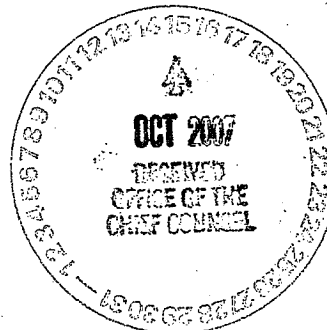


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CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

17 United Molasses Company, 18 Petitioner, 19 v. 20 California Regional Water Quality Control 21 Board, San Francisco Bay Region, 22 Respondent.	: No.: : United Molasses Company's Petition for : State Water Resources Control Board : Review Pursuant to Water Code §13320 : : : :
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23 Pursuant to California Water Code Section 13320 and corresponding California Code of
24 Regulations, United Molasses Company ("United Molasses" or "Petitioner") hereby files this
25 Petition for immediate stay and review by the State Water Resources Control Board ("SWRCB" or
26 "State Board") of an improper action by the Regional Water Quality Control Board, San Francisco
27 Region ("SFRWQCB" or "Regional Board"). Cal. Water Code §13320; 23 Cal. Code Regs. §2050,
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1 *et. seq.* United Molasses requests that the SWRCB hold this Petition in abeyance while negotiations
2 between the above parties continue.

3 **1. United Molasses Requests an Immediate Stay of the Water Code Section 13304 Site**
4 **Cleanup Requirement Order, Review Per Water Code Section 13320, and an Order**
5 **Finding the Port of Richmond Equally Liable as a Named Discharger.**

6 United Molasses hereby petitions the SWRCB to grant an immediate stay and review of site
7 cleanup requirement Order No. R2-2007-0067 (“Order”), issued by the SFRWQCB collectively to
8 United Molasses, the Port of Richmond and Vopak North America, Inc., pursuant to Water Code
9 Section 13304. The Order concerns the Port of Richmond Marine Terminal 4 (“Terminal 4” or
10 “Site”), located in Contra Costa County on Point San Pablo, near the northwest tip of Richmond,
11 California and was approved by the SFRWQCB on September 12, 2007. The cover letter
12 accompanying the Order upon service is dated September 24, 2007, and Petitioner was served
13 October 2, 2007. A copy of the Order and all service documents are attached as **Exhibit A**. The
14 transcript of relevant excerpts of the September 12, 2007 SFRWQCB meeting is attached as **Exhibit**
15 **B**.

16 Petitioner seeks review per Water Code Section 13320 of the Order improperly naming
17 United Molasses as a discharger. Further, Petitioner seeks an Order from the SWRCB finding the
18 Port of Richmond equally liable as named discharger.

19 However, United Molasses respectfully requests that the SWRCB hold this Petition in
20 abeyance while Petitioner, the SFRWQCB, and other named dischargers continue to negotiate in
21 good faith. United Molasses submits this timely petition to preserve its rights for review of the site
22 clean-up requirement Order by the SWRCB should the parties be unable to successfully complete
23 negotiations in a reasonable time.

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1 **2. The SFRWQCB's Site Cleanup Requirement Order Issued Pursuant to Water Code**
2 **Section 13304 Must be Withdrawn Because it is Improper and Inappropriate to**
3 **Name United Molasses.**

4 **A. The SWRCB Must Find the SFRWQCB Action Improper and Inappropriate**
5 **Based on the Evidence Presented.**

6 Upon a Section 13320 Petition, the State Board must review the SFRWQCB record to
7 determine if there is sufficient evidence ensuring an appropriate and proper action by the Regional
8 Board. Cal. Water Code §13320. The State Board is required to make an independent review of the
9 SFRWQCB action to determine whether the weight of the evidence supports the issuance of the
10 Order. *In the Matter of the Petition of Exxon Company, U.S.A., Et Al. of the Adoption of the*
11 *Cleanup and Abatement Order No. 85-066 by the California Regional Water Quality Control Board,*
12 *Central Valley Region, Order No. WQ 85-7, 1985 Cal. ENV LEXIS 10, *14 (1985) (standard of*
13 *State Water Board review under Section 13320 requires independent judgment as to whether the*
14 *action was reasonable); In the Matter of the Petition of Robert James Claus for Review of Inaction of*
15 *California Regional Water Control Board, Central Valley Region, Order No. WQ 85-1, 1985 Cal.*
16 *ENV LEXIS 16, *28 (1985). An action is appropriate and proper if it is supported by a*
17 *preponderance of the evidence. Petition of Robert James Claus, 1985 Cal. ENV LEXIS at *28,*
18 *citing Chamberlain v. Ventura County Civil Service Comm'n, 69 C.A.3d 362, 368 (1977).*
19 However, the record and evidence before both the Regional Board and the State Board in the present
20 case show that the adoption of the Order naming United Molasses as a discharger is inappropriate
21 and improper under Section 13304. *See* Cal. Water Code §§ 13304, 13320.

22 Pursuant to Water Code Section 13304, the SFRWQCB has the authority to issue the site
23 cleanup requirement order to "[a]ny person who has discharged or discharges waste into the waters
24 of this state... or who has caused or permitted, causes or permits, or threatens to cause or permit any
25 waste to be discharged or deposited where it is...discharged into the waters of the state and creates...
26 a condition of pollution or nuisances." Cal. Water Code §13304(a). Upon such finding, the named
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1 discharger “shall upon order of the regional board, clean up the waste or abate the effects of the
2 waste...” *Id.*

3 As set forth below, there is not enough credible evidence that United Molasses was ever a
4 user, let alone a discharger, of contaminants found at the Site. After an independent review, the
5 preponderance of the evidence before the State Water Board will clearly prove that United Molasses
6 is not a discharger per Water Code section 13304. Consequently, it is inappropriate, improper, and
7 inequitable to name United Molasses in the site cleanup requirement Order.

8 **B. Port of Richmond Marine Terminal 4 Site Description and Occupant History.**

9 The Port of Richmond Marine Terminal 4 is located in Contra Costa County on Point San
10 Pablo, near the northwest tip of Richmond, California. Terminal 4 is located on a peninsula, jutting
11 into the San Francisco Bay. The City of Richmond lies to the East.

12 The Site consists of two subunits that are adjacent to Terminal 4: (1) the former Dorward
13 Terminals/Paktank/Vopak (collectively “Vopak”) leasehold occupying approximately 9.5 acres of
14 land and consisting of several buildings, a former aboveground storage tank farm and related
15 structures; and (2) the former United Molasses leasehold occupying approximately six acres south of
16 the Vopak leasehold and consisting historically of several structures and a smaller collection of
17 tanks. (see site map, attached as **Exhibit C.**) The former United Molasses leasehold is adjacent to
18 and downgradient of the Vopak Site. Prior to the former United Molasses leasehold, the subunit was
19 also part of the Dorward Terminal operations and was used for oil bulk storage until 1936.

20 Petitioner began leasing property in approximately July 1936. United Molasses or its
21 predecessors engaged in aboveground bulk storage, handling and distribution of commercial
22 agricultural products. These products included “agricultural products” such as coconut oil, lignin
23 liquor, linseed oil, cane molasses, blackstrap molasses, beet molasses and tallow.

24 Two fuel-fired boilers were used on the former United Molasses property to heat the
25 molasses so that it could be pumped uphill to storage tanks. The boilers as well as facility vehicles
26 were fueled by diesel and light domestic fuel (as opposed to a heavier grade fuel such as a “No. 4
27 grade fuel”). United Molasses ended its leasehold and closed its business at the Site in August 1993.
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1 No evidence of contamination, release or threat of release, was identified until the observed oil sheen
2 in July 2001, eight years after United Molasses ended their leasehold at the Site.

3 Vopak and/or its predecessors began operating a bulk oil storage facility at the Site in 1917
4 and have stored products including, but not limited to, lubricating oils, gasoline, diesel fuel, neutral
5 oil 100 and 500, Grade 4 fuel oil, distillate oil, No. 5 fuel oil, No. 6 fuel oil, jet fuel, polybutane,
6 toluene, xylene, linear alkylbenzenes, alcohols, animal and vegetable oils, liquid fertilizers, and
7 phosphoric acids. The products were contained in approximately 100 aboveground storage tanks
8 with a capacity ranging from 1000 to 3.9 million gallons, with a total capacity of 21,000,000 gallons.

9 An undetermined number of underground storage tanks were also located at the Site. Two
10 former pipelines on the Site transported alkenes, propylene tetramer, and polymers from the
11 neighboring Chevron Refinery to the Vopak facility. The pipelines were constructed, owned and
12 operated by Chevron.

13 Vopak ceased operations in 2000, and demolished and removed the tanks and associated
14 distribution piping in early 2001. In July 2001, just a few months after Vopak removed its tanks and
15 associated piping, an oil sheen was observed at the Site. The oil sheen seeped into the Bay
16 downgradient from Vopak's stormwater outfall, which drained water from Vopak's 500 series tank
17 farm just upgradient from the stormwater outfall, and into the San Pablo Bay (see Paktank
18 Corporation, Richmond Terminal, Spill Response Plan: Site Drainage map, attached as **Exhibit D.**)
19 This seep also occurred just yards from the site of an 1985 oil seep where Vopak's predecessor in
20 interest, Paktank, was charged with intentionally draining storm water into the Bay, which
21 accumulated in the tank farm and was mixed with petro-chemicals. (See 1985 Coast Guard Notice
22 of Violation, attached as **Exhibit E.**) Based on communications with SFRWQCB on September 12,
23 2007, no other discharge has been observed since July 2001. (See Declaration of Todd O. Maiden at
24 paragraph 2, attached as **Exhibit L.**)

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1 **C. United Molasses Conducted Extensive Testing and Investigation Regarding the**
2 **Observed 2001 Discharge.**

3 Once SFRWQCB Staff notified Petitioner of a potential problem in 2001, United Molasses
4 conducted a multi-phase investigation to determine potential surface sources, whether such sources
5 contained chemicals of concern, and whether those sources impacted groundwater. The first phase
6 of the investigation was initiated in December 2001; the second phase was completed in April 2002.
7 United Molasses was always pro-active and chose to investigate their formerly-leased property
8 rather than argue with the State. United Molasses extensively evaluated all known potential sources
9 at the site and the contamination discharged at the Site.

10 **1. United Molasses Identified and Investigated All Potential Surface Sources**
11 **and None Are the Source of Site Contamination.**

12 United Molasses identified and investigated three potential surface sources on the former
13 leasehold immediately after the July 2001 observed oil seep. All information regarding the
14 identification and investigation of all potential United Molasses sources has been documented in the
15 August 2002 consultant Report of Investigation and submitted on multiple occasions to multiple
16 SFRWQCB staff members over the past five years. (See QEPI Report of Investigation, submitted
17 without Appendices, attached as **Exhibit F**.)

18 **i. Shallow Underground Storage Tank is Not a Potential Source of**
19 **Contamination.**

20 Based on a site history investigation, United Molasses believed there could have been an
21 underground storage tank (“UST”) in the area between the garage and boiler house #2 on the former
22 leasehold. United Molasses retained an environmental consultant to determine the potential
23 presence of the UST. The consultant excavated in the area and discovered a flat piece of steel, at a
24 depth of approximately two feet below ground surface (“bgs”), believed to be a tank bottom. The
25 UST appeared to be properly cleaned, with the top portion torch-cut and removed, and the bottom
26 left in place and covered with soil and gravel. The metal was in good condition with no observed
27 holes or pitting. The soil was not visibly stained.

1 Per the Contra Costa County Environmental Health Services Department instructions, soil
2 samples were collected and analyzed for TPH as diesel. The sample collected from the west end of
3 the excavation exhibited a TPH concentration of 21 mg/kg. The sample collected from the east end
4 of the excavation exhibited a TPH concentration of 110 mg/kg. Visual observations and analytical
5 data from bottom soil samples associated with the storage tank indicate that this structure does not
6 represent a potential source of observed impacts at the site. (See QEPI Report attached as **Exhibit**
7 **F.**)

8 **ii. Sediment Trap is Not a Potential Source of Contamination.**

9 A sediment trap was located on the former United Molasses site, just under the ground
10 surface on the southwest side of the garage in an area adjacent to a former rail spur that was used in
11 the past for loading and unloading. The sediment trap was removed and the soil from the excavation
12 was submitted for lab analysis. An oily sludge was present in the bottom of the trap and collected as
13 a sample. The sample exhibited a TPH concentration of 420 mg/kg and was identified as motor oil.

14 After removal, the area was excavated to an approximate depth of four to six feet, and a more
15 representative soil sample was collected from the staged soil pile. The sample exhibited a TPH
16 concentration of 290 mg/kg and was identified as a mixture of motor oil and alkylbenzene. A
17 bottom soil sample was collected from 2 feet below the bottom of the excavation. The concentration
18 of this sample was 12 mg/kg TPH. Visual observations and analytical data from bottom soil samples
19 associated with the sediment trap indicate that this structure does not represent a potential source of
20 observed impacts at the site. (See QEPI Report, attached as **Exhibit F.**)

21 **iii. 8,000 Gallon UST Only Stored Diesel and is Not a Potential Source**
22 **of Contamination of Type Found in Groundwater.**

23 Finally, the SFRWQCB states that United Molasses's 8,000 gallon UST is a source of
24 contaminants, giving rise to the obligation and authority of the Regional Board to name United
25 Molasses as a discharger in the site cleanup requirement Order, per Water Code section 13304.
26 However, through extensive sampling and investigation, it was determined that historically, the UST
27 only contained diesel fuel, not the type of heavy-end fuel oil stored by Dorward Terminals or its
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1 successors or found in the downgradient groundwater. The UST was only used to fuel: a) on-site
2 vehicles; and b) until 1960, boiler house #2 on the former leasehold. The UST was emptied and
3 removed from service in the mid-1980s; the UST was completely removed in August 1990 –
4 approximately eleven years before any release was observed.

5 In January of 1990, Chips Environmental Consultants, Inc. (CECI) collected two soil
6 samples and one water sample near the former 8,000 gallon UST, all of which contained petroleum
7 hydrocarbon impacts. Further, concentrations of benzene, toluene, ethylbenzene, and xylenes
8 (BTEX) were identified in the groundwater. After removal of the tank, soil samples from the east
9 and west of the former UST identified diesel range TPH concentrations of 120 mg/kg (milligrams
10 per kilogram), and 56 mg/kg, respectively. Site soil samples were collected and did not exhibit
11 concentrations exceeding the lab detection limit of 10 mg/kg. A water sample collected from the
12 excavation exhibited a concentration of 4 mg/kg diesel range TPH. This sample was positively
13 identified using gas chromatography as diesel fuel – not heavy fuel oil of the type observed in the
14 groundwater. (See CECI Report, attached as **Exhibit G**; QEPI Report, attached as **Exhibit F**.)

15 After remedial action was completed, further response actions were deemed unnecessary and
16 the UST received closure from Contra Costa County.

17 United Molasses used this 8,000 gallon underground storage tank to store diesel fuel. There
18 is no evidence in the record that United Molasses fueled boilers or vehicles with the type of heavy
19 hydrocarbon substance found in the subsurface under the Site. There is no evidence that United
20 Molasses stored or used alkylbenzenes anywhere on the former leasehold. Therefore, the 8,000 gallon
21 UST is not a potential source of contaminants found on the Site.

22 **2. United Molasses Conducted Extensive Investigation and Testing**
23 **Regarding the Contaminants Found on the Site.**

24 In addition to investigating all potential surface sources, United Molasses extensively
25 investigated and tested contaminants found at the Site. All parties acknowledge that contaminants at
26 the Site include degraded heavy hydrocarbons and alkylbenzenes. Through the use of forensic
27 analytical methods, it was determined that the degraded heavy hydrocarbon contaminant resembles a
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1 Number 4 fuel oil. Degraded heavy hydrocarbons do not exhibit characteristics of diesel fuel.
2 Instead, diesel has a narrower range of compounds than degraded heavy hydrocarbons, and the
3 degraded heavy hydrocarbon at the site includes components not found in diesel. (See Zymax
4 Report, attached as **Exhibit H.**) Therefore, the evidence presented to the SFRWQCB proves that the
5 contaminant found at the site is not diesel fuel, nor is it related to diesel fuel.

6 No source of degraded heavy hydrocarbons or alkylbenzenes was ever identified on Petitioner's
7 leasehold. Further, no significant impacts were found in unsaturated (vadose zone) soil based both
8 on field screening methods and analytical methods, and impacts were only observed near the water
9 table and in the groundwater at most sample locations. Contaminant presence near the water table
10 (and no observed impacts in the vadose zone soils) indicates that the degraded heavy hydrocarbon
11 was transported to the former United Molasses leasehold via groundwater. Vopak's predecessor in
12 interest, Paktank, self reported to the U.S. EPA that it stored "Grade 4 oil" and "distillate oil." (See
13 **Exhibit I**, page 2.)

14 Vopak is taking responsibility for alkylbenzene and other petroleum impacts contamination
15 found at the site due to the extensive storage and presence of such contaminants on the Vopak site.
16 Since the No. 4 fuel oil was stored at the Vopak facility or its predecessors, it is not unreasonable to
17 assume that the same storage and pipeline infrastructure (dating back to 1917) which leaked
18 alkylbenzenes likely leaked other products stored at that site, including the heavy-end fuel oil.

19 United Molasses has no history of alkylbenzene use or storage at their former leasehold.
20 United Molasses has no history of heavy hydrocarbon use or storage at the former site. The
21 investigation and evidence presented to the SFRWQCB since the 2001 observed discharge
22 effectively and definitely demonstrates that the contaminants found at the Site are not related to any
23 activities conducted by United Molasses.

24 **D. SFRWQCB Approval is Based In Part on Misrepresentations of The United**
25 **Molasses Investigation and is Therefore Improper.**

26 On September 12, 2007, the SFRWQCB approved the Order at issue in a public Regional
27 Board meeting. However, some testimony by SFRWQCB staff may have inadvertently led the
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1 Regional Board to misunderstand or misinterpret the scope and nature of the United Molasses
2 investigation and attendant results.

3 Mr. Curtis Scott, Supervisor Engineering Geologist at the SFRWQCB, stated that he believed
4 the parties contesting the order “have done investigations and looked at each other’s data, and have
5 looked specifically to what’s to their benefit of their data, in my evaluation...” [sic] (SFRWQCB
6 Hearing Transcript, pg. 42, attached as **Exhibit B.**) United Molasses vigorously disputes this
7 statement. United Molasses has diligently reviewed all data regarding the Site, investigated all
8 potential sources and contaminants, and has presented the data to Board staff in an objective,
9 thorough manner. This misunderstanding could possibly be due to multiple changes over the years
10 in SFRWQCB staff members overseeing the Site investigation, including a change in the main
11 SFRWQCB staff contact which left the Site in August 2007. Although the current SFRWQCB staff
12 has assured the parties they participated in the Site investigation throughout, they were not involved
13 in day to day communications and contact.

14 Mr. Scott continued and stated, “At United Molasses, we don’t know for sure what was held
15 in all of their tanks over the history of the site. We do know that they had fuel tanks.” (Id.) This is
16 an incomplete statement as United Molasses has completed extensive due diligence of Site history,
17 company tank storage, and historical material use at the Site throughout the period of the United
18 Molasses leasehold. Numerous documents have been submitted to the SFRWQCB staff regarding
19 historical use and storage. Again, Mr. Scott may have been unaware of such documentation due to
20 the multiple staff changes assigned to oversee the Site investigation.

21 Finally, regarding the type of contaminant found at the Site, Mr. Scott testified, “we have
22 materials that when you look at the range of hydrocarbons we can sit and debate forever what they
23 really are once they’re already degraded...” (Id. at 43.) However, United Molasses believes this
24 statement to be a mischaracterization of the material found at the Site. United Molasses completed
25 extensive analysis and technologically advanced gas-chromatogram testing to understand the
26 pollutant observed. United Molasses has submitted extensive data to the SFRWQCB. (See Zymax
27 Report, **Exhibit H**; QEPI Report, **Exhibit F**.) The testimony above may have led the Regional
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1 Board to believe the parties do not know the contaminant material found, however, this would be a
2 mischaracterization of the United Molasses investigation and resulting data. Further, this
3 investigation has allowed United Molasses to distinguish this contaminant from the type of products
4 used and stored at their facility.

5 The statements above may have wrongly influenced the SFRWQCB to approve the Order
6 naming United Molasses as a discharger. Approval based on the above mischaracterization of the
7 scope and nature of the United Molasses investigation and attendant results is improper and
8 inappropriate.

9 **E. It is Inappropriate and Improper to Name United Molasses in the Water Code**
10 **Section 13304 Site Requirement Order.**

11 Per Water Code Section 13320, the SWQCB must independently review the evidence
12 available to the SFRWQCB and determine by a preponderance of the evidence, if the action by the
13 Regional Board was appropriate and proper. For the forgoing reasons, the action must be found
14 improper and the Order withdrawn.

15 United Molasses diligently and extensively investigated the contamination at the Terminal 4
16 Site and all possible surface sources on the former leasehold. The weight of the evidence proves that
17 United Molasses is not a discharger per Water Code Section 13304. The information presented to
18 the SFRWQCB establishes that it is unreasonable to name United Molasses in a joint cleanup
19 requirement order with Vopak, the bulk chemical and oil storage company. Such action must be
20 found inappropriate and improper under Water Code Section 13320 by the State Water Board.

21 **3. The Port of Richmond is Liable as a Named Discharger.**

22 The SCR Order names United Molasses, Vopak and the Port of Richmond jointly as
23 dischargers. Further, per the SFRWQCB's own Order, "it is the policy of the Board not to allocate
24 or apportion responsibility between the dischargers named to the SCRs," (see Finding 5, Order No.
25 R2-2007-0067; see also *In the Matter of the Petitions of County of San Diego, City of National City,*
26 *and City of National City Community Development Commission*, Order No. WQ 96-2, 1996 Cal.
27 ENV LEXIS 3, *15, fn. 8 (1996)). However, the Order continues and states that "[w]hile the Port of
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1 Richmond as a landowner is properly named as a discharger, it will be required to implement the
2 requirements of this SCR only if the Board through its Executive Officer finds that Vopak and
3 United Molasses are not complying with the requirements of this SCR.” (Finding 5, Order No. R2-
4 2007-0067.)

5 This finding is an improper allocation or apportionment of responsibility. California law
6 recognizes landowner responsibility for remediation and cleanup, even where the landowner did not
7 engage in contamination, but had authority to control and maintain the Site, *Petitions of County of*
8 *San Diego, Et Al.*, 1996 Cal. ENV LEXIS at *3.

9 In Order No. WQ 96-2, cited above, five petitions were filed by three separate entities, the
10 County, the City, and the CDC, challenging their inclusion in the Cleanup Order issued by the
11 RWQCB, San Diego Region. *Id.* at *1. The Regional Board 's Order addressed impacts at the Duck
12 Pond Landfill, which the County was the sole operator and which ceased accepting waste in 1963.
13 *Id.* at *2. The Site sat vacant for decades. *Id.* In 1984, the CDC became involved in a plan to
14 purchase the property and develop a car dealership. *Id.* The City never owned, leased, or operated
15 on the landfill property. *Id.* at 14. However, the City was an easement holder for a public right of
16 way adjacent to the landfill. *Id.* at 14. The City contended that they should not be named in the
17 Order due to the fact that at most, they only held an easement on 30th Street, adjacent to the landfill.
18 *Id.*

19 The State Water Board found that the City was properly named in the Order because the City
20 had the authority to maintain and control the adjacent easement, a roadway. *Id.* at 14. Improper
21 maintenance of the roadway, sewage and stormwater collection systems contributed to the pollution
22 at the Site. *Id.* at *14-15. Therefore, "[t]he City's control of the roadway by easement is properly
23 relied upon by the SDRWQCB to name the City" in the Order. *Id.* at *15.

24 In this case, the Port of Richmond retains even greater control than the City in the case
25 referenced above. As fee simple landowner with complete authority to control and maintain the Site,
26 the City of Richmond should also be named in the Order and given the same opportunity to negotiate
27 its own allocated share with any other party named in the Order.
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1 The SFRWQCB actually discussed their inability – or at least unwillingness - to allocate
2 responsibility at the Board Hearing. (See Transcript at p. 28, **Exhibit B.**) Thus, Finding 5 of Order
3 No. R2-2007-0067, allowing the Port of Richmond “to implement the requirements of this SCR only
4 if... Vopak and United Molasses are not complying with the requirements of this SCR” is contrary
5 to law, inappropriate and improper. United Molasses respectfully requests that the State Water
6 Board find such apportionment improper and instead find the Port of Richmond fully liable as a
7 named discharger.

8 **4. United Molasses Is Aggrieved Due to the Improper and Inappropriate Site Cleanup**
9 **Requirements Presented in the SFRWQCB Order.**

10 The Order issues Section 13304 monitoring and cleanup requirements by the Regional Board
11 seeking information which is improper and inappropriate to require United Molasses to develop,
12 prepare, and complete based on the available credible evidence. Such requirements are unnecessary
13 in light of the information already provided to the SFRWQCB and other reasons outlined above.
14 Thus, under the statute, United Molasses is an aggrieved party, hereby seeking review by the
15 SWRCB. Cal. Water Code §13320(a).

16 **5. All Issues Contained in the Present Petition Have Previously Been Raised by United**
17 **Molasses Prior to the RWQCB Action**

18 United Molasses presented issues raised in the Petition to the SFRWQCB in multiple
19 meetings, comment letters and public comments during the September 12, 2007 Regional Board
20 meeting. A copy of the comment letters are attached as **Exhibit J.**

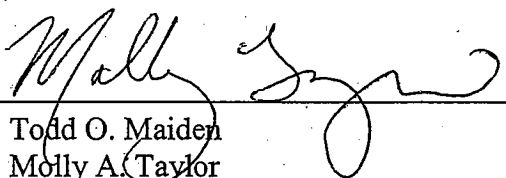
21 United Molasses further confirms that this Petition has been sent to the SFRWQCB in
22 accordance with 23 Cal. Code Reg. Section 2050(8). (See **Exhibit K.**) United Molasses has also
23 delivered a true and correct copy to the other named Dischargers, Vopak and the City of Richmond.
24 (See **Exhibit K.**) However, because this Petition is filed to preserve United Molasses’s rights to
25 appeal the Section 13304 Site Cleanup Requirement Order, United Molasses and the Regional Board
26 will continue negotiations to resolve all differences arising from the action of the SFRWQCB.
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6. This Petition Should be Held in Abeyance by the SWRQCB, Pending the Outcome of Good Faith Negotiations with the Regional Water Board.

In light of the foregoing reasons, United Molasses Company hereby requests that the SWRQCB temporarily hold this Petition in abeyance while United Molasses and the SFRWQCB continue to negotiate in good faith. United Molasses is additionally engaged in negotiations with Vopak North America, Inc. Should a resolution be forthcoming, this Petition for review may be unnecessary. However, United Molasses hereby reserves its rights for review by the State Water Resources Quality Control Board pursuant to Water Code Section 13320.

DATED: 12 October 2007.



Todd O. Maiden
Molly A. Taylor
Counsel for Petitioner United Molasses
Company

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

ORDER NO. R2-2007-0067

SITE CLEANUP REQUIREMENTS

**PORT OF RICHMOND
VOPAK NORTH AMERICA, INC.
UNITED MOLASSES COMPANY**

**PORT OF RICHMOND TERMINAL 4
RICHMOND, CONTRA COSTA COUNTY**

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

1. **Site Location and Description:** Port of Richmond Terminal 4 (hereinafter referred to as the Site) is located in Contra Costa County on Point San Pablo, near the northwest tip of Richmond (see Figure 1). The Site is located on a peninsula, jutting into the San Francisco Bay. The City of Richmond lies to the east. The Site is owned by the Port of Richmond, and consists of two historic leaseholds adjacent to one another: the Vopak North America Inc. (Vopak) leasehold and the United Molasses Company leasehold. The Vopak leasehold consisted of approximately 9.5 acres of land used for a bulk oil storage facility and included a large quantity of aboveground tanks, related structures, and underground storage tanks. The United Molasses Company leasehold consisted of approximately six acres of land hydraulically downgradient and southwest of the Vopak leasehold used for bulk storage, handling, and distribution of agricultural products in aboveground, underground storage tanks, and related structures (see Figure 2).
2. **Site History:** Vopak: Vopak and its predecessors, which include Dorward & Sons and Paktak California, began operating a bulk oil storage facility on its leasehold at the Site in 1917. Vopak and its predecessors stored products including, but not limited to, lubricating oils, gasoline, diesel fuel, neutral oil 100 and 500, Grade 4 oil, distillate oil, No. 5 fuel oil, No. 6 fuel oil, jet fuel, polybutane, toluene, xylene, linear alkylbenzenes, alcohols, animal and vegetable oils, liquid fertilizers, and phosphoric acids. The products were contained in approximately 100 aboveground storage tanks with a capacity ranging from 1000 to 3.9 million gallons, with a total capacity of 21,000,000 gallons. Vopak ceased operations in 2000, and demolished and removed the tanks by February 2001. An undetermined number of

underground storage tanks were also located at the Site. Two former pipelines transported alkenes, propylene tetramer, and polymers from the neighboring Chevron Refinery to the Vopak facility. The pipelines were constructed, owned and operated by Chevron.

United Molasses Company: United Molasses Company and its predecessors, PM Ag and Pacific Molasses Company, began operating on their Site leasehold in 1936. PM Ag and Pacific Molasses Company were engaged in aboveground bulk storage, handling, and distribution of commercial agricultural products. Products included coconut oil, lignin liquor, linseed oil, cane molasses, blackstrap molasses, beet molasses, and tallow. Two boilers were used to heat and improve the transfer of products. The boilers were fired by diesel or light heating oil stored in two underground storage tanks (one was partially buried), one of unknown size and one with a capacity of approximately 8,000 gallons. United Molasses Company removed the two underground storage tanks and eight aboveground storage tanks formerly containing agricultural products in the 1980's and 1990's, and ceased facility operations in 1993.

3. **Regulatory Status:** This Site is currently not subject to a Board order. Site investigation has been required previously under Section 13267 of the Water Code.
4. **Purpose of Order:** This order establishes Site Cleanup Requirements (SCRs) for the Site, and includes provisions, specifications, tasks, and a schedule necessary to conduct additional Site investigations and to minimize the impacts of waste discharge into waters of the State. California Water Code Section 13304 authorizes the Board to issue orders requiring Dischargers to cleanup and abate waste where the dischargers have caused or permitted waste to be discharged or deposited where it is or probably will be discharged into waters of the State and creates or threatens to create a condition of pollution or nuisance.
5. **Named Dischargers:** Vopak, United Molasses Company, and the Port of Richmond (collectively, Dischargers) are named as dischargers to this SCR. Although the Dischargers dispute the relative contribution and extent of contaminants from their respective sites and leaseholds to the overall Site contamination, consistent with State Water Resource Control Board policy, it is the policy of the Board not to allocate or apportion responsibility between the dischargers named to SCRs.

Vopak: Vopak is named as a discharger because it and its predecessors have caused or permitted waste to be discharged into the waters of the State and create, or threatens to create, a condition of pollution or nuisance. Specifically: (a) Vopak and its predecessors operated a leasehold from 1917 to 2000 during which time a large quantity of various chemicals and products were stored at Vopak's leasehold area; (b) Vopak is the successor in interest to those companies which operated a bulk oil storage facility at the Site; (c) chemicals consistent with Vopak's and its predecessors' operations (gasoline, diesel fuel, miscellaneous oils including

fuel oil, and linear alkylbenzenes) have been detected in soil and groundwater at the Site; (d) spill and leak reports have been filed for releases associated with the Vopak leasehold area of the Site, including: a 1985 United States Coast Guard notification of a discharge of oily storm water into the Bay from the Vopak 500-Series tank farm, a 1986 report documenting a leaking underground petroleum storage tank at the northern portion of the Vopak leasehold, and a 1995 National Response Center report of an "unknown oil" discharging from the hillside at the northern portion of the Vopak leasehold; (e) a 1968 site map indicates that an approximately 16,000 gallon fuel oil tank was located within the 500 series tank farm; (f) while tank storage records are very limited, a 1975 record indicates that millions of gallons of diesel and about 100,000 gallons of gasoline were stored at the Vopak leasehold; and, (f) technical reports document the presence of elevated concentrations of linear alkylbenzenes and/or petroleum hydrocarbons as gasoline, diesel, and oil in and downgradient of the area of Vopak's former storage tanks. See also Finding No. 7 below.

United Molasses Company: United Molasses Company is named as a discharger because it and its predecessors caused or permitted waste to be discharged into waters of the State and creates, or threatens to create, a condition of pollution or nuisance. Specifically: (a) United Molasses Company and its predecessors stored and used petroleum hydrocarbons on its leasehold area of the Site from 1936 to 1993; (b) United Molasses Company is the successor in interest to those companies which stored and used petroleum hydrocarbons at the Site; (c) consistent with United Molasses Company's operations, petroleum hydrocarbons, primarily as diesel and oil, have been detected in soil and groundwater at the Site; and d) two underground storage tanks on the former United Molasses leasehold have been identified as sources of releases as indicated by the presence of elevated levels of petroleum hydrocarbons, primarily as diesel and oil, in shallow soils and groundwater in the vicinity of the tanks in underground storage tank removal reports and site investigation reports. See also Finding No. 7 below.

Port of Richmond: The Port of Richmond is named as a discharger because it is the current landowner of the Site. Additionally, the Port of Richmond has been the owner of the Site since the early 1970's, a period during which Vopak and United Molasses Company and their predecessors leased the Site and caused the discharge of contaminants. The Port of Richmond acquired the Site from Vopak's predecessors. While the Port of Richmond as a landowner is properly named as a discharger, it will be required to implement the requirements of this SCR only if the Board through its Executive Officer finds that Vopak and United Molasses are not complying with the requirements of this SCR.

6. **Site Hydrogeology:** The Site is located on the hilly peninsula of the Potrero-San Pablo Ridge, which is composed of the steeply dipping Franciscan complex. The bedrock is composed of sandstone, shale, and conglomerate. Past sea level fluctuations resulted in a complex sedimentary sequence of interfingering estuarine and alluvial fan deposits overlying

the Franciscan Complex bedrock. The uppermost deposits, which consist of imported fill ranging from 3 to 30 feet deep overlies Bay Muds that consist of silt and silty clay with abundant plant matter. The Bay Muds overlie the Franciscan bedrock. The ground surface at the eastern/uphill portion of the Site consists of the Franciscan bedrock. The ground surface at the western/downhill portions of the Site consists of artificial fill. The Site is bounded by the Hayward Fault to the east and the San Pedro-San Pablo Fault to the west. Groundwater beneath the Site lies approximately 8-15 feet below the ground surface and generally flows to the west/southwest, and discharges into San Francisco Bay. The variable nature of the surface topography, subsurface materials, underground utilities, and surface drainage structures poses challenges to predicting with certainty the movement of surface water and groundwater at the Site and the migration of contaminants in water.

7. **Remedial Investigations:** Remedial investigations were conducted at the Site by Vopak, United Molasses Company, and the Port of Richmond in 2001-2003. Additional site investigations are required by this Order. Site groundwater and soil has been impacted by gasoline, diesel, and oil range petroleum hydrocarbons, as well as linear alkylbenzenes, a surfactant used for the production of detergents. The 2001 to 2003 Site investigations included soil and groundwater sampling and trenching throughout the site and adjacent beach areas. The investigations indicate that petroleum hydrocarbon contamination is present in large areas of the Site, including the former United Molasses and Vopak leasehold areas. The most severe contamination is free-phase petroleum hydrocarbons found downgradient of the Vopak 500-series tank farm, within the former United Molasses leasehold, extending from the area of Western Drive to the beach area where petroleum seepage was last observed in 2001 (see Figure 2). During the investigations conducted in 2002 it was determined that a significant leakage of water was occurring from an East Bay Municipal Utility District (EBMUD) water line beneath the Vopak 500-series tank farm, which was subsequently repaired.

A summary of the most significant site impacts documented in the 2001 to 2003 investigation reports are as follows:

United Molasses Company Leasehold Soil and Groundwater Impacts:

Separate-phase petroleum product is found throughout the United Molasses Company leasehold. The highest dissolved petroleum concentrations are found near the two former fuel tanks on the United Molasses leasehold. Maximum concentrations of petroleum hydrocarbons detected in soil are 94 ppm TPH diesel and 180 ppm TPH oil in boring VB-12. Maximum concentrations of petroleum hydrocarbons detected in groundwater are 2300 ppb TPH diesel and 580 ppm TPH oil in VB-12. Linear alkylbenzenes, which originated from Vopak's 500 series tank farm, have been identified, and are commingled with other product but not quantified within the United Molasses leasehold.

Vopak Leasehold Soil and Groundwater Impacts:

Vopak 500-Series Tank Area: The separate-phase petroleum product found underlying the majority of the former United Molasses leasehold is not observed immediately underlying the Vopak 500-Series tank area. However, the product is found immediately downgradient of the tanks in the area, and upgradient of United Molasses source areas in borings B-18, B-25, VB-1, VB-5, VB-13A, VB-14, and wells MW-2 and MW-4, located along Western Drive.

High levels of petroleum hydrocarbon contamination have been detected in soil and groundwater in Vopak's 500-Series tank area. In soil, petroleum hydrocarbon concentration has been detected at maximum concentrations of 3100 ppm TPH diesel in well VMW-3, 28 ppm TPH gas in boring VMW-2, and 5300 ppm TPH oil in well VMW-1. Dissolved groundwater contamination is found in monitoring wells within the 500-Series tank area at maximum concentrations of up to 4100 ppb TPH gas in well VMW-2, and 270 ppb TPH diesel in well VMW-3. Linear alkylbenzenes, which originate from Vopak's 500 series tank farm and potentially other areas of the Vopak leasehold, have been identified and are commingled with other product, but not quantified. The linear alkylbenzenes have migrated in groundwater and have impacted the downgradient United Molasses site.

Northern Vopak Leasehold Area: An area of soil and groundwater contamination has been identified in the northern area of the Site on the former Vopak leasehold, north of the former Vopak warehouse. The petroleum hydrocarbon contamination in soil and groundwater in the northern area of the Site is distinct from the soil and groundwater contamination identified in the southern area. In soil in the former northern Vopak leasehold area, petroleum hydrocarbons have been detected at maximum concentrations of 27 ppm TPH gas, 7100 ppm TPH diesel, and 7200 ppm TPH oil in soil boring VB-21. Separate-phase petroleum hydrocarbons has been detected in borings B-38 and VB-20. Dissolved groundwater contamination is reported at maximum concentrations of 250 ppb TPH gas and 5,900 ppb TPH diesel in boring VB-20. No linear alkylbenzenes were found commingled within area of elevated petroleum hydrocarbon concentrations in soil or groundwater in the northern area of the Site.

