ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

October 28, 2013

Mr. Andrew Cooper
State Water Resources Control Board
1001 I Street, 16th Floor
Sacramento, CA 95814
(Sent via E-mail to: USTClosuresComments@waterboards.ca.gov)

Subject: **Comment Letter – Foothill Mini Mart Case Closure Summary**, Notice of Opportunity for Public Comment; Underground Storage Tank Cleanup Fund Case Closure Recommendation; Claim Number 14095; Fuel Leak Case No. RO0000175 and GeoTracker Global ID T0600102286, Foothill Mini Mart 6600 Foothill Boulevard, Oakland, CA 94605

Dear Mr. Cooper:

Alameda County Environmental Health (ACEH) staff has received the Underground Storage Tank Cleanup Fund's (USTCF's or Fund's) *Notice of Opportunity for Public Comment* dated October 3, 2013, for the subject site. The purpose of the Notice is to inform interested parties of 1) the USTCF's intent to recommend closure of the subject site to the California State Water Resources Control Board's (SWRCBs) Executive Director, and 2) the sixty day public comment period on the Fund's *UST Case Closure Summary Report* (Case Closure Summary), dated March 29, 2013. According to the Notice, written comments to the SWRCB on the Fund's Case Closure Summary must be received by 12:00 noon on April 4, 2013. This letter herein transmits ACEH's comments.

Requirements for Investigation and Cleanup of Unauthorized Releases from USTs

ACEH reviewed the USTCF's *UST Case Closure Review Summary Report*, dated March 29, 2013, prepared by Abdul Karim Yusufzai and signed by Lisa Babcock, (including *Attachment 1: Compliance with State Water Board Policies and State Law* (i.e., the SWRCB's Low-Threat UST Case Closure Policy Paper Check List), and *Attachment 2: Summary of Basic Site Information (Conceptual Site Model)* in conjunction with the case files for the above-referenced site. A complete record of the case files (i.e., regulatory directives and correspondence, reports, data submitted in electronic deliverable format, etc.) can be obtained through review of both the SWRCB's Geotracker database, and the ACEH website at http://www.acgov.org/aceh/index.htm.

ACEH's review was guided by the requirements for investigation and cleanup of unauthorized releases from underground storage tanks (USTs) contained in the following resolutions, policies, codes, and regulations:

- SWRCB's Low-Threat Underground Storage Tank Case Closure Policy (LTCP), adopted on May 1, 2012; and effective August 17, 2012;
- California Code of Regulations (CCR) Title 23, Article 5 and Article 11, Underground Storage Tank Regulations, as amended and effective July 1, 2011;
- California Health & Safety Code (HS&C) Sections 25280-15299.8, Underground Storage of Hazardous Substances, as amended on January 1, 2011;
- SWRCB Resolution 1992-0049, Policies and Procedures for the Cleanup and Abatement of Discharges under California Water Code Section 13304, as amended on April 21, 1994 and October 2, 1996;

- San Francisco Bay Regional Water Quality Control Board's (RWQCB) San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan).

Application of Case Review Tools

ACEH's case closure evaluation was also guided by the application of the principles and strategies presented in the *Leaking Underground Fuel Tank Guidance Manual* (CA LUFT Manual), dated September 2012, developed by the SWRCB "…[t]o provide guidance for implementing the requirements established by the Case Closure Policy" and associated reference documents including but not limited to:

- *Technical Justification for Vapor Intrusion Media-Specific Criteria*, SWRCB dated March 21, 2012;
- *Technical Justification for Groundwater Media-Specific Criteria*, SWRCB dated April 24, 2012;
- *Technical Justification for Soil Screening Levels for Direct Contact and Outdoor Air Exposure Pathways*, SWRCB dated March 15, 2012;
- *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air, Final* Department of Toxic Substances Control (DTSC), dated October, 2011;
- *Active Soil Gas Investigations Advisory,* DTSC, dated April 2012;
- *Evaluating LNAPL Remedial Technologies for Achieving Project Goals, Interstate Technology Regulatory Council*

ACEH also utilized other case review tools developed by the SWRCB to aid in determining compliance of the subject fuel leak site with LTCP criteria, including both the paper *Policy Checklist* (available at www.waterboards.ca.gov/ust/docs/checklist.pdf) and the electronic version of the *Policy Checklist* (available on the SWRCB's GeoTracker website at http://geotracker.waterboards.ca.gov). ACEH's evaluation of the subject site is presented below and in previously submitted documents posted to Geotracker and the ACEH ftp website.

