

RESPONSE TO SANTA CLARA COUNTY LOP COMMENTS

NGUYEN PROPERTY CLOSURE CLAIM 6653

Comment 1: Groundwater data shows that WQO's have not been achieved or nearly achieved. The most recent groundwater samples were collected in 2011 and reported that monitoring well STMW-3 identified TBA at 1,000 µg/L. In addition, the grab groundwater sample from GP-1 contained 8,000 µg/L TPHg, 350 µg/L MTBE and 130 µg/L benzene.

Response: The one-time grab groundwater sample GP-1 was collected in February 2007 and is no longer considered to be representative since more recent data groundwater samples from properly constructed monitoring wells are available. Although the 2011 groundwater monitoring results have not been uploaded to GeoTracker, a copy of the results were included with the comment letter. The results show that TBA was detected at 1,000 µg/L in monitoring well STMW-3. However, the San Francisco Regional Water Quality Control Board Basin Plan does not have a water quality objective for TBA. In addition, the California Department of Public Health Response Level for TBA is 1,200 µ/L. This is the concentration where water providers must either treat the water before supplying the water to their customers or take the supply well out of service. The highest concentration of TBA currently in the groundwater where is less than 1,200 µ/L. Consequently, the only two petroleum constituents that remains in the groundwater at this site that exceeds the water quality objectives is MTBE in two wells, source area well MW-1 at 53 µg/L and downgradient well STMW-3 at 6.5 µg/L and benzene in MW-1 at 16 µg/L, STMW-3 at 7.1 µg/L and STMW-4 at µg/L. Based on the rapid decrease in the concentration of MTBE between these two wells, the residual dissolved plume of MTBE and benzene is projected to not extend beyond the sidewalk of the subject site before meeting the water quality objectives for MTBE of 5 µg/L and benzene of 1 µg/L, respectively.

Comment 2: A groundwater production well is located approximately 290 feet to the west-southwest of the site's property line. According to historical gradient information presented in the rose diagram, the well is located in a downgradient direction from the site.

Response: The case meets Policy Criterion 1 by Class 1. The contaminant plume that exceeds water quality objectives is less than 100 feet in length. There is no free product. The nearest water supply well or surface water body is greater than 250 feet from the defined plume boundary. According to data available in GeoTracker, there are no California Department of Public Health regulated supply wells within 250 feet of this site. No other water supply wells were identified within 250 feet of the site in the files reviewed. Furthermore, the rose diagram included with the County's comments indicates predominate groundwater flow direction of northwest (more than 70% of sampling events). Fund staff also noted that the referenced groundwater production well is actually an agricultural irrigation well located in Emma Prusch Park and is not intended to provide drinking water. According to the City of San Jose, this well is only used for demonstration purposes a few times a year. It was the intent of the City Park's Recreation and Neighborhood Services Department to connect the well to a waterline to provide irrigation to the orchards and gardens in the park. However, this connection has not been implemented.

Comment 3: The Policy exempts active commercial petroleum fueling facilities from assessment related to vapor intrusion to indoor air. In cases where contamination has migrated off-site, it may be appropriate to conduct soil vapor assessment in the portion of the plume outside the boundaries of the active commercial petroleum fueling facility. The groundwater plume is currently not defined. After the plume is defined, it will be necessary to determine if an off-site soil vapor assessment is required.

Response: Based on the rapid decline in MTBE concentrations between monitoring wells MW-1 in the source area and STMW-3 located downgradient of the UST excavation area, the Board staff projected the plume to extend no further than beneath the sidewalk adjacent to the subject site before meeting the water quality objectives for MTBE of 5 µg/L and benzene of 1 µg/L, respectively. In addition, MTBE is very miscible in water and exhibits a strong tendency to stay in solution. Consequently, it is unlikely that soil vapors could be generated from the residual dissolved MTBE remaining at this site.

Comment 4: The Board statement, “This case meets Policy Criterion 3b. A professional assessment of site-specific risk from exposure shows that maximum concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health.” A risk assessment is not present in the project file. The County is unclear who performed a risk assessment and made the determination that petroleum constituents in soil will have no significant risk of adversely affecting human health. Please provide a citation for the inferred risk assessment.

Response: Although no document titled “Risk Assessment” was found in the files reviewed, a professional assessment of site-specific risk from potential exposure to residual soil contamination performed by Fund Staff. This assessment found that maximum concentrations of petroleum constituents remaining in soil will have no significant risk of adversely affecting human health. The Site is paved and accidental exposure to site soils is prevented. As an active petroleum fueling facility, any construction worker working at the Site will be prepared for exposure in their normal daily work.

Comment 5a: Four sampling points are located downgradient of the former UST’s and pump islands: STMW-3, STMW-4, GP-1 and IB-1. The most recent groundwater sampling event for STMW-3 was in 2011. The groundwater sample collected from GP-1 contained 8,000 µg/L TPHg, 350 µg/L MTBE, and 130µ/L benzene. These two sampling points are located along the northern property line, upgradient of an apartment complex, and downgradient of the former UST’s and pump islands. No sampling points are located downgradient of GPMW-3 and GP-1.

Response: Using the 2011 groundwater monitoring well data, samples from GPMW-3 and GPMW-4 demonstrated that WQO’s have or nearly have been achieved and the projected plume boundary does not beyond the sidewalk adjacent to the subject site before meeting the water quality objective for MTBE of 5 µ/L. The older water quality data collected from GP-1 and IB-1 in 2007 are not considered representative of current Site conditions.

Comment 5b: Soil samples collected from IB-1 detected low to non-detectable concentrations of contaminants at 5 and 10 feet bgs. Much higher concentrations were detected at a depth of 14 feet bgs. The depth to groundwater is approximately 11 feet bgs. It appears that groundwater migrated in a westerly direction from the former USTs causing soil impact at IB-1. IB-1 is

located upgradient of the water production well and downgradient from the former USTs and pump islands. No sampling points are located downgradient of IB-1.

Response: The predominant groundwater flow direction is northwest with minor variability to the west-southwest. Monitoring well STMW-3 is located less than 10 feet downgradient of the source and IB-1. It is not clear to Fund staff what water production well that the County is referring to but if they are referring to the Emma Prusch Park agricultural irrigation well, this well is cross-gradient of the dissolved plume's predominant flow direction and beyond the 250 foot radius required by the Low Threat Closure Policy to meet Policy Criterion 1 by Class 1.

Comment 6: The site data does not support the conclusion that the groundwater plume is defined. This issue is addressed in the County's comments above.

Response: The State Board staff used the data available in GeoTracker and recently supplied data in the comment letter to project the plume's length and to make their recommendations. These data confirm the residual plume is projected to not beyond the sidewalk adjacent to the subject site before meeting the water quality objectives for MTBE of 5 µg/L and benzene of 1 µg/L, respectively. The plume is stable, concentrations are decreasing and the case should be closed.

Comment 7: The County does not accept the usage of benzene data to estimate the naphthalene in soil.

Response: The referenced document was a collaborative effort by more than 400 of the following industry, government and academia organizations: Oil and Gas Research Institutions, major Oil Companies, Association of American Railroads, multiple State Governments, the USEPA, The Department of Defense, University of Massachusetts and several private consulting firms. The purpose of the effort was to develop scientifically defensible information for establishing soil cleanup levels that are protective of human health at petroleum hydrocarbon contaminated sites. These findings have been peer reviewed numerous times and accepted throughout the United States in the assessment of risk at petroleum hydrocarbon contaminated Sites.