Response to Comments Received from Sacramento County Environmental Management Department dated August 3, 2015 regarding the Closure Recommendation for Former Beacon Station 3697, 7282 Franklin Boulevard, Sacramento, CA Claim 11424

The following comments were received during the 60-day notice.

Comment: The Sacramento County Environmental Management Department (EMD) has received the Notice of Opportunity for Public Comment regarding the subject case. It is the position of EMD that because of the close proximity to a municipal drinking water well, this site should not be closed.

The municipal well is located to the east and geo-hydraulically downgradient of the site. Based on information provided in the 2015 First Quarter Groundwater Monitoring Report, the contamination plume edge is less than 200 feet laterally from the municipal well. Concentrations as high as 5,400 parts per billion (ppb) Total Petroleum Hydrocarbons as gasoline and 660 ppb benzene exist in monitoring well MW-4, which is also located on the eastern side of the site.

Historically the municipal well was used temporarily, however, because of severe drought conditions in the Sacramento region there is a high likelihood that it could be used more permanently in the near future. This increased pumping of the well will enlarge the cone of influence and magnitude of vertical gradients, therefore increasing the likelihood of contamination entering a drinking water source.

EMD recommends this site not be closed and the responsible party continues remedial actions that would be protective of the municipal well ultimately leading to the cleanup of the site.

Response: Since at least 1987 the municipal well has been sampled 62 times for petroleum hydrocarbon constituents by the municipal well purveyor. The municipal well indicated no detectable petroleum hydrocarbon constituents prior to June 2007. A sample collected in June 2007 indicated detectable concentrations of ethylbenzene, xylenes,1,3,5-trimethylbenzene, n-propylbenzene, bromodichloromethane, bromoform, chloroform, dibromochloromethane, isopropylbenzene and styrene.

- None of the compounds detected during the June 2007 sampling event had been detected in the municipal well prior to the June 2007 sampling event.
- None of the compounds detected during the June 2007 sampling event have been detected in the municipal well since the June 2007 sampling event.
- For much of the time between March and December 2007 the municipal well was nonoperational; the reason is not known. The sample with detections was collected during a period of well non-operation. The compounds detected were most likely introduced during maintenance or repair of the municipal well. Therefore, the Site is not the source of the June 2007 detections.

Since 1991 the municipal well has been sampled 74 times for petroleum hydrocarbons as part of the groundwater monitoring activities for the site. These are separate sampling events from the purveyor sampling events listed above. No petroleum hydrocarbon concentrations were detected in the municipal well during any sampling event. The municipal well was not accessible in June 2007 for groundwater monitoring.

- The combined data from two separate sources demonstrate that the municipal well has not been impacted by petroleum hydrocarbons from the Site.
- The highest dissolved petroleum hydrocarbon concentrations in groundwater at the Site were generally reported between 1986 and 1994 yet at that time no detections were observed in the municipal well. Current dissolved concentrations (over 20 years later) are significantly lower and have not been detected in the municipal well. The data clearly indicate that the limited extent of affected groundwater at the Site is not being drawn into the municipal well.

The closest Site groundwater monitoring wells, MW-8 and MW-10, located approximately 80 feet upgradient of the municipal well, have indicated the following:

- Monitoring well MW-8 has indicated no detectable petroleum hydrocarbon concentrations since 1989.
- Monitoring well MW-10 has indicated no detectable petroleum hydrocarbon constituents since 1996.
- If petroleum hydrocarbons were continuing to migrate toward the municipal well they would be detected in MW-8 and MW-10. The data indicate that the petroleum hydrocarbons from the Site are not migrating toward the municipal well.

EMD's comments regarding future use of the municipal well are speculation. It is not a foregone conclusion that the municipal well purveyor will increase pumping of this particular well, as there are many factors in that decision-making.

In 1990 the depth to groundwater beneath the Site was approximately 55 feet. In 2012 the depth to groundwater was only 25 feet. Since 1986 groundwater elevations have risen substantially, by approximately 30 feet. Since the "severe drought conditions" began in 2012, depth to groundwater has dropped by only 2 feet, to 27 feet. The rise in groundwater elevation has increased the distance between the limited extent of affected groundwater at the Site and the top of the intake screen interval of the municipal well, at 164 feet below ground surface. There is a vertical distance of approximately 137 feet between the groundwater surface and the top of the intake screen. The majority of the subsurface geology within that 137-foot interval consists of low permeability clay that would impede vertical movement of groundwater. If increased pumping was initiated, the well would preferentially pull water horizontally from the more permeable sands and silty sands at depth within the intake screen interval of the municipal well than pull shallow water vertically through less permeable shallow sediments.

Finally, the dissolved benzene concentrations reported in wells MW-1 and MW-4 have indicated stable concentrations since 2009. Stable concentrations indicate that the contaminant plume has expanded to its maximum extent: the distance from the release where attenuation exceeds migration. Natural attenuation will continue to reduce the remaining benzene concentrations in groundwater; in the interim, the groundwater conditions at the Site do not pose a risk to the municipal well and the Site meets the Low Threat Closure Policy criteria for closure.