Santa Susana Field Laboratory

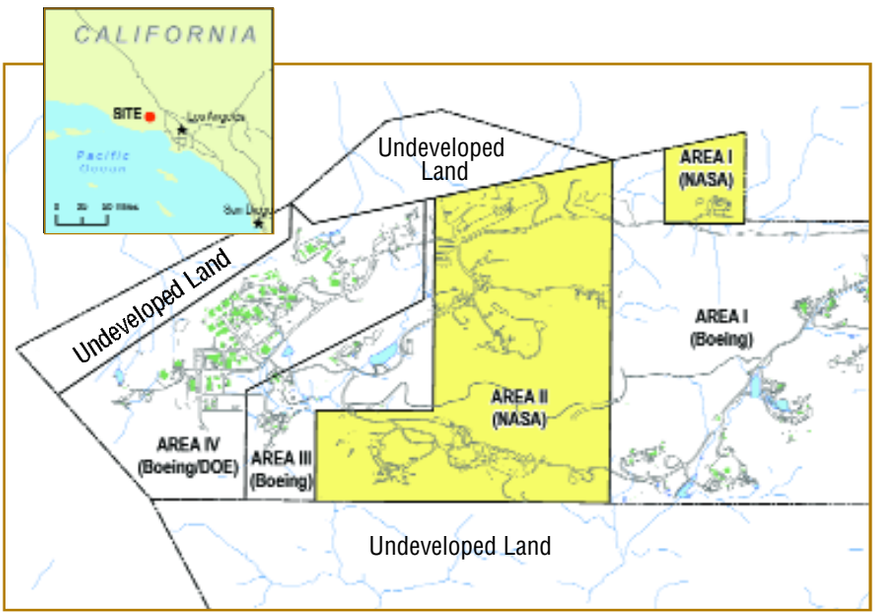
An Overview of NASA's History at SSFL

This provides information on the cleanup of NASA properties at the Santa Susana Field Laboratory (SSFL).

The SSFL is located on 2,850 acres in the Simi Hills, nearly thirty miles northwest of downtown Los Angeles, California, in southeastern Ventura County (close to the communities of Santa Susana Knolls, Bell Canyon and Simi Valley). The facility opened in 1948 and is divided into four so-called "Administrative Areas." Most of Area I and all of Area III are owned and operated by the Boeing Company. Area II and a 41.7-acre portion of Area I are administered by NASA, and operated by Boeing. Area IV is owned and operated by Boeing for the U.S. Department of Energy (DOE), which has long held a lease on that land.

NASA owns and administers 451.2 acres in two areas of the Santa Susana Field Laboratory (SSFL) and has operated here since 1973, when we first acquired land from the U.S. Air Force (USAF). Prior to 1973, NASA conducted testing at SSFL in cooperation with the USAF. NASA recognizes the importance of communicating directly with the community regarding our properties, current and former operations at SSFL and the ongoing environmental cleanup taking place. Other areas are owned and operated by the Boeing Company. NASA is committed to a cleanup of the areas we own to a level protective of public health and the environment. This literature is part of our efforts to keep you informed.

The activities conducted throughout the NASA-owned areas of the SSFL have included research, development and testing of rocket engines associated with the Apollo and Space Shuttle Programs, and for Air Force missile programs. The 41.7 acres of Area I formerly owned by the USAF (and since 1976 by NASA) were used for a Liquid Oxygen (LOX) Plant, which operated under the USAF from the early 1950s until the late 1960s. The plant's buildings and tanks were removed in the 1970s. At its peak, our other property, Area II, contained some 125 buildings and other structures, many of which have been demolished during the past three decades. It also included several ponds for containing cooling water that had been used in rocket testing. Area II was used extensively in support of Space Shuttle Main Engine activities and consisted of four testing locations, which are no longer operational.



for your information

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Engine testing occurred at these metal and concrete test stands.

Each location contained multiple test stands: open-framed, metal structures with concrete foundations (as well as related buildings), where the engines were tested. Our extensive research indicates that, as a result of rocket testing and cleaning activities throughout the SSFL, a number of chemicals made their way into several "media" (soil, surface water and groundwater). In NASA's areas, some of these included solvents, petroleum products (PAHs) and dioxins, as well as some metals. NASA has worked cooperatively with Boeing (which is serving as the cleanup contractor) and the U.S. Department of Energy (DOE) on all environmental issues. While in the past Boeing has taken the lead on communicating the results of environmental activities, we believe it is important to let you know what progress has taken place and what remediation efforts are planned for the SSFL acres that NASA administers. NASA takes full responsibility for administering the cleanup of these areas, including sites that were under other ownership before we acquired them.

NASA is actively engaged in the cleanup process. Since 1990, there have been, site-wide, more than 17,500 laboratory analyses undertaken on over 10,000 samples of soil and surface water throughout the SSFL, and more than 8,000 groundwater samples. For groundwater, we are working with Boeing and DOE to develop what is called a Site Conceptual Model (SCM), which will take into account vapor and contaminant movement and include additional field work. For groundwater and surface media (soil, surface water and soil vapor), NASA will continue to follow steps in what is called the RCRA (pronounced "rick-rah") process, under the Resource Conservation and Recovery Act. Since the early 1980s, California's Department of Toxic Substances Control (DTSC) has been the lead agency for the SSFL cleanup under the RCRA Program, by agreement with the U.S. Environmental Protection Agency.

NASA will continue characterizing the nature and extent of chemical contamination in soil, surface water and groundwater. We will also continue evaluating risks to people and the environment, and gathering data to support the cleanup process. To date, we have excavated and backfilled four of the identified RCRA units (see sidebar) on our property and invested considerable resources in site investigation and cleanup. Actions in Area II have included: removing a building (Propellant Load Facility), cleaning up 3,000 cubic yards of mercury contamination in surface soil and sediment, and removing five underground storage tanks. Beginning in 1984, a pump-and-treat system was used to clean groundwater in NASA's Area II. The treatment for the Alfa area has been inactive since 2001 and for the Bravo area since 2002. The Delta treatment plant became inactive in August 2007. A new centralized treatment system is scheduled to begin operating in 2009. The remaining investigation work and cleanup are scheduled to be completed by 2017.

We look forward to keeping the community up to date on our plans and activities.

The SSFL is currently in what is known as the RCRA Facility Investigation (RFI) phase. Overall, the SSFL has 15 identified RFI areas consisting of 42 Solid Waste Management Units (SWMU) and Areas of Concern (AOC). SWMU describes any "discernible unit," or area, where solid wastes had been placed at any time during a building's operation, whether or not that unit was intended to be used for managing solid or hazardous waste. An AOC refers to an area where releases may have occurred, which warrant investigation by DTSC or any remediation (cleanup), whether or not the areas are associated with a specific SWMU. NASA will also undertake several other steps in the RCRA process, including a Corrective Measures Study (CMS) and Corrective Measures Implementation (CMI) - the actual cleanup work.

For further information, please contact

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SSFL-2009-03-01

PRINTED ON RECYCLED PAPER