STATE WATER RESOURCES CONTROL BOARD (STATE WATER BOARD)
DIVISION OF WATER QUALITY RESPONSE TO COMMENTS ON THE
PROPOSED UST CASE CLOSURE OF MADISON INDUSTRIES,
1900 EAST 64TH SREET, HUNTINGTON PARK, LOS ANGELES COUNTY (Site)

We received one comment letter during the public comment period, which ended on December 18, 2015 at noon. The comments and our responses are presented here.

Comment letter received:

Commenter, represents the Golden State Water Company (GSWC)

COMMENT 1: The subject UST site resides within the boundaries of GSWC's Florence-Graham water system. However, the GeoTracker website incorrectly designates the Metropolitan Water District of Southern California as the primary water system operator.

RESPONSE: State Water Board agrees GSWC is the primary water system operator and GeoTracker has been corrected to reflect that.

COMMENT 2: GSWC owns and operates six public water-supply wells (not including destroyed wells formerly owned by GSWC) within a one-mile radius of the subject UST site. Two wells (Converse 1 and 2) are located approximately 1,550 feet west, three wells (Miramonte 1, 2, and 3) are located approximately 5,100 feet south-southwest, one well (Nadeau 3) is located approximately 4,800 feet south of the subject UST site. The Converse 1 and 2 wells are located generally downgradient of the subject UST site based on Fall 2014 groundwater elevation contours in the deeper principal aquifers of the Central Basin, which were obtained from the Water Replenishment District of Southern California.

RESPONSE: State Water Board recognizes that the GSWC wells are as near as 1,550 feet from the site and typically produce from below the Bellflower Aquiclude. This information was considered when the State Water Board reviewed the case for closure.

COMMENT 3: The uppermost perforations in these wells occur at 296 and 600 feet below ground surface (bgs) for GSWC's Converse 1 and 2 wells, 1,332, 550, and 580 feet bgs for GSWC's Miramonte 1, 2, and 3 wells, respectively, and 575 feet bgs for GSWC's Nadeau 3 well, or approximately 130, 433, 1,188, 406, 437, and 432 feet below mean sea level, respectively.

RESPONSE: State Water Board agrees and these wells and their production intervals were considered in its decision to close the case. Low level contamination at this site was last measured in three groundwater monitoring wells at 124 feet below the ground surface. Therefore, it is unlikely residual contamination in enough mass to cause groundwater to exceed water quality objectives would pass the aquicludes to the deeper groundwater production aquifers. Additionally, the low levels of contamination are likely to naturally attenuate while traveling over 1,000 feet to production wells.

COMMENT 4: Regular sampling of GSWC's Converse 1 well since 1987 (DOW Source ID = 1910077-009), Converse 2 well since 1985 (DOW Source ID = 1910077-010), Miramonte 1 well since 1988 (CDPH Source ID = 1910077-003), Miramonte 2 well since 1985 (DOW Source ID = 1910077-004), Miramonte 3 well since 1988 (DOW Source= 1910077-005), and the Nadeau 3 well since 1988 (DOW Source = 1910077-007) suggests that, with the exception of the detection of chlorinated solvents such as perchloroethene or trichloroethene in most of the wells, fuel-related organic compounds have not been detected in groundwater produced by the wells.

RESPONSE: State Water Board agrees that petroleum constituents have not been detected in groundwater produced by the above mentioned wells.

COMMENT 5: Based on data obtained from Water Replenishment District of Sothern California (WRD), a downward vertical hydraulic gradient between the shallow unconfined aquifer and deeper drinking water aquifers exists in the area, which increases the threat to drinking water aquifers posed by contaminants at the subject UST site.

RESPONSE: State Water Board agrees a downward vertical gradient may exist. The Bellflower Aquiclude is over 100-foot thick and is a continuous feature at the Site and in the regional area. The aquiclude provides a barrier to the downward migration of petroleum constituents to deeper, productive aquifers.

COMMENT 7: Based on data obtained from WRD, a few aquitards appear to exist between the shallow unconfined aquifer and deeper drinking water aquifers in the area, which may impede downward migration of contaminants detected at the subject UST site

RESPONSE: State Water Board agrees that several aquitards may exist as generally known as the Bellflower Aquitard. The Bellflower Aquiclude is over 100-foot thick and is a continuous feature at the Site and in the regional area. The aquiclude provides a barrier to the downward migration of petroleum constituents to deeper, productive aquifers.

