

ALAMEDA COUNTY
**HEALTH CARE SERVICES
AGENCY**

COLLEEN CHAWLA, Agency Director



DEPARTMENT OF ENVIRONMENTAL HEALTH
LOCAL OVERSIGHT PROGRAM (LOP)
For Hazardous Materials Releases
1131 HARBOR BAY PARKWAY
ALAMEDA, CA 94502
(510) 567-6700
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June 28, 2018

Alice Ng Lim and May Lee Lim
c/o Russell Lim
3111 Diablo Road
Lafayette, CA 94549
(Sent via E-mail to rulim@comcast.net)

**Subject: Regulatory Case Closure Evaluation and Request for Stakeholders Meeting
Leaking Underground Storage Tank (LUST) Cleanup Site Case No. RO0000479
GeoTracker Global ID T0600100535
Lim Property Gas Station
250 8th Street, Oakland, CA 94607**

Dear Responsible Party:

I would like to take this opportunity to introduce myself as the new primary caseworker assigned to the above referenced case (the "Case"). A review of the Case files indicates that Alameda County Department of Environmental Health (ACDEH) has not received any technical reports for the Case since the Quarterly Groundwater Monitoring Report dated August 15, 2016 which was prepared by Aqua Science Engineers, Inc. (ASE) and the Updated Site Map and Neighboring Property Basement Evaluation dated October 11, 2016 also prepared by ASE. In a stakeholders meeting held on February 9, 2017, an impediment to closure related to funding was identified. Since the February 2017 meeting, ACDEH has received no updates on the status of this impediment or communications identifying or reporting on actions taken to obtain funding.

ACDEH has reviewed the case file associated with the above referenced property (the "Site") and evaluated the associated LUST Case (the Case) in accordance with the State Water Resources Control Board's (State Water Board's) Low Threat Underground Storage Tank Case Closure Policy (LTCP). ACDEH has determined that at this time, the Case does not meet the LTCP closure criteria indicated in Table 1 below:

Table 1 - Unsatisfied LTCP Closure Criteria

General Criteria		Media Specific Criteria	
<input type="checkbox"/> a. Public Water	<input checked="" type="checkbox"/> e. CSM	<input checked="" type="checkbox"/> 1. Groundwater	
<input type="checkbox"/> b. Petroleum Only	<input type="checkbox"/> f. Secondary Source	<input checked="" type="checkbox"/> 2. Petroleum Vapor Intrusion to Indoor Air	
<input type="checkbox"/> c. Release Stopped	<input type="checkbox"/> g. MTBE	<input checked="" type="checkbox"/> 3. Direct Contact and Outdoor Air Exposure	
<input checked="" type="checkbox"/> d. Free Product	<input type="checkbox"/> h. Nuisance		

An LTCP criteria evaluation checklist is provided in **Attachment A**. Specific details pertaining to ACDEH's evaluation of the LTCP closure criteria indicated above that are not met at this time are provided in **Section I** of this letter. An evaluation of the case's GeoTracker compliance is included in **Section II**. Notification of enforcement action against ASE by the State Water Board is provided in **Section III**. Deliverables and technical reports requested to address unsatisfied LTCP closure criteria and other impediments to regulatory case closure are summarized in **Section IV**. Outstanding compliance issues are identified and discussed in **Section V**.

I. UNSATISFIED LTCP CLOSURE CRITERIA EVALUATION

The following unsatisfied LTCP closure criteria were identified during ACDEH's review of the case file. Excerpts from the LTCP are included in *grey italics*.

General Criteria**d. Free product has been removed to the maximum extent practicable**

"In meeting the requirements of this section: (a) Free Product shall be removed in a manner that minimizes the spread of unauthorized release...(b) Abatement of free product migration shall be used as a minimum [design] objective...and (c) Flammable products shall be stored for disposal in a safe and competent manner..."

Historic free product removal efforts conducted at the Site consist of two remedial excavations, hydrogen peroxide injection, multiple dual phase extraction (DPE) events, and operation of a combination ozone injection and soil vapor extraction system. Details pertaining to each of these remedial efforts are summarized below:

1. Remedial Excavations 1 and Remedial Excavation 2 were completed in 1993 and are reported in the *Environmental Remediation Excavation & Disposal Final Report* dated June 8, 1993 and prepared by All Environmental, Inc. (AEI). These remedial excavations were conducted as over-excavations for the removal of ten underground storage tank (UST) systems which contained gasoline, diesel, and waste oil. The remedial excavations reportedly removed a total of 1,764 cubic yards of soil. Analytical data for backfill materials for these remedial excavations has not been reported to ACDEH at this time.
2. Hydrogen peroxide injections were conducted by ASE from February 1999 to November 2000. Hydrogen peroxide was injected into five injection wells at a rate of approximately 1 milliliter per minute to maintain a target groundwater dissolved oxygen concentration of between 5 and 20 ppm.
3. DPE events were conducted in October 2004 for a 14 day low vacuum pilot test and on February 13, March 14, and April 19 2007 for three 10-hour high vacuum events.
4. A combination ozone injection and soil vapor extraction system was installed in January 2011. Ozone injections commenced in January 2011 and concurrent soil vapor extraction commenced on April 22, 2011. Ozone injection and soil vapor continued until April 13, 2015.

