil to maintain records indefinitely. However, at the February 16, 2006 public meeting, The Port volunteered to hold files related to the site indefinitely, and ExxonMobil representatives said they will research the company's file retention policy.

ATTACHMENT E2. Comment Letter from TRC on behalf of ExxonMobil and Water Board Staff Responses

Dear Ms. Ganguli:

On behalf of ExxonMobil Oil Corporation (ExxonMobil), TRC submits the following comments to the California Regional Water Quality Control Board (CRWQCB) December 19, 2005 Tentative Site Cleanup Requirements for the above referenced site. Comments are as follows:

Global Comments

1. Site should be identified as "Former Mobil Bulk Terminal 04-394 GP Resources Marine Diesel Bulk Storage Facility" in the document. This more accurately describes the site since it remains an active facility and is consistent with prior reports.

8. Tentative Order will not be changed. Sections describing Site ownership and Site history clearly state the site is active and currently operated by GP Resources. The Tentative SCR is specifically related to ExxonMobil's historic operations and the existing Tentative Order title is therefore appropriate.

2. Although ExxonMobil is the only potentially responsible party (PRP) that has taken the lead on the site assessment and remedial activities at this site, other potential dischargers exist. Referring to ExxonMobil as "the Discharger" on ExxonMobil specific tasks infers that ExxonMobil is the sole discharger at the site. For references to ExxonMobil and tasks that are the responsibility of ExxonMobil, replace "the discharger" with "ExxonMobil." The "discharger" term for general requirements in the Order for a discharger is acceptable.

9. Tentative Order will not be changed. The Tentative SCR is intended to address soil and groundwater contamination resulting from ExxonMobil's historic operations, and it is therefore appropriate to name ExxonMobil as "the Discharger". Tentative SCR Finding No. 5 (Named Dischargers) states "If additional information is submitted indicating that other parties caused or permitted any waste to be discharged on the Site where it entered or could have entered waters of the state, the Board will consider adding those parties' names to this order". Finding No. 10b (Petroleum Hydrocarbon Sources) acknowledges there may be additional potential responsible parties, and reiterates that the Order may be amended to add additional parties if warranted. Finding 10b goes on to state "…such an action would in no way alleviate ExxonMobil's responsibility to remediate the petroleum hydrocarbon plume associated with its discharges or to meet the tasks outlined in this Order."

3. For the distribution list:
    a. Refer to TRC as TRC and not TRC Solutions.
    b. Cory O'Donnell works for Bingham McCutchen LLP.

10. Comment noted. The Distribution List will be edited to reflect these changes.

4. During the January 11, 2006 meeting, the Port indicated it was not accurate to term the wall that is located north of the site a "seawall" and it should be called a "retaining wall". However, in the Port's UTILITIES Drawing Number 6508-403A-2, the lots located south of this wall are termed "Seawall Lots".

11. The Tentative Order will not be changed. Based on feedback from the Port at the February 16, 2006 public meeting, the construction and use of the wall is that of a "retaining wall" rather

than a "seawall". The Tentative Order will be edited to change all references of "seawall" to "retaining wall".

Acronyms and Definitions
For "Site", also include current operator. See Item #1 under Global Comments.

12. Tentative Order will not be changed. See Water Board staff response No. 8.

Item #2, Page 5
Clarify the distinction between General Petroleum and GP Resources.

13. Comment noted. The Tentative Order will be edited to make this clarification.

Table 1, Page 5
Table refers to the presence of 1,000-gallon UST, 20,000-gallon diesel AST, and 150,000-gallon diesel AST from the mid-1930s to 1990. The UST was removed in 1986 and the two ASTs were in-place until the early-1990s. Table also refers to two 20,000-gallon ASTs being present from 1992 to present. Based on review of site history, the 150,000-gallon AST was removed in 1994/1995 time frame and the two ASTs were installed in 1995.

14. Comment noted. The table will be updated as appropriate.

Item #3, Page 6
An additional purpose of the assessment work is to determine if other sources may exist at the site.

15. Comment noted. The Tentative Order will be edited to reflect this addition.

Item 4, Pages 6 and 7
The Site History should include the following: quarterly LPH pumpouts (1992 to 2000), groundwater pumpouts related to soil excavations (early to mid-1990's), interim soil vapor extraction activities (1997), and the current use of hydrocarbon absorbent soakies in LPH wells (2000 to present). The information was documented in previous progress reports and the October 27, 2004 TRC presentation materials.

16. Comment noted. The Tentative Order will be edited to reflect these additions.

Item #4a, Page 6
Based on review of historical Sanborn Fire Insurance Maps and aerial photographs that were provided in the 2003 Technical Information Report, the seawall just north of the site was installed sometime between 1913 and 1935. Fill material relating to the 1906 earthquake was placed on and near the site starting just after the earthquake. The exact date the placement of fill material in this area was complete is unknown.

17. Comment noted. The Tentative Order will be edited as appropriate.

Item #4b, Page 6
Revise the third and fourth sentences in this item to state "Soil samples confirmed the presence of both gasoline and diesel-range hydrocarbons. The suspected source of the petroleum hydrocarbons is the 1,000-gallon UST".

18. Tentative Order will not be changed. There is sufficient evidence to demonstrate ExxonMobil is responsible for hydrocarbon releases at the Site, and that associated contamination extends beyond the boundaries of the Site.

Item #4c, Page 6
Revised the first sentence in this item to end with "…AST was overfilled by Olympian Oil Company" (Accutite, April 23, 1990).

19. Comment noted. The Tentative Order will be edited to reflect this change.

Item #4h, Page 7
Although the slurry wall was not specifically designed as a contaminate containment wall, based on the construction of this wall, it likely does act as a barrier to groundwater flow thus inhibiting migration of any hydrocarbons that may be present.

20. Comment noted. However, the wording of the Tentative Order is accurate and will not be revised

Item #5b, Page 7
Revise the first sentence in this item to state, "ExxonMobil is named as a primary discharger because ExxonMobil is suspected to be responsible for an unknown portion of the petroleum hydrocarbons detected in soil and groundwater at the site.

21. Tentative Order will not be changed. See Water Board staff response No. 18.

Revise the third sentence in this item to start with "Both suspected gasoline and diesel releases…".

22. Tentative Order will not be changed. See Water Board staff response No. 18.

There is no mention of other possible PRPs/sources in this item. Other possible sources identified in past reports are as follows:

- Aboveground storage tanks (ASTs) that existed just east of the site.
- Underground storage tanks (USTs) located west of the site at the Hyde Street Pier.
- Former AST farm and UST located just east of Leavenworth Street.
- Former AST farm located on the southeast corner of Jefferson and Leavenworth Streets
- Former tanks located on the southwest corner of Jefferson and Leavenworth Streets.
- Former Coal Wharf that included a 41,000-gallon oil AST, Former Equitable Gaslight Company (town gas site) that included two 180,000 cubic ft gas holder ASTs, Former California Fruit Canners Association Cannery, and a former UST located across Jefferson Street just south of the site.
- Underground petroleum pipelines (not related to the site) running along the seawall and in Jefferson Street.