COMMENT 8: Based on limited groundwater elevation data from monitoring wells at the subject UST site, as well as data collected between 2007 and 2011 from monitoring wells located approximately 300 to 400 feet to the east, at the adjacent Lanza, Inc. site (i.e., see http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL2042T1544), groundwater flow in the shallow unconfined aquifer in the area ranges from the north-northwest to north-northeast. However, no monitoring wells appear to have been installed close to the intersection of Wilmington Avenue and East 64th Street, or directly downgradient of the former USTs and documented soil contamination. In addition, it is unclear whether polycyclic aromatic hydrocarbons (PAHs)

detected in soil beneath the former USTs (e.g., naphthalene), which appear to suggest a release consisting of petroleum, as defined in Low Threat Closure Policy (LTCP) General Criterion b, were targeted for analysis in groundwater samples collected from monitoring wells at the subject UST site. Therefore, it is unclear whether the nature and extent of groundwater contamination have been completely assessed and General Criterion e of the LTCP has been satisfied, consistent with the 6/18/15 LTCP checklist.

RESPONSE: Three monitoring wells were installed at the site. North-northwest was the flow direction reported using site data. Commenter is correct no monitoring wells were installed downgradient, however MW1 was installed within 5 feet north of the UST system and the last two sampling events were ND for constituents of concern (COCs). Low level COCs were detected east of the UST system in MW3 (16.7µg/L benzene, 4.10 µg/L toluene, and 14.9µg/L total xylenes). The State Water Board considers it unlikely that the low level COCs would migrate downward and transport over 1,000 feet to production wells.

COMMENT 9: Based on the publically available information, it is not clear whether contaminated soil associated with the USTs was excavated and removed from the subject UST site. So, it is unclear whether General Criterion f of the LTCP has been satisfied, consistent with the 6/18/15 LTCP checklist.

RESPONSE: State Water Board agrees that information is not available to determine the fate of soil associated with the USTs removed in 1989; however, based on results of subsurface investigations, the secondary source appears to have been removed to the extent practicable. Soil samples collected at the Site beneath the former USTs in 2011, 2013, and 2014 at depth between 5 and 120 feet bgs indicate that low levels of secondary source remain in soil are limited to between 30 and 95 feet bgs. Since only trace to non-detect levels of petroleum constituents were detected between 100 feet bgs and 120 feet bgs, and groundwater was encountered at approximately 125 feet bgs, additional removal of secondary source would not likely change the conceptual site model.

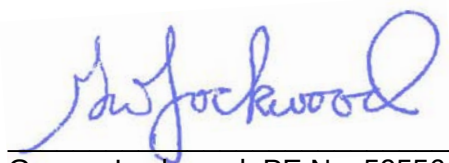
COMMENT 10: Because the downgradient extent of groundwater contamination does not appear to have been delineated, the length of any contaminant plume likewise does not appear to have been assessed. In addition, contaminant concentrations over longer time periods at sites like the subject UST site can increase with increasing groundwater elevation and decrease with decreasing groundwater elevation. This behavior suggests that, in the absence of other factors, contaminant concentrations may only be stable in so much as groundwater levels do not fluctuate and/or remain below any possible residual vadose zone soil contamination. In other words, contaminant concentrations associated with the subject UST site could increase in the future if groundwater elevations increase significantly. Furthermore, based on the limited number of groundwater sampling

events (i.e., 2 events in two wells over roughly 1/2 year and 3 events in one well over roughly 1-1/2 years), it is unclear whether statistically meaningful conclusions can be drawn with respect to trends in the extent, or concentrations, of contaminants over time. Thus, it is unclear whether the Groundwater-Specific Criterion of the 6/18/15 LTCP checklist has been satisfied.

RESPONSE: Although there are no groundwater monitoring wells in the downgradient (north-northwest) direction, low to non-detect levels of petroleum constituents in the near source area wells and cross-gradient well, located approximately 180 feet to the northeast of the source area, indicate the plume is not likely to exceed 250 feet in length. State Water Board considered the possibility of changing groundwater elevations when evaluating the potential for remaining petroleum constituents in soil to impact groundwater. Groundwater was encountered at approximately 125 feet bgs in November 2014. Trace to non-detect levels of petroleum constituents were detected between 100 and 120 feet bgs; therefore, concentrations remaining in soil in the 25 feet immediately above the current water table would not be expected to cause groundwater concentrations to increase. Petroleum constituents were detected in groundwater at low levels in 2014 and showed a decreasing trend over the two monitoring events. Due to a lack of elevated levels of petroleum constituents in the 25 feet above the water table, this stable or decreasing trend is likely to continue and additional monitoring will not likely change the conceptual site model.

COMMENT 11: Because it is unclear whether all of the General and Groundwater-Specific Criteria have been satisfied, as described in the 10/5/2015 UST Case Closure Summary, GSWC is unable to comment on potential impacts to drinking water aquifers in the area from contamination at the subject UST site.

RESPONSE: State Water Board considered potential impacts to drinking water aquifers when evaluating this case for closure and determine that due to the low levels of petroleum constituents remaining in soil and groundwater at the Site and the presence of the Bellflower Aquiclude, providing a continuous separation of over 100 feet between groundwater at the Site and the underlying drinking water aquifer, drinking water aquifers are not likely to be impacted by the release. As described in the closure summary document and in the responses to comments above, it is the State Water Board's opinion that the criteria of the low threat closure policy are met at the subject UST site.



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