8. **Interim Remedial Measures:** Interim remedial measures at the Site include removal of the sources and potential sources of contamination, including the underground and aboveground storage tanks and associated piping, at the former Vopak and United Molasses leaseholds. The beach seep, which occurred in 2001 when the storage tank facilities at the Vopak site were removed, ceased after an EBMUD water line leak running through the Vopak leasehold was repaired.
9. **Basin Plan:** The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Board's master water quality control planning document. It designates beneficial uses and

water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Board and approved by the State Water Resources Control Board, U.S. EPA, and the Office of Administrative Law where required.

The potential beneficial use of groundwater beneath the Site includes:

- a. Municipal and domestic water supply
- b. Industrial process water supply
- c. Industrial service water supply
- d. Agricultural water supply
- e. Freshwater replenishment to surface waters

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

The existing beneficial uses of waters of San Francisco Bay includes:

- a. Municipal and domestic supply
- b. Industrial process supply or service supply
- c. Water contact and non-contact recreation
- d. Wildlife habitat
- e. Cold freshwater and warm freshwater habitat
- f. Fish migration and spawning
- g. Navigation
- h. Estuarine habitat
- i. Shellfish harvesting
- j. Preservation of rare and endangered species

10. **State Water Board Resolution No. 92-49:** State Water Board Resolution No. 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304," applies to this cleanup and requires cleanup and abatement of the effects of a discharge in a manner that promotes attainment of either background water quality, or the best water quality which is reasonable if background levels of water quality cannot be restored. Cleanup to levels other than background must be consistent with the maximum benefit to the people of the State, not unreasonably affect present and anticipated beneficial uses of such water, and not result in water quality less than prescribe in the Basin Plan and policies adopted by the State and Regional Water Boards. This Order does not yet prescribe clean-up levels, but requires the Dischargers to investigate whether cleanup to background levels is feasible, as described in Provision B.5.
11. **Preliminary Cleanup Goals:** The Dischargers will need to make assumptions about future cleanup standards for soil and groundwater, in order to determine the necessary extent of remedial investigation, interim remedial actions, and the draft remedial action plan. Pending

the establishment of Site-specific cleanup standards, the following preliminary cleanup goals shall be used for these purposes:

- a. **Groundwater:** Applicable water quality objectives (e.g., lower of primary (toxicity) and secondary (taste and odor) maximum contaminant levels, or MCLs) or, in the absence of a chemical-specific objective, equivalent drinking water levels based on toxicity and taste and odor concerns.
 - b. **Soil:** Applicable screening levels as compiled in the Board's draft Environmental Screening Levels (ESLs) document or its equivalent. Soil screening levels are intended to address a full range of exposure pathways, including direct exposure, indoor air impacts, nuisance, and leaching to groundwater.
12. **Cost Recovery:** Pursuant to California Water Code Section 13304, the Dischargers are hereby notified that the Board is entitled to, and may seek reimbursement for, all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order.
 13. **CEQA:** This action is an order to enforce the laws and regulations administered by the Board. As such, this action is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15321 of the Resources Agency Guidelines.
 14. **Public Notice:** The Board has notified the Dischargers and interested agencies and persons of its intent to under California Water Code Section 13304 to prescribe site cleanup requirements for the discharge, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
 15. **Public Hearing:** The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the Dischargers, in accordance with Finding No. 5, shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

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

2. Further significant migration of wastes or hazardous substances through subsurface transport to waters of the State is prohibited.
3. Activities associated with the subsurface investigation and cleanup which will cause significant adverse migration of wastes or hazardous substances are prohibited.

B. TASKS

1. WORKPLAN TO EVALUATE CURRENT SITE CONDITIONS

COMPLIANCE DATE: January 4, 2008

Submit a workplan, acceptable to the Executive Officer, to evaluate current surface water and groundwater conditions at the Site, including, at a minimum: the extent of free and dissolved petroleum hydrocarbon product, the pathways and migration rates of contaminants in surface water, groundwater, soil, and bedrock, and, the current conditions of beach areas where historic releases have been observed. The workplan shall provide for resampling of all existing groundwater monitoring wells. The workplan shall specify investigation methods and a proposed time schedule for implementation of the workplan.

2. CURRENT SITE CONDITIONS REPORT

COMPLIANCE DATE: May 1, 2008

Submit a technical report, acceptable to the Executive Officer, documenting completion of necessary tasks identified in the Task 1 workplan. The report shall describe the current Site conditions based on an evaluation of available site data. The report shall also propose additional investigation and a time schedule for implementation, if necessary, to provide additional data necessary to define the extent of surface water and groundwater impacts at the Site.

3. WORKPLAN FOR INTERIM REMEDIAL ACTIONS

COMPLIANCE DATE: July 1, 2008

Submit a workplan, acceptable to the Executive Officer, which proposes interim remedial actions for the Site. The interim remedial actions shall include the removal of free petroleum product from groundwater, elimination and prevention of the discharge of free or dissolved product into the bay, and remediation of any remaining

impacts to beach areas and bay waters. The workplan shall specify the methods of remediation and include a proposed time schedule.

4. **REPORT DOCUMENTING IMPLEMENTATION OF INTERIM REMEDIAL ACTIONS**

COMPLIANCE DATE: December 1, 2008

Submit a technical report, acceptable to the Executive Officer, documenting implementation of interim remedial actions proposed in the Task 3 workplan. The report shall describe any variation with the interim remedial actions proposed in Task 3.

5. **WORKPLAN FOR FINAL REMEDIAL MEASURES**

COMPLIANCE DATE: July 1, 2009

Submit a technical report, acceptable to the Executive Officer, evaluating the performance of interim remedial measures on both free and dissolved groundwater and surface water contamination at the Site. The report shall propose final cleanup plan which includes, at a minimum, the following:

- a. Results of any additional investigation
- b. Evaluation of the installed interim remedial actions
- c. Risk assessment for current and post-cleanup exposures
- d. Proposed numeric Site-specific final cleanup standards for soil and groundwater
- e. Feasibility study evaluating and proposing final remedial actions
- f. Implementation tasks and time schedule

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

Item e shall consider the preliminary cleanup goals for soil and groundwater identified in Finding 11 and shall address the attainability of background levels of water quality (see finding 10).

6. **SITE MONITORING PLAN**

COMPLIANCE DATE: December 1, 2007

Submit a workplan, acceptable to the Executive Officer, proposing a Site monitoring plan which will provide hydrological and water quality data necessary to evaluate Site

conditions and the performance of interim and final remedial actions. The workplan shall specify wells to be monitored, monitoring frequency, and analytical methods.

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

C. PROVISIONS

1. **No Nuisance:** The storage, handling, treatment, or disposal of polluted soil or groundwater shall not create a nuisance as defined in California Water Code Section 13050(m).
2. **Good Operation and Maintenance (O&M):** The Dischargers shall maintain in good working order and operate as efficiently as possible any facility or control system installed to achieve compliance with the requirements of this Order.
3. **Cost Recovery:** The Dischargers shall be liable, pursuant to California Water Code Section 13304, to the Board for all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order. If the site addressed by this Order is enrolled in a State Water 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 Dischargers over reimbursement amounts or methods used in that program shall be consistent with the dispute resolution procedures for that program.
4. **Access to Site and Records:** In accordance with California Water Code Section 13267(c), the Dischargers shall permit the Board or its authorized representative:
 - a. Entry upon premises in which any pollution source exists, or may potentially exist, or in which any required records are kept, which are relevant to this Order.
 - b. Access to copy any records required to be kept under the requirements of this Order.
 - c. Inspection of any monitoring or remediation facilities installed in response to this Order.


- d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the Dischargers.
5. **Self-Monitoring Program:** The Dischargers shall comply with the Self-Monitoring Program as attached to this Order and as may be amended by the Executive Officer.
6. **Contractor / Consultant Qualifications:** All technical documents shall be signed by and stamped with the seal of a California registered professional geologist, a California certified engineering geologist, or a California registered civil engineer.
7. **Lab Qualifications:** All samples shall be analyzed by State-certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/ quality control (QA/QC) records for Board review. This provision does not apply to analyses that can only reasonably be performed on-site (e.g., temperature).
8. **Document Distribution:** Copies of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the following agencies:
 - a. City of Richmond, Richmond Community Redevelopment Agency
 - b. Contra Costa County, Department of Environmental HealthThe Executive Officer may modify this distribution list as needed.
9. **Reporting of Changed Owner or Operator:** The Dischargers shall file a technical report on any changes in Site occupancy or ownership associated with the property described in this Order.
10. **Reporting of Hazardous Substance Release:** If any hazardous substance is discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, the Dischargers shall report such discharge to the Board by calling (510) 622-2369 during regular office hours (Monday through Friday, 8:00 to 5:00).

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

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

11. **Periodic SCR Review:** The Board will review this Order periodically and may revise it when necessary. The Dischargers 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, complete, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on September 12, 2007.



Digitally signed by
Bruce Wolfe
Date: 2007.09.21
11:32:28 -07'00'

Bruce H. Wolfe
Executive Officer

Figures: Figure 1 – Site Location Map: Page 13
Figure 2 – Site Map: Page 14

Attachment: Self-Monitoring Program: Page 15

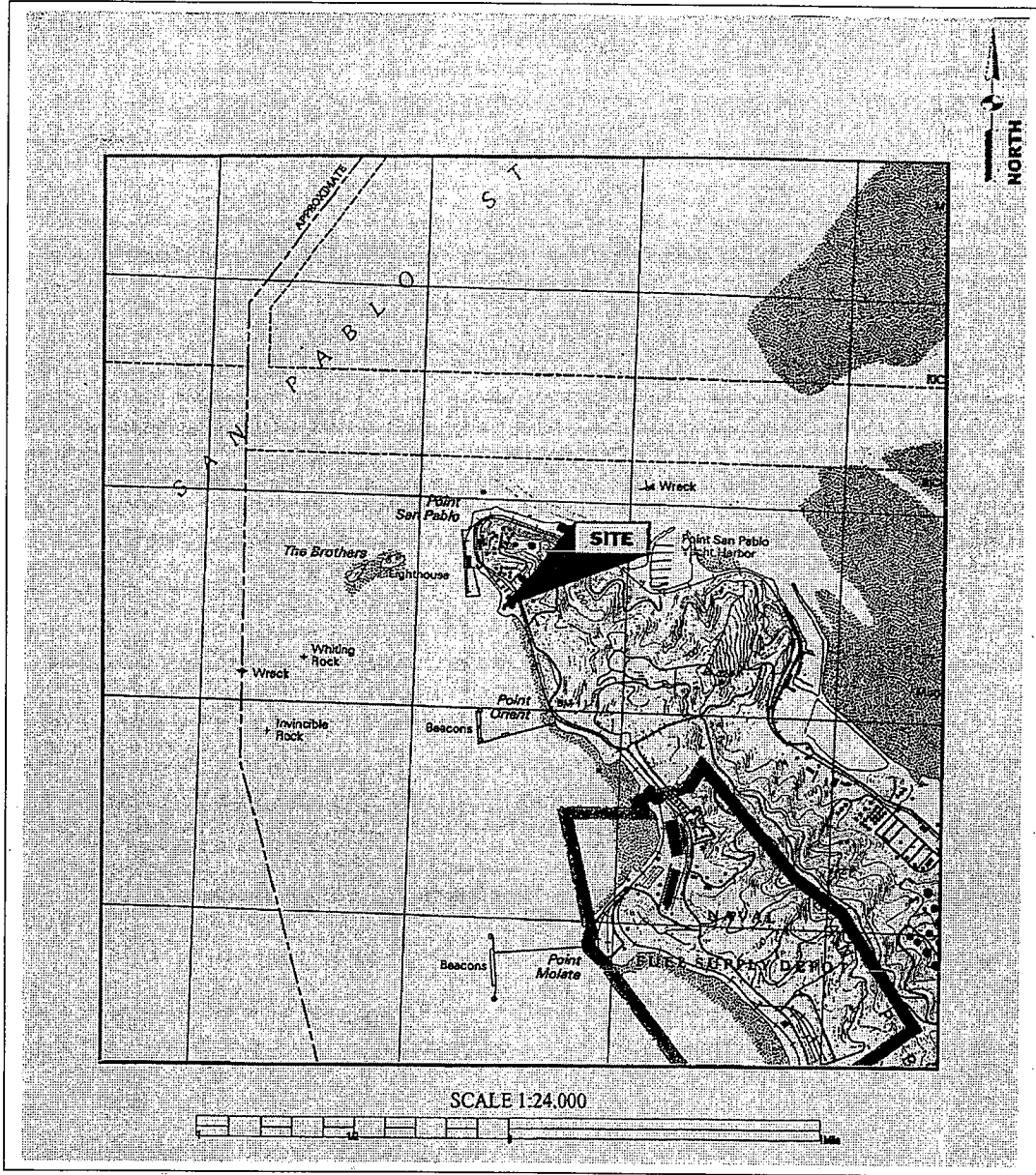
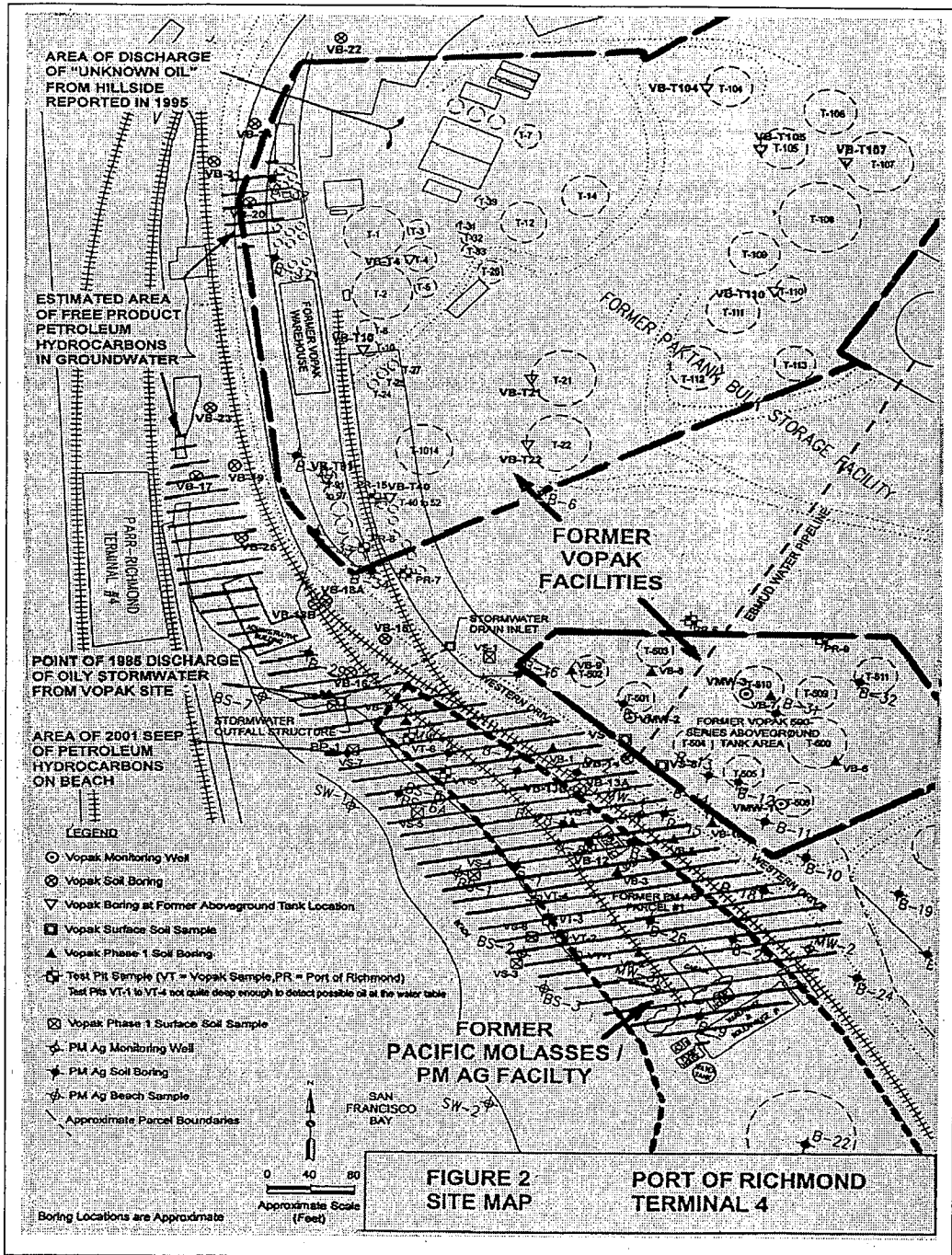


Figure 1
Site Location Map



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM FOR:

**PORT OF RICHMOND
VOPAK NORTH AMERICA, INC.
UNITED MOLASSES COMPANY**

**PORT OF RICHMOND TERMINAL 4
RICHMOND, CONTRA COSTA COUNTY**

for the property located at

**PORT OF RICHMOND TERMINAL 4
RICHMOND, CONTRA COSTA COUNTY**

1. **Authority and Purpose:** The Board requests the technical reports required in this Self-Monitoring Program pursuant to Water Code Sections 13267 and 13304. This Self-Monitoring Program is intended to document compliance with Board Order No. R2-2007-0067 (site cleanup requirements).
2. **Monitoring:** The Dischargers shall measure groundwater elevations and shall collect and analyze representative samples of groundwater quarterly in all existing monitoring wells. Analytes shall be analyzed utilizing the following EPA laboratory analytical methods:

Analyte	EPA Method
TPH gas	5030 or equivalent
TPH diesel	3510 or equivalent
BTEX	8260 or equivalent
MTBE and other fuel oxygenates	8260 or equivalent

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

3. **Quarterly Monitoring Reports:** The Dischargers shall submit quarterly monitoring reports to the Board no later than 30 days following the end of the quarter (e.g., report for first quarter of the year due April 30). The first quarterly monitoring report shall be due on January 30, 2008. The reports shall include:
 - a. **Transmittal Letter:** The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall be signed by the Dischargers' principal executive officer or his/her duly authorized representative, and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.
 - b. **Groundwater Elevations:** Groundwater elevation data shall be presented in tabular form, and a groundwater elevation map shall be prepared for each monitored water-bearing zone. Historical groundwater elevations shall be included in the fourth quarterly report each year.
 - c. **Groundwater Analyses:** Groundwater sampling data shall be presented in tabular form, and an isoconcentration map shall be prepared for one or more key contaminants for each monitored water-bearing zone, as appropriate. The report shall indicate the analytical method used, detection limits obtained for each reported constituent, and a summary of QA/QC data. Historical groundwater sampling results shall be included in the fourth quarterly report each year. The report shall describe any significant increases in contaminant concentrations since the last report, and any measures proposed to address the increases. Supporting data, such as lab data sheets, need not be included (however, see record keeping - below).
 - d. **Groundwater Extraction:** If applicable, the report shall include groundwater extraction results in tabular form, for each extraction well and for the Site as a whole, expressed in gallons per minute and total groundwater volume for the quarter. The report shall also include contaminant removal results, from groundwater extraction wells and from other remediation systems (e.g., soil vapor extraction), expressed in units of chemical mass per day and mass for the quarter. Historical mass removal results shall be included in the fourth quarterly report each year.
 - e. **Status Report:** The quarterly report shall describe relevant work completed during the reporting period (e.g., site investigation, interim remedial measures) and work planned for the following quarter.

4. **Violation Reports:** If the Dischargers violate requirements in the Site Cleanup Requirements, then the Dischargers shall notify the Board office by telephone as soon as practicable once the Dischargers have knowledge of the violation. Board staff may, depending on violation severity, require the Dischargers to submit a separate technical report on the violation within five working days of telephone notification.
5. **Electronic Reporting:** In addition to print submittals, all reports submitted pursuant to this Order must be submitted as electronic files in **PDF format**. The Board has implemented a document imaging system, which is ultimately intended to reduce the need for printed report storage space and streamline the public file review process. Documents in the imaging system may be viewed, and print copies made, by the public, during file reviews conducted at the Board's office. PDF files can be created by converting the original electronic file format (e.g., Microsoft Word) and/or by scanning printed text, figures & tables. Data tables containing water level measurements, sample analytical results, coordinates, elevations, and other monitoring information shall also be provided electronically in **Microsoft Excel® or similar spreadsheet format** to provide an easy to review summary, and to facilitate data computations and/or plotting that Board staff may undertake during their review. Data tables submitted in electronic spreadsheet format will not be included in the case file for public review. All electronic files must be submitted on CD or diskette and included with the print report.
6. **Other Reports:** The Dischargers shall notify the Board in writing prior to any Site activities, such as construction or underground tank removal, which have the potential to cause further migration of contaminants or which would provide new opportunities for Site investigation.
7. **Record Keeping:** The Dischargers or their agents shall retain data generated for the above reports, including lab results and QA/QC data, for a minimum of six years after origination and shall make them available to the Board upon request.
8. **SMP Revisions:** Revisions to the Self-Monitoring Program may be ordered by the Executive Officer, either on his/her own initiative or at the request of the Dischargers. Prior to making SMP revisions, the Executive Officer will consider the burden, including costs, of associated self-monitoring reports relative to the benefits to be obtained from these reports.



Linda S. Adams
Agency Secretary

California Regional Water Quality Control Board

San Francisco Bay Region

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



Arnold Schwarzenegger
Governor

September 24, 2007
File No. 2119.1231 (TS)

To: MAILING LIST - SENT VIA EMAIL where listed

Subject: **SITE CLEANUP REQUIREMENTS ORDER NO. R2-2007-0067**
PORT OF RICHMOND TERMINAL 4 SITE
RICHMOND, CONTRA COSTA COUNTY

The Regional Water Quality Control Board adopted Order No. R2-2007-0067 (enclosed) for the subject site at its regular monthly meeting on September 12, 2007. Should you have any questions regarding the adopted Order, please contact Terry Seward at (510) 622-2416, or by email at tseward@waterboards.ca.gov.

Sincerely,

Bruce H. Wolfe
Executive Officer

Digitally signed by Bruce
Wolfe
Date: 2007.09.21 11:30:13
-07'00'

Enclosure: Order No. R2-2007-0067
Attached: Mailing List

Preserving, enhancing, and restoring the San Francisco Bay Area's waters for over 50 years

MAILING LIST

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Robert Doty
Cox, Castle & Nicholson LLP
505 Montgomery Street, 20th Floor
San Francisco, CA 94111

Taylor, Molly A.

To: Taylor, Molly A.
Subject: FW: Terminal 4 Order

Attachments: Terminal 4 transmittal - 9-07.pdf; Terminal 4 - 07 0067 Adopted Order.pdf



Terminal 4 Terminal 4 - 07
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From: Terry Seward <TSeward@waterboards.ca.gov>
To: stevetekosky@attsmiaw.com <stevetekosky@attsmiaw.com>; nchan@ci.richmond.ca.us
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Todd O.; rgoodman@rjo.com <rgoodman@rjo.com>; Don.moster@tateandlyle.com
<Don.moster@tateandlyle.com>; Quirino.wong@vopak.com <Quirino.wong@vopak.com>
Sent: Tue Oct 02 12:04:25 2007
Subject: Terminal 4 Order

Attached is the final Order for Terminal 4

California Regional
Water Quality Control Board

San Francisco Bay Region

Meeting

September 12, 2007

ITEM 11

Port of Richmond, Vopak North America, Inc., and United
Molasses Company, for Port of Richmond Terminal 4,
Richmond, Contra Costa County

Elihu M. Harris Building
1515 Clay Street
Oakland, California

Reported by: Tahsha Sanbrailo

P R O C E E D I N G S

2

September 12, 2007

Oakland, California

Item 11: Port of Richmond, Vopak North America, Inc., and United Molasses Company, for Port of Richmond Terminal 4, Richmond, Contra Costa County

CHAIRMAN MULLER: So we'll move on to Item 11, which is a very important Item also, for all involved. We'll go ahead and get staff's presentation. We're going to have to get a two minute break for some people.

MR. WOLFE: Yeah. I would suggest that we do have a handout and we can get it.

(Off the Record)

CHAIRMAN MULLER: Yeah, work our way through this. All right, welcome, welcome back, perfect timing. Okay.

MR. WOLFE: Item 11 is Consideration of Site Cleanup Requirements for the Port of Richmond, Terminal 4. Responsible parties would be Port of Richmond, Vopak North America, and United Molasses Company. I'd like Terry Seward to make the staff presentation.

MR. SEWARD: All right. Good afternoon, Chairman Muller, Members of the Board, my name is Terry Seward, I'm the Senior Engineer in the Groundwater Protection and Waste

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Containment Division. I'll be giving a short presentation on Item Number 11, which are site cleanup requirements for the Port of Richmond's Terminal 4. The tentative order names the Port of Richmond, Vopak North America, and United Molasses Company as dischargers.

As shown on the slide, Terminal 4 is located at Point San Pablo in North Richmond, it's located about two miles north of the Richmond San Rafael Bridge, and it's near the Chevron Refinery, which is located in this vicinity.

The main dischargers include the former operator, Vopak and United Molasses, and the current property owner, the Port of Richmond. Vopak and their predecessors have operated at the site for about 80 years, while United Molasses and its predecessors have operated for about 60 years.

Records exist that both facilities stored petroleum products for either storage or heating purposes, and other non-petroleum products were also stored by Vopak and United Molasses.

Ownership changed in 1974 when the Port of Richmond acquired land at both facilities occupied, and the Port leased these portions back to Vopak and United Molasses.

This figure shows the terminal for and around 1970s. Chevron's located back here, you can see the stacks, and most of these tanks located all in this vicinity are Vopak's tanks.

The 500 series tanks, which I'll be referring to later, are located in this vicinity here. And United Molasses facility is adjacent to the Bay in this low-lying area down here. And there's extensive petroleum contamination in that area.

This site shows - this slide shows the current site conditions with the above-ground tanks removed, and the approximate areas where both Vopak and United Molasses operated. Most of Vopak's tanks were located up in this hilly region up here, and United Molasses is located in the low-lying area down by the Bay. And the 500 series is located just upgradient from it in this region. And the blue dot shows the location of an oily seep that had occurred.

Now, this slide identifies the primary site issues. Soil and ground water adjacent to the Bay are contaminated with petroleum and alkyl benzene, which is used for manufacturing surfactants. And, additionally, oil, as you saw in the previous slide, has seeped to the Bay, but was last observed in 2001.

And the other site issues include that there are limited tank storage records for both Vopak and United Molasses that identify the types of materials that were stored over the full operational history of each facility. For example, one tank might store coconut oil, and then a few years later might be storing jet fuel.

Now, Vopak had tank storage records from about 1985 to 1990, but had been operating at the site since 1917, which makes it difficult to assess what was stored in each tank over its entire history. And, similarly, United Molasses has limited storage records.

Vopak and United Molasses dispute the site evaluation and whose product lies beneath the former United Molasses area. Investigations were performed about five years ago, but they weren't coordinated by the former operators, and no recent investigation or evaluation has been performed. And, finally, site cleanup has not occurred.

Now, this is again looking at an aerial view of the site. The approximate areas impacted by petroleum are identified in yellow here, and the approximate area of the oil seepage in 2001 which resulted in the Coast Guard action is indicated in blue.

This northern area up here, Vopak claims that they're responsible for that. They agree that they are responsible for that. In addition, the alkyl benzene are found in this 500 series area, as well as downgradient in this United Molasses area. We know Vopak also stored in the 500 series area fuel oils, they had a 16,000 gallon fuel oil tank that they had operated. And they also stored other non-agricultural products, such as toluene and fuel additives in the 500 series area.

A pipeline was also located just about here that extended out towards this region. And gasoline and heavier hydrocarbons have been reported in soil and groundwater in the 500 series area.

Now, in United Molasses's area they have free phase degraded product throughout that area, as identified in yellow. They had a 1,000 - or 8,000 gallon diesel tank that was pulled in 1990 and it had holes in it, and when it was pulled floating product that was identified as diesel was found in the excavation water. They also had a sediment trap in this area, and another partially buried tank in this region here that stored fuel oil.

The red dotted line on this slide identifies the location of a cross-section or vertical slice through the Vopak 500 series tankfarm and the United Molasses area.

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The section in the next slide is looking southernly at this slice.

This figure shows a cross-sectional drawing that I would call a site conceptual model. Here you have the Vopak 500 series, and United Molasses is down here. You have the bedrock overlain by alluvial, which gets thicker as you get closer to the Bay here.

And the key points to note on this figure is that groundwater is going to flow towards the Bay. The bedrock fairly shallow up here, and it gets thicker down here where product has accumulated. And linear alkyl benzenes, which have been identified here, have also migrated down into this area and have commingled with this yellow free product.

The tentative order was first released in May. It follows the standard monitoring investigation evaluation and remediation structure, not unlike most orders adopted by the Board.

The order requires the past operators, Vopak and United Molasses, to evaluate site conditions and submit reports and measures to remediate the site as needed.

And we received comments from all the dischargers. The Port requested to me to be named secondarily on the order, since they did little more than

lease the property to Vopak and United Molasses, and they indicated they support the order.

United Molasses' main comments indicate that they'll comply, but they state that all the impacts within their area are caused by Vopak. And they would like us to try and separate responsibility for the dischargers in their area.

Now, Vopak's comments indicate that they contest the order and would like either two orders or the Board to carve out areas at the site, one for Vopak and one for United Molasses. Vopak indicated they are not responsible for petroleum releases in the United Molasses area or in the 500 series area, but do acknowledge that they're responsible for the linear alkyl benzenes and petroleum hot spots to the north of their area.

Vopak, United Molasses, and the Port have been properly named as dischargers.

In response to the Port's comments, the tentative order was revised to state that the Port will be held liable if the other two dischargers failed to comply with the order.

In response to Vopak and United Molasses, both Vopak and United Molasses stored petroleum products and had evidence of releases in their facility areas. Vopak

released alkyl benzenes and fuel hydrocarbons. United Molasses released petroleum within their area.

The range of weather degraded product identified within United Molasses area, it's in the diesel to fuel oil range, and it's mixed with alkyl benzenes. And these similar fuels have been used or stored by both Vopak and United Molasses facilities. And both Vopak and United Molasses have evidence of damaged tanks, product beneath tanks, or soil staining.

Pollutants released within the 500 series tank farm would migrate downgradient into the United Molasses area, and commingle with other petroleum product in the United Molasses site.

A large part of any cleanup at the site would involve a plume that is clearly commingled such that issuing separate orders is not practicable, and doing so would be going against State Board direction regarding apportioning responsibility.

The revised order identified that the Port will be responsible for compliance only in the event the other dischargers do not comply. And findings were updated to include analytical data reported by the dischargers. And we also clarified that we will not apportion responsibility.

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Okay, so, thank you.

I recommend adoption of the tentative order.

And I'd be happy to answer any questions you may have.

Mr. Waldeck.

BOARD MEMBER WALDECK: So United Molasses was not a molasses company, I mean it sounds like such a friendly company, like the Vermont Maple Syrup Company, you know, but it had nothing to do with molasses?

MR. SEWARD: No, they stored agricultural products, such as molasses. The fuel tanks that they had were for heating thick products that they needed to move through the pipeline. And they also used for fueling vehicles, too.

BOARD MEMBER WALDECK: Okay, thank you.

MR. SEWARD: Yes?

BOARD MEMBER YOUNG: I have a beginner's question for you. If we are not going to apportion responsibility, how - who does, do they go to court?

MR. SEWARD: Well, we encourage them to work together, and I think you're going to hear that they are looking forward to doing that.

BOARD MEMBER YOUNG: I'm sorry, I should restate. I didn't mean these people in particular, I meant

generically, if folks can't work among themselves to apportion responsibility and there's still an issue and a disagreement what is the next step? It doesn't - who do they go - to whom do they go?

MR. WOLFE: Right. It is essentially if their attorneys cannot come to agreement then they do go to court frequently.

BOARD MEMBER YOUNG: Okay.

MR. WOLFE: It may have been before you were a member of the Board, but we did have an item in front of us where we had three parties arguing about responsibility. This was -

CHAIRMAN MULLER: United Bank.

MR. WOLFE: - Union Bank, the bank owned it and was preparing to go to court, and in effect Union Bank wanted us to make some decisions that would probably have helped them in court. Ultimately in court they worked it out amongst them.

BOARD MEMBER YOUNG: Okay, thanks, I just - procedurally.

CHAIRMAN MULLER: Okay, thank you. If you could standby. Oh, I'm sorry, Bill.

BOARD MEMBER PEACOCK: Just one quick question. What happens if these two - you say the Port of Richmond is

responsible if the dischargers do not, what happens if they do not?

MR. SEWARD: We would - they would be required to comply with the requirements of the order.

BOARD MEMBER PEACOCK: And if they do not?

MR. SEWARD: If they do not we'd be seeking enforcement against all parties, I imagine.

BOARD MEMBER PEACOCK: All three parties?

MR. SEWARD: All three parties, yeah.

BOARD MEMBER BRUCE: And wouldn't the Port of Richmond then take them to court?

BOARD MEMBER WALDECK: Probably.

CHAIRMAN MULLER: Well, I think, you know, yeah, we know which direction it could go. But I think - and I'm not sure how my card should go. I was going to ask for the attorney for United Molasses to come first, and is that - all right, or how do you want to work this, guys? Because I got Vopak and United Molasses, and I'm not sure.

MR. MAIDEN: Well, we have a clear procedure, for the record, augmenting -

CHAIRMAN MULLER: Why don't you come up and we'll figure out. And Port of Richmond is here also.

MR. MAIDEN: Good afternoon, Mr. Chairman, Members of the Board. Todd Maiden, Reed Smith, on behalf of United Molasses.

MR. TEKOSKY: And Steve Tekosky, representing Vopak, and apropos of Dr. Young's question, we have a joint proposal, and that joint proposal was a joint proposal between PM Ag and Vopak, and PM Ag and Vopak alone.

MR. MAIDEN: So it's a quick, what I would view as sort of a procedural point. If we can agree on it, that's great, and if not, we're prepared to make more substantive statements to the Board. But basically it's really just a request from the primary parties who would be asked to perform the work here, to - respectively, to continue this matter for 60 to 90 days so that we could have some discussions on this.

The reason why we're asking for this is several-fold. First, the parties that are involved here, the stakeholders, including Members of the Board, have never all sat down in the same room to meet on this since 2002, was the last time there was ever any meeting on this. And there was a long hiatus on this, which I can explain in a moment.

So there's never really been the opportunity to sit down. In fact, I have asked prior to Mr. Seward - the

prior member of the - staff member of the Regional Board, specifically asked on two occasions, gosh, maybe we ought to have several people meet concurrently. And for whatever reason that didn't happen. But it wasn't that the parties, at least that, you know, Molasses didn't request it.

So at any rate, we also now have some new players that are involved in this. The Regional Water Board staff up until about a month ago, there was a different member of the Regional Water Board staff, Mr. Felix, who was working on the matter as of August when we came in to have a discussion with Regional Water Board, Mr. Seward and Mr. Curtis, I'm not sure - oh, I'm sorry, right behind Mr. Seward. So there was really - which we weren't aware of, so it was a real change in staffing for us in terms of - they may have been involved behind the scenes, but certainly for us it was a change in players.

Secondly, as of maybe I would say roughly two weeks ago, I received an email from counsel for the City, who's here today, saying that the City now has new counsel involved in this. We just met him today. And so, again, it's a new, late, relatively late-breaking news.

Your concern I can see, as well, might postpone this, what are we weighing this against - that might be - what risk is involved here? And not to make light of it,

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there are some issues that Dr. Seward has raised which we believe should be addressed by someone sooner rather than later. But the reality is the seep that he mentioned, which is inside of the hill, that blue spot on the slide, the last time anyone saw any seep coming from the hill was I believe late 2001, early 2002. So it isn't as if this is an ongoing matter.

In fact, what happened, the parties actually did respond to Regional Water Board staff's requests in the 2001/2002 time period. Multiple reports were submitted. The last reports were submitted in 2003, and then the matter sort of went off-calendar, and we never heard back from the Regional Water Board for several years. And so now we're sort of back into it, and I will admit not happy about it, but willing to do business with staff and work reasonably with them. But the reality is, gosh, maybe we ought to circle the wagons and get everybody in the same room at the same time.

I anticipate you may hear from counsel from the City saying this is our property, we don't want any more slippage on this, we want this resolved sooner rather than later. And we respect that, if you were the property owner I can anticipate that that's the position they would take. I think they're also maybe behind the scenes getting some

pressure from one or more members of their city council, which is possibly driving them.

But I think having a meeting, if we postpone this 30 to 60 days, get the parties to meet, it is moving the ball forward, which is I think what the City would want, and I would submit I think if you get the parties working together on a voluntary basis it's going to be a healthier working relationship. I believe it was Ms. Young or somebody who mentioned, well what happens if they don't agree, and that's what's happening right now, you have a challenged order right now. And if you get the parties coming into this not working well together, I think there is a higher risk of litigation. It may not impact you directly, but the time and money I think would be better spent investigating the property rather than fighting over it.

CHAIRMAN MULLER: Great. Clifford? I have some comments, too, but go ahead.

BOARD MEMBER WALDECK: Can I just make a comment quick?

CHAIRMAN MULLER: Sure.

BOARD MEMBER WALDECK: I'm just looking at my packet here, and I appreciate your need for closure here, but I see an email here from Cecil Felix from July 20th,

"Staff is prepared to revise tentative order after considering the comments to the previous tenant. A PDF version of the revised tentative order is attached, along with a transmittal letter. Call discharger representative to discuss revised tentative order on Tuesday." And then replying back more than two weeks later on August 6th, it says, "Cecil, in conjunction with the comments submitted on behalf of Vopak," it says, "respects to consider naming the East Bay MUD as a discharger with respect to the PM Ag former leasehold here."

Is this what you're talking about, how you'd like to get East Bay MUD in, because in some ways just from a courtesy point of view I don't know if you even responded to the email sent from staff on July 20th.

MR. MAIDEN: I'm sorry, who authored that email.

MR. TEKOSKY: I did, I did.

MR. MAIDEN: Oh, I wasn't aware of that email.

BOARD MEMBER WALDECK: It's on this page, yeah.

CHAIRMAN MULLER: State your name, please.

MR. TEKOSKY: Oh, Steve Tekosky, representing Vopak. We, and I presume PM Ag, had numerous conversations with staff concerning the tentative order, and we did submit comments. We were invited by Mr. Felix to come in and attend a meeting, with the promise being that the

meeting would occur with staff before the tentative order became fixed and submit - and was submitted to the Board.

When we showed up and two of us flew into Oakland, I flew in from Los Angeles and my client flew in from Houston, and I understand this is the case with Mr. Maiden as well in a separate meeting, we were informed, and this is through no fault of Mr. Seward's at all, we were informed that Cecil Felix was no longer on the project, and that the tentative order was a done deal, and that we had no opportunity therefore to discuss it and to change it. This was a surprise to us, but we have been dealing in good faith with staff for years. And we continue to deal in good faith with staff. This has nothing to do with Mr. Seward.