23. Water Board staff revise Finding No. 10 (Petroleum Hydrocarbon Sources) to include the information above. However, Finding No. 5 will not be changed. The purpose of Finding No. 5 (Named Dischargers) is to explain why ExxonMobil and the Port of San Francisco are named as Dischargers in the Tentative Order. Finding No. 5e states "If additional information is submitted indicating that other parties caused or permitted any waste to be discharged on the Site where it entered or could have entered waters of the state, the Board will consider adding those parties' names to this order."

Item #5d, Page 8
Revise the first sentence in this item to end with "…for remediation costs relating to contamination resulting from ExxonMobil's former operations at the Site".

24. Comment noted. The Tentative Order will be edited to reflect this change.

Item #8, Page 8
The CRWQCB states that the seawall was installed over 100 years ago. This statement should be changed as indicated previously.

25. Comment noted. The Tentative Order will be edited as appropriate.

The CRWQCB also states that "the seawall is considered to be permeable to water, and it is assumed groundwater from the Site discharges to the Bay". Please add a sentence after this that indicates "However, to date, no evidence has been produced to verify discharges to the Bay are occurring".

26. Tentative Order will not be changed. It is Water Board staffs' professional opinion that the groundwater wells at the Site are hydraulically connected to the Bay.

Item #10a, Page 8
Revise sentence in item to state "Groundwater and soil data indicate that petroleum hydrocarbon contamination has been detected at the site and the hydrocarbon concentrations detected outside the boundaries of the Site may have resulted from releases from the Former Mobil Bulk Terminal 04-394".

27. Tentative Order will not be changed. Water Board staff acknowledge the potential presence of off Site petroleum sources (see Finding No. 10, Petroleum Hydrocarbon Sources). However, data indicates that hydrocarbon contamination within the Site boundaries does not end at the Site boundaries.

Item #10b, Page 9
Additional potential sources not listed include ASTs that existed just east of the site, USTs located west of the site at the Hyde Street Pier, the former Coal Wharf that included a 41,000-gallon oil AST, former Equitable Gaslight Company (town gas site) that included two 180,000 cubic ft gas holder ASTs, former California Fruit Canners Association Cannery, former UST located across Jefferson Street just south of the site, and former AST farm located on the southeast corner of Jefferson and Leavenworth Streets (see comment to Item #5b). Other potential sources are related to the other four petroleum companies listed in the CRWQCB Tentative Order under this item.

28. Water Board staff will augment this section to include additional potential sources.

Item #11a, Page 9
Revise third sentence in this item to end with "…both suspected gasoline and diesel releases from the Site".

29. Tentative Order will not be changed. See Water Board staff response No. 18.

Discussion of groundwater concentrations in this item not complete. Does not mention up- and cross-gradient hydrocarbon detections as well as LPH detected in upgradient Well AW-8.

30. Tentative Order will not be changed. Finding No. 11 (Site Investigations) is meant to provide a brief overview of key reports.

Item #11c, Last Bullet, Page 10
Revise the last bullet to state "There were potential offsite TPH sources based on, but not limited to, the presence of hydrocarbons located more then 150 feet cross-gradient from the, differences in the profile of hydrocarbons across the site, vertical pattern of hydrocarbon contamination detected in prior borings, the presence of fill material known to be a source of the metals and much of the polynuclear aromatic hydrocarbon (PAH) contamination, and historical pattern of LPH detections (i.e., detection of product in Well AW-8).

31. Water Board staff will briefly expand this report finding. Finding No. 11 (Site Investigations) is meant to provide a brief overview of key reports.

Item #11f, Page 10
Indicate that hydrocarbon detections frequently correlated with fill material (brick fragments, wood, etc.).

32. Tentative Order will not be changed. Finding No. 11 (Site Investigations) is meant to provide a brief overview of key reports.

Item #11h, Page 10
Replace "Discharger" in the first sentence with "ExxonMobil".

33. Tentative Order will not be changed. See Water Board staff response No. 9.

Item #11i, Page 11
Discussion of information in the Technical Information Report should be expanded here or in another location of the Tentative Order. The history in this document is invaluable in the understanding of site conditions and subsurface impacts from other sources.

34. Potential off-site sources are adequately referenced in Finding No. 10 (which will be revised as noted in Water Board staff response No. 23). Finding No. 11 (Site Investigations) is meant to provide a brief overview of key reports. In addition, the primary objective of the Tentative Order is to address hydrocarbon contamination associated with ExxonMobil's historic operations.

Item #11j, Page 11
Replace "the Discharger's" in the first sentence with "ExxonMobil's".

35. Tentative Order will not be changed. See Water Board staff response No. 9.

Item #12, Page 11
Revise second sentence in this item to end with "…proposed remediation strategies and determine if other sources exist".

36. Comment noted. The Tentative Order will be edited to reflect this change.

Item #13, Pages 11 and 12
Presentation of groundwater data and LPH occurrence data from December 2003 to September 2005 should be clarified. Text in this item gives the impression that 12 different wells have consistently had concentrations exceeding the solubility of diesel. However, TPH-D groundwater concentrations exceeded the solubility of diesel in only 6 wells from December 2003 to September 2005. See the summary table below:

WELL WITH TPH-D ≥5,000 µg/l	DATE OF TPH-D ≥5,000 µg/l
AW-5	6/04 & 6/05
AW-7	6/05 & 9/05
RW-6	12/03
RW-7	3/04
RW-8	12/03
RW-9	6/04, 9/04, 9/05, & 12/05

37a. The text in this section will be edited to clarify the number of wells with concentrations exceeding the solubility of diesel as opposed to the number of times collected samples contained concentrations exceeding the solubility of diesel.

Currently, TPH-D groundwater concentrations exceeded the solubility of diesel in only one well (Well RW-9).

Trace LPH has been detected in 3 wells from December 2003 to December 2005. Currently, trace LPH is detected in two wells (AW-3 and AW-8). See the summary table below:

37b. Data is discussed using a minimum of eight quarters of data.

WELL W/ SHEEN/TRACE LPH	DATES OF LPH DETECTION
AW-3	9/04 to 12/05
AW-8	3/04 to 12/05
RW-9	12/03, 3/04, 3/05, & 6/05
AW-9	Unknown (no access since 6/01)

It is unknown whether Well AW-9 might contain LPH because we have had no access to this well since June of 2001 because the unsafe condition of the Wharf J-10 building. When Well AW-9 was sampled in June of 2000 and June of 2001, it did not contain LPH. Currently, a trace of LPH is detected in two wells (Wells AW-3 and AW-8).

37c. A table will be added showing wells and dates on which free phase hydrocarbon was observed.

