


FOR INFORMATION ONLY

CITY OF LOS ANGELES
Department of Recreation and Parks

May 17, 2006

TO: BOARD OF RECREATION AND PARK COMMISSIONERS
FROM:  (fa)
JON KIRK MUKRI, General Manager
SUBJECT: ORCUTT RANCH/CENTEX HOMES RESIDENTIAL DEVELOPMENT SITE -
ENVIRONMENTAL INVESTIGATION FOR PERCHLORATE
CONTAMINATION

Centex Homes owns 375 acres of undeveloped land located just west of the intersection of Roscoe Boulevard and Valley Circle Boulevard in the West Hills community of Los Angeles. They are planning to develop a residential housing project (referred to as the Sterling Residential Neighborhood) on 100 acres with the remaining acreage to be transferred to the Santa Monica Mountains Conservancy.

The western boundary of the project site is less than one mile from the eastern portion of the Santa Susana Field Laboratory, formerly owned by Rocketdyne and now under the ownership of Boeing. This facility, situated in Ventura County, began operating in 1948 and has been principally involved in the research, development, and testing of liquid-propellant rocket engines and associated components. Other operational activities include nuclear energy research and the development and testing of water jet pumps and lasers. Over the past few decades, the Santa Susana Field Laboratory has been the focus of environmental controversies, investigations and litigations over the on-site and off-site contamination of soil, surface water, and groundwater stemming from the storage, use, and disposal of various hazardous materials and wastes. The contaminants of concern include metals, volatile organic compounds, perchlorate, petroleum hydrocarbons, hydrazine, dioxins and radionuclides.

Perchlorate, because it is extremely soluble in water and highly mobile in soil, has drawn most of the attention, particularly with regard to groundwater contamination. Currently, approximately 90% of the manufactured volume of perchlorate is used as a solid rocket fuel oxidizer. Perchlorate in drinking water poses the greatest human health risk due to the potential for long-term exposure. Perchlorate is known to disrupt the delicate balance of hormone levels in the thyroid, which is particularly threatening to the healthy growth and development of fetuses, infants, and young children. It is also suspected to have a role in causing thyroid cancer.

In February 2005, the U.S. Environmental Protection Agency (EPA) established its official reference dose of perchlorate at 0.0007 milligrams per kilogram per day, and translated that

number to a Drinking Water Equivalent Level (DWEL) of 24.5 parts per billion (ppb). Both the EPA and the National Academy of Sciences support this number as being protective of all populations. With respect to perchlorate contamination in soil, there are no established federal or state standards. The California Department of Toxic Substances Control (DTSC) has used for the cleanup of perchlorate-contaminated soil at Whittaker Bermite, a former munitions manufacturing and testing facility in Santa Clarita, a site-specific action level of 500 ppb. For perchlorate detected in soil at this site, DTSC considers concentrations below this action level to pose no risk to human health and the environment.

Surface drainage from the Santa Susana Field Laboratory crosses Centex Homes' Sterling Residential Neighborhood site via Dayton Canyon Creek. Because of this hydrological connection, Centex Homes retained Allwest Remediation to conduct an environmental site investigation during May through July 2005. The preliminary results indicated the presence of perchlorate in the lower portion of Dayton Canyon Creek, with one sample registering at 62,000 parts per million (ppm), representing 6% perchlorate. In response to this discovery, Centex Homes requested oversight by the DTSC (Glendale Branch), and entered into a Voluntary Cleanup Agreement with DTSC in August 2005. As part of this effort, Allwest Remediation prepared a work plan in September 2005 which addressed the perchlorate contamination issue, and included additional site characterization studies and a remedial action program.

In conjunction with the work plan, Allwest Remediation collected several soil samples, soil gas samples, and surface water samples throughout the Sterling Residential Neighborhood site from September 2005 to January 2006 and analyzed them for the following contaminants of concern: perchlorate, metals, hydrazine, dioxins, polyaromatic hydrocarbons and volatile organic compounds. Perchlorate was the only contaminant detected, generally in near-surface samples (within three feet of the surface), with concentrations up to 2110 ppm found in the lower creek area.

