Department of Toxic Substances Control

The mission of the Department of Toxic Substances Control is to provide the highest level of safety, and protect public health and the environment from toxic harm.

State of California

Cal/EPA

Fact Sheet, July 2011

Public Comments Sought

Santa Susana Field Laboratory Draft Site-Wide Groundwater Remedial Investigation Report

Aerial view of the Santa Susanna Field Laboratory Site

The California Department of Toxic Substances Control (DTSC) seeks public input on the draft Site-Wide Groundwater Remedial Investigation Report (RI Report) for the Santa Susana Field Laboratory (SSFL) property located in the Simi Hills, Ventura County, California. DTSC is the lead state agency responsible for overseeing the investigation and cleanup of the soil and groundwater at SSFL.

This Fact Sheet summarizes the information provided in the draft RI Report, developed by consultants to Boeing, Department of Energy (DOE), and National Aeronautics and Space Administration (NASA). DTSC is currently reviewing the draft RI Report will compile input received from the public and provide comments after the close of the public comment period, August 31, 2011.

What is the SSFL?

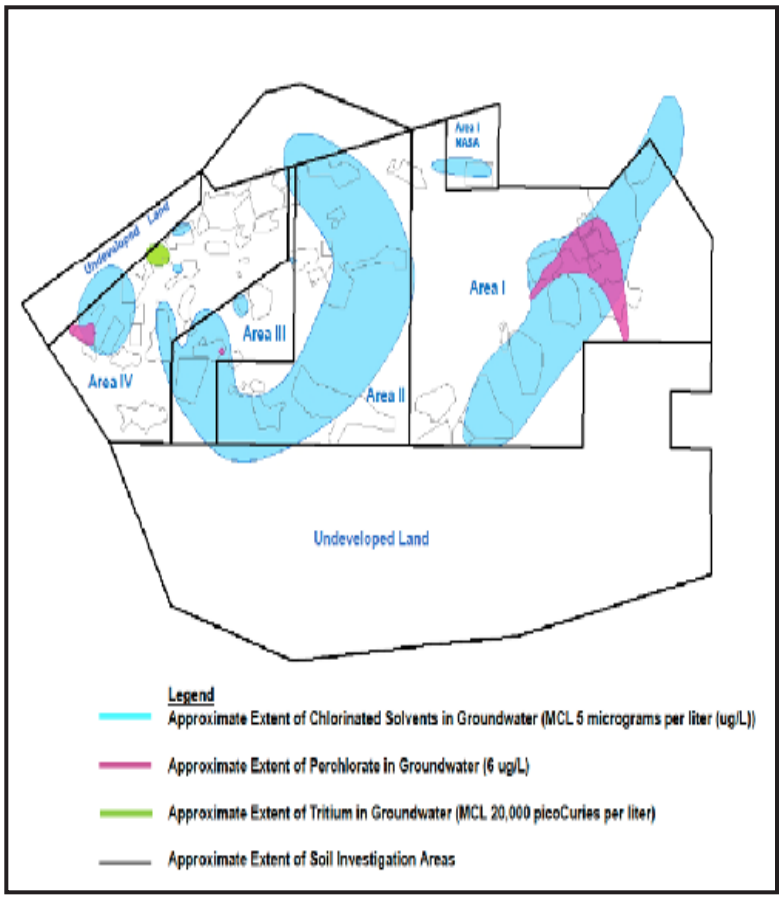
SSFL occupies approximately 2,850 acres of property in the Simi Hills. The property is divided into four administrative areas (Area I, Area II, Area III, and Area IV) and includes undeveloped land acting as buffer zones to the northwest and south. Most of Area I, all of Areas III and IV, and the northern and southern undeveloped land areas are owned and operated by The Boeing Company (Boeing). Area II and a small portion of Area 1 are owned by the federal government. A 42-acre portion of Areas I & II are owned by the federal government, administered by National Aeronautics and Space Administration (NASA), and operated by Boeing. The United States Department of Energy (DOE) owns facilities on a 90-acre site within Area IV.

Historical activities at the site included administrative operations, rocket testing, and nuclear research. During these activities, various fuels were used for the rocket tests, and solvents were used to clean engines, machines, and other equipment. Some of these chemicals escaped the work area and leaked down into the soil and groundwater beneath the ground surface. Trichloroethylene (TCE) was one of the solvents used and is the most commonly found contaminant in groundwater.

What is Groundwater?

Groundwater is water that fills spaces between soil and rocks beneath the ground surface (subsurface). Groundwater flows through the various layers of subsurface soil, sediment, and rock. Chemicals released at the ground surface may reach and contaminate groundwater. Once in the groundwater, some contaminants can move throughout the subsurface at the same rate as groundwater flow and some will move slower than groundwater. The rate of groundwater flow depends on the amount of space between the soil and sediment particles and size of the fractures in the sandstone and shale bedrock.

Since the 1980's, the SSFL groundwater investigation has included installation and sampling of monitoring wells. As wells were installed and information collected; areas that needed further investigation were identified and more groundwater monitoring wells were installed and sampled. Over 350 monitoring wells exist to monitor contaminated groundwater associated with SSFL.



What Is the RI Report?

The RI Report provides information on the type of site-related chemicals and radionuclides in groundwater at SSFL and where the contaminants are and how they move through the sandstone and shale beneath SSFL. This information is used to develop and evaluate treatability studies and cleanup alternatives that will be presented in a feasibility study. The groundwater investigation addresses the following questions:

- Is the amount of contamination found beneath the ground surface consistent with estimates based on site activities and usage?
- Has the investigation adequately defined how deep the contamination has gone below ground surface?
- Does contamination in the spaces between soil particles and within rock fractures beneath

the ground surface cause the contamination to spread?