Item #14d, Page 13

TRC has sampled the 17 site wells for TDS and 3,000 mg/l was exceeded in one well (AW-6). Based on the close proximity of the wells to the Bay and the fact the wells were sampled when the tide was coming in, the seawall may be acting as a barrier and the exchange between groundwater and Bay water not a prevalent as stated by the CRWQCB and others. Aquifer test data presented in Section 10.2.4 of the August 30, 2004 TRC Environmental Risk Assessment and Feasibility Study suggests the transmissivity (T) of the shallow water bearing zone at the site to be 0.02 ft^2/min which is at the 200 gallons per day threshold. However, actual yield from wells used to extract groundwater during the previous GWP&T system was below 200 gallons per day. In addition, any impact to groundwater from metals from the fill material (unrelated to the former bulk terminal operations) likely could not be reasonably or economically treated for domestic use.

38. Tentative Order will not be changed. There is insufficient data to make the Site exempt from beneficial use protections under Board Resolution No. 89-39.

Item #16, Page 14

Refer to the current CEQA process taking place for the Wharf J-10 building and how that has and can impact the project schedule.

39. Tentative Order will not be changed. Finding No. 16 (California Environmental Quality Act) is specifically related to the Order, not to provide Site background information.
Note that Finding No. 4 (Site History) will be updated to reflect the current status of the EIR related to the Wharf J-10 project (see Water Board response No. 63).

Comments on Task Order and Schedule, Pages 15 to 18

1. Based on the need to collect additional assessment data prior to recommending interim and final remedial action, we recommend the following revised order and schedule for the tasks specified in the Tentative Order:

RECOMMENDED TASK ORDER	**RECOMMENDED COMPLIANCE DATE**
Additional Site Characterization Workplan	February 10, 2006
Final Additional Site Characterization Report and Interim Remedial Action Plan	April 28, 2006
Implementation of Interim Remedial Action Plan	45 days following approval of the IRAP.
Final Revised Remedial Action Plan	July 3, 2006
Implementation of Final Remedial Action Plan	90 days following approval of the RAP.
Property Use Restrictions	September 1, 2006
Implementation of Property Use Restrictions	60 days after Executive Officer approval of proposed Property Use Restrictions and Risk Management Plan

40. Water Board staff acknowledge that ExxonMobil is currently trying to move forward with sampling in the Site vicinity and recently submitted an updated workplan.
Additional Task requirements will be added to the Tentative Order, but report deadlines will be edited to generally follow the order requested.

It should be noted that the schedule assumes no access issues and that the CRWQCB is aware that ExxonMobil's consultant has been currently delayed over one month negotiating access with a Port tenant.

41. Comment noted.

2. The Additional Site Characterization Workplan should be an amendment to the approved TRC Workplan dated June 15, 2005 and approved by the CRWQCB on November 7, 2005. The amended workplan will incorporate the additional assessment tasks outlined in Items 3a, 3b, 3c, and 3d on Pages 15 and 16 in the Tentative Order. Indicate the CRWQCB understands that the completion of the tasks discussed in the original and amended workplans is dependant on ExxonMobil's consultant gaining the required access.

42. Tentative Order will not be changed. Water Board staff cannot include language in a Tentative Order relating to access agreements with third parties. The Water Board will evaluate submittal deadlines as necessary.

3. Other additional site characterization scope items that will be completed but not discussed in the Tentative Order includes forensic analysis of LPH detected in wells and the ambient air sampling to be completed inside buildings, on the bulk terminal site, and a background location.

43. Comment noted. Additional analysis will be included in the task list.

4. On January 17, 2006, to address Item #3b on Page 16 of the Tentative Order, information was requested from the Dolphin Club in writing regarding the areas/routes used by swimmers and hours in the water. Evaluation of health risks posed to swimmers will need to be based on hypothetical scenarios since no data currently exists that demonstrates that hydrocarbons relating to releases from the Former Mobil Bulk Terminal 04-394 GP Resources Marine Diesel Bulk Storage Facility are entering the Bay.

44. Comment noted. Water Board staff expect ExxonMobil's risk assessor to attend public meetings with the Water Board, the Port, and Stakeholders to explain the model and the assumptions used in the evaluation.

5. Since it will be possible to complete the interim remedial action plan (IRAP) following completion of the additional assessment activities, the IRAP can be included with the Final Site Characterization Report.

45. Comment noted. However, these reports must be separate reports.

6. When referring to the IRAP and interim remedial action, it should be termed "Additional IRAP" and "additional interim remedial action" since interim remedial action has taken place at the site in the past (LPH pumpouts, interim soil vapor extraction (SVE), soakies, etc.) and currently are taking place at the site (soakies).

46. Tentative Order will not be changed. Water Board staff prefer to reference dates associated with historic and future reports rather than expanding the names of reports required in the Tentative Order.

7. When referring to the Final RAP, it should be termed "Revised Final RAP" since previous RAPs have been submitted.

47. Tentative Order will not be changed. Water Board staff prefer to reference dates associated with historic and future reports rather than expanding the names of reports required in the Tentative Order.

8. Indicate under Item #5a on Page 17 of the Tentative Order that the final future land use (other than what is discussed under Phases 1 and 2 on Pages 20 through 24 of the draft EIR) has not been determined.

48. The Tentative Order will be updated to reflect the current status of the EIR, as indicated in Water Board staff response No. 63.

9. Revise the sentence under Item #5e on Page 17 of the Tentative Order to state "A long-term solution to eliminate possible discharge of hydrocarbon-impacted groundwater to San Francisco Bay". As previously stated, no data currently exists that demonstrates that hydrocarbons relating to releases from the Former Mobil Bulk Terminal 04-394 GP Resources Marine Diesel Bulk Storage Facility are entering the Bay.

49. Tentative Order will not be changed. Water Board interpret the data to indicate groundwater is impacted with petroleum hydrocarbons, and that groundwater in the Site vicinity discharges to the Bay

10. Under Item #7 on Page 18 of the Tentative Order, indicate the Port will be responsible for recording deed restrictions and notifying tenants regarding the soil and groundwater conditions. Based on the extent of property the Port owns in the area and assessment data, other property owners do not appear affected.

50. Tentative Order will not be changed. Water Board staff cannot segregate Tasks between Primary and Secondary Dischargers. This Task will be edited to indicate "the Discharger must ensure the property owner..." This Task (Property Use Restrictions) has been edited as noted in Water Board staff response Nos. 76, 77 & 78.

Item #B2, Page 29

Based on the number of wells at the site, the tasks related to proper groundwater sampling of these wells, and access issues at the site, it is unreasonable to request that all the wells and surface water observations be "completed within one hour". Currently, water levels in the existing wells are collected within an hour and the sampling requires approximately 3 to 4 hours to complete.

51. Comment noted. The Tentative Order will be edited to clarify that only groundwater elevation data must be collected within one hour, prior to sampling.

Item #C1, Page 29

The groundwater monitoring reports include a cover letter and an additional information section on the summary page that follows the cover letter. Issues encountered during the sampling event and the proposed corrective actions are described in the cover letter and/or the additional information section on the summary page that follows the cover letter.

52. Comment noted. The currently submitted cover letter is generally acceptable, but may require minor additions. Future reports must include the following information: "A letter transmitting essential points shall be included in each monitoring report. The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall also certify the completion of all monitoring requirements. The letter shall be signed by the Discharger's principal executive officer or his/her duly authorized representative, and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge."