There is nothing, there has not been one request in the history of this site that the Regional Board has made of Vopak, or of PM Ag for that matter, that we have failed to honor and to deliver on. And the fact that this has gone on for years has not been our fault, and it's not been Mr. Seward's fault. There has been a merry-go-round of staff assigned to this project. I'm guessing that even for significant periods of time there might not even have been a staff member assigned to the project. But we have always been willing to work with the Board, we're willing to work

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with PM Ag, and we want to have the opportunity to see whether or not we can come up with something consensual, which I think is better than having a contested proceeding.

CHAIRMAN MULLER: Right, I'm going to -

BOARD MEMBER WALDECK: John?

CHAIRMAN MULLER: Okay.

BOARD MEMBER WALDECK: Just one other thing, then I'll let you go. Well, in some ways you should be flattered that Cecil Felix, when it was relinquished, it was not given to the fresh rookie off the farm team, it was kicked upstairs to the major leaguers, Terry and Curtis.

MR. TEKOSKY: We appreciate - and we appreciate that very much, because Terry was assigned to it first and we very much enjoyed working with Terry and produced reports to Terry.

BOARD MEMBER WALDECK: Okay. And of course you have to hear what the City of Richmond has to say about this.

CHAIRMAN MULLER: Okay, almost, Mr. Chair, I'll let you handle that.

City of - Port of Richmond, come forward please,
City of Richmond.

We're going to have - we have more lawyers in here today than they do at the White House lately. [Laughing.] I think the White House is more appropriate.

MR. GOODMAN: Mr. Chairman, and Board Members, I'm Robert Goodman, of Rogers Joseph and O'Donnell in San Francisco. I represent the City of Richmond. And the Interim City Attorney, Louise Rennie is with me today, as is - as are Tom Wilson and Norm Chan of the Port.

We do not oppose - we do not support and we oppose continuing this matter for another 30 or 60 or 90 or however many days it would end up being. Vopak and United Molasses have had since May to deal with this tentative order. Our experience in dealing with staff was substantially different from their apparent experience with dealing with staff. We found staff to be accessible, even in the transition from Mr. Felix to Mr. Seward.

I have represented the City in this matter since May, since it is not a two - it is not a recent appearance, and that is certainly no justification for putting this off. And there's no political pressure within the City Council that we're aware of.

What we have is we have the City that's a property owner that has a piece of property that has not been investigated and needs to be cleaned up, and this has been

dragging on for years. And I think that nothing, as is apparent by the presentations today, nothing will focus these folks more clearly than having an order that requires the work be done. And we certainly support the idea of meeting with staff and Vopak and United Molasses after an order is entered. But we don't think that some compromise is going to magically appear because of a 60 or 30 day continuance. If there were a way to work this out it would have happened since May, and that certainly has not occurred.

CHAIRMAN MULLER: Thank you. I think we kind of got a feel of what's happening here. And I don't know if we should Groundhog Day and start all over again, or what staff's recommendation is. It's interesting that two of the parties are, again, willing to try to work things out, and the third party, City of Richmond, Port of Richmond, is very concerned about moving this forward, which is a very special piece of property out on that corner there.

So -

MR. SCOTT: Chairman Muller?

CHAIRMAN MULLER: Yeah, Mr. Curtis [sic], go ahead and see what you can throw in here.

MR. SCOTT: I'm Curtis Scott, I'm the Division Chief for the Groundwater Protection Division.

CHAIRMAN MULLER: Pull the mic a little closer.

MR. SCOTT: I don't want them to hear me. The - I found it very interesting when we met with them previously, and I think that on clarification on the record and the staff, Terry - or Cecil Felix did work for us, and was under our direct supervision. I've had knowledge of this site from day one, and Terry says, and the supervisor.

So I do have difficulty because we were directing the actions that Cecil was taking and reviewing the work and meeting with him and so on. I think the real issue that comes up is this is a site where we issued a tentative order in May with the initial plans to bring it in front of the Board in July. And we got indications that the parties might be interested in talking with each other, and we also at the same time got substantial comments that we thought was worth to let's delay it another month. Well, we delayed a little bit more than a month. So there's been a lot of time for people to be talking. The talking's happening today.

The order itself is very clear. It's a standard requirements, you look at the site, you have to look at each other's property together, that's the idea of the order, that's why they're both named. And in no way does the order prohibit them from working together and reaching a

solution. The order does give us some enforcement capability if we don't, if they don't.

So I really don't quite myself understand or accept the arguments that they're putting before you.

CHAIRMAN MULLER: Thank you.

Legal staff, do I need to bring the cards back forward and have the presenters present their testimony now again, other than the brief comments they made about -

MS. WON: I think they want to present their testimony if we are going forward today with this matter.

CHAIRMAN MULLER: Yeah. What's the Board's pleasure? It's my opinion that we should go forward. Okay. So we'll start all over again here and if you could keep your comments as brief as possible, please, and we'll listen to your pleas.

So I'm not sure if we're going to start with Gordon, or who we're going to start with. You guys kind of help me out. Or Steve, I have - I don't know who wants to go first. I'm kind of messed up here a little bit after all these hours of shuffling a lot of cards today.

So City of Richmond, we're going to put you over here for now. Okay?

And then we're going to go with - Mr. Reynolds, were you going to speak also, or you're going to speak also, okay. We got you.

MR. THRUPP: Good afternoon, Board Members. I appreciate your perseverance and your attention. My name's Gordon Thrupp, I'm Associate Hydrogeologist with GSN Tech Consultants here in Oakland. I have a Bachelor's in Geology from Stanford University, and Ph.D. in Earth Sciences from the University of California Santa Cruz. I'm a registered professional geologist and certified hydrogeologist in California.

I'm here today on behalf of Vopak to summarize the findings and discuss some aspects of the tentative order for the Richmond Terminal 4 site that Terry's already presented a summary of.

Leo Wong, Environmental Manager from Vopak is here from Houston, and Steve Tekosky, who just spoke earlier is an attorney engaged by Vopak from LA.

My main points I want to make today are that the impacts on the former Vopak 500 series parcel that Terry showed you, and the former PM Ag parcel, are distinct and should be addressed independently.

And second, no credible evidence links Vopak to the oily field beneath the former PM Ag parcel that seeped on the beach and started this problem.

This is an aerial photograph that shows what Terry already showed, but I'll zoom in on. This green is the 500 series area, which is also low-lying. The tanks up on the hill are above this, this is very similar elevation to this. And the purple is the former PM Ag parcel. I've also handed you this presentation in case it's easier to see.

And it should be emphasized that this site's well-characterized. There have been more than 125 samples and boring and surface samples and test bits, and there's also 7 monitoring wells, two field efforts by both Vopak and PM Ag.

And to summarize findings on the PM Ag, former PM Ag parcel, the findings show that based on extensive investigation the extensive oily fuel is on groundwater in nearly every boring.

Also oily fuel in (inaudible) was observed and in groundwater near former PM Ag underground storage tank.

Chemical composition of the oily fuel is consistent with the oily fuel that seeped on the beach in 2001. This is from the PM Ag parcel.

This figure shows a map of the area zoomed in. You can see the two parcels of interest, and the yellow region is estimated extent of the separate phase oily field petroleum hydrocarbons that Terry also showed you.

Summary of findings based on extensive investigation for the former Vopak 500 series area, which is above ground tank area, includes no oily petroleum fuel observed in any of the borings, localized surface spills by Richmond contractors after Vopak left, presence of linear alkyl benzenes, that we call LABs, as well, for short, in soil and groundwater. And also please note that the LABs beneath the Vopak 500 series area are visually and chemically distinct from the oily fuel beneath the PM Ag parcel.

This map shows the two parcels again with the blue area representing the estimated extent of the separate phase linear alkyl benzenes. Linear alkyl benzenes, LABs, are a specific class of manufactured chemicals, they are not petroleum hydrocarbon fuels. Vopak stored the LAB, alkyl benzene, and does not contest responsibility for the LAB impacts. The LABs were used to make detergents, they're not regulated, and they are readily biodegradable.

These chromatograms show the chemically distinct character of the beach seep petroleum oil fuel, and the

LABs beneath the Vopak parcel, and they are entirely different chemical signatures.

This was first pointed out, the distinct chemical nature was first pointed out on behalf of PM Ag in the first report submitted by QEPI, and this is a figure from their report. The blue boxes are the areas characterized as linear alkyl benzenes by QEPI on behalf of PM Ag, on behalf of PM Ag in the yellow, yellowish areas where fuel oil was identified beneath the PM Ag parcel.

The data clearly indicate that the Vopak 500 series above ground tank area is the source of the LABs, the linear alkyl benzenes, but not the oily fuel. There was no difficulty detecting the LABs beneath the Vopak parcel. If the Vopak 500 series area were also the source of the large extent of the oily fuel beneath the PM Ag parcel, surely the oily fuel would also have been detected beneath the Vopak 500 series area, as were the LABs.

This map shows the results of data compilation for all the areas, both parcels in the surrounding area. And it again illustrates the distinct locations of the Vopak and PM Ag impacts. LABs are beneath the Vopak parcel shown in blueish, and free phase oily fuels beneath the PM Ag parcel in adjacent areas shown in yellow. No credible

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evidence links Vopak to the oil field beneath the PM Ag parcel, based on extensive investigation.

In conclusion, impacts beneath the former Vopak 500 series area and the PM Ag parcel are chemically and spatially distinct. Vopak admits responsibility for the LABs and some other localized impacts, as Terry discussed. But, again, no credible evidence links Vopak to the oily fuel beneath the PM Ag parcel that seeped on the beach.

The order should address the LABs and oily fuel impacts independently. And this would not be allocation or apportionment, which we realize the Board doesn't do, but simply accurate representation of factual data.

We respectfully request revision to the tentative order for the Richmond Port site. A multi-box order would be more effective than one box order.

Thanks for your attention. We're happy to answer questions.

CHAIRMAN MULLER: Okay. Any other comments? Steve, do you want to make a brief comment?

MR. TEKOSKY: Thank you, Chairman. I would just sum up by saying that Gordon's technical presentation indicates that Vopak is responsible for a pebble on its property, and we're trying to avoid having to cleanup a cobble on our neighbor's property.

So thank you.

CHAIRMAN MULLER: All right. Now we'll switch over to Bob, where'd you go, oh here you are, sorry. You were all standing together a minute ago, and now we're all separated again. So we're going to get you back together here pretty soon. Then we're going to start with Mr. Reynolds?

MR. REYNOLDS: Yes. Okay. Good afternoon, I'll try to make this as brief as possible.

CHAIRMAN MULLER: Thank you.

MR. REYNOLDS: We appreciate your time, we appreciate the attention by the Board. My name is Bob Reynolds, I work for C Corps International, representing United Molasses.

The goals for this very brief presentation are to summarize site conditions, and I think we have a sense of what is going on here from previous presentations. We would like to demonstrate that the on-site sources that are identified in the order as sources of impacts on the United Molasses site are not in fact sources of impacts for the United Molasses site. And then, again, respectfully request to meet with the Board, take the time to explain our data and perhaps mutually determine the next course of action.

Briefly, I'll just go through this every quickly, site operations for United Molasses occurred from 1936 to 1993. They were in the business of storage and distribution of commercial agricultural products, not fuel oil. I mean they did have diesel fuel and light domestic fuel were the only two compounds of petroleum hydrocarbons that we have record of having used in the past on the former United Molasses site.

We'll see a figure here in just a second, but the site and adjacent properties were part of the Dorward Terminal prior to 1936, where the whole area up there on the edge of that point was a part of the Dorward Terminal.

United Molasses has spent significant amount of dollars using very sophisticated analytical methodologies to try to determine what this material is that's across the site. We are not refuting that there is a hydrocarbon separate phase oil layer on our site, we're not refuting that at all. We are refuting the nature and character of this material, and then the evaluation and the identification of what those sources of those materials are.

We have been calling this a degraded heavy hydrocarbon. Based on our forensic data it most closely resembles a number 4 fuel, a degraded number 4 fuel. Based

on historical information in files for United Molasses we have no indication of ever having used a number 4 fuel at the property. Again, we had used diesel, and we have good documentation for that, and a very spotty allusions to the fact that they might have used something like a light domestic oil.

We also know, due to our very high level analytical data, that there are specific compounds in this oil that's across our site that indicates that this is not a diesel. There's called biomarkers that include things like starings and turpanes (phonetic, and also specific polycyclic aromatic hydrocarbons that we don't find in diesel fuel, but we do find in the heavier fractions of fuel.

The characteristics of this degraded heavy hydrocarbon are remarkably uniform across the site. I bring this up as a point, because if there had been a source of diesel at the site we would be able to tell due to distinct differences in the nature of the analytical data that we have collected that there would be some diesel. But what we're seeing is just a remarkable uniformity in the analytical data at the site.

You've seen this, I believe this is a figure that's in the packet that was put out by the Board as part of the

order. And, again, you've seen this before, the shaded area is the area where based on our data and based on data collected by others indicates that there is a layer of oily hydrocarbon on the shallow groundwater.

If you'll see - here we go, I don't think that's going to work, yeah - if you see right there, here's our leasehold. We had area to the south and areas off to the east at higher elevations, as you had seen on that aerial photograph that Mr. Seward had put together.

Then these three purple areas are areas identified in the order.

This one here is the partially buried UST.

This one here is the 8,000 gallon diesel UST.

And this third one is a sediment trap that we had dug up at the time we removed this UST bottom here.

And we'll chat about these very briefly.

The order identifies this partially buried UST as a source of observed site impacts. And we believe that this is a factual error in the order, because we had gone out in the early 2000s and removed this tank bottom, and we collected soil samples from underneath, there was not stained soil observed, there was no hydrocarbon odors observed during the removal of this structure. The tank bottom itself was no more than two feet below the surface

of the ground. And we collected soil samples from beneath there and also collected soil samples from this third sediment trap here. And as you can see, our closure samples we had were ranged between 12 parts per million and 110 parts per million total petroleum hydrocarbons. And anybody in the business will tell you that these are low concentrations that certainly do not represent the types of concentrations you would have to have to contribute this large plume across the United Molasses site, and off-site. It just can't possibly happen with those concentrations, you need higher concentrations, and we're not finding them at the site.

The order also identifies the 8,000 gallon diesel UST as a source of observed site impacts. We disagree with that. There were documents in 1990 when this was pulled, that indicate that diesel was in there, that the tank had holes in it, and we're not refuting that. But we have pretty good documentation that this tank held diesel throughout the past, and we also know that based on our analytical data that the material across our site is not a diesel fuel.

And moreover, it's very interesting to note that this UST was granted regulatory closure in 1997 by the Water Board. And this is a screen catcher of what I was

able to find on the internet indicating that this site had been closed in 1997.

So very briefly, a quick summary here, again, we have what we have identified as a degraded heavy hydrocarbon, it's more in the number 4 oil range, which is heavier than a diesel. It has constituents in this material that we do not expect to find in the diesel. And the order itself identifies two tanks, two USTs, as sources for these materials, and we think we can make a pretty good case to indicate that these are not the sources of this material.

And we believe that, you know, even if we address these factual errors we don't think that we should be a part of this order. We would request that we be given the time to chat with Board staff, and mutually determine the next course of action.

That concludes my presentation. Thank you.

CHAIRMAN MULLER: Thank you. Next? Todd, did you want to?

MR. MAIDEN: Thank you, again, for the record, Todd Maiden. It's after 4:00, so I'll try to wrap it up quickly.

Basically, I'm trying to underscore the points why United Molasses does not believe that a joint order, as

proposed by staff, is the appropriate mechanism at this juncture.

And first, this is background, I want to say that I think all the maps we've been using are flawed to a certain degree. They separate this out to make it look like there's two parcels, and Vopak parcel and a United Molasses parcel. You have to go back through the history here.

Prior to Vopak being on that parcel there was another facility - another operator called "Pack Tank," more or less the same kind of operation, bulk oil storage, bulk chemical storage, that kind of thing. Different company, but basically from what I gather more or less doing the same thing in the same place.

Prior to Pack Tank that area was the Dorward Terminal. If you're a native of the Bay Area you'll probably know that for a long time it was known as the Dorward Bulk Oil Terminals, one of the largest bulk storage facilities for heavy fuels and heavy hydrocarbons in the whole Bay Area.

Dorward Terminals leased the United Molasses facility as well. United Molasses is the current name. Prior to United Molasses the original molasses company at that facility was Pacific Molasses. Later on the name was

changed to PM Ag, with the PM standing for Pacific Molasses. And later on now it's United Molasses. But all the way through, to answer Mr. Waldeck's question, they are a good company. It's molasses, it's corn syrup, it's lignin, it's coconut oil, it's not alkyl benzenes, and it's not heavy fuel oils, like a number 4 fuel oil which we think is going on here.

I'm not saying it was Vopak, I don't know that. We do know we've spent a lot of time and a lot of money, drilled a lot of holes, and investigated all the known surface sources that related to the United Molasses operations. We identified three, showed you some photographs of a tank and a sump and 8,000 gallon light diesel tank which was used to power trucks, and that kind of thing. Don't deny that and don't deny that there was an 8,000 gallon diesel tank that when it was pulled out of the ground had some holes in it.

But there's no evidence in the record that the company ever dealt with alkyl benzenes. There's no evidence in the record that the company ever dealt with any kind of heavy fuel oils hydrocarbons that you're finding here. In fact, what you're finding is a lot of clean soil from the surface down to the groundwater, and then you're finding lots of heavy hydrocarbons throughout that area. Where

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they came from, we don't know, but they didn't come from United Molasses.

Prior to United Molasses being there that whole area was Dorward Terminals. They had big above-ground tanks there. Did it come from them? I don't know. I'm not - I can't point the finger at Vopak or any of them. But I can say that we spent a lot of time, and worked with staff, and have invested in a lot of investigation, submitted several reports, responded to everything they asked of us, and we can't think of another surface source. We can't think of some operation that would explain this to link it to United Molasses.

Is there a problem there? Maybe. There's certainly something in the groundwater. Is it coming out into the Bay? It doesn't look like it. It did for a short time in and around the 2001 time period. The time period when that occurred, by the way, 2001, this company left the facility in 1993. There was no evidence of any release or any problem from 1993 to 2001. In 2001 is when Vopak pulled up the rest of their tanks and distribution piping systems throughout that area. At one time they had over a hundred above ground tanks. You saw the photograph, the whole hill was littered with tanks.

Within a few months, I'll say three months, four months after that occurred is when you started to see this seep coming out of the hill onto the beach. That was sort of a blip in time, after they pulled up the tanks and pulled the piping out and all that, the seep disappeared. Is it related to Vopak? I don't know, I'm not going to - it does - all I know is that for eight years - and there's a caretaker living on the property, about a hundred feet from the beach, you would think that over eight years he might have seen if there was some release or some problem after United Molasses left the facility. Two to three months after Vopak pulls up the tanks that's when the seep was seen.

The final point. The location of that seep, if you - if when you look at it, if you look at where that actually occurred, it's not on the former United Molasses leasehold. It's at the far end of the beach up by where the Vopak offices and Vopak facility was. What is it directly downgradient from? It's directly downgradient from the stormwater discharge point for the 500 series tank farm, directly across the road. Is there a connection there? I don't know, but I do know that there was a prior release from that very area in the past.

In fact, if you look at staff's report that they've submitted to you, on Page 14, and you go halfway down on the lefthand side, you'll see two points here: you'll see the point of 1985 discharge of oily stormwater from - it says from the Vopak site. If memory serves, I think back then it was actually Pack Tank. And then very close to it, the area of the 2001 seep of petroleum hydrocarbons, same area, same kind of mechanism, this is right below the point where the stormwater discharge lets out. Neither one of these is downgradient from the United Molasses leasehold, certainly not downgradient from any of the known surface sources at the United Molasses site. It's got to be - I'm throwing a dart, but I'll bet at least 100 yards from the 8,000 gallon fuel tank that was diesel, not the heavy hydrocarbons that you're seeing here.

So those are some of the background reasons why United Molasses feels so strongly about this. We're not saying that a problem doesn't exist. We're not saying that problem shouldn't be addressed for the benefit of the city, or whatever. But we certainly don't want to be drawn into a joint order to address alkyl benzenes or heavy hydrocarbons that there's no evidence were ever used by this company.

With that I'll submit.

CHAIRMAN MULLER: Thank you. I think just quickly, I don't know, the City of Richmond want to get back up and make a brief comment? Sorry about that.

MR. GOODMAN: Again, Bob Goodman, for the City of Richmond.

Just a few points to make. One, the order does name the City of Richmond as a discharger, but says that the City will only be required to comply with the order if the other two dischargers fail to comply. We had requested that we be named secondarily responsible, which is what the Board has traditionally done in a situation like this. The City of San Francisco has a number of bulk fuel terminals where the actual operators were named as primary dischargers, and the City of San Francisco was named as a secondary discharger. We believe that the order should be amended to provide that the City of Richmond is a secondary discharger here.

Having said that, we believe that there would be no reason to continue the hearing. As we indicated, that the Board should issue an order requiring the primary dischargers here, Vopak and United Molasses, to address the contamination. And we strongly support the idea that the parties should meet with Board staff after an order is issued so that we can discuss how best to efficiently

investigate and then cleanup this property on the schedule that's set forth in the order. We believe that staff has indicated a willingness to meet with us. And I think that it's in that process that we'll be able to move the investigation and cleanup forward.

As Mr. Seward indicated, there are it appears to be commingled plumes here. It's not an unusual situation. You've got two companies who have responsibility. We think that the order should be issued so that they can get moving and investigate and cleanup the property.

Thank you.

CHAIRMAN MULLER: Clifford?

BOARD MEMBER WALDECK: I have a question for Mr. Scott. So I keep on hearing the Bob Dylan song in my head, "It Ain't Me, Babe." But the - let's just give a few benefits of the doubt, and I have two scenarios for you that both of the, you know, that these sites were trashed by the previous owners and both of these people were both good citizens, and they're just a victim of what was on the site. I want you to comment on that.

And then, Two, does the City of Richmond have some use there the last couple of years that could have caused all of this stuff?

MR. SCOTT: I don't know how hypothetical I can get. I can go back and say that we've got two facilities -

BOARD MEMBER WALDECK: Make sure your -

MR. SCOTT: Oh it's not? Making a noise, okay. I don't know how hypothetical I can get, but what I know is I have two facilities 80 to 100 years have been at this site. I have two facilities that have done investigations and looked at each other's data, and have looked specifically to what's to their benefit of their data, in my evaluation, and the other guy did it.

When I look at the products that are there, what I know is that we don't know over 100 years or 80 years, whatever the factual number is, exactly what's been in the tanks. At Volpak we have a really strong idea what's been there for the last 20 years, before that we have indications that other petroleum products were stored in tanks. At United Molasses, we don't know for sure what was held in all of their tanks over the history of the site. We do know that they had fuel tanks. We do know that there are records on the tank of the tanks that there was product. If it's very permeable material you're probably not going to see stuff sitting there forever, if the leak occurred 40 or 50 years ago, or over a period of time.

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So with that - and we also have a situation that - and I agree, it would be nice to look at it as one site instead of two, because geologically they really are, but we have pipelines running right down the road that separates the two sites, one owned by Vopak.

So now we have a situation to where whenever you have tanks we come above ground tank facilities, terminals, we have seen leaking in literally every one, it's often not from the tank itself, it's from pipes, valves, the stuff runs downhill, you see it shortly on the surface, but wherever there's a low spot, and it goes. And so we have two facilities that have tanks. We have indications that there were impacts, who knows what, we can't tell, we're not doing the investigation ourselves, from Vopak, what they say are non-petroleum products that are below the Molasses facility. And we have materials that when you look at the range of hydrocarbons we can sit and debate forever what they really are once they're already degraded how long they've been there. They could - they're in fuel oil to diesel ranges.

So.

BOARD MEMBER WALDECK: Yeah, I mean, I mean it is very forensic, because it's underground, you know -

MR. SCOTT: Well, right.

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BOARD MEMBER WALDECK: And it's a harder thing to get your arms around, it's a pretty easy thing to say it's not me, you know.

MR. SCOTT: Correct. We showed you -

BOARD MEMBER WALDECK: And you've been at this about 30 years now?

MR. SCOTT: Yeah. We showed a section that just was a slice, and it shows coming down hill, it shows the Bay. You have to consider that that's also longitudinal. But that slice, there's areas where there's been fill placed in where flows could actually be influenced. There could be a leak from, if you wish, another part of the Vopak facility, or from Molasses somewhere else, that might not show immediately downgradient because it's all spread out now.

CHAIRMAN MULLER: Let me just try to bring this to some conclusion here. In all my years, trust me, we have heard this for 12 years. No matter what site and what property owner, we're dealing with a very difficult situation. Whether it's upgrade or downgrade or whatever, we heard it today with Mr. Medeiros. It's a common argument.

My thing is, my opinion is that there's a tremendous risk that we did not know about when we moved

into plants and operations, because we weren't aware of the situations at the time. It's like the PCBs, we all stuck our hands and arms in PCBs and DDTs and whatever, because we didn't know any better. And so I don't think the companies knew any better when they're moving into this prime location site because they were looking for storage and movement, very simple, how we can get our product to the consumer at the end.

Port of Richmond comes in, excuse me, and looks at this ideal location on our Bay. And so what I'm asking for is that we're all going to have to be good stewards, and we're all going to have to step up. I'm not putting the blame on anybody, but I will tell you that when you're in a location like that your liability is very, very, very tough. It's going to be there because we just are going to look at all of you to be good stewards and to cleanup this project. And I think the way we have to do it is we will go ahead, and from my point of view, adopt this tentative order.

I appreciate the two parties willing to get together and meet, and I will agree with Port of Richmond - or disagree, that they're going to have to be listed as a secondary discharger. That's a normal thing we've done over the year. Is that correct, legal staff?

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MS. WON: In this case, even though the Port of Richmond wants to be named as secondary liable, it really is a difference - it makes no practical difference, because the Port of Richmond is not going to have to step up and implement the order unless the other parties fail to do so. So the result is the same, so we don't necessarily have to call them secondarily liable. And besides which, we can't, because they don't meet the legal criteria for being named secondarily liable.

CHAIRMAN MULLER: Right. And so I'm seeing this as kind of a little encouragement for us to bring this to some conclusion. And so from my perspective I'd ask for staff's recommendation, unless other Board Members have comments.

MR. WOLFE: I must say, I must say I agree. I'm a little confused that initially we had the two attorneys saying they wanted to work together to resolve this, but then we heard the presentations pointing fingers at each other.

The tasks that the tentative order would require of the parties are pointed out on Page 8 of the tentative order, including the first task would be to complete simply a work plan to evaluate the current site conditions, and produce that current site conditions report by May of next

year. In my mind, whether the order goes back and tries to separate this out or combine, it's still very straightforward for both parties to be able to connect the information they have, and they presented today together, determine what new information may be necessary to bring it up to date, and to complete that task of current site conditions report, and that puts them on the path to complete the further tasks of prepare work plan for interim remedial action and implement those interim remedial actions in something over a year.

So in my mind there is time for the parties to work together. This provides the task frame list and schedule, and I think it's a very reasonable schedule, and will not be difficult for them to comply with. We certainly, as staff, will meet with them and make sure they're clear on our expectations of what information that currently exists can be used, what new information may be appropriate to be developed and prepared.

But this is really a bare bones order that is not significantly difficult to comply with. There's a lot of work that's already been done that can be used to it. So my recommendation is to proceed with the tentative order that has already been revised, but make no further revision, and recommend that you adopt it as you have before you.

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BOARD MEMBER PEACOCK: Moved the adoption of the tentative order.

BOARD MEMBER ELIAHU: Second.

CHAIRMAN MULLER: Moved, and seconded. Further discussion, quickly. I'd like to make sure that we could have some type of tracking when we have staff changes on these types of cleanup issues, that we really do pass this on to the next person, have it documented. I'm sure it is all there anyway, but just a better record-keeping for all of us.

MR. WOLFE: Right. In this -

CHAIRMAN MULLER: So we don't have, you know, we don't want to be accused of neglecting parties out there.

MR. WOLFE: Yeah, understood. In this instance Cecil Felix was one of the people as part of our annual rotation, he did move to a different division, but recognizing that we had a tentative order already out Terry, as the section leader, picked this up precisely so there would be a limited gap, so that we didn't have a new staff who may not have known the background step in. So we understand that there may have been some gaps, because I know that the time, about the time Cecil was rotating to his new assignment he took vacation. So the communication that he was no longer assigned may have been a bit slow,

but as both Terry and Curtis pointed out that they've been providing oversight on this facility for years, literally years.

CHAIRMAN MULLER: Any further discussion? If not, roll call vote, Mary, please?

MARY: Mr. Eliahu?

BOARD MEMBER ELIAHU: Yes.

MARY: Mr. Peacock?

BOARD MEMBER PEACOCK: Aye.

MARY: Mr. Waldeck?

BOARD MEMBER WALDECK: Aye.

MARY: Dr. Young?

BOARD MEMBER YOUNG: Abstain.

MARY: Mr. Muller?

CHAIRMAN MULLER: Aye.

So ordered.

(C O N C L U S I O N)

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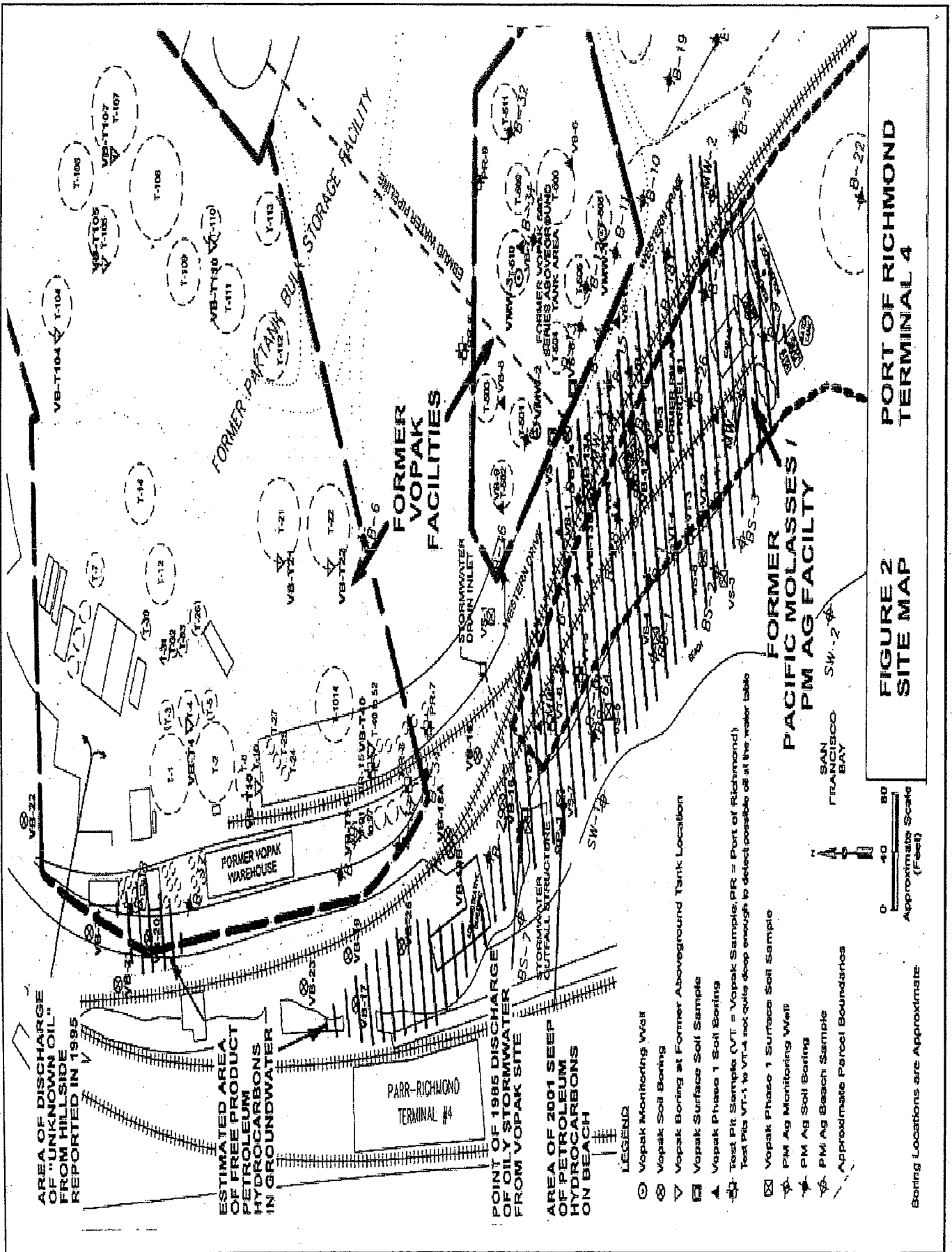


EXHIBIT C

LEGEND



RUNOFF FLOW DIRECTION



TRUCK AND TANK CAR LOAD/UNLOAD AREAS

Re-Order From:



2-HOLE EXTENSION POCKET

Item #: EPM-2

2"Expansion

EXHIBIT D

U.S. Department
of Transportation

United States
Coast Guard



Commander (dj)
12th Coast Guard District

Coast Guard Island
Building 54-C
Alameda, CA 94501-5100
(415) 437-3358

CASE: MV 86001554
DATE: 28 April 1986

Paktank Corporation
2101 Western Drive
Richmond, CA 94501

Ref: Paktank Corporation

Dear Sirs:

A notice of violation has been received by this office alleging that on 25 November 1985 oil was discharged into San Pablo Bay from Paktank Corporation at Paktank Terminal, Richmond, CA, in violation of the Federal Water Pollution Control Act (FWPCA), specifically 33 USC 1321. A copy of the Coast Guard investigative report, which it is your right to examine, is attached as enclosure (1).

The Act requires the assessment of a civil penalty against the owner or operator of any vessel or facility from which oil in harmful quantities is discharged into the waters of the United States or their adjoining shorelines. Harmful quantity has been defined by the Environmental Protection Agency as an amount which, among other things, discolors or causes a film or sheen upon the water. Fault or culpability is not a factor in determining whether or not a violation has occurred.

The Coast Guard investigative report indicates that a civil penalty is warranted in this case. In assessing a civil penalty, Section 311(b)(6) requires me to consider: (1) the appropriateness of the penalty to the size of the owner or operator's business, (2) the effect on the owner or operator's ability to continue in business; and (3) the gravity of the violation.

The Act provides for a penalty of \$5,000 per incident, on the basis of my examination of the case file, I have preliminarily determined that a civil penalty in the amount of \$5,000 is appropriate. The considerations I have used in arriving at this figure are listed for your information in Enclosure (2).

Coast Guard civil penalty proceedings are conducted in accordance with Subpart 1.07 of Title 33, Code of Federal Regulations. Civil penalties thus assessed are collectible debts to the U. S. Government. At this point, before a penalty is assessed, you may do one of the following:

REQUEST A HEARING. Your request must be in writing and the issues in dispute must be specified. The hearing will be promptly scheduled at a mutually agreeable date. While hearings are informal, you may appear with counsel, if you desire. Hearings are held in the Hearing Room at the above address.

EXHIBIT E

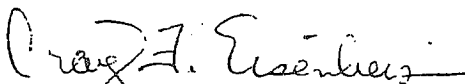
APR 30 1986

SUBMIT WRITTEN STATEMENTS. You may, in lieu of a hearing submit written statements presenting evidence or information relating to the case. Upon receipt of your statements, I will afford consideration to them as if you had appeared in person. Then I will make a decision in the case based upon all the information in the file, including the material you have submitted. You are also invited to submit any information in mitigation or extenuation. For example, before a final decision is made, you may wish to submit evidence that you have since complied with the law or taken corrective action. I will advise you of my final decision by mail.

PAY PRELIMINARY AMOUNT. You may waive your right to a hearing and simply pay the amount specified, at which time I will close the case. A check or money order made payable to the U. S. Coast Guard should be mailed to the above address with a copy of this letter. I will provide a notice of receipt.

Please take one of the above courses of action within 30 days after receipt of this letter. If you do not respond within this time frame the amount specified will normally become the amount assessed.

Sincerely,



CRAIG F. EISENBEIS
Commander, U. S. Coast Guard
Hearing Officer

Copy to:
CCGD12 (m)
CO, MSO San Francisco

Encl: (1) Violation case file

CASE CONSIDERATIONS FOR DISCHARGE OF OIL

CASE # MV 86001554

1. ELEMENTS OF VIOLATION:

- A. Did a discharge in fact occur? (33 USC 1321 (a) (2))
Yes, on 25 November 1985
- B. Was it a harmful quantity? (40 CFR 110.3)
Yes, a sheen was observed
- C. Was it "oil" as defined? (33 USC 1321(a)(1))
Yes, petroleum products
- D. Was it a hazardous substance? (33 USC 1321(a)(14))
Unknown
- E. Was it into waters subject to the Act? (33 CFR 2.05-25)
Yes, San Pablo Bay
- F. Was it from a vessel or facility of which the person charged is owner, operator, or person-in-charge? (33 USC 1321(a)(6))
Yes, a Paktank Corporation tank farm

2. PENALTY CONSIDERATIONS:

A. GRAVITY OF VIOLATION:

1. What was the cause of the discharge?
Paktank drained rainwater accumulations inside the tank farm into the Bay
2. Was the discharge intentional?
Yes
3. Could the discharge have been prevented using reasonable care?
Yes
4. Was the discharge caused by an act or omission previously attributable to the same owner/operator/person-in-charge so as to place him on notice of the particular hazard?
Yes, not only was the spill intentional, but Paktank had been warned to discontinue the procedure only the previous month

5. Did the owner/operator/person-in-charge take special steps to avert discharges of this nature?

No

6. Was the discharge foreseeable by a prudent person?

Yes

7. Was the cause of the discharge a violation of the pollution prevention regulations? Which one?

8. How much oil was discharged?

Unknown harmful quantity

9. What were its effects?

A sheen was observed in San Pablo Bay

10. Did the violator conduct cleanup and/or take remedial action?

Some of the residue was cleaned from the discharge point

B. APPROPRIATENESS OF PENALTY

1. What are the form and size of the party's business organization?

Petroleum tank farm

2. Is there evidence that a penalty of any particular size would be inappropriate to the size of this organization?

No

C. ABILITY TO CONTINUE IN BUSINESS

1. Is there evidence that a penalty of any particular size would adversely affect the party's ability to continue in business?

No

D. OTHER FACTORS:

1. Investigators cited a callous attitude on the part of Paktank employees

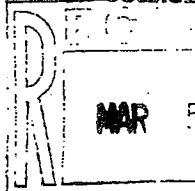
PRELIMINARY AMOUNT \$5,000

SIGNED: C. E. S. E. S.