➢ Has the horizontal and vertical flow of groundwater been defined so that we can better predict where contaminants might move?

➢ Does contamination continue to move vertically and horizontally or has it remained stable; has the amount of contamination increased, remained stable, or decreased?

➢ Is the current groundwater monitoring program adequate to identify the amount and track contaminant movement in the groundwater?

➢ Have the affects of the contaminants natural breakdown over time been considered and evaluated?

Additional information regarding these questions is available in Section 10.9.1-of the draft RI Report.

What Information did the RI Provide?

Based on the data collected and assessed during the RI, the following observations were noted:

Chemical and radiological contaminated groundwater from SSFL remains mostly onsite. Chemical contaminated groundwater does extend approximately 800 feet off-site at one location to the northeast of the SSFL property. On-site, groundwater contamination extends a few hundred to a few thousand feet both laterally and vertically from on-site contaminant sources.

- Contaminant movement beneath the SSFL property is affected by: absorbing into soil and sediment, ponding (or settling) into areas where it may become trapped in one location and cannot move, and natural chemical breakdown over time. Radioactive decay does affect radiological contaminants in groundwater.
- Movement of chemicals and radionuclides by groundwater flow beneath the ground surface can be tracked by sampling monitoring wells and/or seeps.
- Most of the groundwater contamination exists near the on-site sources where the contaminants were used and then entered into the ground.
- In general, contamination found in groundwater appears to be moving slower, both laterally and vertically, than the overall flow of groundwater in the area.
- TCE is the contaminant found most frequently and at the highest levels in groundwater beneath the SSFL property.
- Contamination in groundwater on-site and off-site exists at levels that exceed drinking water standards, as defined in agency regulations. It is anticipated that a formal restriction will be put into effect on the groundwater to prohibit access and use for drinking water.
- A risk assessment indicated that the contaminants found in groundwater beneath SSFL have the potential to cause a risk to human health and the environment.

The groundwater investigation confirmed the existence of contaminated groundwater beneath SSFL, defined the extent of contaminated groundwater and provides information on groundwater and contaminant movement. The investigation defines and verifies the ability to monitor groundwater contaminant movement, and identifies the Site Conceptual Model as a tool for guiding risk management decisions.

PUBLIC MEETING:

August 11, 2011 at 6:30 pm

Simi Valley City Council Chambers
2929 Tapo Canyon Road,
Simi Valley, CA 93063

PUBLIC COMMENT PERIOD ENDS:

August 31, 2011

SUBMIT COMMENTS TO:

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How Can the Public Become Involved?

DTSC would like to receive input from the community regarding the draft Site-wide Groundwater RI Report. Specifically, the following information would be helpful to DTSC as we move forward in the characterization and cleanup process:

- ✓Do you have any questions regarding the investigation process?
- ✓Do you have any information that may be of additional benefit to the investigation?
- ✓Do you have questions regarding the RI report conclusions made based on the information collected and assessed during the RI?

Human Health and Ecological Risk Assessments

Human health and ecological risk assessments conducted for groundwater indicated a potential increased risk on the SSFL site if the contamination is not cleaned up. No evidence of off-site groundwater contamination exposure was identified and therefore no off-site human health risks have been identified.

Next Steps

DTSC will review and consider any public comments. A Response to Comments document will be distributed to everyone who makes a comment and provides their name and address. After the Groundwater RI is complete a Feasibility Study (FS) will be prepared that will assess different groundwater cleanup options. The groundwater FS is anticipated to be available for public review in 2015. Treatability studies for groundwater are currently underway and that data will be used in developing the FS.

Where to Find the Documents

The draft RI Report and other related documents for SSFL are available for review at the following locations:

Simi Valley Library
2969 Tapo Canyon Road
Simi Valley, CA 93063
Phone: (805) 526-1735

Department of Toxic Substances Control
Regional Records Office
9211 Oakdale Avenue
Chatsworth, CA 91311
Contact: Vivien Tutaan or Glenn Castillo
Phone: 818-717-6521
Hours: 8 a.m. – 5 p.m. Monday – Friday
A computer is available in the DTSC file room for your use.

Site documents are available at:
http://dtsc.ca.gov/SiteCleanup/Santa_Susana_Field_Lab/ssfl_document_library.cfm

- ➢The middle of the page contains grey boxes beginning with "Document Library" at the top
- ➢Click on the 5th box which says "RCRA Facility Investigation – Groundwater"
- ➢Then click on the 4th link from the bottom – Sitewide Groundwater Remedial Investigation Report"

This will open the page listing all of the separate pieces of the Sitewide Groundwater Remedial Investigation document starting with the text at the top. The Site Conceptual Model is located at the bottom of the page

All documents made available to the public by DTSC can be made available in alternate format (i.e. Braille, large print, etc.) or in another language as appropriate, in accordance with State and Federal law. Please contact Yvette LaDuke for assistance.

Who to Contact for Information

If you have any questions about the project or cleanup activities, please contact:

Buck King, DTSC Project Manager
700 Heinz Avenue, #200
Berkeley, CA 94710
(510) 540-3955 or bking@dtsc.ca.gov

Yvette LaDuke, DTSC Public Participation
1-866-495-5651, 3, 2 or yladuke@dtsc.ca.gov

Media Inquiries:
Charlotte Fadipe, DTSC Public Information Officer
(916) 323-3395 or cfadipe@dtsc.ca.gov

Notice to Hearing-Impaired Individuals

You can obtain additional information about the site by using the California State Relay Service at 1 (888) 877 5378 (TDD). Ask them to contact Yvette LaDuke at (818) 717-6569 regarding the SSFL project.