Alameda County Environmental Health Meeting Sign-In Sheet

Olympic Station 2436 Grant Avenue, San Lorenzo, CA, RO0000373

Tuesday, July 07, 2015 10:00 AM

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Environmental Project Summary

Former Olympic Station 1436 Grant Avenue, San Lorenzo, CA

Prepared for Meeting at Alameda County Environmental Health Department Office

July 7, 2015



Project Overview

- Petroleum hydrocarbon impact was discovered in 1998 at the time of UST and product dispenser removal. New USTs were not installed, and the former Olympic Station building now operates as a smog testing business.
- Limited excavation activities beneath the site's former fuel dispensers (to 3.5' bgs) and waste oil UST (to 12' bgs)were performed in 1998.
- Several phases of subsurface investigation were subsequently completed onsite and offsite in order to assess the extent of impact in the site vicinity. This includes the advancement of approximately 36 soil borings with conversion of 15 of these borings to groundwater monitoring/extraction wells.



- DRO, GRO, BTEX, and MTBE have been detected in soil samples.
- The highest concentrations of petroleum hydrocarbons in soil are typically detected between about 7 and 12 feet bgs.
- The attached figures provided detailed information regarding the distribution of petroleum hydrocarbons in soil across the site and areas where soil concentrations historically exceeded Environmental Screening Levels.
- In a 2012 Corrective Action Plan, Stratus calculated an estimated mass of 955 pounds of GRO in soil beneath the site using the available soil analytical data.



- Between surface grade and approximately 15 to 18 feet bgs, fine grained silt/clay mixtures are predominately noted (except in areas of coarse fill). Below this depth, sandy soils are predominately encountered until approximately 25 feet bgs.
- Groundwater monitoring and sampling at the site has been performed since 1999. Since this time, groundwater levels have fluctuated between approximately 5.5 and 8.5 feet bgs, and thus seasonal groundwater fluctuation is minimal. Groundwater flow is west, southwest, and northwest at a low gradient.
- Three groundwater monitoring wells (MW-4, MW-5A, and MW-6A) are constructed solely within the fine grained soils (10' depth). The other monitoring (and extraction) wells are at least 20' deep and extend into the deeper sandier soils. The 10' depth wells were installed in 2010 (MW-4) or 2014 (MW-5A and MW-6A).



- Groundwater samples at the site are tested for GRO, BTEX, and MTBE.
- In general, fuel contaminant concentrations in the 10' depth wells are higher that levels observed in the other wells with longer well screen intervals.
- The following figures have been prepared that illustrate the generalized extent of GRO, benzene, and MTBE in groundwater during June 2014 (before DPE implementation, discussed later in this report), and during the second quarter 2015 (most recent data). The data is segregated using the 10' depth wells and the deeper 20-26' depth wells.



 Based on our understanding of the distribution of petroleum hydrocarbons in groundwater, and information collected during a water supply well survey, water wells to not appear threatened from the site's petroleum hydrocarbon and MTBE impact.

• Soil gas sampling was performed at the site in 2010. Relatively high concentrations of GRO and benzene were detected in these samples. GRO and benzene were reported at maximum concentrations of 52,000,000 μ g/m³ and 160,000 μ g/m³, respectively. ESLs for commercial property are 29,000 μ g/m³ and 280 μ g/m³, respectively. Post dual phase extraction (DPE) soil gas samples have not been collected; current concentrations in soil vapor are likely significantly lower than 2010 levels.



- DPE and ozone injection pilot testing were performed in 2011.
 DPE was subsequently selected as the remedial alternative for the property.
- DPE was initiated at the property in July 2014 and is ongoing. As of May 2015, an estimated 943 pounds of GRO have been removed from the subsurface in the vapor phase.
- Initially, wells EX-1 through EX-7 were used (in various combinations) for extraction. For approximately 2 months, wells MW-5A and MW-6A have been used for extraction in order to attempt to increase mass extraction rates and improve groundwater quality west of the site.



Data Gaps / Pathway to Closure

- The lateral extent of fuel contaminant impact to groundwater is not fully assessed. Offsite assessment of contaminant impact to the north-northwest of the site is hindered by the presence of a high-traffic roadway that contain multiple underground utility corridors that limit potential drilling.
- Monitoring well installations in the left turn lane of westbound Grant Avenue were aborted due to utility conflicts, and monitoring well locations north of Grant Avenue have been deemed 'too distant' by ACEHD. Monitoring wells west-southwest of MW-5A and MW-6A have been requested by ACEHD.
- Post DPE soil gas sampling needed in the future.



Points of Discussion

- What are the criteria for discontinuing DPE remediation?
- If monitoring wells are required, how many are needed and where should they be located?
- When should the next soil gas samples be collected, and how long after DPE should be allotted for equilibrium conditions to be achieved?
- Are there any other items of concern that would prohibit closure?





