Direct evidence that non aqueous phase liquid (NAPL) remains at the Site includes the observation of petroleum sheen in groundwater extracted from monitoring well MW-3. Indirect evidence that free product remains at the Site include observations of a very strong hydrocarbon odor in monitoring well MW-3 and a moderately strong hydrocarbon odor in monitoring well MW-2 during the most recent groundwater monitoring event in July 2016 and reported concentrations of benzene and total petroleum hydrocarbons as gasoline above their effective solubilities of 3,000 micrograms of analyte per liter of sample ($\mu\text{g/L}$) and 20,000 $\mu\text{g/L}$ respectively.

At this time, ACDEH has not been provided with an evaluation of the mobility, migration, or practicality of further NAPL removal efforts.

Based on the lines of evidence presented above, ACDEH has determined that insufficient evidence has been presented to support the assertion that **General Criteria d.** has been satisfied.

e. A conceptual site model (CSM) that assesses the nature, extent, and mobility of the release has been developed

"The CSM establishes the source and attributes of the unauthorized release, describes all affected media (including soil, groundwater, and soil vapor as appropriate), describes local geology, hydrogeology and other physical site characteristics that affect contaminant environmental transport and fate, and identifies all confirmed and potential contaminant receptors (including water supply wells, surface water bodies, structures and their inhabitants). ...All relevant site characteristics identified by the CSM shall be assessed and supported by data so that the nature, extent and mobility of the release have been established to determine conformance with applicable criteria in this policy."

The most recent update to the CSM is provided in the *Report on Soil, Groundwater, and Soil Vapor Assessment* dated May 10, 2007 and prepared by ASE. ACDEH's review of the case files indicates that data gaps relative to the

completeness of the CSM are present with respect to the evaluation of the Media Specific Criteria for Groundwater, Soil, and Petroleum Vapor Intrusion to Indoor Air which are discussed in **Section I.1**, **Section I.2**, and **Section I.3** respectively. In addition, ACDEH identified the following data gaps that must be addressed for the CSM to be considered sufficiently complete:

1. **Local Geology and Hydrogeology** – ACDEH’s review of the case file was unable to identify any evaluations of the local geology and hydrogeology sufficient to explain fluctuations in the presence or absence of free-phase hydrocarbons, variations in concentrations of constituents of concern in groundwater, or anisotropies in radial influence of historic vapor and liquid extraction and injection events;
2. **Preferential Pathway Study** – The presence of anthropogenic or natural preferential pathways for the migration of free-phase, aqueous phase, and vapor phase petroleum hydrocarbons has not been evaluated at this time. Due to the elevated benzene concentrations reported in groundwater and proximity to nearby sensitive receptors (residences and schools), a preferential pathway study for the Site is warranted.
3. **Monitoring Well Network Evaluation** – The adequacy of the monitoring well network for the Site has not been evaluated to determine if the monitoring well network is appropriately and adequately screened to discriminate between separate water bearing zones or for the evaluation of the presence and mobility of free-phase hydrocarbons

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 extent, and meet all of the additional characteristics of one of the five classes of sites listed [in the policy and summarized in Table 2 below]. 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.

...Sites with soil that does not contain sufficient mobile constituents...to cause groundwater to exceed the groundwater criteria in this policy shall be considered low-threat sites for the groundwater medium.”

ACDEH’s review of the case file indicate that insufficient evidence has been presented to support the determination that the contaminant plume that exceeds water quality objectives (the “Groundwater Plume”) is stable or decreasing in areal extent. Please note that the extents of the Groundwater Plume are defined by the water quality objectives and not by the LTCP closure criteria. The extents of the Groundwater Plume are not defined to the south beyond monitoring wells MW-4R or MW-2. Therefore, the stability (and subsequently the maximum plume length) of the Groundwater Plume cannot be evaluated at this time.

ACDEH has evaluated the Site against the five Groundwater Site Classes identified in the LTCP. The criteria for each of the LTCP Groundwater Site Classes and the applicable current site conditions are summarized in Table 2 below. Based on ACDEH’s review of the Case file, the Site does not meet any of the Groundwater Site Classes at this time

Table 2 - Summary of Groundwater Site Class Requirements and Current Site Conditions	Groundwater Site Class					Current Site Conditions ^A
	(1)	(2)	(3)	(4)	(5)	
Maximum plume Length (feet)	≤100	≤250	≤250	≤1,000	-	Unknown
Free Product not present [N] or removed to extent practicable [R] ^B	N	N	R	N	-	Free Product Present
Distance to nearest water supply well or surface water body (feet)	≥250	≥1,000	≥1,000	≥1,000	-	>2,000
Benzene concentration in Groundwater (µg/L)	-	≤3,000	-	≤1,000	-	8,900 (MW-4R)
MTBE concentration in groundwater (µg/L)	-	≤1,000	-	≤1,000	-	<500 (MW-4R)
Land use restriction as a condition of closure	-	-	Yes	-	-	-
Regulatory low threat determination	-	-	-	-	Yes	No

"-" = criteria not applicable; "µg/L" = micrograms of analyte per liter of sample; ^A = Parameter value based on the CSM and the current groundwater data that represents the determining conditions for evaluation of groundwater site class; ^B = Free product may still be present below the site where the release originated, but does not extend off-site.

