

COMMENT LETTER*

TO: State Water Resources Control Board – Division of Water Quality
Attn.: USTClosuresComments@waterboards.ca.gov

FROM: Kevin D. Brown, CEG #2180; geobrown@earthlink.net

DATE: December 5, 2013

SUBJECT: **Comment Letter – ARCO Station No. 6185 Proposed Case Closure**

SITE ADDRESS: 5898 Mission Street, San Francisco, San Francisco County, CA

***Disclaimer:** The views and opinions expressed in this comment letter are solely those of the author in his private capacity and do not in any way reflect the views of his employer or any related entity.

Dear State Water Resources Control Board,

I have reviewed the “NOTICE OF OPPORTUNITY FOR PUBLIC COMMENT” and the “UST CASE CLOSURE SUMMARY”, pertaining to the referenced site. As a California-licensed professional geologist and certified engineering geologist who wants to ensure that accurate geologic interpretations have been conducted at UST sites before case closure, and to also evaluate whether corrective actions have been completed in accordance with regulations and the Low-Threat Case Closure Policy (LTCP), I have the following concerns/comments.

Case Review

On Page 1 of the closure summary, it states:

- “This Case meets all of the required criteria of the Policy.”
- “The petroleum release is limited to the shallow soil and groundwater.”
- “Remedial actions have been implemented and further remediation would be ineffective and expensive.”

I disagree with these statements. For example, not all of the general criteria of the LTCP have been met. The LTCP requires that, “A conceptual site model that assesses the nature, extent, and mobility of the release has been developed.” On June 10 and 11, 2013, boring HP-2 was advanced at the site in the area of a former pump island. Groundwater was encountered at 32.75 feet during drilling, which later stabilized at a depth of 40.90 feet. A groundwater sample was collected and analyzed; it was found to contain 110,000 µg/L of gasoline-range organics (GRO) and 19,000 µg/L of benzene. These are very high gasoline-related constituents detected in a deeper water-bearing zone, not in shallow groundwater (as shown on Figures from the environmental consultant, ARCADIS).

The petroleum release is not limited to shallow soil and groundwater. The lateral and vertical extent of the soil contamination causing the groundwater pollution discussed above has not been determined, nor can it be stated with any degree of confidence that the characterization of the deeper groundwater zone, to date,

has been adequate. Therefore, the CSM is incomplete.

The LTCP requires that secondary source be removed to the extent practicable. There have been remedial actions conducted at the site; some efforts were more effective than others. The August 23, 2013, *Amended Request for Low-Threat Closure* from ARCADIS states, *Secondary source removal has been addressed.* Addressed is not the same as extent practicable. It does not appear that any past remedial efforts were focused in the area of HP-2 and the former pump island, and there has been no demonstration that additional remedial efforts at the site, especially in this area, would be ineffective and cost-prohibitive.

Groundwater

ARCADIS' has mistakenly made the assumption that groundwater beneath the site is not considered a potential source of drinking water. This mistake is important to note because the Basin Plan for the San Francisco Bay Regional Water Quality Control Board considers the groundwater a potential source of drinking water unless demonstrated otherwise (e.g., high TDS, low yield, etc.).

The LTCP states, "... establishing an alternate level of water quality not to exceed that prescribed in the applicable Basin Plan is appropriate, and that water quality objectives will be attained through natural attenuation within a reasonable time, prior to the expected need for use of any affected groundwater." The water quality objective in the Basin Plan for benzene in groundwater is 1 µg/L, which is the drinking water MCL. At this site, as previously stated, benzene has been detected in deeper groundwater, as recently as recently as six months ago, at a very high concentration of 19,000 µg/L (or 19,000 times the MCL).

Instead of citing the Basin Plan, ARCADIS used the Regional Water Board's ESLs (where groundwater is not considered a drinking water source) to determine water quality objectives at this site for benzene and other constituents of concern, to determine the minimum lengths of the plumes, to determine degradation rates, etc. Clearly, the assumption that groundwater is not a drinking water source is inappropriate and, therefore, all of the analysis based on this assumption is likely erroneous.

Page 2 of the case closure summary indicates that for the "Groundwater Media-Specific Criteria", the site meets the LTCP criteria for "Class 5." This determination is confusing to the reader. The criteria listed in the summary (plume is less than 250 feet in length, etc.) are for a "Class 2" site, with this exception noted: Benzene in groundwater that is greater than 3,000 µg/L is near a secondary source area. For a Class 2 site, according to the LTCP, benzene cannot exceed 3,000 µg/L.

I look forward to receiving a written response to my concerns in the near future. Thank you.

Sincerely,



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