U.S. Department
of Transportation
**United States
Coast Guard**



Commanding Officer Bldg 14, Rm 124,
U. S. Coast Guard Coast Guard Island,
Marine Safety Office Alameda, CA 94501-5100
San Francisco Bay (415) 437-3073



16000
11 February 1986

From: Commanding Officer, Coast Guard Marine Safety Office
San Francisco Bay, CA
To: Commander, Twelfth Coast Guard District (mepps)

Subj: WATER POLLUTION VIOLATION REPORT MSO-951-85, PAKTANK
CORPORATION

1. Forwarded, recommending appropriate penalty against Owner of
the Facility.
2. Comments: *A SUBSTANTIAL PENALTY IS RECOMMENDED.*

D. P. Montoro
D. P. MONTORO
By direction

WATER POLLUTION VIOLATION REPORT

INSTR: Prepare in triplicate. Retain one for case file. Submit original and copy.

REPORTING UNIT MSO SAN FRANCISCO BAY	DATE OF VIOLATION 25/NOV/85	CASE NUMBER 951-85
---	--------------------------------	-----------------------

PART I - DISCHARGE DATA

1. TIME OF OCCURRENCE 0915	2. LOCATION PAKTANK TERMINAL, RICHMOND, CA
3. WATER BODY SAN PABLO BAY	4. MATERIAL UNKNOWN PETROLEUM CHEMICALS
5. QUANTITY UNK	6. SOURCE PAKTANK TERMINAL TANK FARM
7. CAUSE RELEASE OF WATER FROM TANK FARM	8. DISCHARGER ROBERT JOBE
9. REMARKS AN UNKNOWN AMOUNT OF PETROLEUM CHEMICALS MIXED WITH SEVERAL HUNDRED GALLONS OF RAINWATER WAS RELEASED FROM THE TANK FARM INTI SAN PABLO BAY, A NAVIGABLE WATERWAY OF THE U.S.	

PART II - REPORTING DATA

1. NAME OF PERSON REPORTING PETTY OFFICER PARKER	2. ADDRESS OF PERSON REPORTING P/M(15) AIRSTA SAN FRANCISCO
3. GOVERNMENT AGENCY RECEIVING REPORT MSO SAN FRANCISCO BAY	4. DATE/TIME OF REPORT 25/NOV/85 0920
5. WAS THE PERSON REPORTING THE INCIDENT EMPLOYED BY OR ACTING IN BEHALF OF THE VIOLATOR? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
6. NOTIFICATION PASSED VIA <input type="checkbox"/> NRC <input checked="" type="checkbox"/> OTHER TELEPHONE	
7. OTHER AGENCIES NOTIFIED WATER QUALITY, FISH & GAME, CAL OES	8. OCMi NOTIFIED (Time/Date) N/A
9. REMARKS A HELO FROM AIRSTA SAN FRANCISCO DISCOVERED THE SHEEN ON AN OVERFLIGHT AND REPORTED IT TO MSO SAN FRANCISCO.	

PART III - FACILITY DATA

1. NAME OF ONSHORE/OFFSHORE FACILITY PAKTANK CORP.	2. ADDRESS OF ONSHORE/OFFSHORE FACILITY 2101 WESTERN DR., RICHMOND, CA 94801
3. TYPE OF FACILITY BULK LIQUID STORAGE & TRANSFER	4. PERSON-IN-CHARGE ROBERT JOBE
5. NAME OF OWNER/OPERATOR SAME AS BLOCK #1	6. ADDRESS OF OWNER/OPERATOR SAME AS BLOCK #2
7. REMARKS N/A	

N/A PART IV - VESSEL DATA N/A

1. NAME OF VESSEL	2. NATIONALITY	3. CALL SIGN/OFFICIAL NO.
4. GROSS/NET TONNAGE	5. FUEL/CARGO CAPACITY	6. HOME PORT
7. VESSEL TYPE	8. NAME OF OWNER/OPERATOR	9. ADDRESS OF OWNER/OPERATOR
10. NAME OF LOCAL AGENT	11. ADDRESS OF LOCAL AGENT	
12. MASTER	13. LICENSE/DOC. NO.	14. PERSON-IN-CHARGE
15. LICENSE/DOC. NO.	16. CERTIFICATE OF FINANCIAL RESPONSIBILITY (Number and expiration date)	17. OCMi ACTION
18. OCMi FILE #	19. REMARKS	

PART V. WITNESSES AND OTHER PERSONS MENTIONED IN REPORT

NAME ROBERT JOBE ADDRESS 2101 WESTERN DR, RICHMOND, CA ZIP 94801 TELEPHONE NUMBER (415) 233-0418	EMPLOYER PAKTANK CORP. POSITION TERMINAL MANAGER CONNECTION WITH THE CASE PERSON-IN-CHARGE STATEMENT ATTACHED YES NO ENCLOSURE NUMBER (X)
NAME STEVE OTT ADDRESS BLDG. 14, COAST GUARD ISLAND ALAMEDA, CA ZIP 94501 TELEPHONE NUMBER (415) 437-3073	EMPLOYER USCG POSITION MST2 CONNECTION WITH THE CASE INVESTIGATOR STATEMENT ATTACHED YES NO ENCLOSURE NUMBER (X)
NAME RUSSELL HYDE ADDRESS SAME AS ABOVE ZIP TELEPHONE NUMBER () -	EMPLOYER USCG POSITION BMT CONNECTION WITH THE CASE INVESTIGATOR STATEMENT ATTACHED YES NO ENCLOSURE NUMBER (X)
NAME ROBERT WASHINGTON ADDRESS SAME AS ABOVE ZIP TELEPHONE NUMBER () -	EMPLOYER USCG POSITION RD1 CONNECTION WITH THE CASE INVESTIGATOR STATEMENT ATTACHED YES NO ENCLOSURE NUMBER (X)
NAME KEVIN O'SHEA ADDRESS SAME AS ABOVE ZIP TELEPHONE NUMBER () -	EMPLOYER USCG POSITION MST2 CONNECTION WITH THE CASE INVESTIGATOR STATEMENT ATTACHED YES NO ENCLOSURE NUMBER (X)
NAME M. HOSSAIN KAZEMI ADDRESS CALIF REGIONAL WATER QUALITY CONTROL BOARD, 111 JACKSON ST. OAKLAND, CA ZIP 94607 TELEPHONE NUMBER (415) 464-1247	EMPLOYER STATE REGIONAL WATER QUALITY CONTROL POSITION SANITARY ENGINEER CONNECTION WITH THE CASE INVESTIGATOR STATEMENT ATTACHED YES NO ENCLOSURE NUMBER (X)

ADD SUPPLEMENTAL LIST IF REQUIRED FOR COMPLETE LIST.

N/A PART VI - SAMPLES N/A

1. TAKEN FROM	DATE AND TIME TAKEN	TAKEN BY	WITNESS
2. TAKEN FROM	DATE AND TIME TAKEN	TAKEN BY	WITNESS
3. TAKEN FROM	DATE AND TIME TAKEN	TAKEN BY	WITNESS
4. TAKEN FROM	DATE AND TIME TAKEN	TAKEN BY	WITNESS
5. TAKEN FROM	DATE AND TIME TAKEN	TAKEN BY	WITNESS
6. TAKEN FROM	DATE AND TIME TAKEN	TAKEN BY	WITNESS
7. TAKEN FROM	DATE AND TIME TAKEN	TAKEN BY	WITNESS
8. TAKEN FROM	DATE AND TIME TAKEN	TAKEN BY	WITNESS
9. TAKEN FROM	DATE AND TIME TAKEN	TAKEN BY	WITNESS
10. TAKEN FROM	DATE AND TIME TAKEN	TAKEN BY	WITNESS
11. TAKEN FROM	DATE AND TIME TAKEN	TAKEN BY	WITNESS
12. TAKEN FROM	DATE AND TIME TAKEN	TAKEN BY	WITNESS

ADD SUPPLEMENTAL LIST IF REQUIRED FOR COMPLETE LIST

PART VII - PHOTOGRAPHS		
1. NUMBER TAKEN 10	2. TYPE OF FILM 35MM 100 ASA	3. ENCLOSURE NUMBER Encl. (4)
4. REMARKS		

PART VIII - LIST OF ENCLOSURES

- Encl:
- (1) Statement of Robert Jobe
 - (2) Legal Notice to Suspected Discharger
 - (3) POLREP
 - (4) Photographs
 - (5) Diagram of Paktank lower tank farm and path of oil to San Pablo Bay
 - (6) Photograph of Paktank facility showing area on diagram

PART IX - INVESTIGATORS SUMMARY

OBSERVATIONS:

At 0920 on 25 Nov 1985, MSO San Francisco Bay received notification of a sheen 1 NM x 50-100 FT on the north side of the Richmond-San Rafael bridge that appeared to coming from the Paktank Facility on the Richmond side. Pollution investigators RD1 Washington and MST2 Oshea arrived onscene at 1005. They observed an oil sheen on the surface of the water of San Pablo Bay, a navigable waterway of the United States. At 1030 POL/INV BM1 Hyde and MST2 Ott arrived onscene to relieve Washington and Oshea. After conducting an initial investigation, POL/INV found that rainwater had accumulated in Paktanks lower tank farm and Paktank had opened a valve located below the berm and drained the water onto the roadway where it ran down the road and into a storm drain which emptied into San Pablo Bay. The valve had a blank on the end of it but was only secured by 2 bolts that were not tightened down. This gave the appearance that the valve was blanked off but in fact water would drain out when the valve was opened. In this instance the rainwater was mixed with various petroleum chemicals that are stored in the tank farm and spilled on the ground due to day to day to operations. POL/INV were not able to determine how much product was released from the tank farm; only that there was several hundred gallons of water in the tank farm which was mixed with an unknown amount of petroleum chemicals. At 1130 POL/INV issued a Legal Notice to Suspected Discharger to Robert Jobe the terminal manager for Paktank. Mr. Jobe stated that it was common practice for them to release the water from the berm. He said it was the only way to keep the tank farm from flooding over. Mr. Jobe was told that it is illegal to release any water that might be mixed with something that would cause a sheen, sludge, or emulsion. Mr. Jobe was also told by POL/INV and Mr. H. Kazemi of State Water Quality Control Board that he would no longer be allowed to continue the practice of emptying the tank farm in that manner.

SOURCE:

The source of the spill was the rainwater accumulation in Paktanks lower tank farm that mixed with Petrochemicals that had been spilled

CAUSE:

The rainwater/petrochemical mixture was released by Paktank personnel through a valve below the tank farm berm.

INVESTIGATORS COMMENTS:

On 23 October 1985, POL/INV responded to a similar case at Paktank. They were emptying rainwater mixed with Sodium Hydrosulfide. The amount of chemical released could not be proved by POL/INV, but the product being released had an extremely foul odor. On that case we could not prove that the amount released was above the reportable quantity, therefore a violation was not submitted; however Paktank was informed at that time that what they were doing was questionable and that they should consider alternate procedures for emptying their tank farm before they run into further problems. It was the POL/INV opinion that Paktank did not take the suggestion very seriously and had no intention of changing their procedures. Mr. Jobe laughed at POL/INV when it was suggested they try to implement work habits that would reduce the number of spills inside their tank farm. POL/INV received a statement from Mr. Jobe approximately 2 weeks after the incident occurred. His statement did not reflect anything that he had said to POL/INV while they were onscene during the investigation. It is this investigators opinion that Paktank is not taking the pollution prevention regulations very seriously and I feel the maximum fines possible should be levied against Paktank in order to bring them into compliance.

PART X - CLEANUP OR OTHER MITIGATION ACTION

Paktank personnel secured the valve and spread sorbent material on the remaining product on the roadway to prevent it from going in the storm drain.

REPORTED IMPACT

ACTION TAKEN TO PREVENT RECCURANCE

Paktank contracted their engineering office in Texas to see what can be done about finding another way to dispose of or prevent the rainwater from accumulating in the tank farm.

SIGNATURE OF I.O.

S. OTT, MST2, USCG

Stephen L Ott MST2

SIGNATURE OF

D. P. Montoro
D. P. MONTORO, LCDR, USCG
By direction

DATE

11 Feb 86

PART XI - CIVIL PENALTY ACTION TAKEN



DEPARTMENT OF TRANSPORTATION
 UNITED STATES COAST GUARD

ENCLOSURE(1)

Commanding Officer
 U.S. Coast Guard
 Marine Safety Office
 Bldg 14
 Government Island
 Alameda, CA 94501
 415-437-3073 (3086)

Page 1 of 1

STATEMENT FORM

Statement of Robert S. Jobe Case Number _____

Location of Incident Paktank Corp., 2101 Western Dr., Richmond, CA

Date/Time of Incident 11-25-85 1030 hours

Coast Guard personnel Hyde and O'Shea were investigating an oil sheen on the bay. They looked at the bay from our dock at Terminal #4. They stopped on the road and noticed a small sheen on the rain water runoff, running down the road and into the storm drain. The valve to our dike area was closed and I believe that the sheen was caused from the oil on the roadway. The storm drain to the bay was closed immediately and absorbent pads were used to trap what little oil was on the rain water. I did not observe any oil sheen on the water running into the bay.

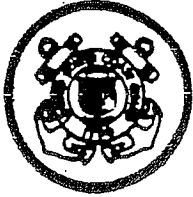
R. S. Jobe [Signature] 12/10/85 233-0418
 (Print Name) (Signature) (Date) (Phone)

C.L. Johnson [Signature] 12/10/85 233-0418
 (Printed Name of Witness) (Signature) (Date) (Phone)



It's a law we can live with.

ENCLOSURE(2)



DEPARTMENT OF TRANSPORTATION UNITED STATES COAST GUARD

Commanding Officer
Marine Safety Office
Build. 14, Gov't Island
Alameda, CA 94501

16460

Date/Time: 25 NOV 85 1130

LEGAL NOTICE TO SUSPECTED DISCHARGER

To: Robert Jobe

This is to advise you that a pollution incident has occurred or threatens to occur at:

PAK TANK IN PARR 4 RICHMOND CA
(Vessel/Facility)

SAN FRANCISCO BAY 25 NOV 85 0915
(Location/Body of Water) (Time of Discharge)

for which you are a possible suspect.

It has been determined that the United States Government has an interest in this incident. Section 311(b)(3) of the Federal Water Pollution Control Act (FWPCA) prohibits the discharge of oil in harmful quantities into the navigable waters of the United States, or into the waters of the contiguous zone.

The pollution investigator's assessment of the incident is as follows:

I OBSERVED AN OIL SHEEN ORIGINATING FROM THE COAST GUARD TANK AREA OF YOUR TANK FARM AND PUMPED INTO A STEEL DRAIN
WHICH FLOWS INTO SAN FRANCISCO BAY

According to the FWPCA, the owner/operator of the source may undertake removal actions. All removal operations must be in accordance with applicable Federal and State regulations and with the National Oil and Hazardous Substances Pollution Contingency Plan. A determination as to whether removal actions are being done properly will be made by the On-Scene-Coordinator. If the On-Scene-Coordinator cannot determine, on a continuing basis, that removal actions are being carried out properly, the owner/operator or the appropriate responsible person will be so advised. If corrective action is not immediately taken, the Coast Guard will take over removal operations. The owner/operator will be liable for Federal removal costs as set forth in Section 311(f) of the FWPCA, including cost for Coast Guard personnel and equipment required to monitor the incident.

The On-Scene-Coordinator or Coast Guard Representative for this incident is:

Name: LT MAURICE R. DUNN, MSP Officer Phone#: 415-237-1100
Name: KEVIN A. SMITH Phone#: 415-237-1100

KEVIN A. SMITH (Name of OSC or Representative (Print)) [Signature] (Signature)

I hereby acknowledge receipt of USCG, MEO, San Francisco Bay letter 16460 dated 25 NOV 85.

Robert Jobe 11-25-85
(Name (Print)) Date Date

TERMINAL MGR
(Official Position)

[Signature]
(Signature)

21-1-64
(Address)

415-237-1100
(Phone #)



T AUTODIN

R 260451Z NOV 85
FM COGARD MSD SAN FRANCISCO BAY CA
TO NC/DDCDTWELVE ALAMEDA CA//MEPPS//
INFO OFFICE OF EMERGENCY SERVICES
PO BOX 9577
SACRAMENTO CA 95823 TLX (910) 367 0283
NC/EPA SAN FRANCISCO CA//REGION NINE//
AF/COGARD AIRSTA SANFRANCISCO CA
NC/COMPACAREA COGARD ALAMEDA CA//PK//

BT
UNCLAS//N16465//
EPA PASS TO EMERGENCY RESPONSE SECTION
SUBJ: POLREP ONE AND FINAL, MINOR, UNKNOWN OILY PETROLEUM
PRODUCT, PAKTANK CORPORATION, RICHMOND, CA, UCN 951

1. SITUATION

A. 250920U NOV 85: RCVD REPORT FROM AIRSTA S.F. REPORTING
A SHEEN APPROX 1/2 NM X 50-100 FEET THAT APPEARED TO BE COMING
FROM THE PAKTANK TERMINAL ON POINT SAN PABLO IN RICHMOND.

B. 1030U: POL/INV O/S AT PAKTANK. POL/INV FOUND THAT
RAINWATER HAD ACCUMULATED IN PAKTANKS LOWER TANK FARM AND
PAKTANK OPENED A VALVE TO RELEASE THE RAINWATER AS IS PAKTANK'S
COMMON PRACTICE WHEN THE BERM FILLS UP. THIS RAINWATER WAS
RELEASED FROM A VALVE BELOW THE BERM WHICH RAN ONTO THE ROADWAY
AND INTO A STORM DRAIN WHICH EMPTIED INTO SAN FRANCISCO BAY. IN
THIS INSTANCE THE RAINWATER WAS MIXED WITH VARIOUS PETROLEUM
CHEMICALS THAT ARE STORED IN THE TANK FARM AND SPILLED ON
THE GROUND DUE TO DAY TO DAY OPERATIONS.

C. ON SCENE WX: PARTLY CLOUDY, TEMP. 55-60, WINDS 5-10 KTS.

2. ACTION:

A. 1045U: TOOK PHOTOGRAPHS AND REQUESTED MR. JOBE PROVIDE
POL/INV WITH A STATEMENT TO DOCUMENT CASE.

B. 1130U: ISSUED LEGAL NOTICE TO SUSPECTED DISCHARGER TO
ROBERT JOBE THE TERMINAL MANAGER.

C. VALVE SECURED SO THAT NO MORE RAINWATER COULD DRAIN
FROM THE BERM.

D. 1330U: POL/INV MET WITH MR. KAZEMI OF STATE REGIONAL
WATER QUALITY CONTROL BOARD. HE INFORMED MR. JOBE THAT WHAT
HE WAS DOING WAS NOT LEGAL ACCORDING TO STATE LAWS AND SAID
HE WOULD ISSUE HIM A CLEAN UP AND ABATEMENT ORDER AND SOMEHOW
GET THE PROBLEM CORRECTED.

3. PLANS AND RECOMMENDATIONS:

A. MSD WILL WORK WITH REGIONAL WATER QUALITY CONTROL BOARD
TO ENSURE THAT PAKTANK ESTABLISHES ALTERNATIVE PROCEDURES
FOR DISPOSING OF THE RAINWATER RUN-OFF.

B. MSD WILL PROCESS A WATER POLLUTION VIOLATION REPORT IN
ADDITION TO VIOLATION FILED BY THE STATE RWQCB.

C. MSD WILL CONTACT EPA TO DETERMINE IF PAKTANK HAS A
PERMIT TO DISPOSE OF RAINWATER IN THIS MANNER AS WAS INDICATED
IN A DISCUSSION WITH MR. JOBE THE TERMINAL MANAGER.

D. PAKTANK WILL CONTACT MSD AND STATE RWQCB THE NEXT TIME
THE BERM FILLS UP SO THAT TESTS ON THE TOXICITY CAN BE DONE.

4. CASE STATUS:

A. CASE CLOSED.

BT
NNNN

*Report of Investigation
Former PM Ag Leasehold
RWQCB File #2119.1231
Point San Pablo
Richmond, CA*

1 of 2

Prepared for:
**Seyfarth Shaw
San Francisco, CA**



Submitted by:
Quality Environmental Professionals, Inc.

August 21, 2002

EXHIBIT F



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1.0 Introduction

The former PM Ag Products Incorporated (PM Ag) facility (the "facility") is located in Contra Costa County on Point San Pablo, on the northwest tip of Richmond, California.¹ The facility is located on a peninsula, jutting into the San Francisco Bay (Figure 1). The facility was located on three parcels of land. Parcel #1 is approximately 3.5 acres, located along the shore of the San Francisco Bay. Parcels #2 and #3, consisting of approximately 3.3 acres, are located inland to the east/northeast of Parcel #1. The facility was leased from and is currently owned by the City of Richmond, California. Past property usage included limited production and warehousing operations for molasses-based and other agricultural products. PM Ag began operating on the site in 1936 and ceased operations in 1993.

In July 2001, an unidentified oil-like seep (visible at minus tide) was observed on the beach of the San Francisco Bay along the shoreline adjacent to the facility. In response to the observation of the seep, Quality Environmental Professionals, Inc. (QEPI), at the request of Seyfarth Shaw, legal counsel to PM Ag's successor in interest, conducted an investigation in December 2001 to determine the presence or absence of petroleum hydrocarbon impacts to soil and groundwater in the vicinity of the facility. Four primary goals were identified for this investigation:

- Evaluate whether an underground fuel storage tank is located at the facility (and if so, what is its condition);
- Collect sufficient subsurface data to identify various fuel oils, solvents, and other organic compounds that may be impacting the groundwater in the area;
- Conduct a survey of the property boundaries and of the soil boring locations using Geographical Positioning System (GPS) equipment for the purpose of preparing site maps for Geographical Information System (GIS) software; and
- Prepare a report documenting the investigation findings and evaluating the potential origins of any identified soil and groundwater impacts.

As a result of the information collected during the December 2001 investigation, QEPI revisited the facility and adjacent parcels previously used for bulk oil storage and refining (collectively, the "site") in April 2002 to conduct further subsurface investigation activities. Four primary goals were identified for this second phase of investigation:

- Delineate the extent and magnitude of hydrocarbon compounds, specifically degraded heavy hydrocarbon fuel, in shallow soil and groundwater,
- Investigate potential source areas,

¹ PM Ag recently went through a corporate change and is now known as United Molasses Company. However, for purposes of this report, the property at issue is referred to as the former PM Ag facility/leasehold.

1.0 Introduction

(Continued)

- Collect information regarding hydrogeological conditions at the site, and
- Evaluate whether an underground fuel storage tank remains at the facility (and if so, determine its condition).

1.1 Site Background

1.1.1 Site Location & Description

The former PM Ag facility is located at 2055 Western Drive on Point San Pablo, near the northwest tip of the City of Richmond's peninsula, jutting into the San Francisco Bay. The facility location is indicated on the San Quentin, California, United States Geological Survey (USGS) Quadrangle Map, in Section 10 of Township 1 North and Range 5 West, provided as Figure 1. The City of Richmond, California owns the facility that was once leased by PM Ag (or related corporate entities) from approximately 1936 to 1993.

QEPI personnel observed the condition of the facility during the December 2001 and April 2002 investigations. The facility is composed of three parcels. Parcel #1 currently consists of several structures: a warehouse/boiler house #1, a garage, a pump house, an aboveground rectangular steel tank (the Promol tank), a cylindrical, aboveground steel tank, a rectangular sheet-metal building, known as boiler house #2, and a water tank.

Two large, steel delivery pipelines originate at the pump house (south of the warehouse/boiler house #1) and run along the shore of the San Francisco Bay to the northwest to a wharf. Other smaller pipelines are present as well. The pipelines are currently inactive. The materials contained in the pipelines were mostly molasses and some sodium hydroxide. The material in the pipelines has since been cleaned out.

An easement was granted to Dorward (bulk oil storage) Terminals in or about 1969 for two stanchions and pipelines connecting Dorward facilities (i.e., the former Paktank property) at their south tank farm to the existing facilities of the Standard Oil Company and Chevron Chemical Company at Point Orient. QEPI did not observe these pipelines on the facility at the time of the two investigations. Additionally, QEPI did not encounter any underground pipelines during the Geoprobe® investigations.

At the time of both investigations, two mobile trailers were present on Parcel #1. The trailers were occupied by several individuals who rent the property from the Port of Richmond (the "Port") at a discount because they also act as caretakers for the property.



1.0 Introduction

(Continued)

Historically, Parcel #1 contained three aboveground storage tanks (ASTs), T-1 through T-3, for the storage of molasses and other non-petroleum hydrocarbon products. The ASTs are no longer present on Parcel #1.

Prior to the investigations, Port personnel suspected that an underground fuel storage tank was present on Parcel #1 in the vicinity of the warehouse/boiler house #1. As part of the scope of work for the December 2001 investigation, QEPI used a magnetometer in an attempt to locate the suspect underground storage tank (UST). QEPI was unable to verify the presence or absence of the UST during this investigation. As part of the scope of work for the April 2002 investigation, QEPI conducted a test pit excavation between the garage and the pump house to determine the presence or absence of the suspect UST. A tank bottom was encountered in this area.

Based on additional anecdotal information, QEPI directed a second test pit excavation on the southwest side of the garage in an area adjacent to a former rail spur that was used in the past for loading and unloading. A sediment trap was located just under the surface. The sediment trap was removed from the excavation and the soil from the excavation was submitted for laboratory analysis. Details of these excavation activities and analytical results are further discussed later in this report.

Parcel #2 consists of 0.2 acres located adjacent and southwest of Parcel #3 and contains a weigh station. Parcel #3 consists of approximately 3.1 acres and contains a single pump house with associated piping. Aboveground tanks T-4 through T-9 (also used to store molasses and other non-petroleum hydrocarbon products) are no longer present on Parcel #3. Figure 2 depicts the current condition of Parcels #1 through #3 and the former Dorward Terminal/Paktank bulk oil storage site adjacent to the facility.

Aerial photographs depicting the facility and surrounding properties in 1946, 1959, 1965, 1985, and 1994, provided by Environmental Data Resources (EDR), are provided in Appendix A.

1.1.2 Brief Summary of Site History & Site Operations

Seyfarth Shaw, PM Ag's legal counsel, and personnel from the Port of Richmond provided QEPI with information pertaining to the site history and operations of the facility. PM Ag's corporate predecessor in interest began operating at the facility in or about 1936. The facility was used for production, warehousing, and distribution of molasses and other agricultural products such as coconut oil, lignin liquor, linseed oil, tallow, and various types of molasses. Caustic soda and liquid fertilizer were also stored on site for third parties (e.g., Georgia Pacific).

Privileged & Confidential—Attorney Work Product

Phase II Investigation - PM Ag, Richmond, CA

1.0 Introduction

(Continued)

According to the EDR report provided in Appendix B, the facility was a small quantity generator under the Resource Conservation and Recovery Act (RCRA). No violations were documented for the facility.

PM Ag ceased operations at the facility in 1993. Sanborn® Maps dated 1950 and 1970, illustrating past operations at the facility and adjacent properties are provided in Appendix C.

The facility is not currently used for industrial/commercial purposes. At the time of this investigation, two mobile trailers were present on Parcel #1. The trailers were occupied by several individuals who rent the property from the Port at a discount because they also act as caretakers for the site. QEPI has no knowledge of future plans for the facility.

1.1.3 Overview of Previous PM Ag Site Investigations

Previous investigations were conducted on the facility relating to an 8,000-gallon diesel UST located south of boiler house #2. This UST was used to fuel on-site vehicles, and, for a brief time, to provide fuel for the #2 boiler.

The diesel UST was emptied and removed from service in the mid 1980s. On January 23, 1990, Chips Environmental Consultants, Inc. (CECI) collected two soil samples and one water sample near the former 8,000-gallon UST. CECI referred to the contents of the UST as diesel. Petroleum hydrocarbon impacts were found in all three samples. Concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX) were identified in the groundwater sample. It is not clear as to why BTEX was analyzed since the BTEX compounds are not generally associated with diesel fuel.

On February 5, 1990, CECI returned to the facility to collect 10 soil samples from the area surrounding the former UST. The highest concentrations of total petroleum hydrocarbons (TPH) as diesel were found east of the former UST. BTEX constituents, particularly xylenes, were identified in several samples.

In August 1990, the 8,000-gallon UST was removed. Soil samples collected from the east and west end of the UST excavation pit identified diesel range TPH concentrations of 120 milligrams per kilogram (mg/kg) and 56 mg/kg, respectively. Two composite soil samples were collected and analyzed for TPH. The composite samples did not exhibit concentrations exceeding the laboratory detection limit of 10 mg/kg. A water sample collected from the excavation exhibited a concentration of 4 mg/kg diesel range TPH.

According to the EDR report provided in Appendix B, remedial action for this incident was completed and further response actions deemed unnecessary by the appropriate regulatory



1.0 Introduction

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agency. Additional environmental data related to the site is listed in the EDR report. Copies of these site investigation reports are provided in Appendix D.

The two investigations conducted by CECI and the confirmation samples from the UST removal identified impacts to the subsurface soil and groundwater at the facility. Constituents identified included diesel range TPH and BTEX compounds. Based on the EDR report, remedial action for impacts associated with the former UST were determined to be complete or deemed unnecessary by the regulatory agency.

PM Ag ceased operation of the 8,000-gallon UST and removed the contents of the tank in the mid 1980s. Consequently, degradation of the tank, noted during the removal activities, may have been the result of the empty tank having been subjected to the atmosphere for several years.

During the UST removal activities, CECI noted the presence of free product in the vicinity of the UST. CECI analyzed samples for TPH quantitated against a diesel standard. CECI did not conduct identification analyses. In light of the other groundwater finding addressed below, it is possible that the product CECI observed during that investigation was the degraded heavy hydrocarbon fuel currently impacting the facility from an upgradient source, rather than diesel from the UST.

1.1.4 Surrounding Land Use

The areas surrounding the facility include former industrial properties (Figure 2). Most notably, the properties to the north and northeast of the facility comprise the former Dorward Bulk Oil Storage Terminal/Paktank bulk oil storage facility. The former Bulk Oil Storage properties, also owned by the City of Richmond (the "City"), currently contain an office building, warehouses, and docks. A tenant of the City is currently occupying the office building and a warehouse. Several boats and barges were moored at the former Bulk Oil Storage facility docks throughout the December 2001 investigation. They did not appear to be engaged in commercial or industrial activities. Two mobile trailers, located on the former Bulk Oil Storage property, were occupied at the time of both investigations.

The majority of the ASTs have been removed from the Bulk Oil Storage parcels. Six Paktank ASTs remain located on the northeast portion of the Bulk Oil Storage parcels at the crest of the hill. A large water tank belonging to the East Bay Municipal Utility Department (EBMUD) is located west of the Paktank ASTs. A map depicting the surrounding properties is provided as Figure 2.

The former Bulk Oil Storage properties were previously operated by Dorward & Sons (later known as Dorward Terminals, Inc.). Dorward began operating on the parcels in 1917.

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According to The Daily News (1963 newspaper article), the Dorward Bulk Oil Storage facility was "one of the leading facilities in the area for the processing, blending and packaging of liquid commodities, such as lubricating oils, alcohols, petro-chemicals, and vegetable oils." It was also stated that the Richmond Oil Storage Terminal (which appears to refer to Port of Richmond Marine Terminal 4) was adjacent to the Dorward facility and was connected by pipeline to transport lubricating oils and petro-chemicals. These two facilities merged and together they were declared to provide the oil industry one of the largest bulk storage terminals in the West. Dorward constructed tanks T-1, T-2, and T-3 on the former PM Ag leasehold in 1917. Dorward used the ASTs for oil storage prior to PM Ag operations at the facility.

Beginning in approximately 1977, Paktank operated the Bulk Oil Storage facility for various chemicals and petroleum-based products with limited refining operations. Limited storage may also have occurred for agricultural products as well. Additionally, according to documents obtained from the Contra Costa Health Services Department, in 1987 various materials containing alkylbenzenes were stored on the Paktank property.

Paktank ceased operations and dismantled the majority of the ASTs and related pipelines at this location in the spring of 2001. The beach seep was first observed in July 2001, within a few months after Paktank finished dismantling its tanks and pipelines.

1.1.5 Summary of Previous Incidents & Investigations of Surrounding Properties

As set forth below, there have been numerous releases or threats of releases of petroleum hydrocarbons and related products at or emanating from the Bulk Oil Storage facility. A few examples are listed below.

In 1985, Paktank received a notice of violation letter issued by the United States Coast Guard alleging oil was discharged into the San Pablo Bay from the Paktank Corporation on November 25, 1985 (Appendix E). The release was the result of Paktank intentionally draining storm water that had accumulated in a tank farm area into the bay. The storm water had mixed with an unknown volume of petro-chemicals present in the tank farm as a result of daily operations. The location where the oil sheen was observed on the beach in July 2001 is within a few yards of where this prior release at the Paktank facility was identified.

In October 1986, Engineering Science (ES) oversaw the removal of a 6,000-gallon and a 10,000-gallon diesel UST located on the northwest corner of the former Paktank bulk storage facility. Upon removal, the 6,000-gallon UST was described as badly deteriorated with many holes. The 10,000-gallon UST was an old buried railroad tank car. Five soil samples were collected during the excavation activities and were analyzed for TPH as diesel fuel. Samples identified as A and D, obtained at approximately 9 to 9.5 feet below ground surface (bgs), exhibited concentrations of 280 and 930 mg/kg, respectively. A sample collected from the

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stockpile tailings exhibited a concentration of 250 mg/kg. Approximately a week later, two additional samples were collected from the northeast and northwest corners of the excavation and were analyzed for TPH. The samples identified as A1 and B1 exhibited TPH concentrations of 85 and 41 mg/kg, respectively. A copy of the ES data is provided in Appendix E-1.

In July 1988, an incident was reported at the former Paktank facility for a leak discovered coming from the bottom of tank 91 (Appendix E-2). The product was pumped back into the tank and the 16,000 gallons of product originally in the tank was pumped to other ASTs at the facility. The product remaining on the ground was soaked up with absorbent pads and drummed.

On February 10, 1989, an incident report was filed for a leak detected in the bottom of tank 107. The product from this tank, PK oil, was transferred to tanks 109, 509, and 506. Approximately 100 gallons of product spilled on the ground, solidified, was heated and returned to the tank. A copy of this incident report is provided as Appendix E-3.

In October 1989, Paktank retained the service of Chicago Bridge and Iron (CBI) to perform an inspection of their ASTs to determine the effects of an earthquake, which occurred on October 17, 1989. Several of the tanks inspected were in need of repair, due in part to holes and stress cracks. Specifically, tanks in the 500 series area located immediately upgradient from the facility were cited as in need of repair and maintenance. A copy of the CBI report is provided in Appendix E-4.

A document entitled "Open Issues" originating from Paktank personnel, reports "product seepage from the hillside" that needs to be addressed. The memo states that absorbent cloths used to clean up the seepage should continue to be used until the sources can be eliminated. QEPI is unaware whether Paktank ever identified this source. Additionally, the memo refers to a "mystery tank" that is not reported on the tank availability list or identified by a number. The contents of the tank are unknown. A copy of the Open Issues memo is provided in Appendix E-5.

According to the EDR report provided as Appendix B, the former Paktank facility was a large quantity hazardous waste generator under the Resource Conservation and Recovery Act (RCRA). Four violations were documented for the former Paktank Bulk Storage facility from 1985 to 1994. Additionally, the former Paktank facility was considered a California Haznet site. Haznet data is extracted from the copies of hazardous waste manifests received each year by the Department of Toxic Substance Control (DTSC). According to the EDR report, 43 records exist for the former Paktank facility. Some of the substances listed were unspecified oil-containing wastes, pesticide rinse water, and tank bottom waste.

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On March 9, 1995, the National Response Center issued Incident Report #282608 documenting an unknown oil sheen on the water in San Pablo Bay. The incident report named Paktank as the suspected responsible party. A copy of this incident report is provided in Appendix E-6.

According to an Underground Storage Tank Removal Inspection Form dated July 31, 1998, an old partially-buried tank car belonging to the former Paktank facility, located on the beach, was cleaned, removed, and cut up onsite for disposal. Upon removal the tank was described as having large holes with one end rusted open. The tank previously contained some type of "heavy oil." At the time of the removal, the soil under the tank appeared clean. A copy of the UST Removal Inspection Form is provided in Appendix E-7.

In early 2001, OGISO Environmental (OGISO) was removing subsurface concrete from the former Paktank Bulk Storage property and discovered "discolored and smelly soil" that appeared to be impacted. OGISO oversaw the excavation of the visibly impacted soil, which was placed in bins for disposal. Two sidewall samples, one bottom sample, and one stockpile sample were collected and analyzed for BTEX, diesel fuel, and total recoverable petroleum hydrocarbons (TRPH). Samples collected from the west sidewall and the bottom of the excavation, as well as the stockpile sample, exceeded risk-based screening levels for diesel and TRPH. An additional foot of soil was removed from the bottom and west sidewall of the excavation and additional samples were collected. Both samples exhibited concentrations of diesel and TRPH below the screening levels. A map was not provided with the letter report from OGISO; therefore, the location of the impacted soil found on the former Paktank property is unclear. A copy of the OGISO report is provided as Appendix E-8.

Other properties in the vicinity have also experienced releases of petroleum products. For example, in September 2000, Chevron Products Company, located on Point Orient south/southeast of the facility, retained the services of URS/Dames & Moore to conduct an investigation in response to an oil sheen observed on the water of the San Francisco Bay near the Chevron Richmond Refinery. The oil sheen was observed on April 17, 2000. Approximately two feet of impacted soil was removed from behind a gravity wall in the vicinity of the seep before hydrocarbon stained bedrock was encountered. A map depicting the location of the oil sheen was not provided in the Dames & Moore report. However, it was necessary to perform the work at low tide to minimize the effects of water intrusion into the investigation area, suggesting the work was performed adjacent to the water's edge. Soil samples collected during the investigation exhibited total extractable hydrocarbon concentrations from 1,200 to 22,480 mg/kg. Dames & Moore, as part of the investigation report, recommended installation of a free-phase extraction trench to facilitate removal of free-phase hydrocarbons. There is no documentation in the file indicating the extraction trench was installed.

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(Continued)

The former Point Molate Naval Fuel Depot is located farther to the southeast. It is surrounded by the Chevron Oil Refinery on the north, south, and east sides, and the San Francisco Bay to the west. There were formerly 20 USTs and 32 ASTs associated with the fueling operation. Numerous significant impacts to the Bay have been documented at this location. The RWQCB issued a cleanup order in 1995. A 1,100-foot long impermeable trench was constructed to collect groundwater migrating toward the Bay.

2.0 Investigation of Beach Seep by Others

In July 2001, an oil seep (visible at minus tide) was observed on the beach of the San Francisco Bay along the shoreline adjacent to the former Bulk Oil Storage facility, just north of the facility boundary. In response to the observation of the oil seep, Quality Environmental Professionals, Inc. (QEPI), at the request of Seyfarth Shaw, legal counsel to PM Ag, conducted investigations in December 2001 and April 2002 to determine the presence or absence of petroleum hydrocarbon impacts to soil and groundwater in the vicinity of the facility. Various investigatory efforts also were completed by the California Department of Fish & Game (CalF&G), the Port of Richmond, and Vopak (formerly Paktank) to determine the nature and source of the oil-like substance seeping from the beach.

