



GROUNDWATER TREATMENT STATUS SUMMARY

Groundwater present in the northern portion of the property has been impacted by Volatile Organic Compounds (VOCs) as a result of releases from waste storage areas formerly operated by Hughes/Raytheon. The predominant contaminants present in groundwater are; 1,1-Dichloroethene (DCE), Trichloroethene (TCE), and Tetrachloroethylene (PCE). DCE is the predominant contaminant present, and is a degradation product of PCE/TCE.

Groundwater on the property has been the subject of numerous rounds of investigation dating back more than 25 years. Active remediation of groundwater commenced in 1996 under the oversight of the Regional Water Quality Control Board (RWQCB – who has State of CA primacy for water quality protection), via a system composed of several elements, including; vapor extraction, groundwater extraction and treatment, and air sparging. All of these processes were conducted in contained systems within a treatment equipment compound located on the northern property boundary. Influent concentrations were closely monitored, and all treated groundwater was subject to monitoring and treatment standards established in Waste Discharge Requirements (WDRs) produced for the site by the RWQCB. Treated water, after testing and monitoring to ensure that the WDR treatment standards were met was discharged via re-use as irrigation water on landscaped areas on the northern area of the property as per the requirements of the WDRs. **At no time was untreated contaminated groundwater ever discharged to the environment.**

In late 2006, after more than 10 years of treatment, contaminant levels in the groundwater had been lowered to a point where the more aggressive treatment system components identified above became less effective for removal of the remaining residual contaminant levels. With the pre-approval of the RWQCB, the active groundwater treatment was suspended in order to allow for the addition of wells and the commencement of an enhanced bioremediation process, a commonly utilized remediation technique. This process essentially entails the introduction of air and nutrients into the groundwater thereby encouraging and enhancing the natural degradation process that occurs naturally via microbial activity. By using an enhanced process the microbes become healthier and more robust, and in effect increase the microbial metabolization of the remaining contaminants. The bio-degradation process happens naturally, but via augmentation it is speeded up, thus resulting in shorter time frames to meet the ultimate cleanup levels established by the RWQCB. Running the active treatment system would in effect short-circuit the bioremediation; therefore it is shut down during this process, and in point of fact has been shut down for approximately 1.5 years. Depending upon the progress made via bioremediation, the active system may be re-started at some point, or could remain completely shut down as it is now, until such time as it is approved for disassembly following the completion of remediation of the groundwater to RWQCB's satisfaction and regulatory levels.

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