2. Vapor Intrusion to Indoor Air

"Petroleum releases shall satisfy the media-specific criteria for petroleum vapor intrusion to indoor air and be considered low-threat for vapor-intrusion-to-indoor-air pathway if:

- Site-specific conditions at the release site satisfy all of the characteristics and criteria of scenarios 1 through 3 as applicable, or all the characteristics and criteria of scenario 4 as applicable [These scenarios are summarized in Table 3 below]; or*
- A site-specific risk assessment for vapor intrusion pathway is conducted and demonstrates that human health is protected to the satisfaction of the regulatory agency; or*
- 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 petroleum vapors migrating from soil or groundwater will have no significant risk of adversely affecting human health.*

...satisfaction of the media-specific criteria for petroleum vapor intrusion to indoor air is not required at active commercial petroleum fueling facilities, except in cases where release characteristics can be reasonably believed to pose an unacceptable health risk."

ACDEH compared current and historic site conditions to the LTCP's Petroleum Vapor Intrusion to Indoor Air Exposure Scenarios (the "Exposure Scenarios") which are summarized in **Table 3** below. As discussed in **Section 1.d**, there is direct and indirect evidence that unweathered NAPL is present in environmental media at the Site. Depth to groundwater at the Site has historically ranged from 19.85 feet below ground surface (ft bgs) in December 2009 at monitoring well MW-4R to 12.65 ft bgs in March 2006 at monitoring well MW-2. As such the minimum required separation distance of 30 feet for a bioattenuation zone in the presence of unweathered NAPL is not present. Therefore, the Site does not meet the criteria for closure under Exposure Scenario 1 and 2.

Dissolved phase benzene concentrations are greater than 1,000 µg/L and vadose zone soil analytical data has not been reported for samples collected from depths less than 14.5 ft bgs. Therefore the case therefore does not meet the criteria for closure under Exposure Scenario 3.

Direct measurement of soil vapor was conducted in 2007 and 2008 at a total of 10 locations (SB-1 through SV-10). The soil vapor samples were collected from a depth of 3 feet below ground surface and were analyzed for gasoline range total petroleum hydrocarbons (TPHg), benzene, toluene, ethylbenzene, and xylenes. The samples were not analyzed for a leak check compound, naphthalene, or oxygen content. Repeat or confirmation soil vapor sampling results have not been reported to ACDEH. Benzene and ethylbenzene were reported in samples from residential areas at maximum concentrations of 2,700 micrograms of analyte per cubic meter of sample ($\mu\text{g}/\text{m}^3$) from SV-7 and 550 $\mu\text{g}/\text{m}^3$ from SV-3 respectively, however, the LTCP Exposure Scenario for direct measurement of soil vapor provides criteria for soil vapor samples collected at least five feet below the base of existing building foundations where a bio attenuation zone is present. Therefore, soil vapor analytical data from SV-1 through SV-10 are not appropriate to satisfy the requirements of criteria for closure under Exposure Scenario 4.

Table 3 - Petroleum Vapor Intrusion to Indoor Air Exposure Scenario Characteristics and Criteria

	Exposure Scenario								
	1	2	3			4		c	d
			a	b	c	a	b		
Bounds of BAZ	BoF to NAPL in GW	BoF to NAPL in Soil	BoF to Max GW			-		BoF to 5' below BoF	GS to 5' below GS
Minimum BAZ Length	30'	30'	5'	10'	5'	-		5'	
TPH in BAZ Threshold (mg/kg)	<100	<100	<100			-		<100	
Benzene in GW Threshold ($\mu\text{g}/\text{L}$)	-	-	<100	≥ 100 and <1,000	<1,000	-		-	
Soil Gas Sample Depth	-	-	-			5' below BoF	5' below GS	5' below BoF	5' below GS
Oxygen in BAZ	-	-	Unk or <4%	Unk or <4%	$\geq 4\%$	-		$\geq 4\%$	
Benzene in soil gas of BAZ RES / COM	-	-	-			<85	<280	<85,000	<280,000
Ethylbenzene in soil gas of BAZ RES / COM	-	-	-			<1,100	<3,600	<1,100,000	<3,600,000
Naphthalene in soil gas of BAZ RES / COM	-	-	-			<93	<310	<93,000	<310,000

"-": Criteria not applicable to exposure scenario; "BAZ": Bioattenuation Zone; "BoF": Base of Foundation; "NAPL": unweathered light non-aqueous phase liquid; "Max GW": maximum recorded historic groundwater elevation; "' ': feet; "GS": existing ground surface; "TPH": sum of gasoline range and diesel range total petroleum hydrocarbons; "mg/kg": milligrams of analyte per kilograms of sample; " $\mu\text{g}/\text{L}$ ": micrograms of analyte per liter of sample; "Unk": Unknown; "RES": residential; "COM": commercial;

ACDEH's review of the case file indicates that insufficient evidence has been presented to support the determination that **Media Specific Criteria a., b., or c. for Petroleum Vapor Intrusion to Indoor Air** listed above have been satisfied, specifically:

- a. The Site does not meet any of the criteria described in Exposure Scenario 1 through 4.
- b. A site specific risk assessment has not been completed for the Site at this time; or
- c. Engineering controls to mitigate vapor intrusion are not currently installed or employed at the Site.

