



2011 YEAR IN REVIEW

NASA Santa Susana Field Laboratory (SSFL) 2011 Year in Review

NASA administers 451.2 acres in two areas of Santa Susana Field Laboratory (SSFL) used historically for the research, development, and testing of rocket engines associated with programs such as Apollo and the Space Shuttle. NASA is committed to a cleanup of these areas to a level protective of public health and the environment. During 2011, NASA continued its environmental investigations and cleanup at SSFL and its commitment to ongoing communication with the public. Project highlights are summarized here, and more information is available on the SSFL website at <http://ssfl.msfc.nasa.gov>.

NASA Adds to On-Site SSFL Team

In 2011, NASA hired Peter Zorba as NASA's Remedial Project Manager at SSFL. In this role, Peter is responsible for all NASA on-site remediation decisions, including those related to NASA's efforts on soil and groundwater characterization and remediation as well as on stormwater measures. Prior to joining NASA, Peter was the Environmental Engineer and Compliance Officer for the City of Lancaster, CA, and he has worked on environmental cleanup projects in California, Colorado and Russia. A reserve officer in the U.S. Marine Corps and an Iraq War veteran, Peter provides on-site leadership with a strong background in remediation efforts.

Environmental Impact Statement (EIS) for SSFL Remediation Moves Forward

NASA's proposed action to conduct environmental cleanup and demolition activities on land it administers at SSFL was published as a Notice of Intent (NOI) in the Federal Register on July 6, 2011. The NOI is the first step a federal agency is required to take in developing an Environmental Impact Statement (EIS) under the National Environmental Policy Act. The aim of NASA's EIS is to integrate environmental values into its decision-making processes by considering the potential environmental impacts of its proposed actions and a reasonable range of alternatives to those actions. Along with the historic and archaeological resources, other resources such as wildlife, plants, water and transportation will be considered in the EIS.

In August, NASA held three public scoping meetings to introduce the EIS process, the proposed action and a range of alternatives, and possible technical approaches to implement those alternatives. A key objective of the meetings was to receive input from the public relevant to the range of alternatives and technical approaches including what environmental issues should be considered in the EIS. The scoping meetings featured posters and an opportunity for NASA and members of the public to informally discuss the proposed EIS followed by a more formal presentation by NASA and question-and-answer session, and finally, an opportunity for official public comment on the record, which was transcribed by a court reporter. Public comments received during the official comment period, which closed September 19, will be considered in developing the EIS. Approximately 50 people attended each of the three scoping meetings. NASA expects to issue responses to comments received in early 2012.

NASA Begins National Historic Preservation Act Section 106 Consultation

With the goal of responsible management of cultural resources at the SSFL site, NASA is integrating the EIS process with the Section 106 consultation requirements of the National Historic Preservation Act (NHPA). Integrating both processes allows public participation and consultation with Native American Tribes, the State Historic Preservation Office (SHPO), the Advisory Council on Historic Preservation (ACHP), and other interested parties. For more information on NASA's Section 106 Consultation Process, please see: <http://go.usa.gov/RqC>.

Other consultation processes also are under way. In December NASA met with the U.S. Fish and Wildlife Service and the California Department of Fish and Game.

First NASA SSFL “Field Notes” Newsletter Published

NASA published its first SSFL “Field Notes” newsletter in April which included a “name the newsletter” contest by community members and stories on:

- Field Notes, itself, and the NASA commitment to public involvement in decision-making regarding the cleanup of SSFL.
- Progress made on soil removal work at the former incinerator and ash pile.
- NASA signing the Administrative Order on Consent (AOC) with the California Environmental Protection Agency in December 2010.
- NASA beginning the Environmental Impact Statement (EIS) process.
- The May 4, 2010 Community Information Session.
- The site-wide groundwater remedial investigation.
- “Groundwater U” sessions in March through May 2011, and
- The Groundwater Extraction and Treatment System (GETS).

The newsletter also provided links to cleanup project personnel and regulatory agencies and was posted to the NASA SSFL cleanup Website at: http://ssfl.msfc.nasa.gov/documents/local/fieldnotes_201104.pdf.

All future copies of the newsletter will be delivered electronically unless you request a written copy. To receive a print copy or to be put on the mailing list, please contact Merrilee Fellows at mfellows@nasa.gov.

Site-Wide Groundwater Investigation Report

More than a decade in the making, a NASA, Boeing, and U.S. Department of Energy (DOE) Site-Wide Groundwater Remedial Investigation Report was submitted to the California Department of Toxic Substances Control (DTSC) in 2009 and made available for public comment by DTSC in August 2011. For the investigation, more than 20,000 groundwater samples were collected from beneath SSFL at more than 485 groundwater monitoring locations, and nearly a half-million records have been produced. Samples collected from the groundwater monitoring network cover an area of about 11 square miles and extend to depths greater than 1,000 feet. More than 7,800 rock core samples were collected from more than 40 locations to depths of 1,400 feet and analyzed over the last 12 years to supplement the groundwater sampling results.

Further characterization related to the Draft Site-Wide Groundwater Remedial Investigation (RI) includes seeps investigation, faults investigation, installation of additional source area wells, and refinement of groundwater flow models.