Item #C2d, Page 30

Based on the slow recovery of the wells and the fact wells are purged prior to sampling, elevation data collected after the completion of sampling would not be representative of the static water level. In addition, the sampling time is determined based on tide cycle charts produced by the Tide Tool program to ensure we are sampling the wells at the point in the tide cycle requested by the CRWQCB. Water level data collected prior to purging.

53. Comment noted. The Tentative Order will be edited to require elevation measurements be made within one hour, prior to sampling and clarify the reason a tide chart must be submitted.

Item #C3d, Page 30

To date blanks and duplicates have not been required. Review of lab data would suggest blanks and duplicates are not necessary at this time.

54. Tentative Order will not be changed. Blanks and duplicates are standard and must be incorporated in future sampling events.

Item #C3e(v), Page 30

Analytical data is provided electronically to TRC in a database format from the laboratory. Tables created for the TRC groundwater reports are created by merging the database file from the lab with TRC's database. These files are not compatible with Excel®.

55. Comment noted. However, ExxonMobil will need to determine a method by which data can be provided to the Water Board in a format that will allow staff to review and organize the data.

Item #D1a, Page 31

Please provide additional explanation of the requirements for the "Known or probable contaminant sources" map for the Annual Report.

56. This item refers to showing the location of the source(s), such as historic tanks or spill areas. Reference to previously produced maps is acceptable.

Item #D2f, Page 32

This item is not applicable to the Former Mobil Bulk Terminal 04-394 GP Resources Marine Diesel Bulk Storage site.

57. Comment noted. This requirement will be removed.

Table A2, Page 35

1. Method for TPH-D and TPH-G should be listed as 8015M/DHS LUFT.

58. Comment noted. Table A2 will be edited to reflect this change.

2. Method for benzene, toluene, ethylbenzene, xylenes, MTBE, and TBA (VOCs) should be listed as 8260B.

59. Comment noted. Table A2 will be edited to reflect this change.

3. Comment on Note 4 - Based on the slow recovery of the wells and the fact wells are purged prior to sampling, elevation data collected after the completion of sampling would not be representative of the static water level. See response to Item #C2d, Page 30 on the previous page.

60. Comment noted. The Tentative Order will be edited to clarify that only groundwater elevation data must be collected within one hour, prior to sampling.

Please call Mr. Steve Pao, ExxonMobil Project Manager (310-212-1877) or the undersigned at (949-753-0101) if you have questions or need additional information.

ATTACHMENT E3. Comment Letter from the Port of San Francisco and Water Board Staff Responses

Dear Ms. Ganguli:

Thank you for the opportunity to review and comment on the above-referenced draft order (Order). The Port of San Francisco's comments are offered below, following the format of the Order for ease of reference.

Findings

2) Site Ownership and Operation, Table 1 and next paragraph. From 1990 to 1992, the Lessee was GP Resources, operating under a sublease from Mobil Oil. GP Resources has no relationship to General Petroleum, which was a predecessor of Mobil Oil and Exxon/Mobil. In 2001 the Port installed double-walled piping from the GP Resources tank yard to the newly-constructed fuel dock at Hyde Street Harbor; Both the buried piping and the piping hung from the pier, which extends from the wharf face to the fuel dock, are double-walled.

61. Comments noted. The Tentative Order will be edited to reflect these changes.

4) Site History. Beginning with the first mention of the "redwood seawall", in section 4a, and subsequently throughout of the document and figures, the term "retaining wall" should replace "seawall" wherever the term is used to refer to the redwood retaining wall.

62. Comment noted. The Tentative Order will be edited to reflect this change.

4) Site History, k). This item could be revised to reflect the current status of the Environmental Impact Report (DEIR) process and scope: In October 2005, the San Francisco Planning Department issued a Draft Environmental Impact Report (EIR) for Wharf J-10, located immediately north of the Site. The Wharf J-10 EIR analyzes environmental effects that could result from 1) demolition of the Wharf J-10 deck, substructure and building; 2) placement of rip rap to stabilize the shoreline; 3) construct new fishing industry facilities by current tenants on the Wharf J-10 site; and 4) potential other future fishing industry-related facilities and buildings. The DEIR public comment period closed on November 29, 2005; the San Francisco Planning Department is overseeing the production of written responses to public comments prior to issuing a Final EIR. Pursuant to California Environmental Quality Act (CEQA) requirements, the Wharf J-10 EIR includes a study of alternatives to the project. One of the alternatives assumes preservation of the Wharf J-10 shed building, which would require independent bracing and stabilization of the shed structure while the deck and substructure are demolished and rebuilt. Once the Final EIR is certified as complete (targeted for Spring 2006), the Port Commission can consider the proposed demolition and rebuild options described above.

63. Comments noted. The Tentative Order will be edited to reflect this change.

5) Named Dischargers, e). The Port requests that this section clarify that the Port will be responsible for any task that identifies the property owner (i.e. secondary discharger) as the party responsible for execution, and that the Port would only become responsible for tasks assigned to the primary discharger (ExxonMobil), if ExxonMobil fails to comply with the requirements of the Order, and after written notice to the Port by the Regional Board and a reasonable time period to comply.

64. Comments noted. The Tentative Order will be edited to include written notification, but the Tentative Order cannot include a vague reference to deadlines. The Board will evaluate as necessary whether there is sufficient time to comply.

11) Site Investigations, d). This section summarizes statements made in the subject site investigation report (TRC, September 1990), including the assertion that three distinct and separate liquid-phase hydrocarbon (LPH) plumes are present. The Port has commented previously on this interpretation of the existing data in its letters to the RWQCB dated 10/26/04 and 8/9/05, and maintains that the conclusion that there are three separate areas of contamination rather than one LPH plume is not demonstrated by the data collected to date. The additional site characterization requested by the RWQCB will help delineate the LPH plume beneath the site, but until there is sufficient data to support the assertion that there are three separate plumes, the Port requests that the Findings identify the statement as an interpretation rather than a statement of fact.

65. The introduction of Finding No. 11 currently states: "*The descriptions below provide a summary of key reports and do not constitute Water Board approval or rejection of report findings.*" Water Board staff will include the following additional clarification: *"The descriptions below provide a summary of key report findings and do not constitute Water Board approval or rejection of report findings."* However, this comment will not be added to every report summary.

11) Site Investigations, j.). This section summarizes a conclusion made in the *Environmental Risk Assessment and Feasibility Study* ("RA/FS', TRC, August 2004) that the potential for health risk associated with vapor intrusion is unlikely. The Port suggests that this sentence be revised to clarify that soil gas monitoring will be required in order to assess risks associated with inhalation of indoor air.

66. Comment noted. Finding No. 11 (Site Investigations) is meant to provide a brief overview of key reports rather than describe future activities. Water Board staff will include a note indicating future soil gas monitoring requirements are included in Task 3a but will not expand the report description.