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:

- d. Maximum concentrations of petroleum constituents in soil are less than or equal to those listed in [Table 4 below] for the specified depth below ground surface...; or
- e. 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
- f. 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.

ACDEH's review of the case file indicate that soil analytical data has not been reported for surface (0 to 5 ft bgs) or shallow (5 to 10 bgs) soils. Therefore, there is insufficient evidence to support the determination that **Media Specific Criteria for Direct Contact and Outdoor Air Exposure** summarized in Table 4 below have been satisfied.

Table 4 - Concentrations of Petroleum Constituents in Soil That Will Have No Significant Risk of Adversely Affecting Human Health (adapted from Table 1 of the LTCP)

Chemical	Residential		Commercial/Industrial		Utility Worker
	0 to 5 feet bgs (mg/kg)	5 to 10 feet bgs (mg/kg)	0 to 5 feet bgs (mg/kg)	5 to 10 feet bgs (mg/kg)	0 to 10 feet bgs (mg/kg)
Benzene	1.9	2.8	8.2	12	14
Ethylbenzene	21	32	89	134	314
Naphthalene	9.7	9.7	45	45	219
PAH	0.063	-	0.68	-	4.5

"mg/kg": milligrams of analyte per kilogram of sample; "PAH": Poly-aromatic hydrocarbons based on the seven carcinogenic; "-": Not applicable;

II. GEOTRACKER ELECTRONIC SUBMITTAL OF INFORMATION COMPLIANCE

ACDEH's review of the case file included a GeoTracker Electronic Submittal of Information (ESI) compliance audit. GeoTracker reporting requirements are described in Section 3893 of the California Code of Regulations. Non-compliant GeoTracker requirements identified as part of ACDEH's compliance audit are identified in the table below.

Table 5 – Non-compliant GeoTracker Requirements			
<input checked="" type="checkbox"/>	Latitude and longitude of wells (GEO_XY)	<input checked="" type="checkbox"/>	Surveyed elevation of wells (GEO_Z)
<input checked="" type="checkbox"/>	Elevation of groundwater in wells (GEO_WELL)	<input checked="" type="checkbox"/>	Boring log (GEO_BORE)
<input type="checkbox"/>	Technical report (GEO_REPORT)	<input checked="" type="checkbox"/>	Laboratory Electronic Data Files (EDF)
<input checked="" type="checkbox"/>	Depth and length of screened interval of wells (Field Point ID)	<input checked="" type="checkbox"/>	Site map(s) depicting location of <u>all</u> sampling points (GEO_MAP)

1. GEO_XY - Surveyed latitude and longitude data was identified as absent from the GeoTracker database for MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, and MW-7;
2. GEO_Z – Surveyed elevation data has not been uploaded for any field points.
3. GEO_WELL – Depth to groundwater data has not been uploaded since the June 2013 groundwater monitoring event. Additionally, groundwater data has not been uploaded for events prior to March 2003;
4. GEO_BORE – Boring logs are missing for SV-1 through SV-10, IW-1 through IW-5;
5. EDF – Laboratory EDF data is missing for multiple sampling events including all soil analytical data except the soil analytical data from the November 2010 sampling event and all soil vapor data from the February and March 2007 and February 2008 sampling events.
6. Field Point ID – Depth to top of casing and length of screened interval data is missing for all wells;
7. GEO_MAP – The last updated GEO_MAP for the Site is dated March 22, 2007 and does not include locations for all field points. Please update the GEO_MAP to include all field points, current and historical infrastructure, current and historic locations of UST system components, streets bordering the Site, and other relevant features (i.e. utilities, extents of historic excavations and backfill, and land use of adjacent properties).

III. NOTIFICATION OF ENFORCEMENT ACTION AGAINST AQUA SCIENCE ENGINEERS

ASE has historically acted as the environmental consultant for the Case from 1995 until at least October 2016. On June 30, 2017, the State Water Resources Control Board reached a settlement agreement with ASE of Contra Costa and Orange Counties over allegations of overbilling and other abuses against the Underground Storage Tank Cleanup Fund (Cleanup Fund). As part of this settlement, ASE has agreed to pay an administrative civil liability of \$50,000 and to cease all work on projects funded by the State Water Board. ASE and its principals, David M. Schultz and David G. Allen, are disqualified from the Cleanup Fund and all its subaccounts under the terms of the settlement and are prohibited from doing work funded by the State Water Board's Cleanup and abatement Account and its Proposition 1 programs. The settlement agreement can be viewed on the office of Enforcement's Website.