2.1 California Fish & Game Investigation

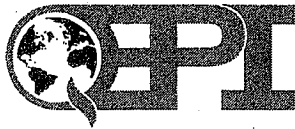
In August 2001, a representative from Cal F&G collected a sample from the beach seep area and submitted it for identification analysis to the Cal F&G Petroleum Chemistry Laboratory. The laboratory identified the sample as an intermediate fuel oil resembling a Shell IFO 180. The laboratory provided low-resolution GC/MS chromatograms for the beach sample, a Shell IFO 180 oil sample, and a Bunker C fuel oil sample. The chromatograms are included in Appendix F.

It is QEPI's understanding that Cal F&G collected samples during the Port of Richmond investigation in August and September 2001 (see next section). The results from these samples have not been made available to QEPI.

Cal F&G was called at the request of Mr. Tom Wilson (Port of Richmond) while QEPI conducted its second investigation in April 2002. Cal F&G collected a water sample from soil boring B-38. The result from this sample has not been made available to QEPI.

2.2 Port of Richmond Investigation

In August and September 2001, Port of Richmond personnel conducted an investigation by excavating 35 shallow trenches at the facility, at the former Bulk Oil Storage parcels, and on the beach. Visual impacts of an oil-like substance were observed in 25 trenches across both the Bulk Oil parcels and the facility. A separate-phase oil-like substance was observed in seven locations on the former Bulk Oil Storage parcels and one location in the right-of-way (ROW) along Western Drive. These locations are all upgradient of the PM Ag Facility. This separate phase oil-like substance also was found downgradient at nine locations on the former PM Ag facility.



2.0 Investigation of Beach Seep by Others

(Continued)

Documents indicate that samples were collected from several of the trenches for laboratory analysis. The Cal F&G reportedly collected samples from trenches 21 through 25. The analytical results from these samples have not been made available to QEPI.

Additionally, City of Richmond personnel collected a water sample from location #4 on the beach (see Figure 1 in Appendix G). It was reported that this sample was a petroleum product, most closely resembling an intermediate fuel oil. The results from this sample were compared to those from two previous known releases in the area of Point San Pablo. There were no similarities between the materials. The analytical results have not been made available to QEPI. A map of the trench locations and a description of visual impacts found at each location are provided in Appendix G.

2.3 Vopak Investigation

On May 9 and May 10, 2002, S.S. Papadopoulos and Associates, Inc. (SSP) conducted an investigation on the former Paktank Bulk Oil Storage and PM Ag facilities. SSP advanced 11 soil borings, dug 6 test pits, collected 7 near-surface samples, and collected two beach product samples. Soil samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) and total petroleum hydrocarbons (TPH) as gasoline by Method 8020, TPH as diesel and TPH as motor oil by Method 8015M with silica-gel clean up, and six soil samples were analyzed for volatile organic compounds (VOCs) by Method 8260B. Groundwater samples were analyzed for BTEX/MTBE and TPH as gasoline by Method 8021, TPH as diesel and TPH as motor oil by Method 8015M with filter and silica-gel clean up, and two samples were submitted for VOCs by Method 8260B. The two separate-phase hydrocarbon samples were analyzed for TPH as diesel and motor oil by Method 8015M with low resolution chromatogram characterization. Draft figures, draft tables, and draft soil boring logs prepared by SSP are provided as Appendix H.

SSP collected samples from four soil borings in the area of the former 500 series ASTs on the former Bulk Oil Storage parcels, two borings in the Western Drive ROW, and from 18 locations in and around Parcel #1 of the PM Ag facility. Soil and groundwater samples analyzed for TPH were quantitated against gasoline, diesel, and motor oil standards. This yields a concentration as compared to the respective standard, but does not serve to identify the material analyzed.

2.3.1 Discussion of Soil Results

SSP has not generated a report as of the writing of this document; therefore, SSP's analytical methods have not been documented. The following observations are based on the draft analytical data provided by SSP on behalf of Vopak. QEPI believes that the SSP data can be

2.0 Investigation of Beach Seep by Others

(Continued)

used to make a relative comparison between the concentrations of the different hydrocarbon fractions, but the data does not directly compare with data collected by QEPI during the two sampling events completed in December 2001 and April 2002.

The highest concentration of TPH as gasoline (TPH/G) was detected at a concentration of 620 mg/kg in beach product sample BP-1 collected near the seep (located near the old Paktank stormwater outfall point). Since this is a product sample, the concentration is suspect because it should be much higher (total TPH should equal one million parts per million). Other elevated concentrations were observed at the VB-7 location (76 mg/kg, depth of 7 feet bgs), the VB-9 location (51 mg/kg, depth of 11.5 feet bgs), both in the 500 series AST area, and the VB-5 location (42 mg/kg, depth of 11 feet bgs) in the Western Drive ROW.

The highest concentration of TPH as diesel (TPH/D) detected during the SSP investigation was at VB-9 located in the area of the former 500 series ASTs on the Bulk Oil Storage tank farm (see Figure 2 in Appendix H). TPH/D was present at a concentration of 2,700 mg/kg at a depth of 11.5 feet below ground surface (bgs). TPH/D was also detected at the same location at a depth of 4 feet bgs at a concentration of 2,200 mg/kg. The next highest concentration was 2,300 mg/kg at beach location VS-5 located near the seep. Other elevated concentrations (> 1,000 mg/kg TPH/D) were present at VB-5 (1,300 mg/kg at a depth of 11 feet bgs), located in the Western Drive ROW, and VS-7 (1,600 mg/kg), a beach sample collected near the seep.

The highest concentration of TPH as motor oil (TPH/O) was detected at the VT 2+40 pit sample location (1,700 mg/kg, depth of 9 feet bgs) located upgradient of the seep. TPH/O was detected at a concentration of 1,000 mg/kg in a surface soil sample (VS-2) located next to the former Paktank stormwater outfall. Other elevated concentrations (> 500 mg/kg TPH/O) were observed at beach sample VS-5 (740 mg/kg), VT 0+40 (840 mg/kg, depth of 9 feet bgs) and VT 0+05 (640 mg/kg, depth of 9 feet bgs) both located along the Bay side property line of the facility.

Assuming that the samples collected represent the greatest impacts at each sampling location, it is clear that soil impacts are present at depths near the water table. However, based on the SSP draft soil data, shallow soil impacts (above the water table) representative of a source are present on the Paktank leasehold.

2.3.2 Discussion of Groundwater Results

The highest concentration of TPH/G in groundwater was detected at boring VB-7 (53 mg/L), located in the former Dorward/Paktank 500 series AST area (upgradient of the former PM Ag facility). Other elevated concentrations (> 10 mg/L) were detected at the VB-3 (15 mg/L), VB-2 (12 mg/L), VB-4 (10 mg/L), and VB-1 (10 mg/L) locations. Both VB-7 and VB-1 are also located upgradient of the PM Ag facility.

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2.0 Investigation of Beach Seep by Others

(Continued)

The highest concentration of TPH/D in groundwater was detected at boring VB-1 (120 mg/L) located in the Western Drive ROW upgradient of the PM Ag facility. Other elevated concentrations (>10 mg/L) were detected at the VB-2 (97 mg/L) and VB-4 (27 mg/L) locations. Boring VB-1 is located upgradient of the PM Ag facility in the Western Drive ROW.

The highest concentration of TPH/O in groundwater was detected at boring VB-7 (24 mg/L), located in the former Dorward/Paktank 500 series AST area. Other detections above 10 mg/L were not observed.

2.3.3 Summary of Investigations by Others

During the Port of Richmond investigation, a separate-phase oil-like substance was observed in seven locations on the former Bulk Oil Storage parcels, nine locations on the PM Ag facility, and one location between the two in the Western Drive ROW (upgradient of the PM Ag Facility). Draft soil data from the SSP investigation indicates the highest TPH as gasoline and TPH as diesel concentrations are present upgradient of the PM Ag facility (this does not include the product sample from BP-1—see discussion above). The highest concentration of TPH as motor oil is present above the seep on the PM Ag site at the VT 2+40 location. Draft groundwater data indicates the highest concentrations of TPH as gasoline, diesel, and motor oil are present upgradient of the PM Ag leasehold in the area of the 500 series ASTs.

3.0 Statement of Work

3.1 Objectives of Site Investigation

3.1.1 December 2001 Investigation

The objective of QEPI's December 2001 investigation was to determine the presence/absence of potential soil and groundwater impacts identified in a limited investigation conducted by the Port of Richmond as a result of an oil seep (visible at minus tide) observed on the beach of the San Francisco Bay along the shoreline adjacent to the former Bulk Oil parcels and North of the PM Ag facility. QEPI's investigation included both on-site (i.e., at the former PM Ag facility) and limited off-site activities, including soil and groundwater sampling, AST contents sampling, and surveying. Four primary goals were identified for this investigation:

- Evaluate whether an underground fuel storage tank is located onsite (and if so, what is its condition);
- Collect sufficient subsurface data to identify various fuel oils, solvents, and other organic compounds that may be impacting the groundwater in the area;
- Complete a survey of the property boundaries and of the soil boring locations; and
- Prepare a report documenting the investigation findings and evaluating the potential origins of any identified soil and groundwater impacts.

3.1.2 April 2002 Investigation

As a result to the information collected during the December 2001 investigation, QEPI revisited the facility in April 2002 to conduct further site investigation activities. The primary goal of this investigation was to identify a source of the degraded heavy hydrocarbon fuel observed on Parcel #1 of the PM Ag facility and to determine the nature and extent of those impacts. Soil borings, monitoring wells and test excavations were completed during this phase. Additionally, QEPI collected water samples from pits that were hand-dug on the beach and surface water samples from the San Francisco Bay.

Four goals were identified for this investigation:

- Delineate the extent and magnitude of hydrocarbon compounds in shallow soil and groundwater;
- Investigate potential source areas;
- Collect information regarding hydrogeological conditions at the site; and
- Evaluate whether an underground fuel storage tank is located on the former PM Ag facility (and if so, what is its condition).



3.0 Statement of Work

(Continued)

3.2 Health & Safety Plan

QEPI prepared a Health and Safety Plan (HASP) evaluating potential hazards that may be encountered during the investigation. The HASP is included in Appendix I.

3.3 Quality Assurance Project Procedures

QEPI personnel followed QEPI's standard quality assurance/quality control (QA/QC) procedures during this investigation. QEPI's QA/QC procedure is provided in Appendix J.

4.0 Site Characterization

4.1 Baseline Assessment

4.1.1 Ecological Assessment

A limited ecological assessment was conducted at the facility to determine if any critical habitats could potentially be impacted by site contaminants. The assessment included the following:

- A review of the USGS San Quentin California Quadrangle topographic map for features such as parks, preserves, and other special land use areas;
- Field inspections of the site to determine current land use; and
- A review of the National Wetlands Inventory (NWI) maps for the area.

Field inspections of the site indicate that the facility and adjacent surrounding properties are recreational and industrial properties. The former PM Ag facility and Dorward/Paktank Bulk Oil Storage parcels are currently not operating. Vacant buildings are present on each property and mobile trailers used by city-employed caretakers are present on the properties. The majority of the ASTs have been removed from the former Bulk Oil Storage parcels. All large ASTs have been removed from the PM Ag facility. Two small capacity steel ASTs and the water tank remain.

The former PM Ag facility is located on the coast of the San Francisco Bay. According to the National Wetlands Inventory electronic data coverage, provided in the EDR report, suspected wetlands are present along the coast of the San Francisco Bay and in the general vicinity of the former PM Ag facility. The wetlands are depicted on the Overview Map and Detail Map located in the EDR report included as Appendix B. The wetlands identified on these maps are based on aerial photographs only and are not officially classified as wetlands without being field-verified by a wetlands expert.

There are no major forest, prairie, or dune areas on or immediately adjacent to the facility. Small clusters of Eucalyptus trees are present on the former PM Ag facility and to the northeast. There are no hatcheries, nature preserves, fish and wildlife management areas, or otherwise designated resources on or immediately adjacent to the facility.



4.0 Site Characterization

(Continued)

4.2 Background Hydrogeological Assessment

4.2.1 Regional Geology

The former PM Ag facility is located in the Pacific Border Physiographic Province. This physiographic region is characterized by several coastal mountain ranges underlain by severely folded, faulted, and commonly metamorphosed marine and continental sediments (Planert & Williams, 1995). The facility is located on the peninsula of the Potrero-San Pablo Ridge, which is composed of the steeply dipping Franciscan complex. The bedrock consists of sandstone, shale, and conglomerate, which is approximately Upper Jurassic to Lower Cretaceous in age. Sea level fluctuations have created a complex sedimentary sequence of interfingering estuarine and alluvial fan deposits overlying the bedrock. The uppermost deposits consist primarily of imported fill of various materials and ages, from approximately three to 30 feet in depth. The fill materials overlie Bay Muds, consisting of silt and silty clay with abundant plant matter. The Bay Muds overlap onto the Franciscan bedrock and thicken bayward. The Hayward Fault bounds the site to the east and the projected San Pedro-San Pablo Fault bounds the site to the west.

4.2.2 Regional Hydrogeology

The former PM Ag facility is located on the San Francisco Bay in Contra Costa County. The facility is located in a region where the underlying bedrock exhibits low permeability. However, local bedrock units may contain productive aquifers. This area generally lacks sufficient basin-fill sediments or permeable consolidated rock to yield significant amounts of water in wells (Planert & Williams, 1995).

4.2.3 Site-Specific Geology

QEPI has advanced 37 Geoprobe® soil points and installed four groundwater monitoring wells on the former PM Ag facility and surrounding properties during QEPI's two investigations. Eighteen Geoprobe® soil points were advanced on and offsite during the December 2001 investigation. Additionally, two beach samples were collected. Nineteen Geoprobe® soil points and four monitoring wells were advanced on and offsite during the April 2002 investigation. Additionally, four water samples from the beach and two surface water samples from the San Francisco Bay were collected.

The general soil profile below the fill material on the former PM Ag facility and Bulk Oil Storage parcels include 10YR 3/3 dark brown to 10YR 6/6 brownish-yellow and 2.5Y 3/1 very dark gray to 2.5Y 6/6 olive yellow silt loam with layers of loam and sandy loam and

4.0 Site Characterization

(Continued)

sands/gravels to depths ranging from eight to 20 feet bgs. Cobbles were encountered in most borings. The cobbles limited sample recovery in the macrocore sampling device. Groundwater was encountered in generally coarser horizons at depths between 8 and 14.5 feet bgs. Refusal (bedrock) was encountered in several borings at depths ranging from two to 14 feet bgs. Several borings along Western Drive northwest of the PM Ag facility encountered refusal at approximately four feet bgs. Boring logs and well construction diagrams completed by QEPI for this investigation are provided in Appendix K. Soil boring and monitoring well locations are depicted on Figure 3.

4.2.4 Site-Specific Hydrogeology

4.2.4.1 December 2001 Investigation

Groundwater at the facility or on adjacent Bulk Oil Storage parcels was encountered in soil borings at depths ranging from approximately 8 feet to 14.5 feet bgs. Groundwater elevations were obtained through the use of 1-inch temporary piezometers installed in the boring locations where groundwater was encountered. The temporary piezometers were left in place for at least 24 hours before gauging to allow groundwater to enter the well screen. The wells were gauged with a water level meter.

Due to the small diameter of the temporary piezometers, QEPI could not use the larger-diameter oil/water interface probe to detect and measure the presence of separate-phase product. Product was observed in many of the wells; therefore, QEPI was not able to determine a corrected depth-to-water measurement based on product thickness. Groundwater elevations ranged from 3.85 feet above mean sea level (amsl) in B-1 to 8.68 feet amsl in B-3. Groundwater level measurements and elevations are provided on Table 1.

To determine groundwater flow direction, QEPI retained the services of Kister, Savio, & Rei, Inc. (KSR) to survey the ground and top of casing (TOC) elevations of the temporary well points. KSR used GPS equipment to determine the location of the soil borings for the purpose of preparing a site map from GIS software. Ground and TOC elevations and northing and easting values for each sample location are provided on Table 1.

The groundwater levels collected were the most accurate data obtainable without the proper installation and development of permanent monitoring wells. Therefore, the groundwater flow direction determined by QEPI is the best approximation with the information available and should not be viewed as exact. Based on the groundwater levels collected by QEPI and TOC elevations collected by KSR, groundwater flow was determined to be to the south and west toward the San Francisco Bay. A groundwater flow map is provided as Figure 4.



4.0 Site Characterization

(Continued)

4.2.4.2 April 2002 Investigation

Groundwater at the facility or on adjacent Bulk Oil Storage parcels was encountered in soil borings at depths ranging from approximately nine feet to 14.5 feet bgs. On May 7, 2002, QEPI retained the services of Sigma Prime Geosciences (SPG) to survey the recently installed soil borings and monitoring wells and to obtain groundwater elevations in the four monitoring wells using a water level meter. Groundwater elevations in the monitoring wells ranged from 2.55 feet amsl in MW-3 to 3.83 feet amsl in MW-2. No measurable product was present in the wells, however; a degraded, heavy hydrocarbon fuel was observed on the water level meter when gauging monitoring wells MW-1 and MW-3. Groundwater level measurements and elevations of the monitoring wells are provided on Table 2.

To determine groundwater flow direction, SPG surveyed the ground and TOC elevations of the groundwater monitoring wells. SPG used survey equipment to determine the location of the soil borings and monitoring wells for the purpose of preparing a site map. Ground and TOC elevations for each monitoring well are provided on Table 2. Ground elevations and northing and easting values for each Geoprobe® soil point are provided on Table 1.

Based on the groundwater levels and TOC elevations collected by SPG, groundwater flow is to the southwest toward the San Francisco Bay at an approximate hydraulic gradient of 0.0075. A groundwater flow map is provided as Figure 5.

4.2.4.3 Significance of the Seep Location

QEPI analyzed selected groundwater samples for salinity and total dissolved solids (TDS) for the purpose of profiling the groundwater across the facility with respect to salinity and TDS. As expected, the samples farthest from the Bay (B-31, MW-2, and MW-4) exhibited the lowest values for salinity and TDS, and the surface water samples (SW-1 and SW-2) exhibited the highest values. However, the sample collected from the seep location (BS-6A), and the BS-7 location both have values one to two orders of magnitude less than the surface water samples and the BS-3 sample. Moreover, monitoring well MW-1, located upgradient of the seep on Parcel #1 of the former PM Ag facility, exhibits low values similar to those at the seep location. QEPI assumes that the values from BS-3 are appropriate values for a beach location next to the Bay. The lower values observed at the seep location and the BS-7 location suggest an influx of fresh water in this location indicating the presence of a groundwater discharge point in the area. This is a reasonable assumption since the seep is also observed in the area.

There are anecdotal reports that the East Bay Municipal Utilities Department (EBMUD) had a leaking water main in this general area. However, a single underground water release of short duration would not be enough to flush the area of salinity and TDS; therefore, it is more reasonable to assume the presence of a groundwater discharge point.

4.0 Site Characterization

(Continued)

4.3 Sampling Methodology

The scope of work for QEPI's investigations included the installation of 37 soil borings, four groundwater monitoring wells, the collection of samples from six beach locations, the collection of two surface water samples, and two test pit excavations to determine the presence or absence of a UST. All sample locations are depicted on Figure 3. Boring designations B-30 and B-34 were not used during the investigation.

4.3.1 Sample Matrices

4.3.1.1 December 2001

Subsurface soil and groundwater samples were collected during this investigation. QEPI's boring locations are identified as B-1 through B-18. The sample locations on the beach are identified as BS-1 and BS-2. Table 3 summarizes all samples collected, matrices, and the analyses performed.

4.3.1.2 April 2002

Subsurface soil, groundwater, and surface water samples were collected during this investigation. QEPI's boring locations are identified as B-19 through B-39. Boring B-30 was not advanced during this investigation. Four attempts were made to complete boring B-34, however; refusal was encountered from two to four feet bgs at each location. The monitoring wells are identified as MW-1 through MW-4. The water sample locations from the beach are identified as BS-3, BS-4, BS-6, BS-6A and BS-7. The soil sample locations from the two excavations are identified as Exc-1 (E Bot), Exc-1 (W Bot), and Exc-2. The two surface water samples are identified as SW-1 and SW-2. Table 3 summarizes all samples collected, matrices, and the analyses performed.

4.3.2 Sample Locations

Sample locations for both investigations were determined based on identified potential areas of concern (PAOCs). PAOCs were determined from information provided by a PM Ag representative, Port of Richmond personnel, historical map reviews, field observations of past operational and storage areas, and results from previous investigations. PAOCs included material storage areas (on both the PM Ag and Paktank properties), a former UST area, and the beach, where the Port of Richmond observed an oil seep at minus tide. These areas were evaluated through the collection of soil, groundwater, and surface water samples. Sample locations from both investigations are illustrated on Figure 3.



4.0 Site Characterization

(Continued)

4.3.3 Sample Collection

For both of QEPI's investigations, sample containers, sample collection procedures, preservation methods, and documentation procedures were conducted in accordance with the QA/QC procedures provided in Appendix J.

Soil samples were collected continuously at four-foot intervals using a Geoprobe[®] equipped with a stainless steel sampler with an acetate liner. Each acetate liner was disposed after use. A new liner was placed in the sample core after it was washed using a non-phosphate soap and water solution and rinsed with deionized water.

Soil samples obtained at each sampling location were field classified by QEPI using the United States Department of Agriculture (USDA) soil classification system. Each soil sample was screened for total photoionizable vapors (TPV) (soil headspace) using a pre-calibrated Photovac Microtip HL-2000 photoionization detector (PID). Soil samples were placed in laboratory prepared pre-cleaned 4-oz. soil jars. The 4-oz. soil jar sample containers were completely filled to minimize loss from volatilization. Visual observations of the soil samples, such as staining, soil classification, and odors as well as the field screening results are recorded on QEPI's boring logs, which are provided in Appendix K.

Soil samples submitted to ZymaX Forensics and Envirotechnology (ZymaX) located in San Luis Obispo, California, for laboratory analysis were based on the following factors:

- Sample representing the highest TPV field screening result;
- Visual indication of soil staining and/or odors; and
- Unsaturated samples above the soil/groundwater interface and/or the bottom of the boring.

Groundwater was collected from the Geoprobe[®] sampling points using dedicated polyethylene tubing equipped with a foot valve. Groundwater samples were also obtained from the groundwater monitoring wells. A minimum of three well volumes were purged from each well. Groundwater samples were obtained from the wells by lowering a disposable polyethylene bailer into the well. Care was taken so that the bailer did not come into contact with the ground. The water was then placed into the appropriate pre-cleaned laboratory prepared sample bottles. Care was taken so that each container was filled to the top and no headspace (air bubbles) was present in any of the sample containers to be analyzed for TPH as gasoline and BTEX/methyl-tertiary-butyl ether (MTBE). For the collection of the surface water and beach water samples, each sample was collected by lowering the appropriate sample bottle into the water and slowly filling it. Care was taken not to dilute any preservatives in the sampling process.

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4.0 Site Characterization

(Continued)

Containers were properly labeled, sealed, and placed in a secured cooler on ice for transport to ZymaX under QEPI's chain-of-custody protocol. The chain-of-custody records accounted for each sample and provided the following information:

- Signature of collector
- Date and time of collection
- Sample type (e.g., soil)
- Identification of boring
- Number of containers
- Parameters requested for analysis
- Signature(s) of person(s) involved in the chain of possession
- Date and time of relinquished possession
- Problems encountered and any deviations from established sampling protocol

These sampling and sample management procedures were followed during both site investigations so that the data was of sufficient quality to assess potential impacts for this investigation. These procedures were employed to maintain the precision, accuracy, completeness, and representativeness of data generated during the course of the investigation.

4.3.4 Sampling Points

4.3.4.1 December 2001

4.3.4.1.a Soil Borings

During QEPI's investigation, 18 Geoprobe[®] soil points were advanced on and offsite by Vironex Environmental Services (Vironex) of San Leandro, California. A direct push Geoprobe[®] was used to advance QEPI's Geoprobe[®] soil sampling locations, identified as B-1 through B-18. Borings B-1, B-2, B-7, B-8, B-9, B-15, B-18 were advanced on the former PM Ag Parcel #1. Boring B-17 was advanced in Parcel #2. Borings B-3, B-4, B-11, B-12, B-13, and B-14 were advanced on the former Paktank property. Borings B-5, B-6, B-10, and B-16 were advanced near the edge of the Western Drive ROW near a rail line, north and upgradient of the former PM Ag facility. All sample locations are depicted on Figure 3.

Borings were advanced to depths between 9 and 20 feet bgs. Soil was continuously sampled at four-foot intervals with each soil interval field-classified and screened down to the bottom of the boring. Cobbles were encountered in most borings. The cobbles limited sample recovery in



4.0 Site Characterization

(Continued)

the macrocore sampling device making it difficult to obtain adequate sample volume from several sample intervals. Half of each soil sample was placed into a sealable plastic bag, and the ambient temperature of the soil sample was allowed to equilibrate prior to field screening. The soil samples placed in the bags were field screened for TPV (soil headspace) using a pre-calibrated PID. Visual observations of the soil samples, such as staining and odors as well as the field screening results are recorded on QEPI's boring logs, which are provided in Appendix K. QEPI's boring locations are depicted on Figure 3.

A temporary 1-inch piezometer was installed in several of the Geoprobe® soil point locations and left in place to be gauged for groundwater levels and to collect groundwater samples. A piezometer could not be installed in borings B-2, B-7, B-9, B-15, and B-18 due to the boring caving and preventing proper installation. Groundwater samples were collected from these borings; however, the groundwater level could not be determined. Groundwater was collected from the piezometers using dedicated polyethylene tubing equipped with a foot valve.

After groundwater samples were collected, each piezometer was removed and the boring location was abandoned by the driller using grout and a tremie-pipe. A representative from Contra Costa Health Department was onsite to observe the boring abandonment.

4.3.4.1.b Beach Samples

Samples BS-1 and BS-2 were collected on the beach. Sediment samples were collected from two pits that were hand-dug on the beach during a minus tide. Free product was observed at both locations. A mixture of water and product seeped into the pits and a sample was collected from BS-1 by lowering the appropriate sample bottle into the pit and slowly filling it. Care was taken not to dilute any preservatives. The locations of the sampling points are shown on Figure 3.

4.3.4.1.c AST Sample

QEPI collected a liquid sample from the square tank located near Boiler house #1 in an effort to determine the previous contents of the tank. This tank is identified as the square AST on Figure 2. Based on interviews with former employees, QEPI determined that this tank (referred to as the Promol® tank) was used to mix ingredients into small batches of fortified molasses. The heat pipes observed in the tank facilitated the mixing process. The water sample from this tank was designated 'boiler tank water' during the December 2001 investigation activities, before QEPI understood the tank's use.

4.0 Site Characterization

(Continued)

4.3.4.2 April 2002

4.3.4.2.a Soil Borings

During QEPI's investigation, 19 Geoprobe® soil points were advanced on and offsite by Vironex. A direct push Geoprobe® was used to advance QEPI's soil sampling locations, identified as B-19 through B-39. Borings B-22, B-23, B-25 through B-28, and B-36 were advanced on the former PM Ag Parcel #1. Borings B-20 and B-21 were advanced on Parcel #2. Borings B-29, B-31, B-32, B-33, B-37, B-38, and B-39 were advanced on the former bulk Oil Storage parcels. Borings B-24 and B-35 were advanced near the edge of the Western Drive ROW, near the rail line. Boring B-30 was not advanced during this investigation. Four attempts were made to complete boring B-34, however; refusal was encountered from two to four feet bgs at each location.

Borings were advanced to depths between four and 16 feet bgs. Refusal was encountered at several borings at depths ranging from four feet to 14 feet bgs. Soil was continuously sampled at four-foot intervals with each soil interval field-classified and screened down to the bottom of the boring. Cobbles were encountered in most borings. The cobbles limited sample recovery in the macrocore sampling device making it difficult to obtain adequate sample volume from several sample intervals. Half of each soil sample was placed into a sealable plastic bag, and the ambient temperature of the soil sample was allowed to equilibrate prior to field screening. The soil samples placed in the bags were field screened for TPV (soil headspace) using a pre-calibrated PID. The other half of the soil sample was placed in laboratory prepared pre-cleaned 4-oz. soil jars. Visual observations of the soil samples, such as staining and odors as well as the field screening results are recorded on QEPI's boring logs, which are provided in Appendix K. QEPI's boring locations are depicted on Figure 3.

Groundwater was collected from the Geoprobe® sampling points using dedicated polyethylene tubing equipped with a foot valve. After groundwater samples were collected, each boring location was abandoned by the driller using grout and a tremie-pipe. A representative from Contra Costa Health Department was onsite to observe the boring abandonment.

4.3.4.2.b Monitoring Wells

Monitoring wells were installed using a truck-mounted rotary hollow-stem auger rig. The wells were placed at depths between 14 and 17 feet bgs. The wells were installed with 10 feet of 10-slot PVC screen. A sand pack was installed in the borehole annulus to approximately one foot above the screen using #2/12 quartz sand. Bentonite pellets were placed on top of the sand pack. A bentonite slurry was installed using a tremie pipe to approximately two feet bgs. A 4-inch by 4-inch steel standpipe was placed in concrete to protect the well. A representative from

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(Continued)

Contra Costa Health Department was onsite to observe installation of the monitoring wells. Vironex developed each monitoring well approximately 48 hours after installation.

Soil samples were collected continuously using a Geoprobe® at five-foot intervals with each soil interval field-classified and screened down to the bottom of the boring. Half of each soil sample was placed into a sealable plastic bag, and the ambient temperature of the soil sample was allowed to equilibrate prior to field screening. The soil samples placed in the bags were field screened for TPV (soil headspace) using a precalibrated PID. The other half of the soil sample was placed in laboratory prepared pre-cleaned 4-oz. soil jars. Visual observations of the soil samples, such as staining and odors as well as the field screening results are recorded on QEPI's monitoring well completion diagrams, which are provided in Appendix K. The location of each monitoring well is depicted on Figure 3.

Groundwater samples were collected from each monitoring well. A minimum of three well volumes were purged from each well and placed in DOT-approved drums, which were staged onsite for later disposal. Groundwater samples were obtained from the wells by lowering a disposable polyethylene bailer into the well. Care was taken so that the bailer did not come into contact with the ground.

Two drums of soil cuttings and six drums of purge and development water were generated during this investigation. QEPI collected soil and groundwater samples from the drums and submitted them to the laboratory to be analyzed for the parameters requested by the disposal facility. Analytical reports and disposal documentation are provided in Appendix L.

4.3.4.2.c Surface Water Samples

Two surface water grab samples were collected from the San Francisco Bay. Surface water sample SW-1 was collected in the area where the oil seep was observed at minus tide. SW-2 was collected approximately 350 feet southeast of SW-1. Each sample was collected by lowering the appropriate sample bottle into the bay and slowly filling it. Care was taken not to dilute any preservatives. The locations of the sampling points are shown on Figure 3.

4.3.4.2.d Beach Samples

During the December 2001 investigation, sediment samples were collected from two pits that were hand-dug on the beach during a minus tide. Free product was observed at both locations. The TPH concentrations of these soil samples are the highest detected during either investigation. During the April 2002 investigation, water samples were collected from four additional beach locations. Five water samples were collected from small pits on the beach to delineate beach impacts on either side of QEPI's December 2001 beach sample locations. The beach samples were collected from small pits that were hand-dug at four locations on the beach. Water seeped into the pits and the samples were collected by lowering the appropriate

4.0 Site Characterization

(Continued)

sample bottle into the pit and slowly filling it. Care was taken not to dilute any preservatives. BS-6 and BS-6A were collected at the location of the oil seep that is observed at minus tide. Sample BS-6 was a sample of the free product observed at this location. Sample BS-6A was a water sample collected from underneath the product layer. Sample location BS-7 was collected at a location northwest of the seep to delineate impacts. The water sample collected from BS-3 did not contain any free product. Water collected from BS-4 contained small product globules and a slight sheen. Sample designation BS-5 was not used during this investigation. The locations of the sampling points are shown on Figure 3.

4.3.4.2.e UST Investigation

A primary goal of this investigation was to determine whether a source for the degraded heavy hydrocarbon fuel exists at the site. Anecdotal information suggested that a UST was present in the area between the garage and the boilerhouse #1. QEPI retained the services of Subsurface Environmental Corporation (SEC) to conduct test pits to determine the potential presence of a UST. QEPI directed SEC to excavate in this area and a flat piece of steel believed to be a tank bottom was discovered at a depth of approximately two feet bgs. It appeared that the UST had been properly cleaned, the top portion of the tank had been torch-cut and removed, and the bottom left in place and covered with soil and gravel. The bottom was approximately 30 feet long and eight feet wide. The metal was in good condition with no observed holes or pitting. The tank bottom was removed and additional excavation was performed at each end of the former tank location to evaluate the underlying soil. The soil was not visibly stained. Upon finding the UST bottom, QEPI contacted Contra Costa County Environmental Health Services Department to determine the proper actions to take. Contra Costa County personnel stated the UST was most likely properly closed prior to 1986 and instructed QEPI to collect two bottom samples and to submit the analytical results. Soil samples were collected from each end of the tank from a depth of approximately four feet bgs. The soil samples were analyzed for TPH as diesel. The soil was placed back into the excavation and the area was graded. A map depicting the area of soil excavation and sample location is provided as Figure 6.

Based on additional anecdotal information, QEPI directed the subcontractor to excavate in an area located on the southwest side of the garage, adjacent to a former rail spur that was used in the past for loading and unloading. A sediment trap was located just under the surface. The sediment trap was constructed of steel and did not have a top. It was approximately six feet long, two feet wide, and three feet deep. The metal was in poor condition. Piping connections were present at varying heights on either side of the trap. An oily sludge was present at the bottom of the trap. QEPI collected a sample of the sludge. The sediment trap and stained soil were removed from the excavation and staged on plastic pending approval for disposal. The area was excavated to an approximate depth of four to six feet bgs. An additional, more representative soil sample was collected for the purpose of profiling the material for disposal. This sample was collected from the staged soil pile. A bottom soil sample was collected from a

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(Continued)

depth of six feet bgs (two feet below the bottom of the excavation). The soil was profiled and disposed of at an offsite disposal facility as non-hazardous waste. Clean fill was placed in the excavation and a gravel cover was placed to bring the area up to grade. The former sediment trap location and sample location is provided on Figure 6.

5.0 Investigation Results

Impacts detected on and offsite in soil and groundwater include degraded heavy hydrocarbon fuel, various mixtures of alkylbenzenes, #2 fuel oil, and unidentified light oil. The laboratory identification of the various contaminants at each sampling location in soil and groundwater are illustrated on Figures 7 and 8 and summarized in Tables 4 and 5, respectively. Additional soil analytical results from the April 2002 investigation are provided in Table 6. Additional groundwater analytical results from the December 2001 and April 2002 investigations are provided in Tables 7 and 8, respectively. Laboratory comments and analytical report for the December 2001 and April 2002 investigations are included in Appendix M and Appendix N, respectively.

5.1 December 2001 Investigation Results

5.1.1 Field Screening Results

During this investigation, QEPI screened soil samples in the field for volatile vapors in the soil headspace with a pre-calibrated Photovac Microtip HL-2000 PID. At the majority of the boring locations, there was very little response on the PID to indicate that volatile organic compounds were present in the unsaturated soil. Elevated PID measurements were generally recorded at depths near the water table. However, soil samples from borings B-11 and B-12, located north/northeast of the former PM Ag facility on the former Bulk Oil Storage parcels, exhibited slightly elevated PID readings in unsaturated soil. Soil collected from B-6 and B-15 were not screened. A summary of PID readings for each boring is provided as Table 9. Additionally, PID readings are recorded on QEPI's boring logs included in Appendix K.

5.1.2 Soil Results

Eighteen Geoprobe® sampling points, (B-1 through B-18) and two shallow hand-dug pits (BS-1 and BS-2) were advanced on the former PM Ag facility and Bulk Oil Storage parcels and on the beach during this investigation. All soil samples collected during QEPI's investigation were submitted to Zymax for analysis of TPH in the C₁₀ to C₄₀ range using United States Environmental Protection Agency (USEPA) SW-846 Method 8015GC/MS. The soil sample collected from B-12 was also analyzed for VOCs and TPH as gasoline using USEPA SW-846 Method 8260B and GC/MS combination. Table 3 summarizes all samples collected, matrices, and the analyses performed.

Product was observed at the water table in several sample locations as a separate phase or as oil globules on the sample and/or acetate sample liner. Vadose-zone soil samples collected on the former PM Ag facility did not exhibit significant TPH concentrations. The analytical results indicate that the highest TPH concentrations observed during this investigation were located at beach sample locations BS-1 and BS-2 at 12,000 mg/kg and 4,000 mg/kg, respectively.



5.0 Investigation Results

(Continued)

The majority of soil samples collected during this investigation were identified as an alkylbenzene mix. The majority of the alkylbenzene-derived soil samples were located on the Paktank property upgradient of the PM Ag facility and in the Western Drive/railroad ROW (also upgradient of the PM Ag facility). Soil samples from borings B-3, B-10, B-11, B-13, and B-14, all on a former Bulk Oil Storage parcel, exhibited TPH concentrations of 190, 42, 240, 740, and 140 mg/kg, respectively, identified as an alkylbenzene mix. A soil sample collected at 2 feet bgs from B-3 was also determined to contain unidentified heavy oil. Soil samples from borings B-2 and B-15 located upgradient of the northern edge of the former PM Ag facility in the Western Drive ROW, exhibited TPH concentrations of 54 and 290 mg/kg identified as an alkylbenzene mix. Soil collected from boring B-16, which was on the northeast side of Western Drive, exhibited a TPH concentration of 44 mg/kg identified as an alkylbenzene mix.

Soil samples collected and analyzed for TPH from borings B-7, B-9, BS-1, and BS-2; on Parcel #1 of the former PM Ag facility, indicated the presence of degraded heavy hydrocarbon fuel at concentrations of 590; 180; 12,000; and 4,000 mg/kg, respectively. The sample collected from B-18, located in the Western Drive ROW was analyzed using GC/MS full scan. This sample was identified as a degraded heavy hydrocarbon fuel. TPH concentrations were not detected in soil collected from B-17, on PM Ag's former Parcel #2 and B-12 on the former Bulk Oil Storage property. Figure 7 depicts the identification of each sample collected. TPH in soil analytical results are provided on Tables 4 and 6.