12) Need for Additional Site Characterization. The Port requests that this section be revised to explicitly clarify the fact that additional site characterization is needed not only to assess soil and groundwater conditions with respect to remediation strategy, but also to complete the risk assessment by evaluating potential exposure of current on-site workers to indoor air, and potential exposure of recreational users to contaminants in groundwater discharged to the bay.

67. Comment noted. The Tentative Order will be edited to reflect this change.

13) Current Extent of Hydrocarbon Contamination. Table 2 summarizes the ranges of petroleum hydrocarbons over the past eight quarters of monitoring. We suggest that this table include instances where free product was encountered in a well and, as a result, a groundwater sample was not collected for laboratory analysis.

68. Comment noted. An additional table will be incorporated into this section to clarify the text. Also see Water Board response No. 37.

Tasks

General Comment: Please indicate at the beginning of each task whether the primary discharger or secondary discharger/property owner is responsible for implementation.

69. Staff cannot specify between Primary and Secondary Discharger on a task by task basis. For tasks that require action by the property owner, the Tentative Order has been clarified to state, "The Discharger shall ensure the property owner…" All tasks are the responsibility of the Primary Discharger unless the Primary Discharger fails to comply. The task must then be completed by the Secondary Discharger, as stated in Finding No. 5c.

2) Implementation of Interim Remedial Action Plan. The Port suggests requiring a submittal documenting successful implementation of the interim remedial action.

70. The Tentative Order will be edited to specify that ExxonMobil include an evaluation of the Interim Remedial Action Plan in Quarterly Monitoring Reports following implementation. However, a separate submittal will not be required.

3) Additional Site Characterization Work Plan. Please clarify how this requirement relates to the work plan for additional investigation that ExxonMobil has proposed in its *Response to Comments and Additional Site Assessment Workplan* ("Response to Comments", TRC, 6/15/05), and approved by RWQCB staff (with conditions) on November 7, 2005. The description of this task could be revised to clarify that this requirement is for a comprehensive work plan including the investigation previously proposed and underway, incorporating the approval conditions, as well as any additional site characterization work required to fully characterize the nature and extent of petroleum contamination beneath or emanating from the former ExxonMobil facility site, evaluate potential human health or environmental risks, or support selection and design of a remedial action. The list of parameters to be investigated should include soil gas. The description of this task should clarify that the requirement for a comprehensive additional site characterization work plan should not delay execution of the work previously proposed and approved.

71. Water Board staff will clarify that work in progress or pending reports must meet pre-established submittal deadlines and incorporate additional detail into the Site Characterization task description.

3) Additional Site Characterization Work Plan, a). ExxonMobil has suggested previously that the hydrocarbon size distribution found in soil indicates contribution from other contaminant sources. The Port maintains that existing data do not clearly support such a conclusion. In order to obtain data that effectively clarify the extent to which hydrocarbons in groundwater result from the former Mobil Bulk Plant or from offsite sources, the Port suggests that the additional groundwater sampling and analysis include forensic analysis of the composition of the petroleum mixture in free-phase and dissolved hydrocarbons in groundwater near the bulk plant and at

locations east and west of the source area where off-site sources are suspected. This evaluation should include a determination of the relative composition of different hydrocarbon compounds within a specified range (ie. TPH as gasoline or TPH as diesel) and be performed by an expert in petroleum chemistry who could provide opinions as to the nature of the original source petroleum products released, the amount of biodegradation/weathering that the mixtures have experienced, and the similarities/dissimilarities between samples collected from different locations.

72. Comment noted. This requirement will be incorporated into the Task list. See also ExxonMobil comment number 3 (above Water Board staff response No. 43).

5) Final Remedial Action Plan, a). This sentence should be revised to specify that the proposed remedial alternative should be compatible with the Interim Remedial Action Plan, and with future land use, including fishing industry uses. Maintenance should also be added to the list of examples of current and future uses given in parentheses. The criteria for the Final Remedial Action Plan should specify that it must meet applicable standards for seismic and structural stability.

73. Comment noted. The Tentative Order will be edited to reflect these changes.

5) Final Remedial Action Plan, b). This section references a "completed Environmental Risk Assessment", presumably the RA/FS. The Port suggests considering requiring a revised comprehensive environmental risk assessment and report that incorporates the new data collected during the additional site characterization effort and exposure pathways not evaluated in the previous risk assessment (see comment on Finding 12). This assessment seems to be a prerequisite to identifying cleanup levels as required by Task 5.c).

74. Water Board staff will edit the task list to include submittal of a revised Environmental Risk Assessment.

6) Implementation of Final Remedial Action Plan. The Port suggests requiring a submittal documenting successful implementation of the final remedial action.

75. The Tentative Order will be edited to specify that ExxonMobil include an evaluation of the Final Remedial Action Plan in Quarterly Monitoring Reports following implementation. However, a separate submittal will not be required.

7) Property Use Restrictions, b). This section should require notice to occupants as well as owners.

76. Comment noted. The Tentative Order will be edited to reflect this change.

7) Property Use Restrictions, c). The Port recommends that this section, describing the requirements of a Risk Management Plan (RMP) for the site, also describe the intent and overall performance standards for the document, in addition to listing specific issues that the RMP should include. We suggest that this section include the following performance standards: a) The RMP should establish long-term management measures adequate to protect human health and the environment, and prevent nuisance conditions; b) the RMP must be compatible with federal, state and local laws and guidelines, and current and future land use, and cannot interfere with future use or development; c) The RMP should clearly demonstrate how the primary discharger will take long-term responsibility, including financial responsibility, to manage any contamination allowed to be left in place, and set forth responsibilities, detailed protocols for

coordinating with the property owner, and deadlines for response actions that the Discharger will take whenever contaminated soil or groundwater is or is anticipated to be encountered so that operation, maintenance or construction activities at affected property are not [unreasonably] impacted; and d) The RMP should be required to have the written approval of the property owner. The Executive Officer of the RWQCB will ultimately determine whether the RMP is acceptable. Specifically, we suggest that the Order make clear what activities could result in a risk ((c)(iii)); how this will be communicated to the persons at risk; and that ExxonMobil is responsible for managing the risk ((c)(v)), including the cost of any mitigation strategy ((c)(vii)). The RMP should also include a description of oversight and enforcement responsibilities.

77. The Risk Management Plan will be edited to reflect these changes.

7) Property Use Restrictions. The Port suggests addition of new sections to: d) require that if any activity, construction, or redevelopment is proposed to occur prior to adoption of the RMP, the primary discharger will complete a project-specific RMP to identify and describe management measures to prevent adverse impacts from the proposed project; e) require the property owner make the RMP available to the public and provide the RMP to all tenants, contractors, or others operating at or occupying the affected area; and f) specify how the Dischargers will ensure notification regarding the RMP and ensure its implementation.

78. Comment noted. The Tentative Order will be edited to reflect these changes.

Figure 3, Site Plan. The Port suggest omitting this figure from the Order to avoid confusion about the fact that the slurry wall remains a conceptual-level proposal, and has not been approved by the RWQCB as an interim or final remedial action.

79. Comment noted. The Tentative Order will be edited to reflect this change.

Table 4, Site Reports and Investigations. This table is missing the Port's October 26, 2004 comment letter regarding the *Environmental Risk Assessment and Feasibility Study* (TRC, August 2004).