IV. DELIVERABLE AND TECHNICAL REPORT REQUEST(S)

Please submit the following technical reports and deliverables to ACDEH (Attention: Jonathan Sanders) in accordance with the compliance dates provided below and the *Responsible Party(ies) Legal Requirements/Obligations* and the *File Names for Electronic Reports* which are included as **Attachment B** and **Attachment C** respectively. These technical reports are being requested pursuant to Section 25296.10 of the California Health and Safety Code and Article 11, Chapter 16, Division 3 of Title 23 of the California Code of Regulations. Failure to comply with the deliverable and technical report request compliance dates listed below could result in enforcement action(s) as described in Attachment B.

1. Stakeholders Meeting **Compliance Date: September 28, 2018**

ACDEH requests that a Stakeholders meeting be held to discuss the current status of the Site, impediments to closure, and a path to closure. ACDEH notes that, as described in Section III, work conducted by ASE as preparation for or in response to the stakeholders meeting does not qualify for re-imbusement under the Cleanup Fund. The requested stakeholders meeting must be held prior to the compliance date identified above.

V. CLOSING

ACDEH looks forward to continuing to work with you and your consultants to advance the case toward closure. Should you have any questions regarding this correspondence or your case, please contact the primary caseworker, Jonathan Sanders who can be reached by phone at (510)567-6791 or by email at jonathan.sanders@acgov.org.

Sincerely,



Dilan Roe, P.E. C73703
Chief
Land & Water Division



Jonathan Sanders
Senior Hazardous Materials Specialist
Local Oversight and Site Cleanup Program

ENCLOSURES:

- Attachment A LTCP Closure Criteria Evaluation Checklist
- Attachment B Responsible Party(ies) Legal Requirements / Obligations
- Attachment C File Names for Electronic Reports

DISTRIBUTION LIST:

Electronic File, GeoTracker

Dilan Roe, ACDEH, Chief Land, Water Division (Sent via E-mail to: dilan.roe@acgov.org)

Jonathan Sanders, ACDEH, Senior Hazardous Materials Specialist (Sent via E-mail to: jonathan.sanders@acgov.org)

ATTACHMENT A

LTCP Closure Criteria Evaluation Checklist

250 8TH
OAKLAND, CA 94607
ALAMEDA COUNTY
LUST CLEANUP SITE (INFO)
STATUS: OPEN - VERIFICATION
MONITORING

PERTINENT INFORMATION:
CUF Claim #: 7699 CUF Priority Assigned: B CUF Amount Paid: \$1,475,175

CLEANUP OVERSIGHT AGENCIES
ALAMEDA COUNTY LOP (LEAD) - CASE #: RO0000479 - JONATHAN E. SANDERS - DILAN ROE
SAN FRANCISCO BAY RWQCB (REGION 2) - CASE #: 01-0582 - Regional Water Board

THIS PROJECT WAS LAST MODIFIED BY JONATHAN E. SANDERS ON 6/28/2018 11:20:31 AM - HISTORY

CLOSURE POLICY THIS VERSION IS FINAL AS OF 6/28/2018 CHECKLIST INITIATED ON 11/7/2012 CLOSURE POLICY HISTORY

General Criteria - The site satisfies the policy general criteria - CLEAR SECTION ANSWERS NO

a. Is the unauthorized release located within the service area of a public water system?

Name of Water System :
EBMUD

YES NO

b. The unauthorized release consists only of petroleum (info). YES NO

c. The unauthorized ("primary") release from the UST system has been stopped. YES NO

d. Free product has been removed to the maximum extent practicable (info).

Free Product Remaining: Not Measureable (Sheen)
Removal Methods Tried: HVDPE Skimmer Bailing Absorbant Materials
Did Not Try to Remove FP OTHER: Reemergence of NAPL during ozone sparging. No evaluation of mobility, migration, or practicality of further remediation has been conducted.

FP Not Encountered YES NO

e. A conceptual site model that assesses the nature, extent, and mobility of the release has been developed (info).

Description (Check all that Apply):
GW Not Evaluated
Groundwater Assessment Incomplete - Areal Extent of Contamination Not Defined
Groundwater Assessment Incomplete - Depth of Contamination Not Defined
Hydrogeology Not Adequately Defined
Potential Receptors Not Identified
Soil Assessment Incomplete - Areal Extent Not Defined
Soil Assessment Incomplete - Depth Unknown
Soil Vapor Not Evaluated
Other -
The adequacy of the monitoring well network to evaluate both aqueous phase and free phase contamination has not been evaluated

YES NO

f. Secondary source has been removed to the extent practicable (info). YES NO

g. Soil or groundwater has been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15. Not Required YES NO

h. Does a nuisance exist, as defined by Water Code section 13050. YES NO

1. Media-Specific Criteria: Groundwater - The contaminant plume that exceeds water quality objectives is stable or decreasing in areal extent, and meets all of the additional characteristics of one of the five classes of sites listed below. - CLEAR SECTION ANSWERS NO

