

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
FAX (510) 337-9335

July 30, 2018

Don Sul, Inc.
c/o Rita and Tony Sulins
187 North L. Street
Livermore, CA 94550
(Sent via E-mail to tonynrita@comcast.net)

Exxon Mobil
c/o Jennifer Sedlachek
4096 Piedmont, #194
Oakland, CA 94611
(Sent via E-mail to
Jennifer.c.sedlachek@exxonmobil.com)

**Subject: Work Plan Denial & Request for Technical Reports
Leaking Underground Storage Tank (LUST) Cleanup Site Case No. RO0000394
GeoTracker Global ID T0600100116
Arrow Rentals
187 North L Street, Livermore, CA 94550**

Dear Responsible Party(ies):

Alameda County Department of Environmental Health (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's evaluation included, but was not limited to, the review of the Data Gap Evaluation & First Quarter 2018 Groundwater Rebound Monitoring Report dated April 27, 2018 (the "Subject Report") prepared by Ground Zero Analysis, Inc. (Ground Zero) on behalf of Arrow Rentals Service and submitted to ACDEH as requested in ACDEH's directive letter dated January 18, 2018. The Subject Report includes:

- a. Documentation of groundwater rebound monitoring and sampling activities conducted in March 2018;
- b. A work plan to resolve data gaps related to the delineation of the groundwater contaminant plume that exceeds water quality objectives consisting of the installation of groundwater monitoring wells (the Groundwater Characterization Work Plan); and
- c. Responses to ACDEH's evaluation of un-met closure criteria presented in the January 2018 Directive Letter.

The Subject Report was prepared in response to ACDEH's Directive Letter dated January 18, 2018 (the "January 2018 Directive Letter") which requested several deliverables which are summarized below:

- a. Resubmittal of the First Semi-Annual 2017 Groundwater Monitoring and Remediation Effectiveness Report with the requisite professional signatures and seals;
- b. Submittal of Quarterly Groundwater Rebound Monitoring Reports (QMRs) for each quarter of 2018; and
- c. Submittal of a focused Conceptual Site Model (CSM) and Data Gap Evaluation Work Plan (DGWP). This submittal is required to address technical comments related to the remediation system evaluation.

ACDEH's review of the Subject Report indicates that the Subject report does not address several of the items requested by ACDEH in the January 2018 Directive Letter, specifically:

- a. A focused CSM, including a remediation system evaluation, was not included to support the scope of work proposed for groundwater characterization activities;
- b. A scope of work to evaluate vapor intrusion risk was not included; and

- c. Technical comments provided in the January 2018 Directive Letter were not addressed.

Section I of this letter presents ACDEH's review and acceptance of the QMR. **Section II** addresses ACDEH's technical comment on the Groundwater Characterization Work Plan. **Section III** presents ACDEH's response to the Subject Report's evaluation of un-met closure criteria identified by ACDEH in the January 2018 Directive Letter. **Section IV** presents ACDEH's evaluation of the Cases Electronic Submittal of Information (ESI) compliance. **Section V** presents ACDEH's requests for additional technical reports.

I. RESPONSE TO QUARTERLY MONITORING REPORT

ACDEH is in general agreement with the groundwater sampling and monitoring activities conducted from the first quarter of 2018 and acknowledges that technical comments provided in Section (1) of Appendix C of the January 2018 Directive Letter have been adequately addressed. However, technical comments provided in Section (3) of Appendix C of the January 2018 Directive Letter were not incorporated or addressed in the Subject Report.

Please note that future submittals which do not incorporate the technical comments provided in Section (3) of Appendix C of the January 2018 Directive Letter will be considered incomplete and will be rejected. ACDEH requests that future submittals include hydro- and chemo-graphs for each of the monitoring wells sampled and isoconcentration contours for benzene and gasoline range total petroleum hydrocarbons (TPHg) in each water bearing zone to be considered compliant.

II. RESPONSE TO GROUNDWATER CHARACTERIZATION WORK PLAN

The Subject Report includes a scope of work to conduct additional groundwater characterization activities including the installation and development of groundwater monitoring wells in two locations. The Subject Report omits the CSM with the justification that one will be prepared and submitted after implementation of the Groundwater Characterization Work Plan.