80. Comment noted. The Tentative Order will be edited to reflect this change.

Site Monitoring Program. The Port suggests adding a new requirement for submittal of a site-specific sampling and analysis plan, subject to the approval of the Executive Officer, documenting how groundwater samples will be collected in a consistent manner, meeting all the requirements specified by the Self-Monitoring Program.

81. Comment noted. The Tentative Order will be edited to reflect this change.

Self-Monitoring Program, B. Monitoring Requirements. The Port requests that this section clarify that the primary discharger will coordinate with the Port and take measures as agreed with the Port to ensure that monitoring wells are accessible at the time of the quarterly sampling, and that the presence of a temporary obstacle, such as a parked car, does not constitute sufficient justification for not sampling. Due to the number of wells, the allowable time period for sampling could be reasonably increased to sampling within two hours before and after the low tide (also applies to Table A2, footnote 2). Please clarify that silica gel cleanup should be performed prior to extractable petroleum hydrocarbon analysis only (also applies to Table A2, footnote 2).

82. Comments noted. The Tentative Order will be edited to reflect these changes.

See also, *ExxonMobil comment related to Item #B2, Page 29: "Based on the number of wells at the site, the tasks related to proper groundwater sampling of these wells, and access issues at the site, it is unreasonable to request that all the wells and surface water observations be 'completed within one hour'. Currently, water levels in the existing wells are collected within an hour and the sampling requires approximately 3 to 4 hours to complete."*
Water Board Response No. 51: Comment noted. The Tentative Order will be edited to clarify that only groundwater elevation data must be collected within one hour, prior to sampling.

Self-Monitoring Program, C. Reporting Requirements. Each monitoring report should include a certification statement indicating that monitoring was conducted in accordance with the unique procedures and requirements set forth in the Order and site-specific sampling and analysis plan.

83. Comment noted. The Tentative Order will be edited to reflect this change.

Finally, the Port greatly appreciates the effort and attention to detail that is evident in this draft Order, and your efforts to engage the interested parties in the public participation process. We would like to discuss with you, at your convenience, how we can assist you in obtaining additional information regarding other sources of petroleum contamination and other potentially responsible parties. If you have any questions about the Port's comments, please feel free to contact me at (415)274-0568 or carol.bach@sfport.com.

Sincerely,
PORT OF SAN FRANCISCO

Carol Bach
Environmental and Regulatory Affairs Manager
Planning and Development

ATTACHMENT E4. Comment Letter from Luce Forward LLP on behalf of F. Alioto Fish Company and Water Board Staff Responses

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January 26, 2006

VIA E-MAIL AND U.S. MAIL

Ms. Priya Ganguli
SFB Regional Water Quality Control Board
1515 Clay ST., Suite 1400
Oakland, CA 94612

Re: Former Mobil Bulk Terminal 04-394/Comments on Tentative Site Cleanup Requirements

Dear Ms. Ganguli:

This letter is submitted on behalf of F. Alioto Fish Company, Inc., dba Alioto-Lazio Fish Company ("Alioto-Lazio") regarding the Tentative Order of the San Francisco Bay Regional Water Quality Control Board ("Regional Board") for site cleanup requirements for the Former Mobil Bulk Terminal 04-394, located at 440 Jefferson Street, San Francisco ("Site"). Alioto-Lazio appreciates the opportunity to comment on this Tentative Order.

Findings, 4.h) Site History (p. 7)

1. This subparagraph refers to the removal of soil from the Site, but does not refer to the characterization of such soil as containing arsenic. The Tentative Order does not address the presence of arsenic at the Site and, potentially, in other areas where excavation might be undertaken. Will ExxonMobil be required to address the issues of arsenic in the soil and the potential health hazards that might be created by its remediation activities?

84. If the final approved remediation plan requires soil excavation, ExxonMobil will be required to evaluate soil samples in the work area prior to construction and complete a risk assessment to evaluate and mitigate any potential impacts to human health and the environment. ExxonMobil would be required to analyze samples for a suite of potential contaminants, including, but not limited to, total petroleum hydrocarbons-diesel (TPH-diesel), TPH-gasoline, benzene, toluene, ethylbenzene, xylenes (referred to as BTEX), volatile organic compounds (VOCs), and priority pollutant metals, which includes Antimony (Sb), Arsenic (As), Beryllium (Be), Cadmium (Cd), Chromium (Cr), Copper (Cu), Lead (Pb), Mercury (Hg), Nickel (Ni), Selenium (Se), Silver (Ag), Thallium (Tl), and Zinc (Zn).

2. This subparagraph states that "[l]ateral excavation to the north, east and west was completed to the maximum extent allowed by the slurry wall and surrounding buildings." This statement implies that the levels of contamination in soil were high enough to suggest further excavation, but that this excavation was limited due to potential construction impacts or a risk of removal of lateral support for adjacent structures. [Response 85a] Does the Port's current plans for demolition and, ultimately, reconstruction allow for additional soil removal by ExxonMobil? [Response 85b]Will ExxonMobil be required to consider the Port's plans and the plans of leaseholders in the area (including Alioto-Lazio) in developing their remediation plan?

85a. To the best of Water Board staff's knowledge, the Port's plans for potential demolition (note, the EIR has not yet been approved) will give ExxonMobil access to the area under the Wharf J10 building. The feasibility of sediment removal in this area was not evaluated in ExxonMobil's August 2004 Feasibility Study. If the environmental evaluation of the area (see excerpt below) demonstrates impacts related to ExxonMobil's historic operations, ExxonMobil will be required to evaluate remediation options. Source removal via excavation would be one option considered.
In a letter dated November 14, 2005 and signed by Steve Pao of ExxonMobil, ExxonMobil states "After demolition of the Wharf J-10 building....ExxonMobil agrees to perform an environmental assessment of the area under the former Wharf J-10 building. If necessary, based on the findings of the assessment and in consultation with the appropriate regulatory agencies, ExxonMobil will take appropriate corrective action to address any contamination related to its former operations in order to protect human health and the environment so that future uses and redevelopment of the property are not impeded."

85b. ExxonMobil will be required to take existing and future land use plans into consideration, including both those of the Port and leaseholders, to determine an appropriate remedial action at the Site.

Findings, 5.d) Named Dischargers (p. 8): This subparagraph refers to an Access Agreement between the City and County of San Francisco and ExxonMobil. That agreement contained a requirement that no soil would be stockpiled at the Site. However, a 1996 report states that soil was stockpiled at the Site with plastic sheeting. Will ExxonMobil be allowed to stockpile soil at the Site? If so, why, and will the Regional Board require measures to eliminate dust and potential storm water runoff? How will any such requirements be enforced?