“Groundwater U”

From March through June 2011, NASA, Boeing, and DOE hosted “Groundwater University” in cooperation with the DTSC. This series of six education sessions, a geologic field trip and a subsequent Q&A Poster session was held in advance of DTSC’s public review and comment period on the Draft Site-wide Groundwater Remedial Investigation Report. More than 100 community members attended the series. The first three sessions were taught by independent experts from California universities and provided a general overview of groundwater. The field trip, held in April, was led by the Groundwater Advisory Panel – scientific experts selected by NASA, Boeing, and DOE – who gave first-hand explanations of geologic features and demonstrated some of the technology used to take groundwater samples. The last three sessions were geared specifically to groundwater conditions at the SSFL site. The sessions were videotaped and presentations are available at www.etec.energy.gov, as are presentations from the final “poster” session.

Groundwater Extraction and Treatment System (GETS)

In line with a 2008 Groundwater Interim Measures Work Plan, NASA continued over the past year with an interim treatment of groundwater using a Groundwater Extraction and Treatment System (GETS). The system as a whole is designed to extract groundwater from 14 wells across SSFL and deliver it via a network of new pipelines to the centralized treatment facility located on Boeing property. The facility has been partially operational since early October 2009 with groundwater being extracted from one well (NASA well WS-09A) located in the southwest portion of Area II. Under a National Discharge Pollutant Elimination System (NDPES) permit, a new treated water outfall, Outfall 019, serves as the final stop for the treated water on SSFL property before discharging into regional drainage waterways. System performance is also being monitored.

Field Sampling Plan (FSP) Investigations

In August, October, and December, NASA and DTSC sponsored technical public meetings and tours for three FSP areas. Draft reports for these first three subareas were made available for public review on the DTSC SSFL Website. NASA is preparing a total of five FSPs, with the final two FSPs beginning in early 2012. In the August 2011 meeting, three sites were discussed and visited: the Alfa/Bravo Fuel Farm, the Propellant Loading Facility, and the Coca/Delta Fuel Farm. In October, sites discussed and visited were the former Area II Incinerator Ash Pile, Building 515 Sewage Treatment Plant Area, Building 204, the Storable Propellant Area, and the Skyline Road Area. In December, the Alfa and Bravo rocket engine testing stands were the focus. Technical meetings and tours are planned to continue in 2012 for the Liquid Oxygen Facility, Area II Landfill, ELV area (FSP-4), and the Coca and Delta rocket engine testing stands and the R-2 ponds (FSP-5). Soil and soil vapor sampling began in September and is expected to continue through mid-2012. The schedule also includes a "Site-Wide Datagap" study to be conducted from late 2012 through early 2014 followed by a Final Chemical Data Report. When that report is approved, probably in 2015, a comprehensive soil cleanup effort will be implemented.

Feasibility Study Work Plan

Work related to the Feasibility Study Bedrock Treatability Studies Work Plan focused on planning related to pilot and experimental treatability work studies such as the bedrock vapor extraction field experiment, the chemical oxidation field experiment, the enhanced biological reduction experiment, and the thermal treatment experiment. This work continues into 2012.

Soil Removal in 2011

NASA's work in removing soil contamination and protecting surface water quality continued during 2011 as part of the Interim Source Removal Action (ISRA). Phase I in the Area II Landfill vicinity was completed in 2009. Phase II near a former incinerator and related ash pile began in 2010 and continued in 2011. Phase II work has included excavation of approximately 273 cubic yards of soil in 2010 and an additional 1,156 cubic yards of soil in 2011 that was disposed of at Waste Management's landfill in Lancaster, CA. Phase II work is planned to be completed in 2012 and will be followed by a Phase III. The ISRA is being conducted at SSFL under the direction of the Los Angeles Regional Water Quality Control Board (LA-RWQCB).

Community Outreach and SSFL Community Bus Tours

In line with its commitment to public involvement and community outreach at SSFL, NASA continued to update its SSFL Cleanup Web Site during 2011 (<http://ssfl.msfc.nasa.gov/>). It added names to its more than 700-person email list, continued its RSS electronic updates, and occasionally communicated cleanup progress via the social media. Boeing, DOE and NASA sponsored a series of bus tours of SSFL on five Saturdays during the year. NASA has continued to offer occasional site visits for specific reasons, such as to participate in the Field Sampling Plans or observe areas where NASA is undertaking cleanup activities. NASA also continued in frequent contact during 2011 with a variety of community groups and other SSFL stakeholders, including attendance at various technical and roundtable meetings sponsored by DTSC and other agencies.

Stormwater Maintenance BMPs

NASA is pursuing efforts to reduce soil movement in areas that could contribute sediment and contaminants to stormwater at SSFL. We are designing long-term Best Management Practices (BMPs) to improve stormwater quality and minimize future National Pollutant Discharge Elimination System (NPDES) exceedances at Outfall 009. NASA plans to remove the asphalt in the vicinity of the helipad and re-contour and re-vegetate that area. In addition, NASA plans to rehabilitate an existing asphalt channel that is in disrepair. BMP designs call for removal of all asphalt and vegetation in this channel. The channel will then be reconstructed to effectively collect, convey and control stormwater and surface water runoff in this area. These designs are scheduled to be completed in the spring of 2012 with BMP construction following about May/June 2012. NASA is pleased to collaborate with the Stormwater Expert Panel and the Regional Water Quality Control Board in developing these BMPs.

For information, contact

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