ACDEH's evaluation of the adequacy of the proposed Scope of Work cannot be completed without the requested focused CSM and remediation system evaluation for the following reasons:

1. The January 2018 Directive Letter discussed inconsistencies in the grouping of monitoring wells as being in the "Water Table" water bearing zone or "Shallow" water bearing zone. ACDEH requested that the adequacy of the monitoring well network be evaluated and that technical justification addressing why monitoring wells are grouped differently when calculating potentiometric/free-water surfaces and isoconcentration contours be included as part of an updated CSM.
2. In accordance state regulatory guidance¹ and industry best practices, screened intervals and annular seals of monitoring wells should be designed so as to prevent vertical migration of groundwater and contaminants between discrete water bearing zones. As such, ACDEH requires that as part of the focused CSM, the site geology and hydrogeology be described in sufficient detail so as to allow field staff to distinguish between each water bearing zone and aquitard and must be accompanied and supported by geological cross sections.
3. The Appendix C (2) of the January 2018 Directive Letter included technical comments regarding ACDEH's evaluation of the remediation system. These technical comments must be addressed for ACDEH to evaluate the relative effects of the operation of the remediation system on observed analytical concentrations at each monitoring point during and after operational periods of the remediation system.

¹ Department of Toxic Substances Control's (DTSC's) *Well Design and Construction for Monitoring Groundwater at Contaminated Sites*. June 2014

4. The Subject Report concurs with ACDEH's evaluation that the aerial extents of the contaminant plume that exceeds water quality objectives (the Groundwater Plume) is undefined to the south and north in the Shallow, Intermediate, and Deep water bearing zones. The Subject Report dissents from the January 2018 Directive Letter's conclusion that the contaminant plume that exceeds water quality objectives is undefined to the west in the Shallow, Intermediate, and Deep water bearing zones. Justification for this dissent is supported by the following: (a) analytical data from monitoring well W-3s bounds the contaminant plume to the west in the Shallow water bearing zone; (b) analytical data from monitoring well MW-9 bounds the groundwater contaminant plume to the west in the Intermediate water bearing zone; (c) the Deep water bearing zone is smaller in aerial extent than the intermediate zone and is therefore bounded. ACDEH's response to each of these justifications is provided below:

- a. **Shallow water bearing zone:** As discussed in the January 2018 Directive Letter, MW-3s (as well as MW-4, MW-5, MW-7, MW-8, and W-Bs) has historically been used as a component for the calculation of the free-water surface and groundwater gradient in the Shallow water bearing zone but has been excluded from the calculation of isoconcentration contours in the Shallow water bearing zone. ACDEH has requested technical justification for the inconsistencies in well classification and an evaluation of the monitoring well network to be presented in the focused CSM.

ACDEH also notes that there are historic instances of drastic benzene concentration fluctuations observed in MW-3s (see March 1996, April 1998, and April 2011). Technical justification for the cause of these fluctuations has not been provided at this time. ACDEH acknowledges that the concentration of benzene was reported below the laboratory reporting limit of 0.5 µg/L during the two most recent sampling events conducted at MW-3s (May 2016 and May 2017), however, an evaluation of the potential effects of operation of the on-site remediation system has not been completed. As such, it is unknown if the observed non-detect concentrations are representative of groundwater conditions in the absence of the operation of the on-site remediation system.

Therefore, the use of analytical data from MW-3s as a western bound for the Shallow water bearing zone is inappropriate at this time based on (i) the inconsistencies in groundwater bearing zone classification and the length of the screened interval which potentially penetrates multiple groundwater bearing zones; (b) the unexplained fluctuations in benzene concentration observed in MW-3s, and; (c) the incomplete evaluation of the effects of the operation of the groundwater remediation system on observed benzene concentrations in MW-3s,

- b. **Intermediate water bearing zone:** Monitoring well MW-9 has been sampled a total of three times: November 1988, September 1995, and April 2011. Reported concentrations of petroleum hydrocarbons during each of these sampling events varied significantly. ACDEH notes that concentrations of both gasoline range total petroleum hydrocarbons (TPHg) and benzene in the 1995 sample were reported at concentrations above 20% of their effective solubilities which is indirect evidence of the presence of non-aqueous phase liquid (NAPL)². Based on these observations, groundwater analytical data from W-3 are insufficient to evaluate groundwater concentration trends at this location. Furthermore, the minimum concentration of benzene reported from monitoring well MW-9 was 7.8 µg/L which exceeds the benzene water quality objective (1.0 µg/L). Therefore, the available historical groundwater analytical data from well W-3 is insufficient to define the extents of the Intermediate water bearing zone's Groundwater Plume to the west.