Because of perchlorate's high water solubility coupled with the impending threat of winter rains, a Time Critical Removal Action Work plan was prepared in November 2005 for the purpose of removing the perchlorate-contaminated soil areas from the creek before the onset of any storm flows. However, before the work plan could be implemented, heavy rainfall occurred between December 29, 2005, and January 2, 2006. Coordinated soil sampling and testing efforts by DTSC and Allwest Remediation on January 4 and 5, 2006, in the known areas of contamination and immediately downstream of these areas showed no perchlorate to be present in the soil. The perchlorate had apparently been carried away by the storm flows in the creek.

As a result of this incident, coupled with ongoing pressure from the West Hills Neighborhood Council, DTSC decided to test for the presence of perchlorate at Orcutt Ranch, located immediately to the east and down gradient of the Sterling Residential Neighborhood site. In coordination with the Department of Recreation and Parks, DTSC collected soil samples from the park's water course on March 6, 2006. Eleven sample points were established from which two soil samples were collected at each point, one at six inches and one at three feet, for a total

of twenty-two samples. The test results detected perchlorate in two samples at the three foot depth at concentrations of 130 ppb and 200 ppb. Because the test method that was used (EPA Method 314) can generate false positives for perchlorate as a result of salts in the soil, DTSC further analyzed the two positive samples and used a more sensitive testing method called liquid chromatography with mass spectrometry. The results were non-detect for perchlorate in one sample and 0.9 ppb perchlorate concentration in the other sample. The Department requested the General Services Department's (GSD) Standards laboratory to review DTSC's test methods and results. GSD concurred with the overall sampling and testing protocols that were used by DTSC, and noted that the difference in the perchlorate concentrations detected between the two tests was possibly due to the false positive results known to be associated with EPA Method 314.

As part of its public outreach effort on this issue, DTSC sent a letter to stakeholders in the West Hills community, dated March 30, 2006, stating that the concentrations of perchlorate detected in soil at Orcutt Ranch (130 ppb and 200 ppb) do not pose a risk to human health. This conclusion, of course, also applies to the lower concentration of perchlorate (0.9 ppb) that was detected through the more sensitive confirmation test. Moreover, this risk assessment is consistent with the 500 ppb action level that was set by DTSC for the cleanup of perchlorate-contaminated soil at the Whittaker Bermite site in Santa Clarita, meaning that perchlorate concentrations below this level would pose no risk to human health and the environment.

DTSC has determined that there is no hydrological connection between Orcutt Ranch and the Centex Homes site; therefore, any perchlorate that may be present at Orcutt Ranch cannot be physically linked (at least not by surface water flows) to perchlorate contamination at the Centex Homes site. This fact and the Orcutt Ranch soil sampling results were presented to the community by DTSC at a public meeting held on April 19, 2006, at DeVry University in West Hills. DTSC also informed the community that to aid in making a final determination on whether perchlorate is present at Orcutt Ranch, they would be conducting supplemental sampling in and near the water course to further characterize the vertical and lateral extent of any perchlorate contamination. DTSC collected the samples at Orcutt Ranch Park on April 24 and expects to have the result in approximately two weeks.

As an independent but related action, the Department, in fall 2005, initiated testing of the citrus at Orcutt Ranch to determine if there was any issue with perchlorate accumulation. The Department retained Dr. Bob Krieger of the Department of Entomology at the University of California, Riverside (UCR) who conducts research on perchlorate uptake in citrus. Dr. Krieger collected several samples and had them tested at UCR and at the Center for Disease Control in Atlanta. All the results came back non-detect for perchlorate.

This report is being presented for the Board's information only, and the Board does not need to take any action at this time except to note and file the informational report.

Prepared by David Attaway, Environmental Supervisor, Planning and Development.