



June 11, 2018

Ms. Marcia Redford  
170 Woodland Way  
Piedmont, CA 94611

(Sent via electronic mail to: [Redfordfamily@earthlink.net](mailto:Redfordfamily@earthlink.net))

Subject: Data Gap Work Plan Request; Fuel Leak Case No. RO0003256 and GeoTracker Global ID T10000010538, Woodford Residence, 170 Woodland Way, Piedmont, CA 94611

Dear Ms. Woodford:

Alameda County Department of Environmental Health (ACDEH) has reviewed the case file, including the *Data Gap Investigation Report*, dated April 6, 2018, prepared and submitted on your behalf by the Wheeler Group Environmental LLC (Wheeler). The investigation report documented the installation of soil bores B1 to B12, and the installation of subslab vapor points SS1 and SS2 in an effort to define the lateral extent of soil and groundwater contamination, the extent of potential Light Non-Aqueous Phased Liquids (LNAPL), and the risk of vapor intrusion to the house basement adjacent to the former product piping and former boiler.

ACDEH has evaluated the data and recommendations presented in the above-mentioned reports, in conjunction with the case files, to determine if the site is eligible for closure as a low risk site under the State Water Resources Control Board's (SWRCBs) Low Threat Underground Storage Tank Case Closure Policy (LTCP). Based on ACDEH staff review, we have determined that the site fails to meet the LTCP General Criteria d (Free Product Removal), and e (Site Conceptual Model; see Geotracker). Conversely the subject site appears to meet six of the eight General Criterias, and three of three Media-Specific Criterias.

Based on the review of the case file ACDEH requests that you address the following technical comments and send us the documents requested below.

### **TECHNICAL COMMENTS**

- 1. LTCP General Criteria d (Free Product)** – The LTCP requires free product to be removed to the extent practicable at release sites where investigations indicate the presence of free product by removing in a manner that minimizes the spread of the unauthorized release into previously uncontaminated zones by using recovery and disposal techniques appropriate to the hydrogeologic conditions at the site, and that properly treats, discharges, or disposes of recovery byproducts in compliance with applicable laws. Additionally, the LTCP requires that abatement of free product migration be used as a minimum objective for the design of any free product removal system. The LTCP also defines free product as primarily equivalent to migrating Light Non-Aqueous Phase Liquid (LNAPL).

While free product does not appear to be present on groundwater beneath the site, as groundwater was not encountered prior to refusal on bedrock at a depth of 14 feet below surface grade (bgs) and the release may be a soils only case, free product or LNAPL, appears to be mobile and migrating above bedrock at the site. This is documented by the distribution of the highest contaminant concentrations being present in soil bores at bores B3 and B6 (Total Petroleum Hydrocarbons as diesel or TPHd up to 7,940 milligrams per kilogram or mg/kg) located down slope from the former UST location, at shallow depths (2.5 feet). Additionally the presence of oil product and staining in cracks at the base of the eastern foundation of the house indicates migration potentially along the foundation, and potentially along the sanitary sewer line that extends around three sides of the house at a shallow depth. In that the release is suspected to have primarily occurred from the UST system at the time of the driveway replacement work in 2016, the release appears to be sufficient mobile to continue to migrate through soil or preferential pathways quickly. Finally, due to the shallow nature of the contamination at the site, it appears that irrigation or rain water may

contribute (see report of free water in soil bore B3), and would continue to exacerbate, the migration of the free product above bedrock until corrective action measures are implemented (see below).

- 2. LTCP General Criteria e (Site Conceptual Model)** – According to the LTCP, the SCM is a fundamental element of a comprehensive site investigation. The SCM 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). The SCM is relied upon by practitioners as a guide for investigative design and data collection. All relevant site characteristics identified by the SCM 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.

Our review of the case files indicates that insufficient data collection has occurred to assess the nature, extent, and mobility of the release and to support compliance with General Criteria d as discussed in Technical Comment 1 above. Specifically, the lateral extent of soil contamination, at concentrations the LTCP considers to be indirect evidence of LNAPL (defined as concentrations of TPHd greater than 10 – 50 milligrams per kilogram in soil) has not been sufficiently defined to the east, at a minimum, of the release (east of B4 with a concentration of 3,540 mg/kg TPHd at 3.5 feet bgs).

- 3. Data Gap Investigation Work Plan and Focused Site Conceptual Model** – Please prepare a Data Gap Investigation Work Plan to address the technical comments listed above. Please support the scope of work in the Data Gap Investigation Work Plan with a focused SCM and Data Quality Objectives (DQOs) that relate the data collection to each LTCP criteria. For example please clarify which scenario within each Criteria a sampling strategy is intended to apply to.

In order to expedite review, ACDEH requests the focused SCM be presented in a tabular format that highlights the major SCM elements and associated data gaps, which need to be addressed to progress the site to case closure under the LTCP. Please see the previously forwarded Attachment A “Site Conceptual Model Requisite Elements”. Please sequence activities in the proposed data gap investigation scope of work to enable efficient data collection in the fewest mobilizations possible, by the date identified below.