² California State Water Resources Control Board *Technical Justification for Vapor Intrusion Media-Specific Criteria*, March 2012

- c. **Deep water bearing zone:** ACDEH notes the extents of the Shallow, Intermediate, and Deep water bearing zones are currently undefined. As such, the claim that contaminant plumes that exceed water quality objectives in the Shallow and Deep water bearing zones do not extend beyond the lateral extents of the groundwater plume in the Intermediate water bearing zone is unverifiable. Furthermore, it is inappropriate to evaluate the extents of a Deep and Shallow water bearing zones Groundwater Plumes based on the extents of the Intermediate water bearing zone Groundwater Plume without supporting evidence such as an evaluation of the vertical and lateral hydraulic conductivity within each water bearing zone and an evaluation of hydraulic communication between each water bearing zone. Therefore, the extents of the Deep water bearing zone's Groundwater Plume remain undefined at this time.

The installation of additional groundwater monitoring wells at the Site is inappropriate until a focused CSM and remediation system evaluation that adequately addresses ACDEH's technical comments related to groundwater bearing zone classification, remediation system, and the adequacy of the monitoring well network are addressed.

During ACDEH's review of the Subject Report, ACDEH identified the following technical comments related to the proposed scope of work for groundwater characterization:

1. **Monitoring Well Design:** The Work Plan proposes installing two groundwater monitoring wells (MW-11 and MW-12) with 20 foot screens that span both the shallow and the intermediate water bearing zones. As an alternative, the Work Plan proposes installing two wells in each location: one screened from 30 to 45 feet below ground surface (ft bgs) and one screened from 45 to 60 ft bgs. As discussed above, screened intervals and annular seals for monitoring wells should be designed so as to prevent vertical migration of groundwater and contaminants between discrete water bearing zones. The proposed installation of a long screened monitoring wells that penetrates and connects multiple discrete water bearing zones is therefore inappropriate. The proposed alternative well clusters in each location is acceptable, however, the selection of well screen intervals total depth must be based on observed geological conditions and must be sufficient to maintain a seal between discrete water bearing zones;
2. **Well Development:** Well development criteria and procedures were not included in the Work Plan;
3. **Disposal of Investigation Derived Waste:** Waste management and disposal procedures were not included in the Work Plan;
4. **Field Forms:** Copies of field forms that will be completed during monitoring well installation, surveying, development, and sampling were not included in the Work Plan;
5. **Standard Operating Procedures:** Standard Operating Procedures were not included in the Work Plan.
6. **Reporting Requirements:** The proposed reporting requirements did not include requirements for submittal of Well Completion Reports. Well Completion Reports must be completed and submitted to the Department of Water Resources and must be included as an appendix in the Well Installation Report submitted to ACDEH.

III. RESPONSE TO LTCP CLOSURE EVALUATION

In the January 2018 Directive Letter, ACDEH evaluated 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) and identified four unmet LTCP criteria which are summarized 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 checked="" 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 type="checkbox"/> 3. Direct Contact and Outdoor Air Exposure	
<input type="checkbox"/> d. Free Product	<input type="checkbox"/> h. Nuisance		

The Subject Report presents an evaluation of each of the un-met criteria identified by ACDEH. ACDEH’s response to this evaluation is presented below:

e. Conceptual Site Model

As discussed in **Section II** above, a CSM must be submitted to support the proposed scope of work for groundwater characterization and to satisfy LTCP closure criteria.

f. Secondary Source

The Subject Report references the *First Semi-Annual 2017 Groundwater Monitoring & Remediation Effectiveness Report* dated July 21, 2017 and prepared by Ground Zero (the July 2017 Monitoring Report) for discussion pertaining to the effectiveness of secondary source removal activities at the Site and cites ongoing quarterly groundwater rebound monitoring results as an additional line of evidence that LTCP General Criteria f. has been met.

Technical comments related to the evaluation of the effectiveness of remediation at the Site have been presented in Section (1)(d) of the January 2018 Directive Letter and Section (2) of Appendix C of the January 2018 Directive Letter. These technical comments have not been addressed at this time. Furthermore, the Site is currently undergoing rebound monitoring. Until technical comments related to the evaluation of remediation system effectiveness provided in the January 2018 Directive Letter are addressed and rebound monitoring is complete, a determination that secondary source has been removed “to the extent practicable” cannot be made. As such, this criteria remains an impediment to closure under the LTCP.

