

From: [Detterman, Karel, Env. Health](#)
To: charles.carmel@bp.com
Cc: "[Kristene Tidwell](#)"; [Rob Miller](#); [Roe, Dilan, Env. Health](#)
Subject: Fuel Leak Case RO0000078 and GeoTracker Global ID T0600100106 - ARCO #0374 - 6407 Telegraph Avenue, Oakland, CA
Date: Tuesday, May 27, 2014 4:29:40 PM

Dear Mr. Carmel:

Alameda County Environmental Health (ACEH) has reviewed the documents entitled *Soil Vapor Investigation Report and Updated Conceptual Site Model and Case Closure Request* (RFC) dated March 28, 2014 and the *First Quarter 2014 Monitoring Report* (1st Qtr GWM) dated April 30, 2014 prepared on your behalf by Broadbent. Thank you for submitting the reports. The RFC presents the results of a soil vapor investigation conducted in November 2013 and an updated SCM and requests closure of the site under the State Water Resources Control Board's (SWRCB) Low Threat Underground Storage Tank Case Closure Policy (LTCP).

ACEH has evaluated the data and recommendation presented in the above-mentioned reports, in conjunction with the LTCP. Based on ACEH staff review, we have determined that the site fails to meet LTCP General Criteria e (Site Conceptual Model), the Media Specific Criteria for Groundwater, Media Specific Criteria for Vapor Intrusion to Indoor Air, and Media Specific Criteria for Direct Contact and Outdoor Air Exposure.

Based on ACEH's review, your Request for Closure is denied. ACEH remains concerned about the vapor intrusion risk to the apartment complex located west of and within 20 feet of monitoring well MW-4 and other commercial and residential properties overlying the dissolved phase benzene plume. The bioattenuation zone in the site vicinity is less than 5 feet and concentrations of benzene consistently exceed 1,000 micrograms per liter in MW-4. The plume remains undefined downgradient (southwest) of wells MW-4, MW-8, and MW-9. Additionally, a review of groundwater gradient and isoconcentration maps indicate the direction of the groundwater gradient is to the southwest and the total petroleum hydrocarbons as gasoline (TPHg), benzene, and MTBE isoconcentration plume directions are to the west-west northwest, which conflict with the groundwater gradient direction.

Historic data of dissolved concentrations of TPHg and benzene in groundwater in well MW-4 indicate that there is a residual source resulting in persistent and unstable concentrations in this well that have the potential to be a risk to human health and the environment. The recently conducted soil vapor investigation was not performed in accordance with the approved work plan and the results are inconclusive as to whether the apartment occupants are at risk from vapor intrusion to indoor air. None of the four offsite vapor probes located immediately adjacent to the apartment building were installed due to reported inability to gain permission from the adjacent property owner. Additionally, only one of the two onsite vapor probes was installed. Due to encountered surface water influx from nearby landscaping at 2.5 feet below ground surface (bgs) only the shallow vapor probe was installed and had to be relocated 15 feet from the source area. The subsurface conditions encountered as result of the temporary surface water influx from landscaping are not representative of the actual static groundwater levels which fluctuate between approximately 5 and 9 feet bgs and therefore the soil vapor analytical data is suspect. Furthermore a low

concentration in a soil gas sample collected one time from one shallow vapor probe does not support the conclusion that the occupants in the adjacent residential building are not at risk from vapor intrusion to indoor air. ACEH also notes that details of the foundation of the apartment building as well as other commercial and residential buildings in the vicinity of the site were not provided as requested in our August 18, 2013 Directive Letter.

ACEH also notes that the 1st Qtr GWM report contains data from another BP site, ARCO Station #2107 at 3310 Park Blvd., Oakland. This report must be corrected and re-uploaded to State's GeoTracker website and the Alameda County ftp site.

Therefore, at this juncture ACEH requests a meeting with you and your consultants to discuss the data presented in the RFC and develop an appropriate path forward to and to delineate the groundwater plume and implement the approved *Conceptual Site Model and Revised Soil Vapor Investigation Work Plan*, dated June 19, 2013 so as to collect representative soil gas samples upon which appropriate risk evaluations can be made. Please call Dilan Roe at 510-567-6767 to schedule a meeting within the next two weeks.

Thank you,

Karel Detterman, PG
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PDF copies of case files can be downloaded at:

<http://www.acgov.org/aceh/lop/ust.htm>