EXEMPTION - Soil Only Case (Release has not Affected Groundwater - info) YES NO

Does the site meet any of the Groundwater specific criteria scenarios? YES NO

ADDITIONAL QUESTIONS - Please indicate only those conditions that do not meet the policy criteria:

Plume Length (That Exceeds Water Quality Objectives):
≥ 100 Feet and < 250 Feet ≥ 250 Feet and < 1,000 Feet ≥ 1,000 Feet Unknown

Plume is Stable or Decreasing in AREAL Extent:
No Unknown

Free Product in Groundwater:
Yes No Unknown

Free Product Has Been Removed to the Maximum Extent Practicable:
No Unknown

For sites with free product, the Plume Has Been Stable or Decreasing for 5-Years (info):
No Unknown

For sites with free product, owner Willing to Accept a Land Use Restriction (if required):
No Unknown

Free Product Extends Offsite:
Yes Unknown

Benzene Concentration:
≥ 1,000 µg/l and < 3,000 µg/l ≥ 3,000 µg/l Unknown

MTBE Concentration:
≥ 1,000 µg/l Unknown

Nearest Supply Well (From Plume Boundary):
≤ 250 Feet > 250 Feet and ≤ 1,000 Feet Unknown

Nearest Surface Water Body (From Plume Boundary):
≤ 250 Feet > 250 Feet and ≤ 1,000 Feet Unknown

2. Media Specific Criteria: Petroleum Vapor Intrusion to Indoor Air - The site is considered low-threat for the vapor-intrusion-to-air pathway if site-specific conditions satisfy items 2a, 2b, or 2c - CLEAR SECTION ANSWERS NO

EXEMPTION - Active Commercial Petroleum Fueling Facility YES NO

Does the site meet any of the Petroleum Vapor Intrusion to Indoor Air specific criteria scenarios? YES NO

ADDITIONAL QUESTIONS - Please indicate only those conditions that do not meet the policy criteria:

Soil Gas Samples :

- No Soil Gas Samples Taken Incorrectly

Exposure Type :

- Residential Commercial

Free Product :

- In Groundwater In Soil Unknown

TPH in the Bioattenuation Zone :

- ≥ 100 mg/kg Unknown Soil samples not taken at two depths within 5 ft. zone (only for Scenario 4 with BioZone)

Bioattenuation Zone Thickness :

- < 5 Feet (No BioZone) ≥ 5 Feet and < 10 Feet ≥ 10 Feet and < 30 Feet ≥ 30 Feet 30ft BioZone Compromised TPH > 100mg/kg Unknown

O2 Data in Bioattenuation Zone :

- No O₂ Data O₂ < 4% O₂ $\geq 4\%$

Benzene in Groundwater :

- ≥ 100 $\mu\text{g/l}$ and < 1,000 $\mu\text{g/l}$ $\geq 1,000$ $\mu\text{g/l}$ Unknown

Soil Gas Benzene :

- ≥ 85 $\mu\text{g/m}^3$ and < 280 $\mu\text{g/m}^3$ ≥ 280 $\mu\text{g/m}^3$ and < 85,000 $\mu\text{g/m}^3$ $\geq 85,000$ $\mu\text{g/m}^3$ and < 280,000 $\mu\text{g/m}^3$ $\geq 280,000$ $\mu\text{g/m}^3$ Unknown

Soil Gas EthylBenzene :

- $\geq 1,100$ $\mu\text{g/m}^3$ and < 3,600 $\mu\text{g/m}^3$ $\geq 3,600$ $\mu\text{g/m}^3$ and < 1,100,000 $\mu\text{g/m}^3$ $\geq 1,100,000$ $\mu\text{g/m}^3$ and < 3,600,000 $\mu\text{g/m}^3$ $\geq 3,600,000$ $\mu\text{g/m}^3$ Unknown

Soil Gas Naphthalene :

- ≥ 93 $\mu\text{g/m}^3$ and < 310 $\mu\text{g/m}^3$ ≥ 310 $\mu\text{g/m}^3$ and < 93,000 $\mu\text{g/m}^3$ $\geq 93,000$ $\mu\text{g/m}^3$ and < 310,000 $\mu\text{g/m}^3$ $\geq 310,000$ $\mu\text{g/m}^3$ Unknown

3. Media Specific Criteria: Direct Contact and Outdoor Air Exposure - The site is considered low-threat for direct contact and outdoor air exposure if it meets 1, 2, or 3 below. -

[CLEAR SECTION ANSWERS](#)

EXEMPTION - The upper 10 feet of soil is free of petroleum contamination

YES NO

Does the site meet any of the Direct Contact and Outdoor Air Exposure criteria scenarios?