- 4. Corrective Action Plan** – Due to the apparent continued mobility of the LNAPL through soil and potentially preferential pathways at the site a Draft Corrective Action Plan (CAP) appears to be appropriate. Please incorporate the collection of additional data as may be necessary in to the requested Data Gap Work Plan in order to identify appropriate Corrective Actions, which will be requested in the future, as indicated below.

At that time, ACDEH will request that you prepare a Draft CAP that meets the provisions of section 2725 of the UST regulations (CCR, Title 23, Chapter 16, section 2600, et seq.) and includes the following minimum information:

- Proposed cleanup goals and the basis for cleanup goals.
- Summary of site characterization data.
- Receptor information including likely future land use scenarios, adjacent land use and sensitive receptors, and potential groundwater receptors.
- Evaluation of a minimum of three active remedial alternatives including discussion of feasibility, cost effectiveness, estimated time to reach cleanup goals, and limitations for each remedial alternative.
- Detailed description of proposed remediation including confirmation sampling and monitoring during implementation.
- Post-remediation monitoring.

- Schedule for implementation of cleanup.

Please be aware that public participation is a requirement for the CAP process. Therefore, we will request that you submit a Draft CAP for ACDEH review. Upon ACDEH approval of a Draft CAP, ACDEH will notify potentially affected members of the public who live or own property in the surrounding area of the proposed remediation described in the Draft CAP. Public comments on the proposed remediation would be accepted for a 30-day period.

### **TECHNICAL REPORT REQUEST**

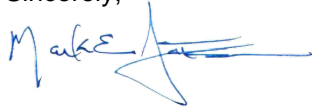
Please submit the following technical reports and deliverables to the State Water Board's Geotracker website and notify your case worker by electronic mail ([mark.detterman@acgov.org](mailto:mark.detterman@acgov.org)), in accordance with the following specified file naming convention and schedule, as provided below, and in the Responsible Party(ies) Legal Requirements/Obligations which is included as Attachment 1. Please note ACDEH no longer accepts reports on the ftp site.

- **August 24, 2018** – Data Gap Work Plan  
File to be named: RO3256\_WP\_R\_YYYY-mm-dd
- **60 Days After Work Plan Approval** – Draft Corrective Action Plan and Site Investigation Report  
File to be named: RO3256\_SWI\_CAP\_R\_YYYY-mm-dd

These reports are being requested 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 in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

Should you have any questions, please contact me at (510) 567--6876 or send me an electronic mail message at [mark.detterman@acgov.org](mailto:mark.detterman@acgov.org).

Sincerely,



Mark Detterman, PG 4799, CEG 1788  
Senior Geologist  
Senior Hazardous Materials Specialist

Enclosures: Attachment 1 – Responsible Party (ies) Legal Requirements / Obligations  
Electronic Report Upload (ftp) Instructions

cc: Brent Wheeler, Wheeler Group Environmental LLC, 3690B Third Street, Suite 221, San Rafael, CA 94901, (Sent via electronic mail to: [bwheeler@wheelergroupenvironmental.com](mailto:bwheeler@wheelergroupenvironmental.com))

Mark Youngkin, Wheeler Group Environmental LLC, 3690B Third Street, Suite 221, San Rafael, CA 94901, (Sent via electronic mail to: [mark.youngkin@gmail.com](mailto:mark.youngkin@gmail.com))

Dilan Roe, ACDEH, (Sent via electronic mail to: [dilan.roe@acgov.org](mailto:dilan.roe@acgov.org))

Paresh Khatri, ACDEH; (Sent via electronic mail to: [paresh.khatri@acgov.org](mailto:paresh.khatri@acgov.org))

Mark Detterman, ACDEH, (Sent via electronic mail to: [mark.detterman@acgov.org](mailto:mark.detterman@acgov.org))  
Electronic File; GeoTracker

<b>Alameda County Environmental Cleanup Oversight Programs (LOP and SCP)</b>	<b>REVISION DATE:</b> December 14, 2017
	<b>ISSUE DATE:</b> July 25, 2012
	<b>PREVIOUS REVISIONS:</b> September 17, 2013, May 15, 2014, December 12, 2016
<b>SECTION:</b> ACDEH Procedures	<b>SUBJECT:</b> 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/](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 values<sup>1</sup> 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
<b>2016 Subsurface Investigation Report</b>	2016 S1	✓	✓	Effluent	SO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✓
<b>2012 Site Assessment Work Plan</b>	2012	✓	✓			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>2010 GW Investigation Report</b>	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	✓	✓	✓	✓	✓

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

<b>Alameda County Environmental Cleanup Oversight Programs (LOP and SCP)</b>	<b>REVISION DATE:</b> NA
	<b>ISSUE DATE:</b> December 14, 2017
	<b>PREVIOUS REVISIONS:</b> September 17, 2013, May 15, 2014, December 12, 2016
<b>SECTION:</b> ACDEH Procedures	<b>SUBJECT:</b> 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/](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.