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Subject:	Recommendation for Case Closure Report
Date:	Friday, June 22, 2012 11:25:00 AM
Attachments:	REFERENCE FILES.pdf

Hollis:

I have been reviewing the case files and the report entitled *Recommendation for Case Closure* dated March 12, 2012 and prepared by ARCADIs on behalf of Atlantic Richfield Company. Although our review of the above mentioned report is not yet final, ACEH has the following concerns regarding the data, assumptions, and recommendations presented in these reports:

Maximum Contaminant Concentrations. ACEH is concerned about the concentrations in groundwater samples reported in the Recommendation for Case Closure report dated March 12, 2012. A review of the analytical data indicates frequent use of laboratory detection limits in excess of the contaminant's corresponding ESLs and thus misleading statements with respect to sample exceedances of ESLs.

Source Areas/Releases. Based on historical TPHg and MTBE concentrations in well MW-2, there appears to be evidence of multiple releases in the vicinity of the gasoline UST tank pit in 1995, 1999, 2001, and again in 2003. Similar spikes can also be observed in historic data of concentrations of TPHg and MTBE in groundwater samples collected from MW-1 and MW-3, in locations both upgradient and crossgradient from the tank pit (please see attached Table 2 – Historical Groundwater Results). Based on the recurring concentration spikes in the historic groundwater data, ACEH is concerned that the source area(s) have not been adequately characterized and the cause(s), date(s), and type of release(s) not adequately addressed. The Recommendation for Case Closure report indicates that three gasoline USTs were removed in 1990 and replaced with one 12,000 gallon capacity regular unleaded gasoline UST, one 10,000 gallon capacity unleaded plus gasoline UST, and one 6,000 gallon super unleaded gasoline UST. Historic analytic data suggest multiple releases subsequent to the site renovations, however no assessment of the data is presented. ARCADIS has identified a TPHg hot spot in the vadose zone soil at the Site in the vicinity of soil boring SB-7, however, the source of contamination in the vicinity of the boring has not been addressed. Also, the isoconcentration contours presented in the report are highly speculative and not supported by site data (please see attached Figure 3 – Historical Lateral Extent of TPHg Soil Impacts).

Characterization of Residual Hydrocarbon Contamination in Soils and Groundwater Downgradient of the Source: In a letter dated May 27, 2010, ACEH approved of proposed additional site characterization activities presented in the Rider to the Addendum to Soil and Groundwater Investigation Work Plan dated March 9, 2010 and prepared by ARCADIS. The approved work plan included installation of two monitoring wells MW-4 and MW-5 and advancement of a soil boring (SB-9) and collection of soil and groundwater samples to further delineate soil and groundwater contamination and the MTBE plume. The field investigation activities were documented in the Monitoring Well Installation Report dated November 30, 2010 prepared by ARCADIS. However, although ARCADIS states that the site assessment activities were conducted in accordance with the approved work plan, the report only documents installation of

one groundwater monitoring well, MW-4. This well was installed northwest of the site where the plume has already been delineated based on non-detects in an adjacent active fuel leak case site (Former Unocal Station No. 1871) borings B-4 and B-9, and groundwater monitoring well MW-11. The proposed location, as presented in the approved work plan, was to the south of the Site where impacts to groundwater and the extent of the MTBE plume has not been defined. The approved work plan also included requirements for the installation of monitoring well MW-5 and advancement of soil boring SB-9 to define the extent of the plume downgradient and southeast of the Site. This work was not completed nor was it addressed by ARCADIS in the Monitoring Well Installation Report. Thus, the MTBE plume has still not been delineated to the south and southwest of the site. Obtaining soil and groundwater data from the locations proposed in the work plan to delineate the extent of the MTBE plume is appropriate. Please see attached Figure 1 – Site Map for the proposed monitoring wells MW-4 and MW-5 and soil boring SB-9.

MTBE Plume Delineation. ACEH does not concur with the MTBE plume delineation presented in the Recommendation for Case Closure report which does not include MTBE concentrations detected in monitoring well MW-4 in the MTBE isocentration contours (please see attached Figure 9 - Extent of MTBE Groundwater Impacts (February 2012) and Figure 13 - Extent of MTBE Groundwater Impacts (February 2011). **R**esults from samples collected from monitoring well MW-4 indicate MTBE has already migrated beneath the freeway interchange to the northwest. Additionally, as stated above, the MTBE plume has still not been delineated downgradient of the site in the south and southwest direction.

Preferential Pathway Investigation: ACEH is concerned that the potential for the storm drains in the vicinity of the Site to act as preferential pathways for contaminant migration has not been adequately assessed. In the Monitoring Well Installation report dated November 2010, ARCADIS states that field crews attempted to clear the soil boring at the proposed off-site location of MW-4 down to 5 feet bgs and found utilities, possibly a storm drain. Although the location of the boring was moved to a new location, ACEH recommends that underground utilities in the vicinity of the site be investigated as a potential preferential pathway (please see attached Figure 3 – Conduit Study). Given the uncertainty in source release(s) and dates of occurrence(s), ACEH remains concerned that the potential for impacted groundwater to enter the storm drain or migrate via higher permeability trench material has not been adequately evaluated. The storm drain flows to Lake Merit (a tidal estuary) or the San Francisco Bay.

Selection of Environmental Screening Levels: In the Recommendation for Case Closure report, ARCADIS presents historical soil results and states that they used ESL values obtained from Table A – Shallow Soils (<3m bgs); Groundwater IS a Current or Potential Source of Drinking Water (RWQCB 2008) to screen sample results. However, the ESL values actually used in the table were obtained from Table K-2 – Direct Contact to a Commercial/Industrial Receptor (Water Board 2008), resulting in an incorrect conclusion that the only samples to exceed the ESLs were TPHg collected from two and five feet bgs at SB-7. Use of the correct ESLs and laboratory detection limits results in significantly different conclusions (see Attached Table 1 – Historical Soil Results).

Potential Sources of Exposure and Pathways: In the Recommendation for Case Closure, ARCADIS presents the potential sources of exposure and the status of the corresponding pathways. Based on concentrations of contaminants in the soil and use of laboratory detection limits in excess of the contaminant's corresponding ESLs, ACEH recommends that the pathway for groundwater contamination due to leaching of contaminated soil is included in the proposed scenario.

Geotracker Compliance: Based on a review of the State Water Resources Control Board

GeoTracker database, the Site is in non-compliance status with requirements for uploading survey data for monitoring well MW-4.

Once our review is complete, I will submit a formal letter providing our final comments and recommendations regarding the Recommendation for Case Closure report.

Also, if you have a current email address for Jennifer Sedlachek with Exxon Mobil Refining and Supply Co, one of the Responsible Parties for the site, could you please forward it to me.

Regards,

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