Summary of ACEH's Review of the USTCF's UST Case Closure Summary

ACEH does not agree with the USTCF's technical analysis presented in the *UST Case Closure Summary Report*, dated October 3, 2013. ACEH's review indicates that the Conceptual Site Model (CSM) is incomplete and that the site is uncharacterized in a number of elements including the delineation of the downgradient extent of the plume. Additionally ACEH disagrees with the Funds conclusion that there are a no unique site attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents. Details of our analysis are provided in the narrative section below.

General Criteria a: The unauthorized release is located within the service area of a public water system.
The site meets this General Criteria.
General Criteria b: The unauthorized release consists only of petroleum.
The site meets this General Criteria.
General Criteria c: The unauthorized ("primary") release from the UST system has been stopped.
The site meets this General Criteria.
General Criteria d: Free product has been removed to the maximum extent practicable.
The site meets this General Criteria.
General Criteria e: A conceptual site model has been developed.
The site does not meet this General Criteria. The CSM does not adequately assess the lateral extent of the groundwater plume. The offsite extent of the plume remains undefined beneath Foothill Boulevard as the utility trench along Foothill Boulevard has

been identified as a preferential pathway for offsite contaminant migration. The most down gradient groundwater sample collected during the 2009 preferential pathway investigation identified a concentration of 81,000 micrograms per liter (μg/L) total petroleum hydrocarbons as gasoline (TPHg) 120 feet south of the property line. Therefore, the leading edge of the plume has not been adequately defined and the contaminant plume cannot be considered stable or decreasing.

The site is located in an older community consisting of mixed use commercial and residential properties and is in an area identified to contain domestic and commercial water supply wells. Attachment 1 presents documents that demonstrate well locations in 1910. A table comparison of current East Bay Municipal Utilities District (EBMUD) and Alameda County Flood Control and Water Conservation District (ACFCWCD) databases of existing wells indicates the EBMUD database contains more comprehensive well location data. However the EBMUD database was not reviewed for the sensitive receptor survey. The EBMUD database consists of addresses where backflow prevention devices have been installed for residential and commercial properties which have volunteered that they have wells. The ACFCWCD database contains records of permitted wells drilled after July 17, 1973 and wells documented by the California Department of Water Resources (DWR) for groundwater investigation in Alameda county in the 1960s. The EBMUD backflow prevention device database contains many more well locations (400 versus 32) for the City of Oakland. The position of ACEH is potential well presence in the site vicinity presents a unique site attribute or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents.

ACEH contends that, without having the contaminant plume defined, the risk to sensitive receptors cannot be determined.

General Criteria f: Secondary source removal has been addressed. The secondary source is the petroleum-impacted soil, free product, or groundwater that acts as a long-term source releasing contamination to the surrounding area. Unless site conditions prevent secondary source removal (e.g. physical or infrastructural constraints exist whose removal or relocation would be technically or economically infeasible), petroleum-release sites are required to undergo secondary source removal to the extent practicable.

The site meets this General Criteria.

General Criteria g: Soil or groundwater has been tested for MTBE and results reported in accordance with Health and Safety Code section 25296.15.

The site meets this General Criteria.

General Criteria h: Nuisance as defined by Water Code section 13050 does not exist at the site.

The downgradient extent of groundwater contamination has not been determined as discussed previously above; specifically the Foothill Boulevard EBMUD 8-inch-diameter water pipe trench has been identified as a preferential pathway. It has not been determined if the contaminant plume presents a nuisance condition.