YES NO

ADDITIONAL QUESTIONS - Please indicate only those conditions that do not meet the policy criteria:

Exposure Type :

- Residential Commercial Utility Worker

Petroleum Constituents in Soil :

- ≤ 5 Feet bgs >5 Feet bgs and ≤ 10 Feet bgs Unknown

Soil Concentrations of Benzene :

- > 1.9 mg/kg and ≤ 2.8 mg/kg > 2.8 mg/kg and ≤ 8.2 mg/kg > 8.2 mg/kg and ≤ 12 mg/kg > 12 mg/kg and ≤ 14 mg/kg > 14 mg/kg Unknown

Soil Concentrations of EthylBenzene :

- > 21 mg/kg and ≤ 32 mg/kg > 32 mg/kg and ≤ 89 mg/kg > 89 mg/kg and ≤ 134 mg/kg > 134 mg/kg and ≤ 314 mg/kg > 314 mg/kg Unknown

Soil Concentrations of Naphthalene :

- > 9.7 mg/kg and ≤ 45 mg/kg > 45 mg/kg and ≤ 219 mg/kg > 219 mg/kg Unknown

Soil Concentrations of PAH :

- > 0.063 mg/kg and ≤ 0.68 mg/kg > 0.68 mg/kg and ≤ 4.5 mg/kg > 4.5 mg/kg Unknown

Area of Impacted Soil :

- Area of Impacted Soil > 82 by 82 Feet Unknown

Additional Information

Should this case be closed in spite of NOT meeting policy criteria?

YES NO

Has this LTCP Checklist been updated for FY 17/18?

YES NO

[SPELL CHECK](#)

ATTACHMENT B

Responsible Party(ies) Legal Requirements / Obligations

Alameda County Environmental Cleanup Oversight Programs (LOP and SCP)	REVISION DATE: December 14, 2017
	ISSUE DATE: July 25, 2012
	PREVIOUS REVISIONS: September 17, 2013, May 15, 2014, December 12, 2016
SECTION: ACDEH Procedures	SUBJECT: Responsible Party(ies) Legal Requirements / Obligations

REPORT & DELIVERABLE REQUESTS

Alameda County Department of Environmental Health (ACDEH) Cleanup Oversight Programs, Local Oversight Program (LOP) and Site Cleanup Program (SCP) require submission of all reports in electronic form to the State Water Board's (SWB) GeoTracker website in accordance with California Code of Regulations, Chapter 30, Division 3, Title 23 and Division 3, Title 27.

Leaking Underground Fuel Tank (LUFT) Cases

Reports and deliverable requests are pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party (RP) in conjunction with an unauthorized release from a petroleum underground storage tank (UST) system.

Site Cleanup Program (SCP) Cases

For non-petroleum UST cases, reports and deliverables requests are pursuant to California Health and Safety Code Section 101480.

ELECTRONIC SUBMITTAL OF REPORTS

A complete report submittal includes the PDF report and all associated electronic data files, including but not limited to GEO_MAP, GEO_XY, GEO_Z, GEO_BORE, GEO_WELL, and laboratory analytical data in Electronic Deliverable Format™ (EDF). Additional information on these requirements is available on the State Water Board's website (http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/)

- Do not upload draft reports to GeoTracker
- Rotate each page in the PDF document in the direction that will make it easiest to read on a computer monitor.

GEOTRACKER UPLOAD CERTIFICATION

Each report submittal is to include a GeoTracker Upload Summary Table with GeoTracker valid values¹ as illustrated in the example below to facilitate ACDEH review and verify compliance with GeoTracker requirements.

GeoTracker Upload Table Example

Report Title	Sample Period	PDF Report	GEO_MAPS	Sample ID	Matrix	GEO_Z	GEO_XY	GEO_BORE	GEO_WELL	EDF
2016 Subsurface Investigation Report	2016 S1	✓	✓	Effluent	SO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✓
2012 Site Assessment Work Plan	2012	✓	✓			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2010 GW Investigation Report	2008 Q4	✓	✓	SB-10	W	✓	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✓
				SB-10-6	SO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✓
				MW-1	WG	✓	✓	✓	✓	✓
				SW-1	W	✓	✓	✓	✓	✓

¹ GeoTracker Survey XYZ, Well Data, and Site Map Guidelines & Restrictions, CA State Water Resources Control Board, April 2005

Alameda County Environmental Cleanup Oversight Programs (LOP and SCP)	REVISION DATE: NA
	ISSUE DATE: December 14, 2017
	PREVIOUS REVISIONS: September 17, 2013, May 15, 2014, December 12, 2016
SECTION: ACDEH Procedures	SUBJECT: Responsible Party(ies) Legal Requirements / Obligations

ACKNOWLEDGEMENT STATEMENT

All work plans, technical reports, or technical documents submitted to ACDEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to the State Water Board's GeoTracker website." This letter must be signed by the Responsible Party, or legally authorized representative of the Responsible Party.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6731, 6735, and 7835) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately licensed or certified professional and include the professional registration stamp, signature, and statement of professional certification. Additional information is available on the Board of Professional Engineers, Land Surveyors, and Geologists website at: <http://www.bpelsg.ca.gov/laws/index.shtml>.