1. LTCP Media Specific Criteria for Groundwater

As discussed in Section II, several impediments to the characterization of groundwater, including the delineation of the groundwater plume that exceeds water quality objectives, remain.

2. LTCP Media Specific Criteria for Petroleum Vapor Intrusion to Indoor Air

The Subject Report summarizes the results of soil vapor sampling conducted in 1990, 1998, and 2005 and cites the conclusions of the *Soil-Gas Investigation Report* dated December 2005 and prepared by Furgo West as sufficient to satisfy LTCP Criterion 2,b. ACDEH acknowledges that in a Directive Letter dated December 29, 2005, ACDEH issued concurrence that concentrations of fuel hydrocarbons detected in soil gas at the Site do not pose a risk to human health due to indoor air vapor intrusion. ACDEH notes that since the 2005 directive letter, the industries understanding of soil vapor migration and vapor intrusion risks has evolved as have industry best practices for sampling and evaluating soil vapor intrusion and regulatory guidance. As discussed in the January 2018 Directive Letter, soil vapor analytical data collected during the 1990, 1998, and 2005 sampling events were not collected or evaluated in accordance with the requirements of the LTCP. Furthermore, the stability of the benzene groundwater plume in 1990, 1998, and 2005 was (and remains) undefined. As such, it is unknown if samples collected during the 1990, 1998, and 2005 sampling events are representative or more conservative than current on-site and off-site conditions.

Therefore, ACDEH dissents from the Subject Reports conclusion that the Site meets the LTCP Media Specific Criteria for Petroleum Vapor Intrusion to Indoor Air criteria 2.b.

IV. GEOTRACKER ELECTRONIC SUBMITTAL OF INFORMATION COMPLIANCE

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

Table 2 – Non-compliant GeoTracker Requirements	
<input type="checkbox"/> Latitude and longitude of wells (GEO_XY)	<input type="checkbox"/> Surveyed elevation of wells (GEO_Z)
<input type="checkbox"/> Elevation of groundwater in wells (GEO_WELL)	<input checked="" type="checkbox"/> Boring log (GEO_BORE)
<input checked="" type="checkbox"/> Technical report (GEO_REPORT)	<input 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)

Details pertaining to the GeoTracker compliance issues identified in ACDEH’s review of the case file are summarized below:

1. **GEO BORE:** Stand alone boring logs in pdf format have not been uploaded to GeoTracker at this time for any of the field points at the Site. In accordance with CCR §3890 and CCR §3393, ACDEH requires that stand-alone boring logs in pdf format be uploaded to GeoTracker for all boring advanced after July 1, 2005. If a well was completed within a boring, the submitted boring log must include a well completion diagram depicting screen depth and interval. For the sake of completeness and ease of review, ACDEH also requests that borings advanced prior to July 1, 2005 for which PDF logs are readily available also be uploaded to GeoTracker.
2. **GEO REPORT:** California Health and Safety Code Section 25295 requires that the owner or operator transmit additional information regarding an unauthorized release to the lead regulatory agency on a written form or using an electronic format developed by the State Water Board (the Underground Storage Tank (UST) Site – Unauthorized Release / Contamination Report). Copies of these reports have not been uploaded to GeoTracker for the release identified in July 1989 or for the 1985 incident in which a petroleum supplier reportedly pumped up to 600 gallons of gasoline into a vapor monitoring well (the “Pitcock Release”).
3. **Field Point ID:** Depth to top of casing and length of screened interval was identified as absent in field point IDs for all wells at the Site.
4. **GEO MAP:** - The last updated GEO_MAP for the Site is dated December 2, 2015 and omits requisite elements, specifically the locations of W-D, W-E, W-ES, B-1 through B-5, W-2, W-3, B-1A, B-7, B-8, B-F, B-G, B-H, and all pipeline excavation trench soil sample locations from 1992 are omitted. 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).