Media-Specific Criteria 1. Groundwater: If groundwater with a designated beneficial use is affected by an unauthorized release, to satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal (sic) extent, and meet all of the additional characteristics of one of the five classes of sites listed in the Policy. A plume that is "stable or decreasing" is a contaminant mass that has expanded to its maximum extent: the distance from the release where attenuation exceeds migration.

The downgradient extent of groundwater contamination has not been determined.

The USTCF states that the Groundwater-Specific Criteria is met by Class 2 which requires a finding that the plume has been delineated to less than 250 feet in length, has no free product, the nearest existing water supply well or surface water body is greater than 1,000 feet from the defined plume boundary, and benzene and methyl tertiary butyl ether (MTBE) concentrations are less than 3,000 μg/l and 1,000 μg/l, respectively. As discussed in General Criteria e above, the plume length has not been delineated along Foothill Boulevard and therefore does not meet this Class 2 scenario.

Media-Specific Criteria 2. Petroleum Vapor Intrusion to Indoor Air: The low-threat vapor-intrusion criteria in the Policy apply to release sites and impacted or potentially impacted adjacent parcels when:

(1) existing buildings are occupied or may be reasonably expected to be occupied in the future, or (2) buildings for human occupancy are reasonably expected to be constructed in the near future.
The site meets this General Criteria.
Media-Specific Criteria 3. Direct Contact and Outdoor Air Exposure. Release sites where human exposure may occur satisfy the media-specific criteria for direct contact and outdoor air exposure and shall be considered low-threat if they meet any of the following: a. Maximum concentrations of petroleum constituents in soil are less than or equal to those listed in Table 1 for the specified depth below ground surface (bgs). The concentration limits for 0 to 5 feet bgs protect from ingestion of soil, dermal contact with soil, inhalation of volatile soil emissions and inhalation of particulate emissions, and the 5 to 10 feet bgs concentration limits protect from inhalation of volatile soil emissions. Both the 0 to 5 feet bgs concentration limits and the 5 to 10 feet bgs concentration limits for the appropriate site classification (Residential or Commercial/Industrial) shall be satisfied. In addition, if exposure to construction workers or utility trench workers are reasonably anticipated, the concentration limits for Utility Worker shall also be satisfied; or b. Maximum concentrations of petroleum constituents in soil are less than levels that a site specific risk assessment demonstrates will have no significant risk of adversely affecting human health; or c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, the regulatory agency determines that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health.
Very limited soil samples have been collected within the top 5 feet at the site and no analysis for naphthalene has been performed. It is therefore unclear that site concentrations meet the concentrations listed in Table I.

Conclusions

ACEH is in disagreement that the site qualifies for closure under the LTCP and recommends additional soil and groundwater study and that a comprehensive sensitive receptor survey be conducted upon establishing the plume definition. These studies would address the delineation of the plume length, sensitive receptors in the vicinity of the plume, establish if a nuisance condition exists, and determine if Direct Contact and Outdoor Air Exposure criteria are met as a result of the unauthorized release(s).

Thank you for providing ACEH with the opportunity to comment on the subject site. Should you have any questions regarding the responses above, please contact Keith Nowell at (510) 567-6764 or send an electronic mail message at keith.nowell@acgov.org.

Sincerely,

Keith Nowell

Digitally signed by Keith Nowell
DN: cn=Keith Nowell, o, ou, email=keith.nowell@acgov.org, c=US
Date: 2013.10.28 13:47:27 -07'00'

Keith Nowell, PG, CHG
Hazardous Materials Specialist

cc: Ravi Sekhon, 6600 Foothill Boulevard, Oakland, CA 94605-2019

Adbul Ghaffar, Zaroon Inc., 40092 Davis Street, Fremont, CA 94538-2605

Javad Farrokhtala, J & S Petroleum, 3300 Powell Street, Emeryville, CA 94538-2605

Scott Bittinger, Stratus Environmental, Inc., 3330 Cameron Park Drive, Ste 550, Cameron Park, CA 95682, (Sent via E-mail to: sbittinger@stratusinc.net)