A soil sample collected from B-12, located on a former Bulk Oil Storage parcel was analyzed for TPH quantified against gasoline. The sample exhibited a TPH concentration of 42 mg/kg. The sample does not resemble typical gasoline patterns and may represent volatile compounds of the alkylbenzene mix. The laboratory analytical report for the December 2001 investigation is provided as Appendix M.

5.1.3 Groundwater Results

During the investigation, groundwater samples were collected from several Geoprobe® sampling points. A temporary 1-inch piezometer was installed in several of the sampling locations and left in place to be gauged for groundwater levels and to collect groundwater samples.

The groundwater samples collected from B-1, located on Parcel #1 of the former PM Ag facility, and samples collected from B-2 and B-15, located in the Western Drive ROW, were identified as an alkylbenzene mix with TPH concentrations of 35,000; 7,700; and 3,600 ug/L, respectively. Samples collected from B-11 and B-14, located on the Bulk Oil Storage parcel were analyzed by GC/MS in full scan mode. These samples were identified as alkylbenzenes. Samples collected from B-10, B-12, B-13, B-16, and B-31, located on the former Bulk Oil Storage parcel, were also identified as an alkylbenzene mix with concentrations of 300; 200,000; 92,000; 4,300; and 130,000 ug/L, respectively.

5.0 Investigation Results

(Continued)

Groundwater samples collected from B-7, B-8, and B-9, located on Parcel #1 of the former PM Ag facility, exhibited TPH concentrations of 5,100; 19,000; and 6,600 ug/L, respectively, and were identified as a degraded heavy hydrocarbon fuel. The sample from boring B-18, located in the Western Drive ROW, was analyzed by GC/MS in full scan mode. The sample was identified as a degraded heavy hydrocarbon fuel. Figure 8 depicts the identification of each groundwater sample collected. TPH in groundwater analytical results are provided on Tables 5 and 7.

Selected groundwater and soil samples were analyzed for VOCs using USEPA SW-846 Method 8260B. Water samples from B-1, B-15, B-18 and soil sample B-12 contain only trace amounts of volatile organics. Water samples B-11 and B-14, located on a former Bulk Oil Storage parcel, contained BTEX and other aromatic compounds.

Water samples collected from B-11 and the boiler (Promol) AST and product samples from B-18 and beach sample BS-1 were analyzed using GC-Mass Spectrometry full scan methods. The chromatograms from these four samples show three different types of impacts:

- The sample collected from the boiler (Promol) AST contains a suite of hydrocarbons and sterols, which are biological compounds that could be derived from animal waste. Additionally, the boiler AST sample contains a relatively undegraded #6 fuel oil. However, based on the chromatograms, the #6 fuel oil is different than the degraded heavy hydrocarbon fuel observed on the PM Ag facility and the Bulk Oil Storage parcels.
- Samples collected from BS-1 and B-18 show very similar patterns, which are different than that of the boiler (Promol) AST and B-11. The pattern from BS-1 and B-18, suggests a degraded heavy hydrocarbon fuel that appears to be from the same source.
- The sample from B-11, located on the former Paktank property, shows an entirely different pattern than the other samples, which may represent a linear alkylbenzene industrial product.

The laboratory analytical report for the December 2001 investigation is provided as Appendix M.

5.1.4 Discussion of Findings

Based on water level gauging of the temporary piezometers, facility-specific groundwater flow is determined to be to the south and west toward the San Francisco Bay. A groundwater flow map is provided as Figure 4.



5.0 Investigation Results

(Continued)

Based on the analytical results and identification of soil and groundwater samples, impacts of alkylbenzene originating from the former Paktank property are migrating onto Parcel #1 of the former PM Ag leasehold.

According to a conversation with Mr. Alan Jeffrey from Zymax, degraded heavy hydrocarbon fuel can mask the presence of alkylbenzenes in the chromatograms because the range of possible constituents in degraded heavy hydrocarbon fuel is greater, and therefore covers up the presence of alkylbenzenes. Based on this information it is possible that alkylbenzenes are present in the groundwater under the PM Ag facility at greater concentrations than the analytical results indicate. It is also possible that alkylbenzenes are present in additional sampling locations that were not identified by the analytical results.

Due to the differences in the character of the chromatograms, it does not appear that the degraded heavy hydrocarbon fuel observed in BS-1 and B-18 (and across and upgradient of the site) is related to the #6 fuel oil detected in the boiler (Promol) AST sample.

QEPI does not believe the Promol tank is a potential source of site impacts to groundwater. The tank rests on an elevated concrete slab. There were no indications of staining around the tank. The tank appeared to be in good condition with no holes evident. The Promol tank has since been cut open and cleaned.

5.2 April 2002 Investigation Results

5.2.1 Field Screening Results

During the investigation, QEPI screened all soil samples in the field for volatile vapors in the soil headspace with a pre-calibrated Photovac Microtip HL-2000 PID. At the majority of the boring locations at the PM Ag facility, there was very little response on the PID indicating that volatile organic compounds were not present in the unsaturated soil. Elevated PID measurements were generally recorded at depths only near the water table.

Conversely, soil samples from borings B-31, B-37 and B-38, located on the north and south portions of the former Paktank Bulk Oil Storage facility, exhibited slightly elevated PID readings in unsaturated soil. Soil collected from B-39 was not screened due to a malfunction of the PID. A summary of PID readings for each boring is provided as Table 9. Additionally, PID readings are recorded on QEPI's boring logs and well construction diagrams included in Appendix K.

The soil was continuously sampled and described at all of the soil boring and monitoring well locations. Staining was not evident in any of the on-site, vadose zone soil samples. However,

5.0 Investigation Results

(Continued)

staining and/or free product were observed at the saturated zone at the majority of the on-site and off-site sampling locations.

5.2.2 Soil Analytical Results

All soil samples were analyzed for TPH in the C₁₀ to C₄₀ range using USEPA SW-846 Method 8015GC/MS. Selected soil samples were also analyzed for the carcinogenic polycyclic aromatic hydrocarbons (PAHs) using USEPA SW-846 Method 8270SIM and semi-volatile organic compounds (SVOCs) using USEPA SW-846 Method 8270C. Table 3 summarizes all samples collected, matrices, and the analyses performed.

As indicated in the previous section, product was observed at the water table in most sample locations as a separate phase or as oil globules on the sample and/or acetate sample liner. Vadose-zone soil samples collected on the former PM Ag facility did not exhibit significant TPH concentrations. The analytical results indicate that the highest TPH concentrations observed during this investigation were located at boring B-38, located along Western Drive northwest of the PM Ag facility. Analytical results also indicate that PAHs are not present at detectable concentrations in samples that were identified as alkylbenzene derivatives, except in MW-4. SVOCs were not detected in any of the soil samples submitted, likely due to the higher method detection limits.

The majority of soil samples were identified as degraded heavy hydrocarbon fuel. Several samples were identified as a mixture of degraded heavy hydrocarbon fuel and alkylbenzene. The majority of the samples identified as degraded heavy hydrocarbon fuel were located in the ROW of the main rail line (upgradient of the PM Ag facility) and at locations downgradient of the rail line on Parcel #1 of the PM Ag facility. Degraded heavy hydrocarbon fuel was also identified in B-37 on the north portion of the upgradient former Paktank tank farm, B-33 located along Western Drive northwest of the PM Ag facility, and B-31 on the former Paktank property.

Additionally, degraded and undegraded heavy hydrocarbon fuel was identified in the surface soil samples collected in borings B-20 (0-2 feet) and B-21 (0-2.5 feet), respectively. Soil samples collected from below these sample horizons and above the water table exhibited TPH concentrations below laboratory detection limits. Figure 7 depicts all soil sample locations identified as degraded heavy hydrocarbon fuel.

The majority of the alkylbenzene-derived soil samples were located on the Paktank property and in the Western Drive/railroad ROW (both areas upgradient of the former PM Ag Facility). Table 4 summarizes the TPH concentrations in soil and the identification of the contaminant based on the chromatograms. This table represents all soil samples collected during the first and second sampling events. Table 6 summarizes the TPH and PAH data for soil samples collected during the second sampling event. Four soil samples were analyzed for SVOCs in



5.0 Investigation Results

(Continued)

addition to PAHs. SVOCs were not detected in any of the samples and a summary table was not prepared. The laboratory analytical report for the April 2002 investigation is provided as Appendix N.

5.2.3 Groundwater Results

5.2.3.1 Soil Borings

QEPI attempted to collect groundwater samples at all boring locations. Groundwater was not encountered in many of the borings located at higher elevations and along Western Drive, northwest of the PM Ag facility. All of the groundwater samples collected from soil borings were analyzed for TPH in the C₁₀ to C₄₀ range. A groundwater sample was collected from boring B-29, located northwest of the PM Ag facility and adjacent to the Paktank administrative building. The laboratory was unable to complete the sample extraction. This may have been due to the presence of fine silt in the sample. This problem was not encountered at any other sampling location. Selected groundwater samples were analyzed for the PAHs. Additionally, groundwater from B-31 was analyzed for salinity using SM 2520B, and total dissolved solids (TDS) using EPA Method 160.1. Table 3 summarizes each water sample collected and the selected analyses.

Free product was observed at the water table at most sample locations. A separate phase formed on the water samples collected from borings B-25, B-26, B-27, and B-28. The analytical results reflect the analysis of the product formed on these samples rather than water. The analytical results indicate that the highest TPH concentration observed in groundwater during this investigation was located at boring B-31 on the former Paktank property.

The majority of the samples were identified as degraded heavy hydrocarbon fuel during this investigation. The majority of the samples identified as degraded heavy hydrocarbon fuel were concentrated around the railroad ROW (upgradient of the PM Ag facility) and at locations downgradient across Parcel #1 of the PM Ag facility. Degraded heavy hydrocarbon fuel was also identified in B-33 and B-38 located on the north portion of the upgradient former Bulk Oil Storage property. Groundwater samples identified as alkylbenzene were located primarily on the Bulk Oil Storage property upgradient of the PM Ag facility.

Analytical results from both investigations indicate migration of the alkylbenzene mix onto Parcel #1 of the former PM Ag facility from the former Bulk Oil Storage property. Analytical results also indicate that PAHs are not present at detectable concentrations in the samples that were identified as alkylbenzene derivatives. Figure 8 illustrates the contaminants identified at each groundwater sampling location. Table 5 summarizes the TPH concentrations in the water samples and the identifications of the contaminant based on the chromatograms. Tables 7 and 8 summarize analytical data for all water samples collected during both investigations. The laboratory analytical report is provided as Appendix N.

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5.2.3.2 Monitoring Wells

The monitoring well samples were analyzed for TPH in the C₁₀ to C₄₀ range, TPH as gasoline, TPH as diesel, and TPH as residual fuel using USEPA SW-846 Method 8015M, BTEX/MTBE using USEPA SW-846 Method 8260B, PAHs, SVOCs, salinity, and TDS. A duplicate sample was collected from MW-3. All monitoring well groundwater samples exhibited significant concentrations of TPH. The low concentrations of TPH as gasoline found in the samples probably reflect the lightest fuel oil fraction such as naphthalene. Groundwater collected from MW-3 and the MW-3 duplicate sample exhibited slightly elevated concentrations of toluene, ethylbenzene, and xylenes.

Two SVOCs, 2-methylnaphthalene and phenanthrene, were detected in the duplicate sample collected from MW-3 at concentrations of 10 and 12 ug/L, respectively. 2-methylnaphthalene was not detected in the MW-3 sample or the PAH analysis of the duplicate sample collected from MW-3. SVOCs were not detected in any of the other samples, likely due to the higher method detection limits; therefore a summary table was not prepared.

The sample from MW-1 was identified as alkylbenzene and an unidentified product. The samples collected from MW-2 and MW-3 were identified as degraded heavy hydrocarbon fuel, and the sample from MW-4 was identified as a mixture of alkylbenzene and degraded heavy hydrocarbon fuel.

5.2.4 Surface Water Results

Two surface water samples were collected to evaluate the water of the San Francisco Bay. The surface water samples were analyzed for TPH in the C₁₀ to C₄₀ range, PAHs, salinity, and TDS. Surface water sample SW-1 was collected from the Bay approximately 4 feet below the seep at minus tide. The sample exhibited a TPH concentration of 380 ug/L and was identified as degraded heavy hydrocarbon fuel. The TPH concentration of surface water sample SW-2, collected approximately 350 feet south of SW-1 near BS-4, was below the laboratory detection limit of 100 ug/L. Figure 8 depicts the contaminant identification at each sample location. Table 5 summarizes the TPH concentrations in the water samples and the identifications of the contaminant based on the chromatograms. Table 8 summarizes analytical data for all water samples collected during the second sampling event. The laboratory analytical report is provided as Appendix N.

5.2.5 Beach Sample Results

The water samples collected from the beach were analyzed for TPH in the C₁₀ to C₄₀ range, PAHs, salinity, and TDS. The BS-6/6A samples were collected from the location of the



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(Continued)

observed seep. Sample BS-6 was a sample of the free product observed at this location. Sample BS-6A, a water sample collected from underneath the product layer, exhibited a TPH concentration of 84,000 ug/L. The sample collected from BS-4 had a concentration of 1,000 ug/L TPH. A slight sheen was observed on this sample during collection. Samples BS-3 and BS-7 did not exhibit any significant TPH impacts. The highest TPH concentrations in water are observed either in samples collected from the beach, or samples collected from locations in close proximity to the beach (e.g., MW-3).

Samples BS-4, BS-6A and product sample BS-6 were identified as degraded heavy hydrocarbon fuel. Figure 8 illustrates the contaminant identified at each sample location. Table 5 summarizes the TPH concentrations in the water samples and the identifications of the contaminant based on the chromatograms. Table 8 summarizes analytical data for all water samples collected during the second sampling event. The laboratory analytical report is provided as Appendix N.

5.2.6 UST Investigation Sample Results

QEPI directed Excavation #1 in the area between the garage and the boilerhouse #1. A flat piece of steel believed to be a tank bottom was discovered at a depth of approximately 2 feet bgs. The tank bottom was removed and additional excavation was performed at each end of the former tank location to evaluate the underlying soil. The soil was not visibly stained. Soil samples were collected from each end of the tank from a depth of approximately 4 feet bgs. The soil samples were analyzed for TPH as diesel.

The sample collected from the west end of the excavation exhibited a TPH concentration of 21 mg/kg. The sample collected from the east end of the excavation exhibited a TPH concentration of 110 mg/kg. Visual observations and analytical data from bottom soil samples associated with the storage tank indicate that this structure does not represent a potential source of observed impacts at the site. The excavation, sample locations, and analytical results are depicted on Figure 6. Analytical results from the excavation is summarized on Table 10.

5.2.7 Sediment Trap Removal Sample Results

QEPI directed Excavation #2 in an area adjacent to a former rail spur located on the southwest side of the garage. The excavation revealed a sediment trap located just under the ground surface. An oily sludge was present in the bottom of the trap. QEPI collected a sample of the sludge. The sample exhibited a TPH concentration of 420 mg/kg and was identified as motor oil.

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The sediment trap and stained soil were removed from the excavation and staged on plastic pending approval for disposal. The area was excavated to an approximate depth of 4 to 6 feet bgs. An additional, more representative soil sample was collected for the purpose of profiling the material for disposal. This sample was collected from the staged soil pile. The sample exhibited a TPH concentration of 290 mg/kg and was identified as a mixture of motor oil and alkylbenzene. The soil was profiled and disposed as non-hazardous waste.

A bottom soil sample was collected from a depth of 6 feet bgs (2 feet below the bottom of the excavation). The concentration of this sample was 12 mg/kg TPH. Visual observations and analytical data from bottom soil samples associated with the sediment trap indicate that this structure does not represent a potential source of observed impacts at the site. The excavation, sample locations, and analytical results are depicted on Figure 6. Analytical results from the two excavations are summarized on Table 10. The laboratory data package is included in Appendix O.

5.2.8 Geotechnical Results

QEPI collected one soil sample at the monitoring well MW-4 location from a depth of 8-9 feet bgs for analysis of selected geotechnical parameters. This horizon was described in the field as fine to coarse sand with cobbles. The sample was described as gravel with a moisture content of 8.14%, a bulk density of 8.14 g/cc, an effective porosity of 35.9, and total organic carbon content of 2,050 mg/kg. Table 11 summarizes the lab data. The lab package is included in Appendix P.

5.2.9 Discussion of Findings

Based on the groundwater levels collected from the four monitoring wells on May 7, 2002, groundwater flow is to the southwest toward the San Francisco Bay, perpendicular to the site.

Field screening results from vadose-zone soil samples collected on the former PM Ag facility did not exhibit elevated measurements of VOCs. Additionally, staining was not evident in any of the on-site, vadose-zone soil samples. Soil collected from borings B-37 and B-38, located along Western Drive northwest of the PM Ag facility and B-31 located on the former Bulk Oil Storage property did exhibit elevated PID readings in unsaturated soil. However, staining and/or free product was observed in the saturated zone at the majority of the on-site and off-site sampling locations.

Product was observed at the water table in most soil boring locations, whether present as a separate phase or as oil globules on the sample and/or acetate sample liner. Vadose-zone soil samples collected on the former PM Ag facility did not exhibit significant TPH concentrations. The analytical results indicate that the highest TPH concentration in soil observed during this



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(Continued)

investigation was located at boring B-38, located along Western Drive northwest of the PM Ag site.

The majority of soil samples were identified as degraded heavy hydrocarbon fuel. Several samples were identified as a mixture of degraded heavy hydrocarbon fuel and alkylbenzene. The samples identified as degraded heavy hydrocarbon fuel were primarily located in the ROW of the main rail line (upgradient of former PM Ag operations) and at locations downgradient of the rail line on the PM Ag facility. Degraded heavy hydrocarbon fuel was also identified in B-37 on the north portion of the upgradient former Bulk Oil Storage property, B-33 located along Western Drive northwest of the PM Ag facility, and B-31 on the former Bulk Oil Storage property, north/northeast of the PM Ag site.

QEPI attempted to collect groundwater samples at all boring locations. Groundwater was not encountered in many of the borings located at higher elevations and along Western Drive, northwest of the PM Ag facility. A separate-phase product formed on the water samples collected from borings B-25, B-26, B-27, and B-28. The analytical results reflect the analysis of the product formed on these samples rather than water. The groundwater analytical results indicate that the highest TPH concentration observed in groundwater collected during this investigation was located at boring B-31 on the former Bulk Oil Storage property.

Five water samples were collected from small pits on the beach to delineate beach impacts on either side of QEPI's December 2001 beach sample locations. The beach samples were collected from small pits that were hand-dug at four locations on the beach, allowing water to infiltrate. The BS-6/6A samples were collected from the location of the observed seep. Sample BS-6 was a sample of the free product observed at this location. Sample BS-6A, a water sample collected from underneath the product layer, exhibited a TPH concentration of 84,000 ug/L. The sample collected from BS-4 had a concentration of 1,000 ug/L TPH. Free product identified as degraded heavy hydrocarbon fuel was detected in four boring locations along the upgradient edge of the PM Ag leasehold. The highest TPH concentrations dissolved in water identified as degraded heavy hydrocarbon fuel are observed in samples collected from the beach, samples collected from locations in close proximity to the beach (e.g., MW-3), and boring B-38 located northwest of the PM Ag leasehold.

The majority of the water samples were identified as degraded heavy hydrocarbon fuel. The samples identified as degraded heavy hydrocarbon fuel were primarily concentrated around the railroad ROW and at locations downgradient across the PM Ag facility. Degraded heavy hydrocarbon fuel was also identified upgradient in groundwater collected from B-38, located on the north portion of the former Bulk Oil Storage property. The sample collected from B-38 exhibited a concentration of 55,000 ug/L.

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The majority of the alkylbenzene-derived soil and groundwater samples were located on the Bulk Oil Storage property upgradient of the PM Ag facility and in the Western Drive/railroad ROW. However, the presence of alkylbenzene in soil and groundwater is documented on Parcel #1 of the former PM Ag facility. There are no records or files indicating that alkylbenzene was used at the PM Ag facility. However, according to documents obtained from the Contra Costa Health Services Department, in 1987 various materials containing large quantities of alkylbenzenes were stored by Paktank on the Bulk Oil Storage property. Based on the analytical results, identifications of soil and groundwater samples, groundwater flow direction, and historical documents; alkylbenzene impacts are migrating from the former Bulk Oil Storage property onto Parcel #1 of the former PM Ag facility.

An investigation of the historical use of the facility indicates that a 10,000-gallon UST, used to fuel a boiler, was once located on Parcel #1 between the rail siding and the boiler house. At the time of this investigation, Port of Richmond personnel suspected that this underground fuel storage tank remained on Parcel #1 between the garage and pump house. As part of the scope of work for this investigation, QEPI conducted a test pit excavation to determine the presence or absence of the suspect UST. QEPI found the bottom portion of a UST, at approximately two feet below ground surface, between the garage and the pump house. It appears the UST was properly cleaned, the top portion of the tank was torch-cut and removed, and the bottom of the tank was left in place and covered with soil and gravel.

In April 2002, the tank bottom was removed and additional excavation was performed at each end of the former tank location to evaluate the underlying soil. The soil was not visibly stained. The soil was placed back into the excavation and the area was graded. The sample collected from the west end of the excavation exhibited a TPH concentration of 21 mg/kg. The sample collected from the east end of the excavation exhibited a TPH concentration of 110 mg/kg. Visual observations and analytical data from bottom soil samples associated with the storage tank indicate that this structure does not represent a potential source of observed impacts at the site.

QEPI directed a second test pit excavation in an area adjacent to a former rail spur located on the southwest side of the garage. A sediment trap was located just under the surface. The sediment trap and stained soil were removed from the excavation and staged on plastic pending laboratory analysis and approval for disposal. The soil was profiled and disposed as non-hazardous waste. A bottom soil sample was collected from the excavation at a depth of six feet bgs (two feet below the bottom of the excavation). The concentration of this sample was 12 mg/kg TPH. Visual observations and analytical data from the bottom soil sample associated with the sediment trap indicate that this structure does not represent a potential source of observed impacts at the site.



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Two fuel-fired boilers were once present on the former PM Ag facility. One boiler was fueled by diesel and the other by light domestic fuel. There are no files or records indicating that heavy hydrocarbon fuel was used at the PM Ag facility.

QEPI advanced a total of 37 soil borings, four monitoring wells, and conducted two test pit excavations in and around Parcel #1 of the former PM Ag facility and did not observe any indications that might represent a source of the heavy hydrocarbon fuel observed at the site. However, degraded heavy hydrocarbon fuel is observed near the water table at almost every location across Parcel #1. Its presence near the water table indicates that the degraded heavy hydrocarbon fuel was transported via groundwater from an upgradient source.

Based on the results of QEPI's December 2001 and April 2002 investigations, it is QEPI's opinion that the impacts to groundwater observed across the PM Ag site are not the result of a release at the facility.

5.3 Identification of Contaminants

5.3.1 Overview

The majority of soil and groundwater samples were analyzed for TPH in the C₁₀-C₄₀ range using low-resolution GC/MS methods. Table 3 summarizes the samples collected and the associated analyses. The sample results were quantitated against a diesel standard.

Selected samples were analyzed using GC/MS full scan methods. This yields total ion chromatography and high resolution mass chromatograms used to examine homologous series of hydrocarbons including the normal paraffins, isoparaffins, methylcyclohexanes, C₃-alkylbenzenes, C₄-alkylbenzenes, aromatic hydrocarbons, steranes, and terpanes.

GC/MS chromatography utilizes a longer column that allows for improved separation of compounds. The analysis itself is run longer (100 minutes versus 30 minutes) to gain better resolution. These high-resolution chromatographic patterns are then compared to the low-resolution TPH C₁₀-C₄₀ chromatograms to make identifications. These are considered to be tentative identifications.

5.3.2 Identification of Contaminants

During the December 2001 investigation, four samples were analyzed in full scan mode: Boiler (Promol) Tank water, B-11 water, B-18 product, and BS-1 product. During the April 2002 investigation, five samples were analyzed in full scan mode: B-6 product, B-26 product, B-28 product, B-38 water, and MW-1 water. These samples were identified as follows:

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Contaminant Identification using GC/MS Full Scan Mode		
Sample Designation	Matrix	Identification
Boiler (Promol) Tank	Water	Undegraded #6 Fuel Oil
B-11	Water	Alkylbenzene
B-18	Product	Degraded Heavy Hydrocarbon Fuel
BS-1	Product	Degraded Heavy Hydrocarbon Fuel
BS-6	Product	Degraded Heavy Hydrocarbon Fuel
B-26	Product	Degraded Heavy Hydrocarbon Fuel
B-28	Product	Degraded Heavy Hydrocarbon Fuel
B-38	Water	Degraded Heavy Hydrocarbon Fuel
MW-1	Water	Degraded Heavy Hydrocarbon Fuel w/Alkylbenzene

The following discussion briefly summarizes the GC/MS full scan results and other analyses and documents how they were used to identify the low resolution C₁₀-C₄₀ TPH samples. A more comprehensive discussion is included with the laboratory report in Appendix M and Appendix N.

The full scan analyses identified three dominant types of product at the PM Ag and former Bulk Oil Storage sites. These include degraded heavy hydrocarbon fuel, an alkylbenzene mix, and undegraded #6 fuel oil. Each of these products exhibits a characteristic chromatogram. The degraded heavy hydrocarbon fuel chromatograms exhibit a gentle baseline increase. Peaks representing the n-alkanes would be present in undegraded samples. Those peaks would be missing or muted in degraded samples. The baseline on an alkylbenzene chromatogram may rise at a steeper angle and one or more distinct peaks may be present. The diesel standard was used to most closely approximate alkylbenzene.

The chromatograms from the GC/MS full scan analyses were compared to the low-resolution chromatograms from the TPH C₁₀-C₄₀ analyses. Based on this comparison, degraded heavy hydrocarbon fuel and alkylbenzene were identified in soil and groundwater on Parcel #1 of the PM Ag facility, in the Western Drive ROW upgradient of the PM Ag facility, and on the Bulk Oil Storage property to the north (in the 500 series AST farm area) and to the northwest, along the former rail line. The off-site locations where degraded heavy hydrocarbon fuel was observed in soil include B-18 and MW-2 in the Western Drive ROW and B-33 and B-37 to the northwest. The off-site locations where degraded heavy hydrocarbon fuel was observed in groundwater include B-18, MW-2 and MW-4 in the Western Drive ROW, and B-33 and B-38 to the northwest. Degraded #2 fuel oil was identified at the B-37 location, the only location where it was detected.

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Undegraded #6 fuel oil was identified in the water sample collected from the Promol (square AST) tank. The normal paraffins were present in this sample, and absent in all others. The absence of normal paraffins indicates that degradation has taken place. Undegraded #6 fuel oil was also identified in a surface sample collected from the B-21 boring location. The chromatogram for the Promol tank sample is different than for the degraded heavy hydrocarbon fuel. For this reason, the Promol tank is not considered to be a source of site impacts.

It should be noted that either product, at high concentrations, has the ability to mask or hide the presence of the other. However, in the absence of other contaminants at high concentrations, the degraded heavy hydrocarbon fuel chromatogram and the alkylbenzene chromatogram are different and easily recognized.

5.3.3 Recalculation of TPH Values

To obtain more accurate concentrations reflecting TPH as residual oil rather than TPH as diesel, ZymaX recalculated TPH C₁₀-C₄₀ concentrations for soil and groundwater samples identified as degraded heavy hydrocarbon fuel. When recalculated, each sample exhibited an increase in TPH concentrations. TPH was recalculated for the following samples.

- Soil: B-20 (0-2), B-21 (0-2.5), B-26 (5-7.5), B-27 (10-11), B-28 (10-10.5)
- Groundwater: SW-1, B-38, BS-4, BS-6A

5.3.4 Polynuclear Aromatic Hydrocarbons

Polynuclear Aromatic Hydrocarbons (PAHs) were analyzed in selected samples using USEPA SW-846 Method 8270SIM. The SIM method (single ion monitoring) yields greater resolution and allows for much lower detection limits. The soil results are summarized in Table 6 and the groundwater results are summarized in Table 8. In general, the PAHs are associated with the samples identified as degraded heavy hydrocarbon fuel. PAHs were not detected in samples identified solely as alkylbenzene.

In several instances, sample identifications could not be made. For example, the soil collected from boring location B-10 could not be identified, but the groundwater sample was identified as alkylbenzene. The soil samples from boring B-38 exhibited some of the highest TPH concentrations, but could only be identified, based on the low-resolution GC/MS analysis, as a mix of components. However, PAHs were detected in the samples indicating the presence of a heavy hydrocarbon, and the groundwater sample was identified as degraded heavy hydrocarbon fuel. At boring location B-39, the soil was identified as alkylbenzene and the groundwater sample contained an unidentified light oil; however, PAHs were detected in the

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sample. The groundwater sample from monitoring well MW-1 is characterized as alkylbenzene, but PAHs are also present in this sample, indicating the presence of a heavy hydrocarbon. The groundwater sample from monitoring well MW-4 is characterized as alkylbenzene and degraded heavy hydrocarbon fuel. PAHs are present in the sample. The soil sample from MW-4 is characterized as alkylbenzene; however, PAHs are also present in this sample.

SVOCs were also analyzed on four soil samples and five water samples. The purpose of the SVOC analysis was to evaluate an expanded suite of compounds: greater than those evaluated in the PAH SIM analysis. SVOCs were not detected in any of the soil samples submitted, likely due to the higher method detection limits. Two SVOCs, 2-methylnaphthalene and phenanthrene, were detected in the duplicate sample collected from MW-3 at concentrations of 10 and 12 ug/L, respectively. 2-methylnaphthalene was not detected in the MW-3 sample or the PAH analysis of the duplicate sample collected from MW-3. SVOCs were not detected in any of the other samples, likely due to the higher method detection limits; therefore a summary table was not prepared.

5.3.5 Potential for Mis-Identification as Diesel Fuel

The SSP samples were analyzed for TPH as gasoline, diesel, and motor oil (see Section 2.3). Many of the soil and groundwater samples exhibited higher concentrations in the diesel range. During a meeting with representatives of the RWQCB, it was suggested that impacts at the site were diesel impacts, rather than heavier hydrocarbon fuel impacts, and that those impacts might be related to an 8,000-gallon diesel UST that was removed from the PM Ag facility in 1990. ZymaX analyzed product samples from borings B-26 and B-28 in full scan mode. These sample locations are closest to the former diesel UST location. The full scan analytical results indicate the material is not related to diesel fuel for the following reasons.

- Diesel fuel has a narrower range of compounds than the heavier petroleum fuel observed at the site, and that is reflected in the chromatogram. Example chromatograms of fresh and degraded diesel are included in Appendix Q along with representative chromatograms from the PM Ag facility (Figure 1 through Figure 4). The diesel chromatograms end near the 60-65 minute retention time. The example chromatograms from the Pm Ag facility show there is significant material beyond the 60-minute retention time.
- Steranes and terpanes are present in the PM Ag and Bulk Oil Storage degraded heavy hydrocarbon samples. These are high-boiling compounds that would not be present in diesel because diesel fuels are distilled at lower temperatures.
- Pyrogenic polyaromatic hydrocarbons are present in the degraded heavy hydrocarbon samples present on the PM Ag and Bulk Oil Storage sites. These include



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benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)fluoranthene, benzo(a)pyrene, benzo(e)pyrene, and perylene. These compounds are not found in diesel fuels.

These three lines of evidence indicate that the material observed at the PM Ag and Bulk Oil Storage sites is not diesel fuel.

The 8,000-gallon diesel UST closure report prepared by CECI (see Section 1.1.3) indicated the presence of free product in the bottom of the excavation. CECI analyzed soil samples for TPH quantitated against a diesel standard. The samples were not fingerprinted or analyzed by GC/MS in full scan mode; therefore, the nature of the contaminant is unknown. QEPI believes that the product observed by CECI during the UST removal activities was the degraded heavy hydrocarbon fuel that is currently observed at the site.

5.3.6 Characteristics of Heavy Hydrocarbon Fuels

The degraded hydrocarbon fuel observed at the PM Ag and former Bulk Oil Storage sites is a thick, black, heavy oil. It is assumed to be a high-temperature petroleum distillate. It may be very similar to #6 fuel oil (Bunker C fuel) although the chromatograms indicate there are distinct differences. Undegraded Bunker C was observed in the Promol tank and in a surface soil sample collected from boring B-21. The product observed at all other locations is different and is characterized as a degraded heavy hydrocarbon fuel.

The degraded heavy hydrocarbon fuel is very sticky and stains readily. Its consistency, as observed at the seep location, is similar to a very thick syrup. At most sampling locations, staining was evident near the water table. At many sampling locations, product was observed, or oil globules were observed on the samples or sampling tools. At the B-38 boring location, the drill rods were observed to be covered with a thick petroleum product that was very difficult to remove. This was the only location where this was observed.

Generally, heavy hydrocarbon fuels are viscous (resistant to flow). However, cutting agents can be added to decrease the viscosity as potentially required by the end user. Fuel oil #2 was identified at boring B-37 located to the northwest of the PM Ag facility. The degraded heavy hydrocarbon fuel may also mobilize in the presence of alkylbenzene.

5.3.7 Age Dating

The location of the oil seep on the beach (and the site in general) contributes to and promotes rapid degradation. The diurnal tidal action causes the influx of oxygenated water on a regular basis. This type of environment should increase or enhance the rate of degradation. A relatively recent spill or release may appear older due to the aggressive degradation that occurs

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in this near-shore environment. Based on ratios of specific constituents present in the product samples, ZymaX believes the degraded heavy hydrocarbon fuel is no less than 10 years old and no greater than 40 years old.

PM Ag stopped using the boilers in Boiler House #1 and Boiler House #2 in the late 1950s (1960 at the latest). QEPI removed a tank bottom located between the boiler house and the garage during the April 2002 site activities. The tank bottom may have been associated with the boilers. Analytical results of soil samples collected from underneath the tank bottom indicate this was not a source of observed impacts to groundwater at the site.

The diesel UST was located next to Boiler House #2. This UST provided fuel to the corn syrup boiler in the boiler house through a small-diameter fuel line. The small diameter of the observed fuel line precludes the use of heavy fuel oil. It was also outfitted with an aboveground pump used to fuel on-site vehicles.

5.3.8 Characteristics of Alkylbenzene

Alkylbenzenes are single ring aromatic compounds with one or more saturated aliphatic side chains. Common compounds included in this class are toluene, ethylbenzene, xylene, and cumene. They are primarily derived from mid-temperature petroleum distillates. Linear Alkylbenzenes contain longer saturated aliphatic side chains, and act as surfactants/solvents and are used to manufacture detergents. QEPI believes the presence of alkylbenzene may contribute to the mobility of the degraded heavy hydrocarbon fuel.

5.3.9 Summary

The following is a summary of the analytical methods and contaminant characteristics.

- The majority of soil and groundwater samples were analyzed for TPH in the C₁₀-C₄₀ range. Selected samples were analyzed by GC/MS in the full scan mode. Hydrocarbon identifications are based on the detailed high-resolution chromatograms generated from the GC/MS full scan analyses.
- The materials identified both on and offsite include degraded heavy hydrocarbon fuel, alkylbenzene, undegraded #6 fuel oil, and other unidentified light to heavy oils.
- Degraded #2 fuel oil was identified in soil at the B-37 sampling location.
- Both alkylbenzene and the degraded heavy hydrocarbon fuel have the ability to mask the presence of the other if either is present at high concentrations.



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- TPH values were recalculated for those samples known to be impacted with degraded heavy hydrocarbon fuel. This resulted in an approximate increase in the TPH concentration by a factor of three.
- Soil and groundwater samples identified as degraded heavy hydrocarbon fuel also exhibited detections of PAHs. Samples identified as alkylbenzene did not exhibit PAH detections.
- The analytical data was examined to determine whether diesel fuel was a potential contaminant. The chromatograms indicate there is significant mass after the 60 minute retention time. The presence of steranes, terpanes, and pyrogenic polyaromatic hydrocarbons indicate the impacts are not related to diesel fuel. QEPI believes the product observed in the bottom of the UST excavation in 1990 was actually the product observed today, and not the diesel fuel associated with the UST.
- The degraded hydrocarbon fuel observed at the PM Ag and Bulk Oil Storage sites is a thick, black, heavy oil. It is assumed to be a high-temperature petroleum distillate. It may be very similar to #6 fuel oil (Bunker C fuel) although the chromatograms indicate there are distinct differences. Fuel oil #2 was observed at the B-37 location.
- The age of the degraded heavy hydrocarbon fuel is estimated to be greater than 10 years and less than 40 years.
- Alkylbenzene acts as a surfactant/solvent. QEPI believes that the degraded heavy hydrocarbon fuel may mobilize more readily in the presence of alkylbenzene.

6.0 RWQCB Meetings

PM Ag was advised by the RWQCB that they might be subject to an order requiring them to mitigate the oil seep observed on the beach adjacent to Parcel #1, and to plan and complete remedial activities on the adjacent Parcel #1 of the former PM Ag facility.

Representatives of PM Ag, Vopak, and the Port of Richmond have met with the San Francisco RWQCB on several occasions to discuss the results of investigations completed on each property. During a conference call on May 24, 2002, QEPI detailed the preliminary results of the two investigations. The following items were discussed.

- The groundwater flow direction was determined using temporary wellpoints in soil borings, and later, permanently-installed monitoring wells. The flow direction is to the southwest toward the Bay.
- The shallow unconsolidated deposits consist predominantly of silt loam with layers of loam and sandy loam. Gravel and cobbles were encountered in most borings. Groundwater was encountered in generally coarser horizons at depths between 8 and 14.5 feet bgs.
- QEPI removed a UST tank bottom and a sediment trap. The results of confirmation soil samples collected from underneath the tanks did not indicate the presence of a source for site impacts to groundwater.
- A degraded heavy hydrocarbon fuel and alkylbenzene were identified in groundwater.
- Field screening results and analytical results from shallow soil samples indicated that impacts are not present in the unsaturated soil across the PM Ag facility.
- The presence of degraded heavy hydrocarbon fuel near the water table indicates a historical release upgradient of the PM Ag facility.

A second meeting was held on June 10, 2002. In this meeting, SSP discussed the preliminary results of their investigation, and identified the following three discussion points associated with QEPI's May 2002 presentation.

- Stratigraphy
- The diesel UST as a potential source of impacts
- The Promol tank as a potential source of impacts

A third meeting was held on July 12, 2002. QEPI addressed the points raised by SSP and Vopak. The following is a summary of the PM Ag response.

- SSP suggested that the subsurface is coarser in nature than that described by QEPI. QEPI believes the subsurface has significant fine-grained horizons, especially at shallow depths, and gravel and cobble zones are also present. There does appear to be a general coarsening



6.0 RWQCB Meetings

(Continued)

with depth. Groundwater is encountered at depths between 8 and 12 feet bgs in coarse-grained horizons.

