

Response to Santa Clara County LOP Comments

Site setting

This Site is located in downtown San Jose, and is a commercial card-lock facility.

Santa Clara County's Summarized Comments to Review Summary Report

1. Vertical Extent of MTBE plume not defined and a downward vertical gradient is reported at a site 1,800 feet to the north

RESPONSE: Geology at the subject Site (Claim 18497) is reported as consisting of "primarily silty clay, clayey silt, and silty sand with clay from the ground surface to a depth of approximately 40 feet below ground surface (bgs), with minor coarse-grained deposits (sand) occurring at depths between 18 and 28 feet bgs. The sand lenses are underlain by a significant deposit of tight clay extending from approximately 28 feet to the total depth explored of approximately 40 feet bgs" (Allterra, 2011). In other words, there is an aquitard from approximately 28 to at least 40 feet bgs. MTBE is reported in one monitoring well at a concentration of 20 micrograms per liter ($\mu\text{g/L}$). The vertical extent of MTBE can reasonably be estimated to not extend beneath or even significantly into the aquitard, and therefore assessment of the vertical extent of the MTBE plume is not necessary. Assessment of the deeper aquifer would be an unnecessary expense and has the potential to create a preferential pathway into the deeper aquifer where one did not exist before.

2. Sampling of soil for naphthalene is necessary due to doubts about correlating benzene concentrations to anticipated naphthalene concentrations; LOP does not accept Potter and Simmons (1998) as reliable in regards to both variability in gasoline formulations and in regards to weathering

RESPONSE: Potter and Simmons (1998) is a peer reviewed and widely accepted source for petroleum hydrocarbon constituent concentrations. Even if one used a less conservative value for naphthalene, concentrations at the Site would still satisfy Table 1 of the Policy.

Furthermore, as the Technical Justification for the Policy notes: "The exclusion criteria defined for benzene are assumed to be conservative for naphthalene, which is also highly susceptible to biodegradation (Anderson et al., 2008; GSI, 2010). Naphthalene also has a much lower solubility value and Henry's Law coefficient (compared to benzene), thereby limiting the amount of naphthalene available to volatilize into gas phase. For these reasons, the screening criteria described here, while developed for benzene, should also be protective of naphthalene vapor intrusion."

Lastly, the Site is paved and accidental access to site soils is prevented. As an active commercial petroleum fueling facility, any construction worker working at the Site will be prepared for exposure in their normal daily work.