Lisa Babcock, State Water Resources Control Board, Division of Financial Assistance, 1001 I Street, Sacramento, CA 95814; (Sent via E-mail to: LBabcock@waterboards.ca.gov)

Robert Trommer, State Water Resources Control Board, Division of Financial Assistance, 1001 I Street, Sacramento, CA 95814; (Sent via E-mail to: RTrommer@waterboards.ca.gov)

Abdul Karim Yusufzai, State Water Resources Control Board, 1001 I Street, 17th Floor, Sacramento, CA 95814; (Sent via E-mail to: ayusufzai@waterboards.ca.gov)

Mary Rose Cassa, San Francisco Regional Water Quality Control Board, 1515 Clay Street, Suite 1400, Oakland, CA 94612; (Sent via E-mail to: mcassa@waterboards.ca.gov)

Dilan Roe, (sent via electronic mail to dilan.roe@acgov.org)
Keith Nowell (sent via electronic mail to keith.nowell@acgov.org)
Electronic File, GeoTracker

ATTACHMENT 1

Figure 2 and Table 10

East Bay Plain Groundwater Basin
Beneficial Use Evaluation Report
Alameda and Contra Costa Counties, CA

California Regional Water Quality Control Board Groundwater Committee

June 1999

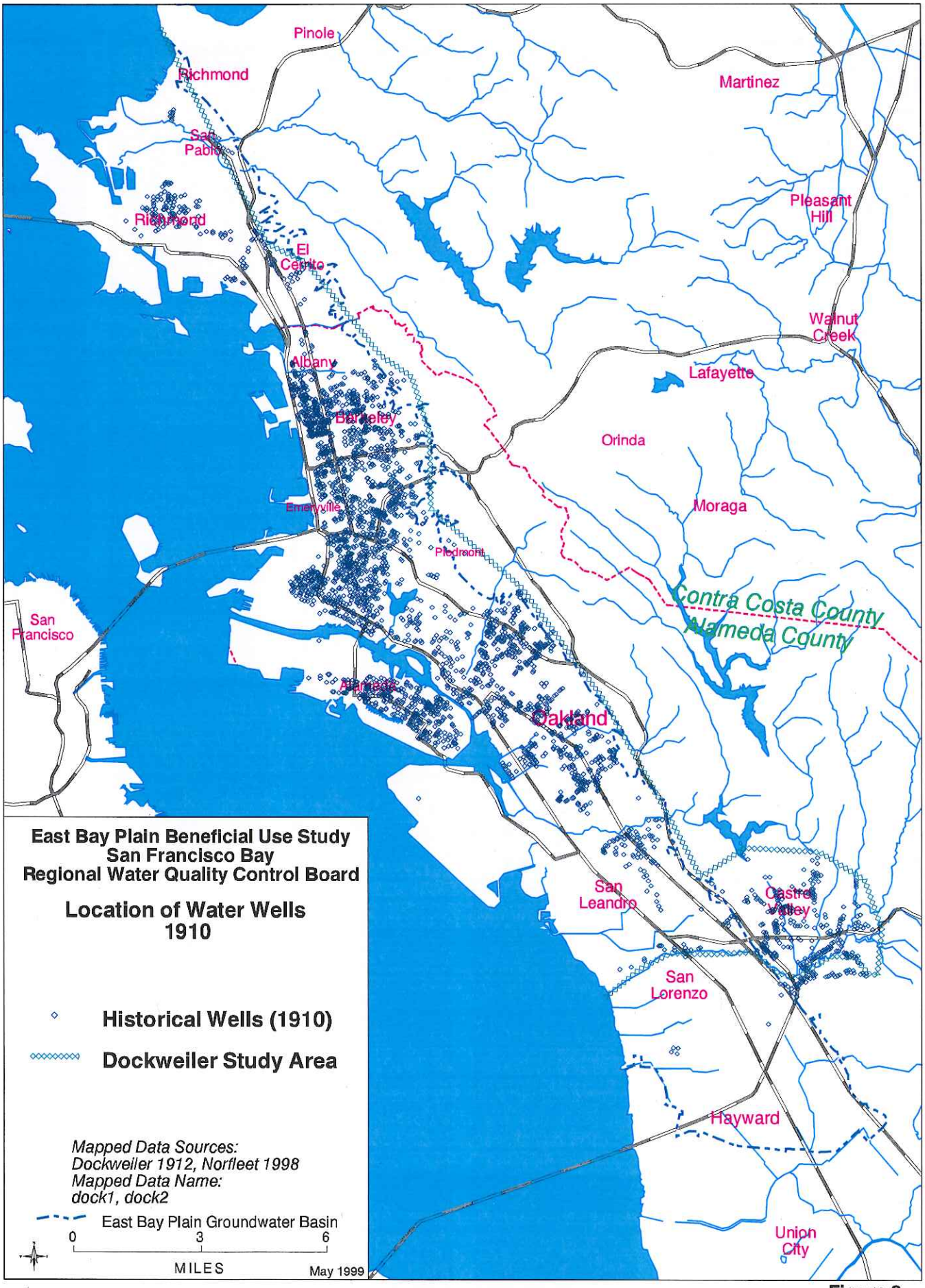
Pinole
Richmond
Martinez
San Pablo
Pleasant Hill
Richmond
El Cerrito
Walnut Creek
Albany
Lafayette
Berkeley
Orinda
Moraga
Emeryville
Piedmont
Contra Costa County
Alameda County
San Francisco
Alameda
Oakland
San Leandro
Castro Valley
San Lorenzo
Hayward
Union City
East Bay Plain Beneficial Use Study
San Francisco Bay
Regional Water Quality Control Board
Location of Water Wells
1910
Historical Wells (1910)
Dockweiler Study Area
Mapped Data Sources:
Dockweiler 1912, Norfleet 1998
Mapped Data Name:
dock1, dock2
East Bay Plain Groundwater Basin
0
3
6
MILES
May 1999