SSP also suggested that there might be preferred migration pathways causing the oil seep to manifest at that location. CECI suggested a preferred pathway in their closure report for the diesel UST. QEPI assumes that statement was made based only on over-excavation activities completed at the time of removal. QEPI believes the strata is coarse enough in the saturated zone to allow the groundwater to move in accordance with the hydraulic setting. QEPI has suggested, however, that the area of the seep may be a groundwater discharge point. This may be driving the accelerated movement of impacts in this area of the site.

- It was suggested that the diesel UST was a potential source of impacts, and that the impacts were related to diesel fuel. QEPI has documented that the heavy oil impacts detected in groundwater at the PM Ag facility are degraded heavy hydrocarbon fuel and mixtures of degraded heavy hydrocarbon fuel and alkylbenzenes. QEPI collected five product samples and four water samples that were analyzed by GC/mass spectrometry in full scan mode. This is a detailed chemical characterization used to identify primary contaminants.
- It was also suggested that the Promol tank was a potential source of impacts. PM Ag verified that this tank was used to mix small batches of molasses. Although undegraded #6 fuel oil and sterols were identified in the water sample collected from the Promol tank, they were present at very low concentrations. The chromatogram from this sample is unlike any other chromatogram from samples collected across the former PM Ag Parcel #1. The Promol tank rests on an elevated concrete slab. There was no indication of staining on the slab or the surrounding ground. The tank was not leaking, or it would not have been one-third full of water at the time of sample collection.

This report will be submitted and reviewed by the RWQCB prior to a site meeting scheduled for August 28, 2002. The purpose of this meeting is to visit the site and discuss potential outstanding issues prior to drafting the final order.

7.0 Summary

7.1 Summary of December 2001 Investigation

The objective of QEPI's December 2001 investigation was to determine the presence/absence of potential soil and groundwater impacts identified by a limited investigation conducted by the Port of Richmond. QEPI's investigation included both on-site and limited off-site activities, including soil and groundwater sampling, tank contents sampling, and surveying. Four primary goals were identified for this investigation:

- Evaluate whether an underground fuel storage tank is located onsite (and if so, what is its condition);
- Collect sufficient subsurface data to identify various fuel oils, solvents, and other organic compounds that may be impacting the groundwater in the area;
- Conduct a survey of the property boundaries and of the soil boring locations using GPS equipment for the purpose of preparing site maps for GIS software; and
- Prepare a report documenting the investigation findings and evaluating the potential origins of any identified soil and groundwater impacts.

An investigation of the historical use of the property indicates that a 10,000-gallon fuel oil UST, used to fuel a boiler, was once located on Parcel #1 between the rail siding and the boiler house. At the time of the investigation Port of Richmond personnel also suspected that this underground fuel storage tank remained on Parcel #1 in the vicinity of the warehouse/boiler house #1.

Two fuel-fired boilers were once present on the former PM Ag facility. One boiler was fueled by diesel and the other by light domestic fuel. QEPI installed boring B-9, near the suspected location of the UST. Free product was identified in B-9 at the water table; however, QEPI was unable to verify the presence or absence of the UST during this investigation.

An easement was granted to Dorward terminals in or about 1969 for two stanchions and pipelines connecting Dorward Facilities (former Paktank property) at their south tank farm to the existing facilities of the Standard Oil Co. and Chevron Chemical Co. at Point Orient. QEPI did not observe an oil pipeline on the property at the time of this investigation. Additionally, QEPI did not encounter any underground pipelines during the Geoprobe® investigation.

QEPI retained the services of Kister, Savio, & Rei, Inc. (KSR) to survey the ground and TOC elevations of the temporary well points. KSR used GPS equipment to determine the location of the soil borings for the purpose of preparing a site map from GIS software. Based on the groundwater levels collected by QEPI and TOC elevations collected by KSR, groundwater flow was determined to be to the south and west toward the San Francisco Bay.



7.0 Summary

(Continued)

Borings on the former PM Ag's northern edge, B-1 and B-2 depicted concentrations of the alkylbenzene mix found primarily on the former Bulk Oil Storage facility. The analytical results indicate that migration of the alkylbenzene mix onto the Parcel #1 of the former PM Ag facility from the former Paktank property has occurred.

During QEPI's investigation, sample locations were selected to determine the extent of both soil and groundwater impacts present onsite, and to determine if off-site migration had occurred. Impacts to the soil and groundwater from the degraded heavy hydrocarbon fuel were identified on the former PM Ag facility, in borings B-7, B-8, B-9, and B-18, as well as beach samples BS-1 and BS-2. All documents pertaining to the former 8,000-gallon UST on the former PM Ag facility refer to the contents as diesel fuel. Based on a conversation with Alan Jeffery, a Senior Chemist from Zymax, diesel fuel and degraded heavy hydrocarbon fuel appear very different in the chromatogram and would not likely be mistaken for one another. QEPI did not determine the origin of the degraded heavy hydrocarbon fuel found on the former PM Ag facility at the time of the December 2001 investigation. Based on this information, QEPI returned to the former PM Ag facility in April 2002 to conduct additional site investigation activities.

7.2 Summary of April 2002 Investigation

The objective of the April 2002 investigation was to identify a source of the degraded heavy hydrocarbon fuel on the PM Ag facility and to determine the nature and extent of those impacts. Soil borings, monitoring wells and test excavations were completed during this phase. Additionally, QEPI collected water samples from pits that were hand-dug on the beach and surface water samples from the San Francisco Bay.

- Based on groundwater level data collected on May 7, 2002, the groundwater flow direction is to the southwest toward the San Francisco Bay, perpendicular to the site shoreline.
- Field screening results from vadose-zone soil samples collected on the former PM Ag facility do not exhibit elevated measurements of VOCs. Additionally, staining was not evident in any of the on-site, vadose zone soil samples. However, staining and/or free product were observed at the saturated zone at the majority of the on-site and off-site sampling locations.
- Analytical results from vadose-zone soil samples collected on the former PM Ag facility do not exhibit significant concentrations of TPH or PAHs.
- QEPI advanced 19 soil borings and four monitoring wells in and around Parcel #1 of the facility and did not observe any indicators that might represent a source for either #6 fuel or alkylbenzene. However, degraded heavy hydrocarbon fuel is observed near the water table at almost every location across Parcel #1.

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Phase II Investigation - PM Ag, Richmond, CA

7.0 Summary

(Continued)

- Its presence near the water table indicates that the degraded heavy hydrocarbon fuel was transported from an upgradient location via groundwater.
- There are no files or records indicating that heavy hydrocarbon fuel was used at the PM Ag facility.
- Visual observations and analytical data from bottom soil samples associated with the underground storage tank and the sediment trap indicate that these structures do not represent potential sources of observed impacts at the facility.
- There are no records or files indicating that alkylbenzene was used at the PM Ag facility. However, according to documents obtained from the Contra Costa Health Services Department, in 1987 various materials containing large quantities of alkylbenzenes were stored by Paktank on the Bulk Oil Storage property.
- The presence of alkylbenzene is documented on Parcel #1 of the former PM Ag facility and the adjacent/upgradient former Bulk Oil Storage site. Alkylbenzene was also observed between the two sites along Western Drive and the railroad ROW. Based on the analytical results and identification of soil and groundwater samples, it appears that alkylbenzene impacts in groundwater are migrating from the former Bulk Oil Storage property onto Parcel #1 of the former PM Ag facility.
- The presence of alkylbenzene, a surfactant, may contribute to the mobilization of the degraded heavy hydrocarbon fuel.
- ZymaX Forensics Laboratory believes that the degraded heavy hydrocarbon fuel is no less than 10 years old and no greater than 40 years old. Operation of the site boilers ceased more than 40 years ago. A UST tank bottom, possibly associated with the boilers was discovered and evaluated. The location of the tank bottom does not represent a source of observed impacts to on-site groundwater.
- Other potential sources may be present that have not been adequately evaluated. Significant impacts to soil and groundwater were observed adjacent to the former PM Ag leasehold along the rail line and the Western Drive ROW (B-18, MW-2, and MW-4). Significant impacts were also observed northwest of the former PM Ag leasehold along the rail line (B-33, B-37, B-38, and B-39). However, no soil impacts were detected on the former PM Ag leasehold.
- A review of regulatory files for the adjacent former Paktank facility indicates a former release of an unknown hydrocarbon to the Bay, a release of PK Oil to the ground which then solidified and was returned to the AST (indicating a heavy oil), the presence of seepage from the hillside (unknown location), and a partially-buried tank car that was reportedly located on the beach (unknown location).

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Phase II Investigation - PM Ag, Richmond, CA



7.0 Summary

(Continued)

Based on the aforementioned points, it is QEPI's opinion that the impacts to groundwater observed at the former PM Ag facility site are not the result of a release at the facility, but rather, emanate from an upgradient source.

8.0 References

- Chips Environmental Consultants, Inc., 1990. Soil and Water Sample Analyses at Pacific Molasses Company, Point San Pablo, California.
- Chips Environmental Consultants, Inc., 1990. Soil Analyses at Pacific Molasses Company, Point San Pablo, California.
- Daily News, January 29, 1963. Dorward Enlarges Terminal Operations By New Acquisition
- Environmental Data Resources, Inc., 2001. The EDR Radius Map with GeoCheck[®], Inquiry Number: 704303.3s.
- Planert, Michael & John S. Williams. United States Geological Survey. 1995. Groundwater Atlas of the United States California, Nevada HA 730-B, Internet.
- Quality Environmental Professionals Inc., March 2002. Site Investigation Report.
- United States Department of Interior, 2002. National Atlas of the United States, Internet.
- United States Geological Survey (USGS), 1995. San Quentin, California Topographic Quadrangle Map



9.0 Signature Page

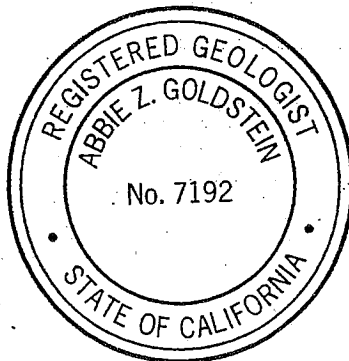
This report was prepared by Jennifer Sprunger, Project Manager and Robert Reynolds, Director of Hydrogeologic Services and reviewed by Bernard Lauctes, Director of Engineering. Abbie Goldstein of Sigma Prime Geosciences also reviewed the report. QEPI appreciates the opportunity to serve your environmental needs. If we can be of any additional service to you or if you have any comments or concerns, please do not hesitate to contact our office at (317) 351-4255.

Jennifer D. Sprunger
Project Manager

Robert K. Reynolds, LPG #1679
Director of Hydrogeologic Services

Bernard A. Lauctes, PE
Director of Engineering

Abbie Goldstein, RG #7192
California Registered Geologist
Sigma Prime Geosciences



***Report of Investigation
Former PM Ag Leasehold***

***Point San Pablo
Richmond, CA***

2 of 2

**Prepared for:
Seyfarth Shaw
San Francisco, CA**

Submitted by:



Quality Environmental Professionals, Inc.

August 21, 2002

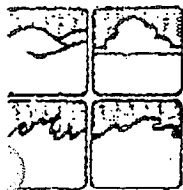


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CHIPS Environmental Consultants, Inc.

718 E. Evelyn Avenue
Sunnyvale, CA 94086

(408)736-1380

Fax (408) 736-0887

January 25, 1990

DSK3 756.DOC

Geert Niemeijer
Pacific Molasses Company
Point San Pablo
Richmond, California 94087

Subject: Soil and water sample analyses at Pacific Molasses Company, Point San Pablo, California.

Dear Mr. Niemeijer:

Attached is the analytical report for the two soil samples and one water sample that we recovered from the subject facility on 1-23-90.

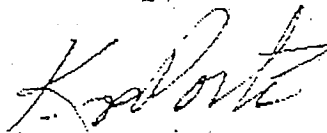
The samples were taken from the locations shown on the attached map at the depths indicated.

The soil samples were taken by driven pipe methodology in half inch diameter steel pipe and the samples were stored in zero headspace condition. The water sample was extracted by a pump from a temporary well at 10 feet below grade and stored in 250 ML glass bottles. All samples were sealed and chilled for transport to our laboratory. Full chain of custody was maintained and remains on file.

NOTE: We found unusually high levels of diesel contamination in all samples.

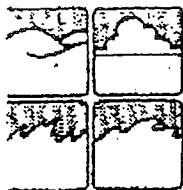
If you have any questions regarding this report, please feel free to contact us at your convenience.

Sincerely,



Kip Porter

EXHIBIT G



CHIPS Environmental Consultants, Inc.

716 E. Evelyn Avenue
Sunnyvale, CA 94086

(408)736-1380

Fax (408) 736-0887

DSK3 756.DOC

January 25, 1990

Geert Niemeijer
Pacific Molasses Company
Point San Pablo
Richmond, California 94807

REPORT OF ANALYTICAL RESULTS Cal DHS Certification # 252

Sample Description: Water Sample, 10' below grade zero
headspace

Sample Integrity: Received zero headspace, sealed & chilled

Sample ID: 003709

CECI ID: 003709

Date Sampled: 1-23-90

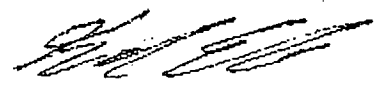
CECI Project #: 756

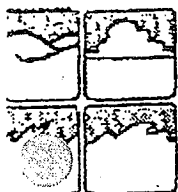
Date Received: 1-23-90

Date Analyzed: 1-24-90

Method	Concentration mg/Lt (PPM)	
		Det. Lim.
*Diesel	Approx. 10% by Volume	
EPA 8020 for BTEX		
Benzene	0.64	0.001
Toluene	0.90	0.001
Ethyl Benzene	1.4	0.001
Xylenes	0.5	0.001

*This water sample was so heavily contaminated with diesel that a thick layer floated at the surface. We poured the sample into a graduated beaker, allowed it to separate at room temperature, and were thus able to visually estimate the percent volume diesel at 10%. We confirmed that this floating layer was, in fact, diesel by gas chromatography.

Mark Chips: 
Laboratory Director



CHIPS Environmental Consultants, Inc.

718 E. Evelyn Avenue
Sunnyvale, CA 94086

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Fax (408) 736-0887

DSK3 756.Doc

January 25, 1990

Geert Neimeijer
Pacific Molasses Company
Point San Pablo
Richmond, California 94807

REPORT OF ANALYTICAL RESULTS Cal DHS Certification # 252


Sample Description: Field water blank, control sample

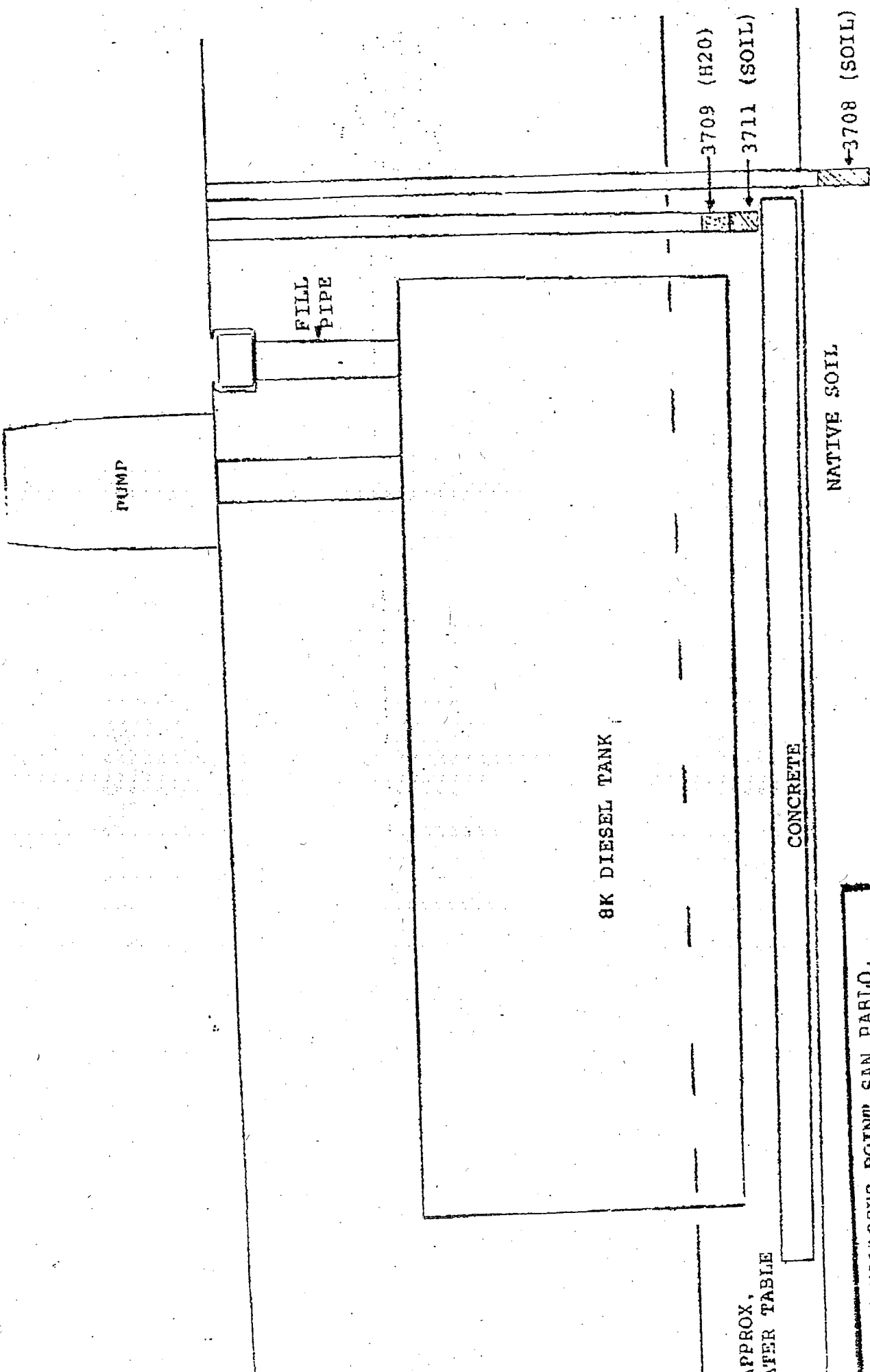
Sample Integrity: Received zero headspace, sealed & chilled

Sample ID: Field Blank
Date Sampled: 1-23-90
Date Received: 1-23-90
Date Analyzed: 1-24-90

CECI ID: 003090
CECI Project #: 756

Method	Concentration mg/Lt (PPM)	
		Det. Lim.
DHS TPH as Diesel	ND	1.0
EPA 8020 for BTEX		
Benzene	ND	0.001
Toluene	ND	0.001
EthylBenzene	ND	0.001
Xylenes	ND	0.001

Mark Chips: 
Laboratory Director



PUMP

FILL
PIPE

8K DIESEL TANK

3709 (H2O)

3711 (SOIL)

3708 (SOIL)

CONCRETE

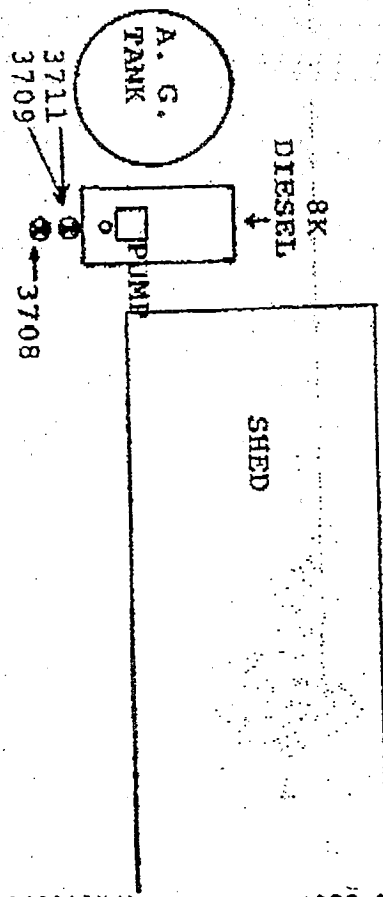
NATIVE SOIL

APPROX.
WATER TABLE

PACIFIC MOLASSES POINT SAN PABLO, RICHMOND, CA.	
Date: 1-23-90	Drawn by: K. PORTER
Scale: 3" = 10'	Revised: Page: 2
Legend	
CHIPS	

OFFICE

SHED



CIFIC MOLASSES POINT SAN PABLO,
DUMOND, CA.

01-23-90	Drawn by: K. FORTEK
10: 5 ⁰⁰ -10 ⁰⁰	Revised: Page 1.

September 10, 2007

Mr. Robert Reynolds
Secor International Inc.
8770 Guion Road, Suite B
Indianapolis, IN 46268

RE: Hydrocarbon Contamination at Port of Richmond Terminal 4

Dear Mr Reynolds,

I am familiar with the circumstances of this case, in particular, the nature of the hydrocarbon contamination at the Vopak North America Inc. leasehold and the United Molasses Company leasehold.

The hydrocarbon products on the United Molasses leasehold include linear alkylbenzenes similar to the material present on the Vopak leasehold, and a degraded petroleum product. This petroleum product is heavier than diesel or #2 fuel oil, and is most similar to #4 fuel oil. The product shows physical differences – primarily higher viscosity - than diesel samples that I have examined. The product is also chemically different, and contains constituents not found in diesel, including high boiling hydrocarbons and sterane and terpane biological markers.

All heavy fuel oils contain hydrocarbons in the diesel range. This is a feature of the composition of the crude oil from which they are refined, and of the refinery processes used to produce the fuel oils. In addition, heavy fuel oils, such as #6 fuel oil, are often diluted with diesel to reduce their viscosity for ease of transport and increased atomization in burners. So, the presence of hydrocarbons in the diesel range in the heavy fuel oil on the United Molasses leasehold is not unusual. However, if these diesel range hydrocarbons represented an influx of diesel fuel from a source on the on the United Molasses leasehold, I would expect to observe a variation in the hydrocarbon composition within the heavy oil plume, with diesel range hydrocarbons more prominent near the diesel source(s). In fact, the hydrocarbon compositions (fingerprints) of the heavy oil, in both product and soil samples, is remarkably uniform throughout the site.

In conclusion, the chemical evidence is consistent with linear alkylbenzenes and a fuel oil heavier than diesel on the United Molasses leasehold. There is no evidence of mixing of these products with diesel fuel from a source on the on the United Molasses leasehold.

Sincerely,



Alan Jeffrey, Ph.D.
Senior Geochemist



U.S. Environmental Protection Agency

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PAKTANK CORPORATION - RICHMOND

(06/013/071303125)

SIC:4491 -Marine cargo handling

Totals:	Annual Tons ----->					Daily Tons->	
	VOC	NOx	CO	SO2	PM10	VOC	NOx
	5	0	0	0	0	0.0	0.0

Source Classification Code Totals

SCC	Annual Tons ----->					Daily Tons->		SCC Description
	VOC	NOx	CO	SO2	PM10	VOC	NOx	
10200504		0		0				Ext Comb Boilers;Indus
40688801	2					0.0		Tran Petro Prod;;Fugit
40708497	3							Org. Chem. Fixed R.Tan
40708498	0							Org. Chem. Fixed R.Tan
Plant Totals	5							

Point Level

Pointid	Stackid	Annual Tons ----->					Daily Tons->		Blr.Cap MMBtu/hr	Heatinput MMBtu/hr
		VOC	NOx	CO	SO2	PM10	VOC	NOx		
1	9999	1								
105	1		0		0					
108	9999	2					0.0			
12	9999	0								
2	9999	0								
53	9999	0								
54	9999	0								
56	9999	2								
6	9999	0								
7	9999	0								
76	9999	0								
Plant Totals		5								

Segment/Process Level

Pointid	Stackid	Seg.	SCC	Annual Tons ----->					Daily tons->		Thruput M scc/yr
				VOC	NOx	CO	SO2	PM10	VOC	NOx	
1	9999	1	40708497	1							
1	9999	2	40708498	0							
105	1	1	10200504		0		0				
108	9999	1	40688801	2					0.0		
12	9999	1	40708497	0							
2	9999	1	40708497	0							
53	9999	1	40708497	0							
54	9999	1	40708497	0							
56	9999	1	40708497	2							
6	9999	1	40708497	0							
7	9999	1	40708497	0							
76	9999	1	40688801	0							
Plant Totals				5							

EXHIBIT I

Stack Level

Pointid	Stackid	Eff.Hgt (ft)	Height (ft)	Dia (ft)	Temp (°F)	Flow (cfs)	Velocity (ft/s)	Lat.	Long.
1	9999	25	25	2.48	135	1.06	0.22	37.9294	122.39
105	1	275	22	2.30	375	1462.48	352.00	37.9294	122.39
108	9999	23	15	2.91	119	66.31	9.97	37.9294	122.39
12	9999	25	25	2.48	135	1.06	0.22	37.9294	122.39
2	9999	25	25	2.48	135	1.06	0.22	37.9294	122.39
53	9999	25	25	2.48	135	1.06	0.22	37.9294	122.39
54	9999	25	25	2.48	135	1.06	0.22	37.9294	122.39
56	9999	25	25	2.48	135	1.06	0.22	37.9294	122.39
6	9999	25	25	2.48	135	1.06	0.22	37.9294	122.39
7	9999	25	25	2.48	135	1.06	0.22	37.9294	122.39
76	9999	23	15	2.91	119	66.31	9.97	37.9294	122.39

Plant Totals

Segment Level - Controls (Not reported for pollutants with no control)

Pointid	Stackid	Seg.	SCC	Pollutant	Control Eff.	Rule Eff.	Primary Control
---------	---------	------	-----	-----------	--------------	-----------	-----------------

SCC Descriptions

SCC	SCC Descriptions	SC
10200504	Ext Comb Boilers;Industrial;Distillate Oil;Grade 4 Oil	10
40688801	Tran Petro Prod;;;Fugitive Emissions;Specify in Comments Field	10
40708497	Org. Chem. Fixed R.Tanks;;;Phenols;Specify Phenol: Breathing Loss	10
40708498	Org. Chem. Fixed R.Tanks;;;Phenols;Specify Phenol: Working Loss	10

1996 NET Plant Detail Report 07/13/01

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Last updated on Wednesday, March 8th, 2006

URL: <http://www.epa.gov/ttn/naaqs/ozone/areas/plant/ca/pl2569xx.htm>

ReedSmith

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Two Embarcadero Center
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415.543.8700
Fax 415.391.8269

February 15, 2007

Via Electronic and U.S. Mail

Cecil Felix
Associate Engineering Geologist
California Regional Water Quality Control Board,
San Francisco Bay Region
1515 Clay Street
Suite 1400
Oakland, CA 94612

Re: **RWOCB File No: 2119.1231** (Terminal 4, Point of Richmond, Richmond, California)

Dear Cecil:

Thank you for taking the time to walk through the above-referenced property with representatives of PM Ag and the City of Richmond recently. This letter addresses some of the topics broached at the site walk-through; and answers some of your questions regarding the history of bulk oil storage at the former Dorward/Paktank/Vopak site and some corresponding history on the operations at the PM Ag site. We believe these documents support PM Ag's position that the 2001 oil seep occurred directly under the main storm water outflow discharge point at the former Paktank facility and that the timing of the release was directly linked to Vopak's removal of tanks and associated piping within a few months prior to the release being observed.

IV. SITE DESCRIPTION

Site Description and Location: The Port of Richmond Marine Terminal 4 ("Terminal 4") is located in Contra Costa County on Point San Pablo, near the northwest tip of Richmond, California. Terminal 4 is located on a peninsula, jutting into the San Francisco Bay. The City of Richmond lies to the East.

The Site consists of two subunits that are adjacent to Terminal 4: (1) the former Dorward/Paktank/Vopak (collectively "Vopak") leasehold occupying approximately 7.3 acres of land and consisting of several buildings, a former aboveground tank farm, and related structures; and (2) the

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EXHIBIT J

former Pacific Molasses/PM Ag leasehold occupying approximately six acres of land south of the Vopak leasehold and consisting historically of several structures and a smaller collection of tanks.

V. SITE HISTORY

Vopak Terminal Richmond, Inc./Paktank Corporation

1. Vopak Terminal Richmond, Inc. had several predecessors under various iterations of the names Dorward and Paktank. Historical ownership and land facility use is shown in the table below. See Exhibits A, B, C and D for documentation regarding the corporation and bulk oil storage history of Dorward and successors.

Date	Description
1917	Dorward & Sons Company ("Dorward") operates its bulk storage business on both subunits of the Site. In or possibly prior to 1936, Dorward ceases bulk storage operations on the parcel leased to Pacific Molasses.
1926	Sometime prior to 1926, Terminal 4 was used for, among other things, the handling of kerosene in cases, gasoline in steel drums, and asphalt in steel drums. (Ex. E, pg. 1).
1962-1963	Merger of Dorward and Sons Company and Richmond Oil Storage Terminals, Inc. results in the creation of Dorward Terminals, Inc. ("Dorward Enlarges Terminal Operation by New Acquisition" <i>Daily News</i> , Jan. 9, 1963, Ex. A). "The Richmond Oil Storage Terminal is adjacent to the Dorward and Sons facility and is connected by pipeline. Its activities have been concentrated on the handling of lubricating oils and petro-chemicals." (Ex. A). The company processes, blends, and packages lubricating oils, alcohols, petro-chemicals, and vegetable oils; in ninety storage tanks ranging in capacity from 2,000 to 550,000 gallons with a total capacity of over 6,000,000 gallons. (Ex. A).
Approx. 1974	Dorward & Sons Company merges into Dorward Terminals, Inc., with Dorward Terminals, Inc. being the surviving entity. The focus of the business is bulk storage of petroleum products. (Ex. B).
1975	Exhibit C includes some representative samples of materials stored at the Dorward facility, including but not limited to over 3.6 million gallons of diesel, over 90,000 gallons of gasoline, over 4.1 million gallons of toluene.
March 1, 1976	Exhibit D indicates that over 6.7 million pounds of

	methanol are stored at the Dorward facility. (Ex. D).
November, 1976	Paktank California, Inc. acquires Dorward Terminals. The company operates 107 storage, process, and mixing tanks for bulk liquids at the facility. The tanks store petroleum, petrochemicals, aromatics, alcohols and fatty acids, liquid fertilizers, phosphoric acid, animal, and vegetable oils.
October, 1977	Paktank California, Inc. changes its corporate name to Paktank Corporation- Richmond Terminal, Inc.
2000	An Army Corps of Engineers document issued in or after 2000 shows that the Paktank/Vopak facility was used for "receipt and shipment of liquid bulk products, including petroleum products, petrochemicals, chemicals and vegetable oils." A description of the facility during the USACE 2000 survey notes: "One 12-, one 10-, seventeen 6-, and one 4-inch pipelines extend from wharf to 79 storage tanks located at rear...." http://www.iwr.usace.army.mil/ndc/ports/pdf/ps/ps31.pdf at p. 37, last viewed, Feb. 12, 2007, attached as Ex. F).
May 18, 2000	Paktank Corporation-Richmond Terminal, Inc. changes its corporate name to Vopak Terminal Richmond, Inc.
Approx. December, 2000	Vopak Terminal Richmond, Inc. ceases its terminal operations.
Approx. Feb. 2001	Vopak completes removal of bulk storage tanks and associated pipelines.
Approx. July 2001	Release observed downgradient from tank farm.

2. Paktank stored assorted petroleum products and non-petroleum oils in various aboveground and underground tanks at the site. A 1995 Petroleum Storage Statement listed the facility's tank capacity as being 21,420,000 gallons in 92 separate tanks on site. Vopak maintained approximately 90 to 100 aboveground storage tanks at the site ranging in size from 24 barrels (1,000 gallons) to 93,000 barrels (3.9 million gallons).
3. Paktank self reported to the U.S. EPA that it utilized "Grade 4 oil" and distillate oil." (See Exhibit G, p.2).
4. There is also secondary source evidence that Paktank used #2 oil to fire a 350 BHP firetube boiler. (See Exhibit H, p.1).

5. Products handled by the Dorward/Paktank/Vopak entities include: phosphoric acid, tallow, espesol, toluene, xylene, diesel oil, cyclohexane, polybutane, cottonseed oil, safflower oil, tung oil, methanol, test gas, coconut oil, bulk chemical, alkylbenzenes and petroleum storage including polymers, toluene, alkylate 55, OFA 430, OFA 105, adogen 172M, aromatic 100, neutral oil 500, neutral oil 100, methyl metacrylate, sodium sulfide, P-560, and propylene tetramer. (See Exhibit I for documentation regarding the site inventory).
6. **Pipeline Construction:** In the 1960s, two 4" pipelines were constructed to receive alkene (dodecylbenzene) from the neighboring Chevron Refinery. Beginning in approximately 1988, the pipelines were used to transport propylene tetramer and polymers to and from Chevron; use of the pipelines ceased in the early 1990's.
7. **Stormwater Outfall:** Attached for your reference is the Paktank Corporation, Richmond Terminal, Spill Response Plan: Site Drainage (Ex. J). This map clearly shows how the storm water from the Paktank/Vopak site drains from upgradient of the former PM Ag site, through the 500 Series tank farm, to the "storm drain," apparent during the site walk through, and out into the San Pablo Bay. Also, the map details how the water funnels down Western Drive, again, draining through the storm drain, out to San Pablo Bay. Paktank's practice of intentionally draining storm water that accumulated in the tank farm into the storm drain that empties into San Pablo Bay, is clearly documented in the November 1985, Notice of Violation Letter issued by the U.S. Coast Guard. (see Ex. L; see also paragraph 13 of this letter for more information regarding the Coast Guard Report). The existing storm drain, terminating just above the beach north of the former PM Ag leasehold, replaced the older drain, which was encased in concrete, extending into the bay. Communications at the site walk through made apparent that the older drain leaked fairly extensively. Also apparent on the map is the "Earth Dike", approximately 6-10 feet deep, since filled in, that ringed the western edge of the Paktank 500 Series tank farm and drained north to a catch basin that led to the outfall at the beach. (Ex. J). The runoff flow directions are clearly marked on the Site Drainage map, documenting the path of water, through the earth dike, draining into the San Pablo Bay, at approximately the same location as the 2001 observed oil seep.
8. Vopak ceased its terminal operations at the property in December 2000. It demolished and removed all of its tanks and associated pipelines and distribution system by February 2001. The oil seep at issue in this investigation was first observed a few months after this demolition work, in July 2001. (See Exhibit K).

PM Ag Products

9. PM Ag Products, formerly known as Pacific Molasses Company, began leasing property in approximately July 1936, just south of and adjacent to what is now known as the City of Richmond's Marine Terminal 4. In 1991, Pacific Molasses changed its corporate name to PM Ag. In 2002, PM Ag became United Molasses Company.

10. PM Ag or its predecessor engaged in aboveground bulk storage, handling and distribution of commercial agricultural products. These products included coconut oil, lignin liquor, linseed oil, cane molasses, blackstrap molasses, beet molasses and tallow. Two fuel-fired boilers were used on the former PM Ag property to heat the molasses so that it could be pumped uphill to storage tanks. One boiler was fueled by diesel and the other by light domestic fuel. There is no evidence that PM Ag fueled boilers with the type of heavy hydrocarbon substance found in the subsurface under the Site.
11. PM Ag ended its leasehold and closed its business at the Site in August 1993.

The City of Richmond

12. On information and belief, the City of Richmond acquired the area covered by the Vopak and PM Ag leaseholds in 1973. At least some of the land was acquired from Parr-Richmond Terminals. The City is the current owner of the Site.

VI. SITE SPILL HISTORY AND PETROLEUM RELEASE INTO THE BAY

As you are aware, the former Paktank/Vopak facility has been cited numerous times for previous environmental violations. Some of the events raised and questioned at the walk-through are detailed below. These incidents make evident the long history of pollution by the upgradient bulk oil leaseholds.

13. In November 1985, Paktank received a Notice of Violation letter issued by the United States Coast Guard alleging oil was discharged into San Pablo Bay. The release was the result of intentionally draining storm water that had accumulated in what we believe was the 500 Series tank farm, directly across the road from and hydrologically upgradient of PM Ag. The storm water had mixed with an unknown volume of petro-chemicals present in the tank farm as a result of daily operations. In the attached Water Pollution Violation Report, part IX, Investigators Summary, it is recorded that "Paktank had opened a valve located below the berm and drained water onto the roadway where it ran down the road and into a storm drain which emptied in San Pablo Bay." (See Water Pollution Report, part IX, Ex. L). Further, on the "Enclosure" attached to the Coast Guard Notice of Violation, it is noted that it is "Paktank's common practice" to open the valve and release the accumulated rainwater "mixed with various petroleum chemicals" into the storm drain and out into the Bay. (See Notice of Violation, Enclosure, Ex. L). The location where the oil sheen was observed on the beach in July 2001 is within a few yards where this prior release at the Paktank facility was identified. (See Ex. K).
14. In October 1986, a Leaking Underground Storage Tank report confirmed the presence of hydrocarbon-impacted soils identified during the removal of two underground storage tanks at the Paktank facility. Soil sampling under the two tanks showed concentrations of diesel fuel as high as 930 mg/kg. The October 14, 1986 entry in the Underground Tank Program Form

observes the 6,000 gallon tank at issue is "badly deteriorated and with many holes." (See Underground Tank Program, 10/14/86 Entry, Ex. M). Further, on October 15, 1986, the entry identifies the 10,000 gallon tank as an "old railroad car," an event referenced at the property walk-through. (Underground Tank Program, 10/15/86 Entry, Ex. M). Table 1 of the soil sampling field notes attached to the same document states that on October 15, 1986, Sample D contained a "strong hydrocarbon odor." (See Table 1, Soil Sampling Field Notes, 10/15/86, Ex. M). On October 24, 1986, while investigating underground piping at 21" depth, "hydrocarbon stained pea gravel" and "pipes leaking" at the Paktank site were visible and documented. (See Engineering Science, Lithologic Description, Ex. M).

15. In June 1986, the Health Services Department, Environmental Health Division, sent Paktank a notice that the Paktank facility failed to comply with department requirements for underground tank owners. (Ex. N, pg. 1). Paktank's non-compliance included failure to obtain required permits to remove or abandon storage tanks, and failure to submit copies of tank tests completed in accordance with the department's prescribed methods. Attached to the notice is a Site Plan: Oil Contingency Plan map for Paktank. (Ex. N, pg. 5). Identified on this map is the "stormwater outfall for entire site" which is the same stormwater outfall detailed above in paragraph 7 of the Paktank section of this letter. Again, this map details the stormwater outfall for the Paktank property, which effectively drains through the storm drain and out into the San Pablo Bay, directly above the site of the observed 2001 oil seep.
16. A 1998 Underground Storage Tank Removal Inspection Form from the Paktank Corporation also references "an old partly buried tank car" which "has been open for years - one end rusted open - on beach." Further, the report states that this "tank contained some kind of heavy oil." No further information has been received regarding this buried tank car. (See Ex. O, Underground Storage Tank Renewal Inspection Form).
17. An unsigned, undated "Open Issues" Paktank Internal Memorandum is also attached, which references "[p]roduct seepage from the hillside" which "needs to be addressed." The memorandum fails to identify the source, which is evidently unknown at the time. No further information has explained this alarming memorandum. (Ex. P).
18. On October 26, 1999, an unknown amount of #2 fuel and #3 gas was released from the marine vessel Exercise Hudson at the Paktank facility. (See Ex. Q). While we do not know the exact location of the release, it is reasonable to assume the release occurred at Terminal 4, directly in front of the beach area where the July 2001 sheen was seen.
19. On July 26, 2001, Board staff received notification from the State Office of Emergency Services, describing a complaint regarding oil sheen observed along the Bay near the facility. (See Ex. K). The release was observable during an extremely low tide. Staff investigated the release on August 22, 2001, and observed a discharge of petroleum to the Bay emanating from the shoreline. The point of discharge was immediately adjacent to the Paktank/Vopak facility. Upon minor digging along the shoreline at the point of discharge, a dark oily petroleum product was observed near the ground surface.