86. In the event a remediation strategy involving excavation is approved, ExxonMobil would perform pre-construction sediment sampling analyses (see Water Board staff comment No. 84). This information, in conjunction with issues such as space needs, would be used to determine soil handling procedures, such as whether or not soil could be stockpiled on-site. ExxonMobil would be required to submit a Soil Management Plan to detail how excavated material would be handled. The plan would describe how ExxonMobil would address obtaining a storm water construction order, cleaning streets in the work area, cleaning vehicles so soil is not transported off-site, dust control, stormwater runoff control, and protection of human health and the environment (including residents in the Site vicinity and construction workers).
Requirements would be enforced via the construction permit and Water Board staff Site inspections.

Findings, 10.h) Petroleum Hydrocarbon Sources (p. 10):

1. Again, soil removal is referenced, but there is no reference to the Reclassification of Soils report and the existence of arsenic. Will the presence and potential heath effects of arsenic be addressed by ExxonMobil?

87. Water Board staff will include a description of the DTSC Reclassification of Soils report in Finding No. 11 (Site Investigations). The Reclassification of Soils report is currently listed in Table 4 (Site Reports and Investigations).
If the final approved remediation plan requires soil excavation, ExxonMobil would be required to evaluate soil samples in the work area prior to construction. ExxonMobil would analyze samples for a suite of contaminants likely to occur in the project area (including arsenic), then complete a risk assessment to evaluate potential impacts to human health and environment.

2. See comment 2 on Finding 4.h) above regarding excavation.

88. The referenced comment states: *"This subparagraph states that "[l]ateral excavation to the north, east and west was completed to the maximum extent allowed by the slurry wall and surrounding buildings." This statement implies that the levels of contamination in soil were high enough to suggest further excavation, but that this excavation was limited due to potential construction impacts or a risk of removal of lateral support for adjacent structures. Does the Port's current plans for demolition and, ultimately, reconstruction allow for additional soil removal by ExxonMobil? Will ExxonMobil be required to consider the Port's plans and the plans of leaseholders in the area (including Alioto-Lazio) in developing their remediation plan?"* Please see Water Board staff response Nos. 84 and 87.

Findings, 11.j) Site Investigations (p. 11): This paragraph refers to a Tier 1 Environmental Risk Assessment that reported "[t]he potential for current or future vapor intrusion….to be unlikely given the predominantly heavier grade of petroleum hydrocarbons."

1. Is the Tier 1 risk assessment, or any other assessment, regarding soil vapor intrusion consistent with recent Department of Toxic Substances Control Interim Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air, December 14, 2004? If not, will an assessment consistent with that guidance be conducted?

89. The Water Board's soil gas screening levels were developed using the same methodology used in the DTSC document referenced above, and is consistent with that document, with adjustments made for Bay area climatic and building ventilation considerations.

2. Was the potential exposure to naphthalene considered in the Tier 1 risk assessment? Why is ExxonMobil continuing to conduct soil vapor testing? Is it only for the purpose of characterizing ground water, or will it include an evaluation of the risk of soil vapor intrusion?

90. Potential exposure to naphthalene in groundwater was evaluated in the previously completed Tier 1 risk assessment; however, soil vapor and potential soil vapor intrusion into Site vicinity buildings was not evaluated.
ExxonMobil is conducting soil vapor testing to evaluate the potential for vapor intrusion into buildings. The data will be used to evaluate exposure pathways (e.g., to building occupants) that were not included in the previous risk assessment.

3. Injection of oxygen release compound was proposed to enhance microbial degradation of residual petroleum hydrocarbons. Has the potential impact on the generation of toxic compounds and the potential for soil vapor intrusion been considered? If so, how?

91. Injection of oxygen release compound is frequently used to remediate petroleum hydrocarbon impacted groundwater and has been approved for use at several sites under Water Board regulatory oversight. When the oxygen release compound is placed into the subsurface, it does not pose a threat to human or aquatic health. This form of remediation increases the oxygen in the groundwater, allowing more bacteria to grow (generally, oxygen is limited in groundwater and subsurface soil, and this limits the ability of native bacteria to flourish). Note that injection of oxygen release compound DOES NOT include introduction of any foreign microorganisms. The released oxygen helps native bacteria, already present at the Site, flourish.

Bacteria are capable of breaking down petroleum hydrocarbons into innocuous byproducts. The amount of gas released is not significant enough to effect vapor intrusion into surface building structures.

(Pure oxygen release compound is generally shipped as a fine powder, and is considered a mild oxidizer. Field personnel working with the powder in its pure form are recommended to avoid contact with their skin, eyes, and respiratory system. The powder is turned into a slurry prior to injection.)

Water Board staff will consider potential secondary impacts of all proposed remediation alternatives.

4. Will ExxonMobil be required to consider soil vapor extraction to enhance remediation and protection of buildings from any soil vapor intrusion?

92. At this point Water Board staff cannot evaluate whether vapor intrusion into buildings is an issue at the Site. That is why ExxonMobil is required to collect soil vapor samples and assess the potential for vapor intrusion and potential human health and environmental impacts. If vapor intrusion is an issue at this site, the Water Board will require ExxonMobil to mitigate impacts.

Findings, 12) Need for Additional Site Characterization (p. 11): This paragraph refers to the need to complete "an analysis of soil gas impacts to assess subsurface conditions in buildings constructed over the Site plume and evaluating potential impacts to swimmers in San Francisco Bay."

1. Why are only "subsurface conditions" in buildings referenced? The evaluation should include an assessment of potential for soil vapor intrusion and the impact of such intrusion on workers and others in those buildings.

93. Comment noted. The Tentative Order will be edited to clarify that soil vapor intrusion into buildings will be evaluated as part of the Site Risk Assessment.

2. Findings 1 recognizes that this area is one where food processing is conducted. Why is ExxonMobil not being required to consider the potential impacts on that activity, including any potential impact on compliance with Food and Drug Administration specifications and other health regulations related to food processing?

94. Comment noted. The Tentative Order will be edited to include submittal of a Revised Risk Assessment that shall include an evaluation of potential impacts on food processing activities. A risk assessment of human health and the environment will address concerns related to heath regulations for employees and building occupants.

Tasks 1) Interim Remedial Action Plan (p. 15): The Interim Remedial Action Plan ("IRAP") refers only to the remediation of soil and groundwater. Should there not also be a requirement to reassess the potential for health impacts from soil vapor intrusion and to implement measures to eliminate any unacceptable risks to human health? See comments on Finding 11.j) above.

95. Comment noted. The Tentative Order will be edited to clarify that soil vapor intrusion into buildings and potential impacts to building occupants will be evaluated as part of the Site Risk Assessment.

Tasks 3) Additional Site Characterization: See comments on Findings 11.j) and 12) above.

96. Comments noted. Please see Water Board staff responses 89, 90, 93, and 94.
Comments on Findings 11.j) and 12) state:
Findings, 11.j) Site Investigations (p. 11): This paragraph refers to a Tier 1 Environmental Risk Assessment that reported "[t]he potential for current or future vapor intrusion….to be unlikely given the predominantly heavier grade of petroleum hydrocarbons."
Findings, 12) Need for Additional Site Characterization (p. 11): This paragraph refers to the need to complete "an analysis of soil gas impacts to assess subsurface conditions in buildings constructed over the Site plume and evaluating potential impacts to swimmers in San Francisco Bay."