In addition to the compliance issues identified above, ACDEH notes that soil analytical data from 1989 through 1992 is used in the justification for the Site meeting LTCP Media Specific Criteria for Direct Contact and Outdoor Air Exposure, however, EDF for these data have not been uploaded at this time. Because these data were collected prior to July 1, 2005 ACDEH does not require that these data be uploaded in EDF format to satisfy ESI compliance requirements for closure under the LTCP, however, ACDEH requests that these data be compiled and uploaded to facilitate review of the case file by this and other regulatory agencies and/or the public.

V. 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. Focused Conceptual Site Model and Data Gap Evaluation
Compliance Date: August 31, 2018

Please prepare a Focused Site Conceptual Model and Data Gap Evaluation in accordance with the compliance requirements of the January 2018 Directive Letter. This technical report must also address the technical comments identified above. ACDEH recommends preparing the focused CSM using ACDEH's CSM tabular format for which a template is available upon request. The Focused Site Conceptual Model and Data Gap Evaluation must include, at a minimum, the following elements:

- a. An evaluation of the monitoring well network adequacy, including identification of monitoring wells that are screened across multiple water bearing zones;
- b. An evaluation of geology and hydrogeology at the Site as it relates to the identification and classification of water bearing zones. This must include geological cross sections to support classification of each water bearing zone and to identify overlying and underlying aquitards;
- c. An evaluation of the remediation system effectiveness sufficient to address technical comments provide in the January 18, 2018 Directive Letter; and
- d. Figures and tables that address the technical comments provided in Section (3) of Appendix C of the January 2018 Directive Letter, including: updated soil and groundwater analytical summary tables; chemo- and hydro-graphs for each monitoring well; Groundwater elevation contour maps for each water bearing zone; isopleths for benzene, TPHg, and MTBE for each water bearing zone;

2. Electronic Submittal of Information
Compliance Date: August 31, 2018

Please address ESI compliance issues identified in Section IV by the compliance dated listed above.

3. Project Meeting
Compliance Date: September 21, 2018

Please schedule a project meeting to discuss the project Site Conceptual Model and a DRAFT of the Work Plan for Site Characterization Activities. This project meeting must be held by the compliance date listed above.

4. Work Plan for Site Characterization Activities
Compliance Date: September 30, 2018

Please prepare a work plan to address data gaps identified in the January 2018 Directive Letter and the Focused Conceptual Site Model and Data Gap Evaluation report requested above. A Draft of this work plan must be submitted to ACDEH for review and comment prior to the Project Meeting requested above.

VI. 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 e-mail 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)

Greg Stahl, Ground Zero Analysis, (sent via E-mail to: gstahl@groundzeroanalysis.com)

ATTACHMENT A

LTCP Closure Criteria Evaluation Checklist

187 L
LIVERMORE, CA 94550
ALAMEDA COUNTY
LUST CLEANUP SITE (INFO)
STATUS: OPEN - VERIFICATION MONITORING

PERTINENT INFORMATION:

CUF Claim #: 389 CUF Priority Assigned: B CUF Amount Paid: \$1,018,889

CLEANUP OVERSIGHT AGENCIES

ALAMEDA COUNTY LOP (LEAD) - CASE #: RO0000394 - JONATHAN E. SANDERS
SAN FRANCISCO BAY RWQCB (REGION 2) - CASE #: 01-0124 - Regional Water Board

- Activities Report
- Documents / Data
- Environmental Conditions
- Admin
- Funding
- Case Reviews

THIS PROJECT WAS LAST MODIFIED BY JONATHAN E. SANDERS ON 7/30/2018 2:40:38 PM - HISTORY

CLOSURE POLICY

THIS VERSION IS FINAL AS OF 7/30/2018

CHECKLIST INITIATED ON 10/3/2012

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 :

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).

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 -

YES NO

f. Secondary source has been removed to the extent practicable (info).

Impediment to Removing Secondary Source (Check all that Apply):

- Remediation Has Not Been Attempted
- Remediation Was Designed Incorrectly
- Remediation Was Shut Off Prematurely
- Poor Remediation O&M
- Other -

Remediation is underway; Currently undergoing rebound testing.

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](#)

YES

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

3(a) - Maximum concentrations of petroleum constituents in soil are less than or equal to those listed in the following table ([LINK](#)) for the specified depth below ground surface.

YES NO

Additional Information

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

YES NO

Has this LTCP Checklist been updated for FY 18/19?

YES NO

[SPELL CHECK](#)

Save Form as Partially Completed

Save Form as Complete

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