Figure 2

recovery (ASR) may enable the District to store excess high-quality Sierra water supply underground for future use during a drought or earthquake. By using the same well for both injection and extraction, the District plans to extract virtually the same high quality water supply as was injected. The results of the pilot projects, along with an assessment of local groundwater resources, will be used to determine EBMUD's future plans for beneficial use of the Plain. Potential beneficial uses by EBMUD include ASR wells, municipal extraction wells, and non-potable irrigation wells. The potential locations of these facilities are not known, but may include nearly any part of the East Bay Plain within the EBMUD service area. Aquifers likely to be used would be below the Yerba Buena Mud.

15.6 EBMUD's Backflow Prevention Database can be used to supplement ACFCWCD well searches.

Two public databases that contain information on existing wells in the East Bay Plain yield notably different estimates. The ACFCWCD database covers the Alameda County portion of the East Bay Plain. EBMUD maintains a database of addresses where they have installed backflow prevention devices at residential or commercial properties that have volunteered that they have wells. EBMUD's database covers the entire East Bay Plain with the exception of Hayward, which is outside their service area. Comparisons between the two databases yield notably different estimates regarding the number of wells in different communities. The following table provides an example of the differences between the databases in the number of wells in selected cities.

Table 10. Comparison of EBMUD and ACFCWCD Well Databases

City	[1]EBMUD Backflow Prevention Database	[2]ACFCWCD Well Permit Database
Alameda	400	2
Oakland	400	32
San Leandro	1958	76
San Lorenzo	756	14

Note:
[1] EBMUD database only includes wells owned by property owners that voluntarily agreed to participate in its backflow prevention program.
[2] ACFCWCD database only includes wells drilled after 7/17/73 and wells documented by DWR for the groundwater investigation in Alameda County in the 1960's.
Above statistics are for all domestic, municipal, industrial and agricultural wells.

Currently, environmental consultants use the ACFCWCD database to search for active wells in the vicinity of groundwater pollution sites. Since the EBMUD backflow database has a greater number of wells, consultants should also search this database although there may be privacy issues to be resolved.