1. The evaluation should include an assessment of the potential for soil vapor intrusion and the impact of such intrusion on workers and other in those buildings, in a manner consistent with DTSC guidance.

97. Comment noted. The Tentative Order will be edited to clarify that soil vapor intrusion into buildings and potential impacts to building occupants will be evaluated as part of the Site Risk Assessment. Also see Water Board response No. 89.

2. The evaluation should include the potential impacts on food processing, including compliance with Food and Drug Administration specifications and other health regulations.

98. Comment noted. The Tentative Order will be edited to include submittal of a Revised Risk Assessment that shall include an evaluation of potential impacts on food processing activities. A risk assessment of human health and the environment will address concerns related to heath regulations for employees and building occupants.

Tasks 5) Final Remedial Action Plan:

1. See comment on Tasks 1) and 3) above. The Final Remedial Action Plan ("RAP") should include actions to eliminate any unacceptable risks of vapor intrusion, the potential for human health effects (swimmers, building occupants, etc.), and any potential effects upon food processing activities.

99. Comment noted. The Tentative Order will be edited to clarify that soil vapor intrusion into buildings and potential impacts to building occupants will be evaluated as part of the Site Risk Assessment. In addition, a Revised Risk Assessment will be required, and will include an evaluation of potential impacts on food processing activities.

2. Subparagraph a) references "future land use," but only cites to Port activities in Finding 4.k). While this reference is not necessarily limited to Port activities, the reference to "future land use" should more clearly include consideration of the future land use plans of leaseholders (including, for example, Alioto-Lazio) to reduce the potential for a remedial plan that is not cost-effective and might be inconsistent with future development.

100. Comment noted. The Tentative Order will be edited to clarify which activities are related to leaseholders' potential future land use.

3. As RAP implementation will necessarily impact neighboring businesses, ExxonMobil should be required to have agreements in place, contingent upon RAP approval, with those businesses to ensure the implementability of its plan.

101. It is beyond the Water Board's authority to compel ExxonMobil to enter into agreements with leaseholders. ExxonMobil is aware of the current status of the Port's EIR process and is in communication with the Port regarding potential construction activities and the need to coordinate future cleanup efforts with plans for land development.

Thank you again for the opportunity to comment upon the proposed Tentative Order. If you have any questions or need any further information, please contact the undersigned or Angela Cincotta at 415-673-5866. We look forward to your consideration of the above comments.

Very truly yours,

Steven P. McDonald
Of
LUCE, FORWARD, HAMILTON & SCRIPPS LLP

cc: Ms. Angela Cincotta
Ms. Monique Moyer

ATTACHMENT E5. Comments Sent Following February 16, 2006 Public Meeting
(Comments from Port of San Francisco and TRC on behalf of ExxonMobil)

From: Carol Bach <Carol.Bach@sfport.com>
To: <pganguli@waterboards.ca.gov>
Date: 2/16/2006 5:24:03 PM
Subject: Fw: j-10 comments

Priya - following are the Port's comments as discussed during our meeting today, and for which you requested an e-mail submittal to document the comments.

I think the only thing that remains to discuss from the Port's persepective is our comments on the requirements for the RMP. I would like to have Rona Sandler in on that conversation. I had suggested a conference call between the three of us, but I will be on vacation until Thursday the 23rd, so if you are trying to get this finished before then, please feel free to discuss with Rona directly and finalize based on her input. She is intimately familiar with the Port's concerns on this topic and can adequately represent the Port's position with respect to comments on the RMP task. Her contact info is:

Rona H. Sandler
Deputy City Attorney
City & County of San Francisco
Direct: (415) 554-4690
Fax: (415) 554-4757
Email: Rona.Sandler@sfgov.org

By the way, I'd love to get a pdf of the sign-up sheet from the meeting today if it's not too much trouble. Thanks, again, for attention to the technical issues around this project and the care you've taken to ensure that all parties are heard.

Comments from Meeting on 2-16-06
As result of and as discussed at our meeting today, the City has the additional few comments on the draft order:

On Tasks 1 and 5, specify that remedial actions must be consistent with existing land uses (as well as future).

102. Tentative Order will be edited to reflect this change.

On Tasks 1 and 5, require an evaluation of risks posed by any proposed remedial action, including any risks to Port tenants and the public. We would not want the remedy to create additional or increased risks over the existing contaminated conditions.

103.Tentative Order will be edited to reflect this change.

Please include a list of data, observations and/or eye-witness accounts submitted by members of the public, either in the findings or in an attachment. We understand that Ms. Reilly has submitted such documentation and believe that it should be documented in the order.

104. Tentative Order will be edited to reflect this change.

From: "Hensel, Jeff" <jhensel@TRCSOLUTIONS.com>
To: "Priya Ganguli" <pganguli@waterboards.ca.gov>
Date: 2/24/2006 3:25:18 PM
Subject: RE: Draft Revisions - TRC Comments

Priya,

Here are my comments after my brief review of the revised draft Tentative Order:

1) Page 3 - Take out reference to Figure 3. Looks like the CRWQCB removed this figure from the order.

105. Tentative Order will be edited to reflect this change.

2) TRC used the word "seawall" based on Port of SF figures and past correspondence. Past figures referred to land by this wall as "seawall lots" and this wall was referred to as a "seawall" in past correspondence we have received from the Port.

106. Tentative Order will referenced the wall as a "retaining wall". Based on discussions at the February 16, 2006 public meeting, the Port explained that the wall was constructed as a retaining wall. Past references calling it a "seawall" are erroneous. In an effort to reduce confusion, staff note that the wall was previously referred to as a "seawall" throughout the Tentative Order.

3) Page 7, Item g - Add period at end of item.

107. Tentative Order will be edited to reflect this change.

4) Page 10, Last Bullet - Add the word "and" between the words wall and inn near the end of the sentence.

108. Tentative Order will be edited to reflect this change.

5) Page 11, Item e - Statement misleading. Statement suggest sheen was related to pipelines which is not true.

109. Tentative Order will be not be edited. This summary reflects the findings of submittals made by public citizens. The introduction to the Site Investigation (Finding No. 11) states that "*All report findings are based on the interpretations of the Discharger and/or the consultant or members of the public.*"

6) Pages 13 & 14 - Recommend using format for TPH-D >5,000 and LPH detection tables in TRC's January 26, 2006 Comments Letter. Easier to follow.

110. Comment noted.

7) Pages 17 to 23 - Don't agree with the order of deliverables or the timing. We need to base the IRAP on the additional site assessment findings. Recommend using schedule and order of deliverables in TRC's January 26, 2006 Comments Letter.

111. Tentative Order will be edited to reflect this change.

8) Need to make a statement indicated schedule is dependant on ExxonMobil receiving timely access to complete the work.

112. Tentative Order will not be changed. Water Board staff cannot include language in a Tentative Order relating to access agreements with third parties. The Water Board will evaluate submittal deadlines as necessary.

Please call me with any questions.

Regards,

Jeff Hensel, RG, REAII
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