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HEALTH CARE SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
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Mr. Hamid Khatirine
c/o Mr. Michael D. Liberty
3713 Century Drive
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ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
REBECCA GEBHART, Acting Director

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

March 8, 2016

Mr. Farrokh Hosseinvoun
(Sent via E-mail to: farok@fhone.net)

Mr. Mohammad Pazdel
1770 Pistacia Court
Fairfield, CA 94533

Mr. Hamid Khatirine
c/o Mr. Michael D. Liberty
3713 Century Drive
Campbell, CA 95008-3832

Subject: Conditional Work Plan Approval, Request for System Evaluation, and Work Plan; Fuel Leak Case No. RO0000473 and GeoTracker Global ID T0600191157, ARCO, 15101 Freedom Avenue, San Leandro, CA 94578

Dear Messrs. Hosseinvoun, Pazdel, and Khatirine:

Alameda County Environmental Health (ACEH) staff has reviewed the case file including the *Workplan for Further Investigation*, dated January 12, 2016, and the *Fourth Quarter 2015 Groundwater Monitoring and Remediation Progress Report,* dated January 14, 2016. The reports were prepared and submitted on your behalf by SOMA Environmental Engineering, Inc. Thank you for submitting the reports.

The referenced groundwater monitoring report documented the quarterly sampling and analysis of groundwater. Contaminant concentrations in downgradient well MW-10 remain elevated (up to 22,000 micrograms per liter (µg/l) Total Petroleum Hydrocarbons as gasoline (TPHg), <10 µg/l benzene, 930 µg/l ethylbenzene, and <10 µg/l methyl tert butyl either (MTBE)). Concentrations of TPHg were 28,000 µg/l during the previous sampling event in September 2015 in this well. The *Technical Justification for Vapor Intrusion - Media Specific Criteria*, (March 2012), for the State Water Resources Control Board's (SWRCBs) Low Threat Underground Storage Tank Case Closure Policy (LTCP), indicates that concentrations of TPHg in groundwater over 20,000 µg/l is indirect evidence of the presence of Liquid Non-Aqueous Phased Liquids (LNAPL) in groundwater. These concentrations at a location approximately 355 feet downgradient of the release indicate the presence of mobile LNAPL.

Figures in the referenced report also appear to indicate a detaching of the TPH plume, and potentially a mobile LNAPL plume, from contamination located beneath the site due to the apparent success of previous Multi-Phase Extraction (MPE) events on and offsite.

The groundwater monitoring report also documented the second residential crawl space vapor sampling event with a concurrent ambient air vapor sample. Both events documented similar ambient air and crawl space concentrations for benzene that were above residential indoor air Environmental Screening Levels (ESLs). Naphthalene also was present in both ambient air samples at higher concentrations or higher non-detectable concentrations than the crawl space samples, and both sets were over the indoor air ESL. Concentrations of Total Petroleum Hydrocarbons as gasoline (TPHg), toluene, ethylbenzene, and total xylenes were below residential indoor air ESLs for both the crawl space and ambient air samples. Documentation of benzene and naphthalene concentrations in ambient air and crawl space air can indicate that residual contamination at the site in shallow soil (upper 10 feet below grade surface or bgs) may represent a vapor source of concern for the offsite residential structure. Review of available site data indicates very limited shallow soil samples have been collected either onsite or offsite at representative locations.

The referenced work plan proposes the installation of three direct push soil bores and subsequent conversion to three 4-inch diameter Multi-Phase Extraction (MPE) wells, as well as the conversion of well MW-10 to a 4-inch diameter well, in an effort to delineate the extent of the groundwater plume