UNDERGROUND STORAGE TANK CLEANUP FUND

For LUFT cases, RP's non-compliance with these regulations may result in ineligibility to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse the cost of cleanup. Additional information is available on the internet at: https://www.waterboards.ca.gov/water_issues/programs/ustcf/

AGENCY OVERSIGHT

Significant delays in conducting site assessment/cleanup or report submittals may result in referral of the case to the Regional Water Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

ATTACHMENT C

File Names for Electronic Reports

Alameda County Environmental Cleanup Oversight Programs (LOP and SCP)	REVISION DATE: April 4, 2018
	PREVIOUS REVISIONS: April 4, 2018, July 17, 2017, November 8, 2016, December 15, 2015, December 16, 2014, June 19, 2013, June 15, 2011, March 26, 2009, April 29, 2008
	ISSUE DATE: June 16, 2006
SECTION: Miscellaneous Administrative Topics & Procedures	SUBJECT: File Names for Electronic Reports

Format: REPORT_NAME_R_YYYY-MM-DD
Ex: SWI_R_VOL1_2006-05-25

LOP and SCP (VRAP) INCOMING REPORTS AND LETTERS	
Document Name	Abbreviation File Name= Abbreviation + Date (yyyy- mm-dd)
Abandoned Well Information/Water Supply Well Information	ABWELLINF_R
Addendum	ADEND_R (added after report name)
Additional Information Report	ADD_R
Analytical Reports (Loose data sheets not in report)	ANALYT_R
As Built Drawings (or Plans)	AS_BUILT
Case File Scanned By OFD	CASE_FILE
Cleanup and Abatement Report	CAO_R
Case Transfer Form (from CUPA)	CASE_TRNSFR_F
Conduit Study/Well Search/Sensitive Receptor/Well Survey/Preferential Pathway Study	COND_WELL_R
Corrective Action Plan (CAP)	CAP_R
Correspondence	CORRES_L
Court Injunctions	INJ_L
Development Entitlement	DEV_ENTITLE
Development Plans (Includes Plan Set, Cross-sections, and Related Drawings)	DEV_PLAN
Development Schedule (Project Schedule, Gant Chart, etc.)	DEV_SCHD
DWR Confidential Well Logs (Report containing)	report name_R_CONFIDENTIAL_YYYY-MM-DD (Ex: SWI_R_CONFIDENTIAL_YYYY-MM-DD)
DWR Well Completion Report-Confidential (Loose well logs)	DWR_WELL_CONFIDENTIAL_YYYY-MM-DD (Date of Well Log)
ESI/DAR (Environmental Site Investigation, Data Assessment Report)	ESI_R
Excavation Report	EX_R
Extension Request Letter	EXT_RQ_L

Fact Sheet	FACT_SHT
Feasibility Study	FEASSTUD_R
Groundwater Monitoring/Quarterly Summary Report	GWM_R
Financial Assurance/Letter of Credit	FNCL_ASSRNC_LOC
Interim Remedial Action Plan	IRAP_R
Interim Remediation Results (Includes Pilot Test Reports, Vapor Mitigation Reports, Soil Management Reports, Free Product Removal Reports, & Dual-Phase Extraction Reports)	IR_R
Lawsuit	LAWSUIT_R
Migration Control Report	MIG_R
Miscellaneous Report/Soil Sample	MISC_R
Miscellaneous Sample Report (analytical results)	MISC_SAMP_R
Notification Letter	NOT_L
NPDES Miscellaneous Reports	NPDES_R
Operations & Maintenance Plan	OM_P
Operations & Maintenance Report	OM_R
Pay for Performance	PFP_R
Petition	PETITION_R
Phase 1 Environmental Assessment Report	PHASE1_R
Photos	PHOTO
Preliminary Site Assessment Report/Phase 2 (historic reports only)	PSA_R
Remedial Action Plan	RAP_R
Remedial Design & Implementation Plan	RDIP_R
Remediation Progress Report	REM_R
Request for Closure	RFC(_L or _R)
Risk Assessment Report	RISK_R
Risk Based Corrective Action	RBCA_R
List of Landowners Forms	LNOWNR_F
SB2004 Letter of Commitment	LOC_L
Site Conceptual Model/Conceptual Site Model	SCM_R
Site Health & Safety Plan	SFTY_PLAN_R
Site Management	SITE_MANAGE_R_
Acknowledgement Statement for Site Management Plan	SMP_ACK_L
Site Management Plan	SMP_R
Site Summary Report	SITE_SUM_R

Soil and Water Investigation Report (Includes soil gas/vapor reports, indoor, additional site investigation, well installation, site characterization, cross section, indoor air, additional onsite investigation, Phase II/preliminary site assessment)	SWI_R
Soil Disposal Report	SOIL_DSPL_R
Source Area Characterization	SOURCAREA_R
State Information	STATE_INFO (no date)
Status Report(monthly remediation status reports addressed to sanitary district requires no stamp/perjury letter)	STAT_R
Tank/Tank System Removal Report	TNK_R
Tentative Order Report	TENT_R
Unauthorized Release Form	URF_R
UST Sampling Report	UST_SAMP_R
USTCF 5 Year Review	USTCF_5YR
USTCF issued Public Notice	USTCF_PP_L
Well Construction Report (limited to water supply wells)	WELL_CST_R
Well Decommissioning Report/Letter (well destruction/abandonment)	WELL_DCM_R
Work Plan	WP_R