20. On February 7, 2002, staff from the RWQCB, Department of Fish and Game OSPR, U.S. Environmental Protection Agency, and representatives from the City of Richmond and PM Ag Products observed an oil sheen on the shoreline of the PM Ag and Paktank/Vopak leaseholds. The discharge of petroleum was observed during low tide in the same proximate location as was first reported and observed in July and August 2001.
21. Other Incidents: Please see Appendix E of the August 21, 2002, Report of Investigation of the Former PM Ag Leasehold, RWQCB File No. 2119.1231, submitted by Quality Environmental Professionals. This Report was resubmitted to Cecil Felix at the RWQCB on November 28, 2006.

VII. Former PM Ag Leasehold

23. History of PM Ag Property

Attached for your reference are excerpts from a 1986 oral history transcript by John Parr Cox, of Parr Terminal, titled "Parr Terminal: fifty years of industry on the Richmond waterfront." (Ex. E). Parr Terminal purchased the Point San Pablo pier and the properties behind the dock, where both Dorward & Sons and the Pacific Molasses Company were concurrent tenants. (Ex. E, pg. 2). Mr. Parr Cox states that "the Pacific Molasses Company had a connection with the Matson Navigation Company, which of course had very involved interest in the Hawaiian Islands. The molasses would come in there in lots from 3,000 to 8,000 tons at a time from the Hawaiian Islands, where it was just held. It was not processed in any way..." (Ex. E, pgs. 2-3). This interview reiterates the history of the Pacific Molasses Company/PM Ag business and the fact that the property at issue was used merely for molasses storage.

24. Tank "A" Identified as Water Tank and Molasses Storage

During the site tour, you inquired regarding the prior contents of the cylindrical tank on the hill within the PM Ag leasehold, overlooking the water. This tank is designated "Tank A." Tank A was erected in 1926, holds 250 tons, and is 17' x 29' in size. (Ex. R, pg. 2). Tank A is identified as a "water tank" in the Vopak figures 2 and 3, which are attached to the QEPI Report of Investigation of the Former PM Ag Leasehold, dated August 21, 2002, Appendix H. The figures are also attached to this letter, Exhibit T, for your convenience. (Ex. S). In addition, PM Ag's historical documents detailing the PM Ag infrastructure over time show that Tank A was also used for storing molasses. (Please see Ex. R for identifying information).

25. Photographs of PM Ag Leasehold and Surrounding Properties

Attached also for your convenience are photocopies of pictures taken during the site walk-through of the present conditions of Point San Pablo, Terminal 4, leasehold. (See Ex. T).

Cecil Felix
February 15, 2007
Page 8

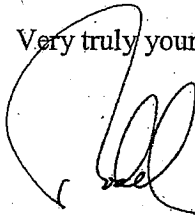
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VIII. Extensive PM Ag Investigation

PM Ag has devoted significant resources toward understanding, then investigating this site. The first phase of the investigation was initiated December 2001; the second phase completed in April 2002. The Report of Investigation of the Former PM Ag leasehold, dated August 21, 2002, documents the extensive investigation and analysis undertaken by PM Ag in an attempt to understand the contamination. PM Ag was always pro-active and chose to investigate their formerly-leased property rather than argue with the State. PM Ag is extremely confident in the results from its extensive investigation and feels that it shows the source of contamination at this site is upgradient of the former PM Ag leasehold.

We hope this letter has answered all the issues raised at the site walk-through and offer a clear history of the parties' contributions to the property. Please feel free to contact our office with any further questions, comments or concerns.

Very truly yours,



Todd O. Maiden

TOM:mm

Enclosures (20) (by U.S. Mail only)

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August 6, 2007

VIA ELECTRONIC AND U.S. MAIL

Cecil Felix
Associate Engineering Geologist
Cal. RWQCB, San Francisco Bay Region
1515 Clay Street
Suite 1400
Oakland, CA 94612

RE: **Point of Richmond, Terminal 4: Comments to Tentative Order for Site
Cleanup Requirements and Self-Monitoring Program**

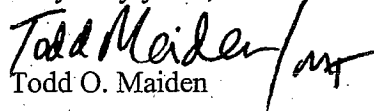
Dear Cecil:

Enclosed please find a copy of the Port of Richmond, Terminal 4, Tentative Order for Site Cleanup Requirements and the Self-Monitoring Program for Terminal 4, which incorporate comments from the United Molasses Company. For your convenience, the document is a redline version highlighting the specific changes recommended by the United Molasses Company.

As we have discussed, the United Molasses Company is disappointed to be named as a discharger in the Tentative Order. In light of the extensive investigation completed, the United Molasses Company feels they have clearly demonstrated that the source of contamination at this site is upgradient of the former United Molasses Company's leasehold. However, we will continue to cooperate with the Regional Water Quality Control Board in an effort to take appropriate response actions relating to impacts, if any, associated with the United Molasses Company.

Please feel free to contact our office with any further questions or concerns.

Very truly yours,


Todd O. Maiden

Enclosures

NEW YORK ♦ LONDON ♦ CHICAGO ♦ PARIS ♦ LOS ANGELES ♦ WASHINGTON, D.C. ♦ SAN FRANCISCO ♦ PHILADELPHIA ♦ PITTSBURGH ♦ OAKLAND

MUNICH ♦ ABU DHABI ♦ PRINCETON ♦ NORTHERN VIRGINIA ♦ WILMINGTON ♦ BIRMINGHAM ♦ DUBAI ♦ CENTURY CITY ♦ RICHMOND ♦ GREECE

reedsmith.com

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

TENTATIVE ORDER FOR SITE CLEANUP REQUIREMENTS

PORT OF RICHMOND
VOPAK NORTH AMERICA, INC.
UNITED MOLASSES COMPANY

PORT OF RICHMOND TERMINAL 4
RICHMOND, CONTRA COSTA COUNTY

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

1. **Site Location and Description:** Port of Richmond Terminal 4 (hereinafter referred to as the Site) is located in Contra Costa County on Point San Pablo, near the northwest tip of Richmond, California (see Figure 1). The Site is located on a peninsula, jutting into the San Francisco Bay. The City of Richmond lies to the east. The Site is owned by the Port of Richmond. At the site were two longtime former leaseholds adjacent to one another: the Vopak North America Inc. (Vopak) leasehold and the United Molasses Company leasehold. The Vopak leasehold consisted of approximately 9.5 acres of land used for a bulk oil storage facility and included a large quantity of aboveground tanks, related structures, and underground storage tanks. The United Molasses Company leasehold consisted of approximately six acres of land hydraulically downgradient and southwest of the Vopak leasehold used for bulk storage, handling, and distribution of agricultural products in aboveground, underground storage tanks, and related structures (see Figure 2).

2. **Site History: Vopak:** Vopak and its predecessors, which include Dorward & Sons and Paktak California, began operating a bulk oil storage facility on its Leasehold at the Site in 1917. Vopak and its predecessors stored products including, but not limited to, lubricating oils, diesel fuel, neutral oil 100 and 500, Grade 4 oil, distillate oil, No. 5 fuel oil, No. 6 fuel oil, jet fuel, polybutane, toluene, xylene, alkylbenzene, alcohols, animal and vegetable oils, liquid fertilizers, and phosphoric acids. The products were contained in approximately 100 aboveground storage tanks with a capacity ranging from 1000 to 3.9 million gallons, with a total capacity of 21,000,000 gallons. Vopak ceased operations in 2000, and demolished and removed the tanks by 2001. An undetermined number of underground storage tanks were also located at the Site. Two former pipelines transported alkene, propylene tetramer, and polymers from the neighboring Chevron Refinery to the Vopak facility. The pipelines were constructed, owned and operated by Chevron.

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United Molasses Company: United Molasses Company and its predecessors, PM Ag and Pacific Molasses Company, began operating on their Site leasehold in 1936. PM Ag and Pacific Molasses Company were engaged in aboveground bulk storage, handling, and distribution of commercial agricultural products. Products included coconut oil, lignin liquor, linseed oil, cane molasses, blackstrap molasses, beet molasses, and tallow. Two boilers were used until 1960 to heat and improve the transfer of products. The boilers were fired by diesel or light domestic fuel, which was contained in one aboveground storage tank (partially buried) of unknown size and one underground storage tank with a

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capacity of approximately 8,000 gallons. The 8,000-gallon tank was subsequently used to store diesel fuel for site vehicles until the mid-1980s. United Molasses Company removed one underground storage tank in 1990 and nine aboveground storage tanks in 1993, and ceased facility operations in 1993.

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3. Regulatory Status: This Site is currently not subject to a Board order. Site investigation has been required previously under Section 13267 of the Water Code.
4. Purpose of Order: This order establishes Site Cleanup Requirements (SCRs) for the Site, and includes provisions, specifications, tasks, and a schedule necessary to minimize the impacts of waste discharge into waters of the State. California Water Code Section 13304 authorizes the Board to issue orders requiring dischargers to cleanup and abate waste where the dischargers have caused or permitted waste to be discharged or deposited where it is or probably will be discharged into waters of the State and creates or threatens to create a condition of pollution or nuisance.
5. Named Dischargers: Vopak, United Molasses, and the Port of Richmond (collectively, Dischargers) are named as dischargers to this SCR. Although the dischargers dispute the relative contribution and extent of contaminants from their respective sites to the overall Site contamination, consistent with State Water Resource Control Board orders, it is the policy of the Board not to allocate or apportion responsibility between the dischargers named to SCRs.

Vopak: Vopak is named as a discharger because it and its predecessors have caused or permitted waste to be discharged into the waters of the State and create, or threatens to create, a condition of pollution or nuisance. Specifically: (a) Vopak and its predecessors operated a leasehold from 1917 to 2000 during which a large quantity of various chemicals were stored at Vopak's leasehold area; (b) Vopak is the successor in interest to those companies which operated a bulk oil storage facility at the Site; (c) chemicals consistent with Vopak's and its predecessor's operations (TPH as gas, diesel, and motor oil, alkylbenzene, benzene, ethylbenzene, xylene, and toluene) have been detected in soil and groundwater at the Site; (d) spill and leak reports have been filed for releases associated with the Vopak leasehold area of the Site, including a 1985 US Coast Guard notification of a discharge of oily storm water into the Bay from the Vopak tank farm, a 1986 leaking underground storage tank report, and a 1995 National Response Center report of an "unknown oil" discharging from the hillside below the Vopak tank farm; and e) technical reports document the presence of elevated concentrations of petroleum hydrocarbons originating from Vopak's former storage tanks. See also Finding No. 7 below.

United Molasses Company: United Molasses Company is named as a discharger because it and its predecessors caused or permitted waste to be discharged into waters of the State and create, or threatens to create, a condition of pollution or nuisance. Specifically: (a) United Molasses Company and its predecessors stored and used petroleum hydrocarbon fuel on its leasehold area of the Site from 1936 until the mid 1980s; (b) United Molasses Company is the successor in interest to those companies which stored and used petroleum hydrocarbon fuel at the Site; (c) chemicals consistent with United Molasses Company's operations (total petroleum hydrocarbons as diesel) have been detected in soil and groundwater at the Site; (however, analytical data indicates the petroleum hydrocarbons detected at the site are not related to diesel or light domestic fuels historically used at the site) and (d) one underground storage tank on the former United Molasses leasehold has been suspected as a source of release, as indicated by the presence of elevated levels of petroleum hydrocarbons as diesel in shallow soils in the vicinity of the tanks in

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underground storage tank removal reports and site investigation reports. See also Finding No. 7 below.

Port of Richmond: The Port of Richmond is named as a discharger because it is the current landowner of the Site. Additionally, the Port of Richmond was the owner of the Site since the early 1970's, a period during which Vopak and United Molasses Company and their predecessors leased the Site and caused the discharge of contaminants. The Port of Richmond acquired the Site from Vopak's predecessors.

6. **Site Hydrogeology:** The Site is located on the hilly peninsula of the Portrero-San Pablo Ridge, which is composed of the steeply dipping Franciscan complex. The bedrock is composed of sandstone, shale, and conglomerate. Past sea level fluctuations resulted in a complex sedimentary sequence of interfingering estuarine and alluvial fan deposits overlying the Franciscan Complex bedrock. The uppermost deposits, which consist of imported fill ranging from 3 to 30 feet deep overlies Bay Muds that consist of silt and silty clay with abundant plant matter. The Bay Muds overlie the Franciscan bedrock. The ground surface at the eastern/uphill portion of the Site consists of the Franciscan bedrock. The ground surface at the western/downhill portions of the Site consists of artificial fill. The Site is bounded by the Hayward Fault to the east and the San Pedro-San Pablo Fault to the west. Groundwater beneath the Site lies approximately 8-15 feet below the ground surface and generally flows to the west/southwest, and discharges into San Francisco Bay. The variable nature of the surface topography, subsurface materials, above and underground utilities and drainage structures poses challenges to predicting with absolute certainty the movement of surface water and groundwater at the Site and the migration of contaminants in water.

7. **Remedial Investigations:** Remedial investigations were conducted at the Site by Vopak, United Molasses Company, and the Port of Richmond in 2001-2003. The investigations were conducted to evaluate impacts of releases at the Site, including:

- Seepage of petroleum product observed along an area of the beach downgradient of the Vopak and United Molasses Company leasehold areas;
- Discharge of oil product in storm water, near the location of the beach seep
- Releases identified during tank removals at the Vopak and United Molasses sites;
- Releases associated with a EBMUD water line leak at the Vopak site; and,
- A release of petroleum hydrocarbon product from the Vopak site to Bay waters.

Site investigations included: soil sampling, trenching, and groundwater sampling throughout the Site. Potential source areas and areas along downgradient beach areas were also sampled. The investigations indicate that petroleum hydrocarbon contamination is present in large areas of the Site, including the Vopak tank farm area. The most severe contamination is free-phase petroleum hydrocarbon product in groundwater in the southern portion of the Site. This area is downgradient of the Vopak tank farm, underlies the former United Molasses Company leasehold, and extends to the beach area where the petroleum seeps were observed.

Free product is also present in the northern portion of the Site, downgradient of the Vopak storage tank farm. The documented releases of petroleum hydrocarbons at the Vopak leasehold and the occurrence of bulk quantities of the petroleum hydrocarbons downgradient of the Vopak bulk petroleum storage facilities indicates that Vopak is a source of petroleum hydrocarbons at the Site. Investigations also indicate that petroleum contaminants exist under the United Molasses Company leasehold and that a storage tank on the leasehold is a suspected source of petroleum hydrocarbon contamination at the

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Site. Because of the limited Site investigation data and the varying interpretations of the data, the vertical and lateral extent of soil and groundwater contamination originating from each source area, and the relative contribution from each source area to the overall Site contamination, cannot be conclusively determined.

8. **Interim Remedial Measures:** Interim remedial measures at the Site included removal of the sources and potential sources of contamination, including the underground and aboveground storage tanks and associated piping, at the former Vopak and United Molasses leaseholds. The beach seep, which occurred in 2001 when the storage tank facilities at the Vopak site were removed, ceased after an EBMUD water line leak running through the Vopak leasehold was repaired.
9. **Basin Plan:** The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Water Board and approved by the State Water Resources Control Board, U.S. EPA, and the Office of Administrative Law where required.

The potential beneficial uses of groundwater beneath the Site includes:

- a. Municipal and domestic water supply
- b. Industrial process water supply
- c. Industrial service water supply
- d. Agricultural water supply
- e. Freshwater replenishment to surface waters

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

The existing beneficial uses of waters of San Francisco Bay includes:

- a. Municipal and domestic supply
- c. Industrial process supply or service supply
- e. Water contact and non-contact recreation
- f. Wildlife habitat
- g. Cold freshwater and warm freshwater habitat
- h. Fish migration and spawning
- i. Navigation
- j. Estuarine habitat
- k. Shellfish harvesting
- l. Preservation of rare and endangered species

10. **State Water Board Resolution No. 92-49:** State Water Board Resolution No. 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304," applies to this cleanup and requires cleanup and abatement of the effects of a discharge in a manner that promotes attainment of either background water quality, or the best water quality which is reasonable if background levels of water quality cannot be restored. Cleanup to levels other than background must be consistent with the maximum benefit to the people of the State, not unreasonably

affect present and anticipated beneficial uses of such water, and not result in water quality less than prescribe in the Basin Plan and policies adopted by the State and Region Water Boards. This Order does not yet prescribe clean-up levels, but requires the dischargers to investigate whether cleanup to background levels is feasible, as described in Provision B.5.

11. **Preliminary Cleanup Goals:** The dischargers will need to make assumptions about future cleanup standards for soil and groundwater, in order to determine the necessary extent of remedial investigation, interim remedial actions, and the draft remedial action plan. Pending the establishment of Site-specific cleanup standards, the following preliminary cleanup goals shall be used for these purposes:
 - a. **Groundwater:** Applicable water quality objectives (e.g. lower of primary (toxicity) and secondary (taste and odor) maximum contaminant levels, or MCLs) or, in the absence of a chemical-specific objective, equivalent drinking water levels based on toxicity and taste and odor concerns.
 - b. **Soil:** Applicable screening levels as compiled in the Board's draft Environmental Screening Levels (ESLs) document or its equivalent. Soil screening levels are intended to address a full range of exposure pathways, including direct exposure, indoor air impacts, nuisance, and leaching to groundwater.
12. **Cost Recovery:** Pursuant to California Water Code Section 13304, the dischargers are hereby notified that the Board is entitled to, and may seek reimbursement for, all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order.
13. **CEQA:** This action is an order to enforce the laws and regulations administered by the Board. As such, this action is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15321 of the Resources Agency Guidelines.
14. **Public Notice:** The Board has notified the dischargers and interested agencies and persons of its intent to under California Water Code Section 13304 to prescribe site cleanup requirements for the discharge, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
15. **Public Hearing:** The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the Dischargers shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

1. The discharge of wastes or hazardous substances in a manner which will degrade water quality or adversely affect beneficial uses of waters of the State is prohibited.
2. Further significant migration of wastes or hazardous substances through subsurface transport to waters of the State is prohibited.

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

B. TASKS

1. **WORKPLAN TO EVALUATE CURRENT SITE CONDITIONS**

COMPLIANCE DATE: January 1, 2008

Submit a workplan, acceptable to the Executive Officer, to evaluate current surface water and groundwater conditions at the Site, including, at a minimum: the extent of free and dissolved petroleum hydrocarbon product, the pathways and migration rates of contaminants in surface water, groundwater, soil, and bedrock, and, the current conditions of beach areas where historic releases have been observed. The workplan shall provide for resampling of all existing groundwater monitoring wells. The workplan shall specify investigation methods and a proposed time schedule for implementation of the workplan.

Comment [A1]: PMA's suggestion that this date be pushed forward to 2007 is not consistent with the requirements of this document and proposes an January 1, 2008 deadline.
Deleted: November 1, 2007

2. **CURRENT SITE CONDITIONS REPORT**

COMPLIANCE DATE: May 1, 2008

Submit a technical report, acceptable to the Executive Officer, documenting completion of necessary tasks identified in the Task 1 workplan. The report shall describe the current Site conditions based on an evaluation of available site data. The report shall also propose additional investigation and a time schedule for implementation, if necessary, to provide additional data necessary to define the extent of surface water and groundwater impacts at the Site.

3. **WORKPLAN FOR INTERIM REMEDIAL ACTIONS**

COMPLIANCE DATE: July 1, 2008

Submit a workplan, acceptable to the Executive Officer, which proposes interim remedial actions for the Site. The interim remedial actions shall include the removal of free petroleum product from groundwater, elimination and prevention of the discharge of free or dissolved product into the bay, and remediation of any remaining impacts to beach areas and bay waters. The workplan shall specify the methods of remediation and include a proposed time schedule.

4. **REPORT DOCUMENTING IMPLEMENTATION OF INTERIM REMEDIAL ACTIONS**

COMPLIANCE DATE: December 1, 2008

Submit a technical report, acceptable to the Executive Officer, documenting implementation of interim remedial actions proposed in the Task 3 workplan. The report shall describe any variation with the interim remedial actions proposed in Task 3.

5. **WORKPLAN FOR FINAL REMEDIAL MEASURES**

COMPLIANCE DATE: April July 1, 2009

Submit a technical report, acceptable to the Executive Officer, evaluating the performance of interim remedial measures on both free and dissolved groundwater and surface water contamination at the Site. The report shall propose final cleanup plan which includes, at a minimum, the following:

- a. Results of any additional investigation
- b. Evaluation of the installed interim remedial actions
- c. Risk assessment for current and post-cleanup exposures
- d. Proposed numeric Site-specific final cleanup standards for soil and groundwater
- e. Feasibility study evaluating and proposing final remedial actions
- f. Implementation tasks and time schedule

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

Item e shall consider the preliminary cleanup goals for soil and groundwater identified in finding 11 and shall address the attainability of background levels of water quality (see finding 10).

6. **SITE MONITORING PLAN**

COMPLIANCE DATE: December 1, 2007

Submit a workplan, acceptable to the Executive Officer, proposing a Site monitoring plan which will provide hydrological and water quality data necessary to evaluate Site conditions and the performance of interim and final remedial actions. The workplan shall specify wells to be monitored, monitoring frequency, and analytical methods.

Comment [A2]: PVA suggests that this date be pushed forward commensurate with execution of this document and proposes a December 2007 deadline.

Deleted: October 1, 2007

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

C. **PROVISIONS**

1. **No Nuisance:** The storage, handling, treatment, or disposal of polluted soil or groundwater shall not create a nuisance as defined in California Water Code Section 13050(m).
2. **Good Operation and Maintenance (O&M):** The dischargers shall maintain in good working order and operate as efficiently as possible any facility or control system installed to achieve compliance with the requirements of this Order.

3. **Cost Recovery:** The dischargers shall be liable, pursuant to California Water Code Section 13304, to the Board for all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order. If the site addressed by this Order is enrolled in a State Board-managed reimbursement program, reimbursement shall be made pursuant to this Order and according to the procedures established in that program. Any disputes raised by the dischargers over reimbursement amounts or methods used in that program shall be consistent with the dispute resolution procedures for that program.
4. **Access to Site and Records:** In accordance with California Water Code Section 13267(c), the dischargers shall permit the Board or its authorized representative:
 - a. Entry upon premises in which any pollution source exists, or may potentially exist, or in which any required records are kept, which are relevant to this Order.
 - b. Access to copy any records required to be kept under the requirements of this Order.
 - c. Inspection of any monitoring or remediation facilities installed in response to this Order.
 - d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the dischargers.
5. **Self-Monitoring Program:** The dischargers shall comply with the Self Monitoring Program as attached to this Order and as may be amended by the Executive Officer.
6. **Contractor / Consultant Qualifications:** All technical documents shall be signed by and stamped with the seal of a California registered professional geologist, a California certified engineering geologist, or a California registered civil engineer.
7. **Lab Qualifications:** All samples shall be analyzed by State-certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/ quality control (QA/QC) records for Board review. This provision does not apply to analyses that can only reasonably be performed on-site (e.g. temperature).
8. **Document Distribution:** Copies of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the following agencies:
 - a. City of Richmond, Richmond Community Redevelopment Agency
 - b. Contra Costa County, Department of Environmental Health

The Executive Officer may modify this distribution list as needed.

9. **Reporting of Changed Owner or Operator:** The dischargers shall file a technical report on any changes in Site occupancy or ownership associated with the property described in this Order.
10. **Reporting of Hazardous Substance Release:** If any hazardous substance is discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, the dischargers shall report such discharge to the Board by calling (510) 622-2369 during regular office hours (Monday through Friday, 8:00 to 5:00).

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

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

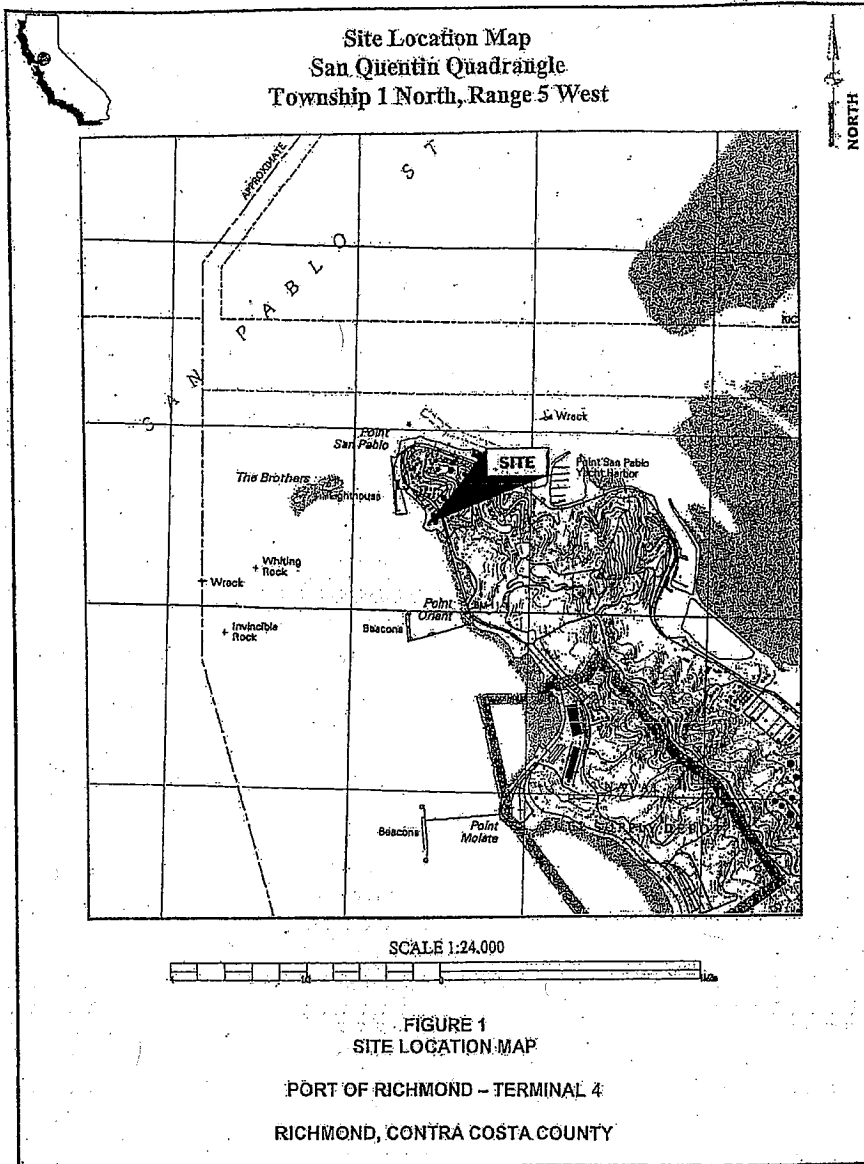
11. **Periodic SCR Review:** The Board will review this Order periodically and may revise it when necessary. The dischargers may request revisions and upon review the Executive Officer may recommend that the Board revise these requirements.

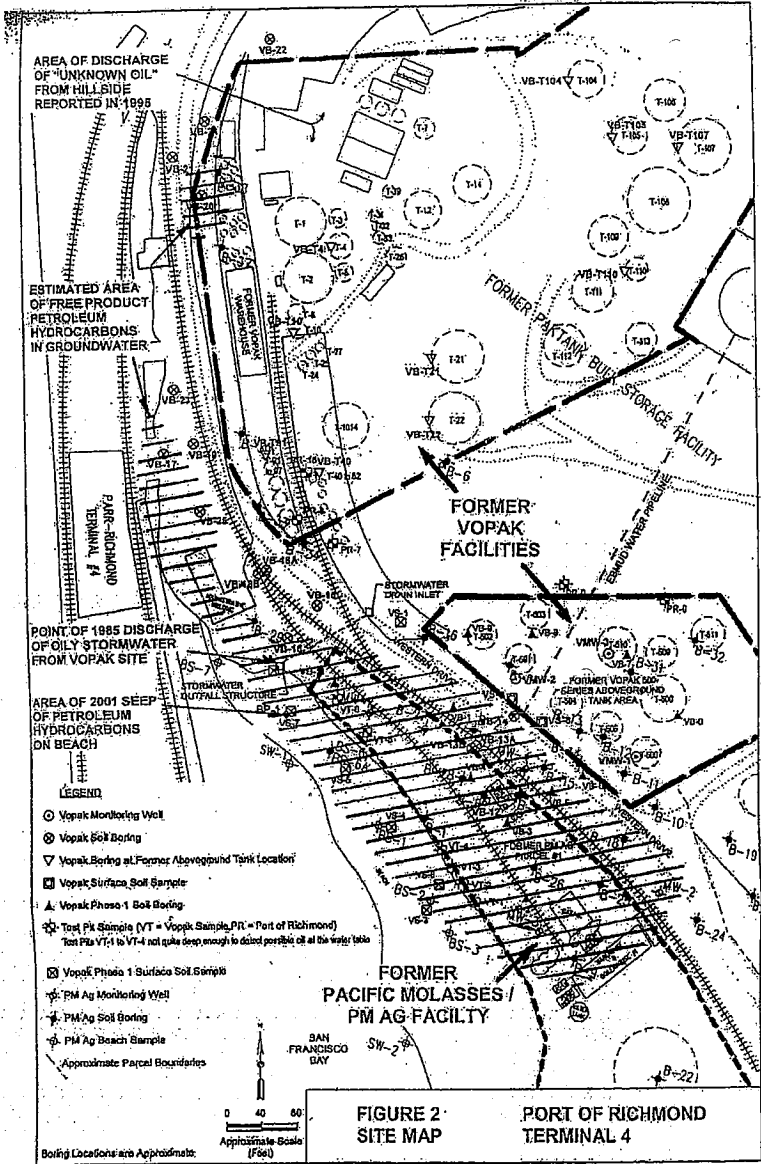
I, Bruce H. Wolfe, Executive Officer, do hereby certify that the foregoing is a full, complete, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on _____.

Bruce H. Wolfe
Executive Officer

Figures: Figure 1 - Location Map
 Figure 2 - Site/Free Product Plume Map

Attachment: Self-Monitoring Program





CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM FOR:

PORT OF RICHMOND
VOPAK NORTH AMERICA, INC.
UNITED MOLASSES COMPANY

PORT OF RICHMOND TERMINAL 4
RICHMOND, CONTRA COSTA COUNTY

for the property located at

PORT OF RICHMOND) TERMINAL 4
RICHMOND, CONTRA COSTA COUNTY

1. **Authority and Purpose:** The Board requests the technical reports required in this Self-Monitoring Program pursuant to Water Code Sections 13267 and 13304. This Self-Monitoring Program is intended to document compliance with Board Order No. XX-XXX (site cleanup requirements).
2. **Monitoring:** The dischargers shall measure groundwater elevations and shall collect and analyze representative samples of groundwater quarterly in all existing monitoring wells. Analytes shall be analyzed utilizing the following EPA laboratory analytical methods:

Analyte	EPA Method
TPH gas	5030 or equivalent
TPH diesel	3510 or equivalent
BTEX	8260 or equivalent
MTBE and other fuel oxygenates	8260 or equivalent

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

3. **Quarterly Monitoring Reports:** The dischargers shall submit quarterly monitoring reports to the Board no later than 30 days following the end of the quarter (e.g. report for first quarter of the year due April 30). The first quarterly monitoring report shall be due on April 30, 2008. The reports shall include:
 - a. **Transmittal Letter:** The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall be signed by the dischargers' principal executive officer or his/her duly authorized representative, and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.

Deleted; January

- b. **Groundwater Elevations:** Groundwater elevation data shall be presented in tabular form, and a groundwater elevation map shall be prepared for each monitored water-bearing zone. Historical groundwater elevations shall be included in the fourth quarterly report each year.
 - c. **Groundwater Analyses:** Groundwater sampling data shall be presented in tabular form, and an isoconcentration map shall be prepared for one or more key contaminants for each monitored water-bearing zone, as appropriate. The report shall indicate the analytical method used, detection limits obtained for each reported constituent, and a summary of QA/QC data. Historical groundwater sampling results shall be included in the fourth quarterly report each year. The report shall describe any significant increases in contaminant concentrations since the last report, and any measures proposed to address the increases. Supporting data, such as lab data sheets, need not be included (however, see record keeping - below).
 - d. **Groundwater Extraction:** If applicable, the report shall include groundwater extraction results in tabular form, for each extraction well and for the Site as a whole, expressed in gallons per minute and total groundwater volume for the quarter. The report shall also include contaminant removal results, from groundwater extraction wells and from other remediation systems (e.g. soil vapor extraction), expressed in units of chemical mass per day and mass for the quarter. Historical mass removal results shall be included in the fourth quarterly report each year.
 - e. **Status Report:** The quarterly report shall describe relevant work completed during the reporting period (e.g. site investigation, interim remedial measures) and work planned for the following quarter.
4. **Violation Reports:** If the dischargers violate requirements in the Site Cleanup Requirements, then the dischargers shall notify the Board office by telephone as soon as practicable once the dischargers have knowledge of the violation. Board staff may, depending on violation severity, require the dischargers to submit a separate technical report on the violation within five working days of telephone notification.
 5. **Electronic Reporting:** In addition to print submittals, all reports submitted pursuant to this Order must be submitted as electronic files in **PDF format**. The Water Board has implemented a document imaging system, which is ultimately intended to reduce the need for printed report storage space and streamline the public file review process. Documents in the imaging system may be viewed, and print copies made, by the public, during file reviews conducted at the Water Board's office. PDF files can be created by converting the original electronic file format (e.g., Microsoft Word) and/or by scanning printed text, figures & tables. Data tables containing water level measurements, sample analytical results, coordinates, elevations, and other monitoring information shall also be provided electronically in **Microsoft Excel® or similar spreadsheet format** to provide an easy to review summary, and to facilitate data computations and/or plotting that Water Board staff may undertake during their review. Data tables submitted in electronic spreadsheet format will not be included in the case file for public review. All electronic files must be submitted on CD or diskette and included with the print report.
 6. **Other Reports:** The dischargers shall notify the Board in writing prior to any Site activities, such as construction or underground tank removal, which have the potential to cause further migration of contaminants or which would provide new opportunities for Site investigation.

7. **Record Keeping:** The dischargers or their agents shall retain data generated for the above reports, including lab results and QA/QC data, for a minimum of six years after origination and shall make them available to the Board upon request.
8. **SMP Revisions:** Revisions to the Self-Monitoring Program may be ordered by the Executive Officer, either on his/her own initiative or at the request of the dischargers. Prior to making SMP revisions, the Executive Officer will consider the burden, including costs, of associated self monitoring reports relative to the benefits to be obtained from these reports.

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

Bruce H. Wolfe
Executive Officer

1 **PROOF OF SERVICE**

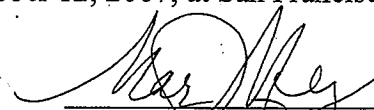
2 I am a resident of the State of California, over the age of eighteen years, and not a
3 party to the within action. My business address is REED SMITH LLP,
4 Two Embarcadero Center, Suite 2000, San Francisco, CA 94111-3922. On October 12, 2007, I
5 served the following document(s) by the method indicated below:

6 **UNITED MOLASSES COMPANY'S PETITION FOR STATE WATER RESOURCES**
7 **CONTROL BOARD REVIEW PURSUANT TO WATER CODE §13320**

8 by placing the document(s) listed above in a sealed envelope(s) and consigning it to an
9 express mail service for guaranteed delivery on the next business day following the date of
10 consignment to the address(es) set forth below.

11 Terry Seward Regional Water Quality Control Board, San Francisco Region 1515 Clay Street, Suite 1400 Oakland, CA 94612 (510) 622-2416 (510) 622-2460 fax	Regional Water Quality Control Board, San Francisco Region
12 Steve Tekosky Tatro Tekosky Sadwick LLP 660 S Figueroa St #1450 Los Angeles, CA 90017 (213) 225-7150 (213) 225-7171 fax	Vopak North America, Inc.
13 Robert C. Goodman, Esq. Rogers Joseph O'Donnell 311 California Street San Francisco, CA 94104 (415) 956-2828 (415) 956-6457 fax	City of Richmond

14
15
16
17
18 I declare under penalty of perjury under the laws of the State of California that the
19 above is true and correct. Executed on October 12, 2007, at San Francisco, California.
20
21

22 
23 _____
24 Mary J. Meyers
25

26 DOCSSFO-12493126.1

REED SMITH LLP
A limited liability partnership formed in the State of Delaware

REED SMITH LLP
A limited liability partnership formed in the State of Delaware

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P.O. Box 7936
6 San Francisco, CA 94120-7936

7 Telephone: 415.543.8700
Facsimile: 415.391.8269
8

9 **COUNSEL FOR PETITIONER**
10 **United Molasses Company**

Petitioner Name and Address:
11 Marc Larson
Corporate Counsel
12 Tate & Lyle Americas, Inc., for benefit of United Molasses Company
2200 East El Dorado Street
13 Decatur, IL 62621

14 CALIFORNIA STATE WATER RESOURCES CONTROL BOARD
15

16
17 _____ : No.:
United Molasses Company, :
18 : **DECLARATION OF TODD O. MAIDEN**
Petitioner, : **FOR PETITIONER UNITED MOLASSES**
19 v. : **COMPANY**
: :
20 California Regional Water Quality Control :
Board, San Francisco Bay Region, :
21 :
Respondent. :
22 _____

23 I, Todd O. Maiden, declare as follows:

24 1. I am a partner of the law firm of Reed Smith LLP, counsel of record in this action for
25 petitioner United Molasses Company. I have been lead attorney for United Molasses Company in
26 this case since 2001. I have personal knowledge of the following facts and, if called upon as a
27 witness, I could and would testify truthfully thereto.
28

EXHIBIT L

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2. On September 12, 2007, Terry Seward, Senior Engineer in the Groundwater Protection and Waste Containment Division of the SFRWQCB, indicated that no other discharge had been observed at the Port of Richmond Marine Terminal 4 site since 2001.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

DATED: October 12, 2007.

By Todd Maiden /ms
Todd O. Maiden