

## **BACKGROUND FOR MEDIA**

*This summary of terms has been developed as a quick guide to some of the abbreviations, documents and concepts used in NASA's Record of Decision, Programmatic Agreement, and Final EIS pertaining to cleanup of the Santa Susana Field Laboratory (SSFL). It is not intended to be a stand-alone document.*

### **Quick Reference to Abbreviations**

ACHP – Advisory Council on Historic Preservation  
AOC – Administrative Order on Consent  
BMPs – Best Management Practices  
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act  
CDFW – California Department of Fish and Wildlife  
CEQA – California Environmental Quality Act  
CFR – Code of Federal Regulations  
DOE – Department of Energy  
DTSC – Department of Toxic Substances Control  
EIS – Environmental Impact Statement  
FEIS – Final Environmental Impact Statement  
GHG – Greenhouse Gas  
GSA - General Services Administration  
NAAQS –National Ambient Air Quality Standards  
NASA – National Aeronautics and Space Administration  
NEPA – National Environmental Policy Act  
NHPA - National Historic Preservation Act  
NOA- Notice of Availability  
NPR – NASA Procedural Requirements  
NRHP – National Register of Historic Places  
RCRA – Resource Conservation and Recovery Act  
ROD – Record of Decision  
ROI – Region of Influence  
SHPO – State Historic Preservation Officer  
SSFL – Santa Susana Field Laboratory  
TCP – Traditional Cultural Properties  
USACE – United States Army Corps of Engineers  
USFWS – United States Fish and Wildlife Service

### **RECORD OF DECISION**

**Record of Decision (ROD)** - A document that states the decision reached by the appropriate decision-maker and that describes the environmental impacts, alternatives, preferred alternative, mitigation measures, if any, and other factors that were considered. To view a graphic representing the steps in the NEPA process see Appendix D at:

[http://nodis3.gsfc.nasa.gov/npg\\_img/N\\_PR\\_8580\\_001A\\_/N\\_PR\\_8580\\_001A\\_.pdf](http://nodis3.gsfc.nasa.gov/npg_img/N_PR_8580_001A_/N_PR_8580_001A_.pdf)

NASA's decision is to proceed with the demolition activities described in Section 2 of the FEIS (beginning at p. 2-1, at <http://go.usa.gov/kgEC>. Proceeding with demolition activity now will move NASA forward toward complying with the state orders, while recognizing that new information could increase efficiency in reaching the required

cleanup levels. NASA will not proceed with any cleanup activities identified in the Proposed Action until such time as another Record of Decision related to the cleanup activities is issued and DTSC has completed its CEQA process.

- NASA will proceed with demolition of non-historic structures and the Coca Test Stand Historic District.
- NASA is deferring its decision on the cleanup solutions until the technology feasibility studies and field sampling characterization are complete and can inform NASA's decision on which technologies to use for soil and groundwater cleanup.
- The ROD contains mitigation for demolition activities including those stipulated in the programmatic agreement for cultural resources.
- Based on comments from EPA and others, NASA considers it important to complete technological feasibility studies to determine if other less impactful solutions are practical and where these technologies might be applied. A Supplemental EIS will be developed if needed and a second ROD will be issued. Regardless of the results of the remaining studies, proceeding with demolition will help NASA in its goal to meet the soil cleanup deadline in the AOC.

**Demolition** – NASA's proposed action included analysis of the demolition of 100% of the existing structures on NASA-administered land at SSFL. Proposed demolition includes all work-related office space and six historic test stands and the related structures that “contribute” to their eligibility as three historic districts.

## **GOVERNANCE/LEGAL**

**Consent Order for Corrective Action** - In August 2007, NASA, Boeing, the U.S. Department of Energy (DOE), and DTSC signed a Consent Order for Corrective Action (State of California DTSC Docket No. P3-07/08-003, 2007; referred to as the “2007 Consent Order”) that addressed the cleanup of soils and groundwater at SSFL. The 2007 Consent Order identified activities for the cleanup of soil and groundwater at SSFL. To view the 2007 Consent Order:

<http://www.epa.gov/region9/superfund/santasusana/references/ref-13.pdf>

**2010 Administrative Order on Consent (AOC)** - On December 6, 2010, NASA and DTSC executed an AOC (State of California DTSC Docket No. HAS-CO\_10/11-038, 2010) that stipulates specific remedial requirements, including the characterization and cleanup of soil contamination on the NASA-administered areas of SSFL to so-called “Look-Up Table values” (Cal/EPA DTSC, 2010). The 2010 AOC requires that NASA complete a federal environmental review pursuant to National Environmental Policy Act (NEPA) of the impacts of implementing the soil and groundwater remedial activity. The AOC requires soil cleanup to be completed by 2017. To view the AOC:

[http://ssfl.msfc.nasa.gov/documents/governance/NASA\\_DTSC\\_Final\\_AOC\\_Dec\\_2010.pdf](http://ssfl.msfc.nasa.gov/documents/governance/NASA_DTSC_Final_AOC_Dec_2010.pdf)

**Report of Excess** – When the Space Shuttle program ended, NASA decided that the property administered by NASA at SSFL and structures located on the property were no longer required to support its mission and on September 14, 2009, NASA submitted to

the General Services Administration (GSA) a "report of excess" (sometimes called a "declaration of excess"). GSA conditionally accepted NASA's report of excess pending NASA's certification that remedial action necessary to protect human health and the environment with respect to hazardous substances on the property has been completed, or that the Governor concurs with the suitability of the property for transfer (CERCLA, Section 120(h)(3)(C). For more information see GSA's webpage on SSFL at [www.gsa.gov/ssfl](http://www.gsa.gov/ssfl).

## **CLEANUP**

**Department of Toxic Substances Control (DTSC)** – The State agency under the purview of the California Environmental Protection Agency that is the lead regulatory agency overseeing the investigation and cleanup of contaminated soil and groundwater at the SSFL. Multiple state, federal and local government agencies also play a role in the cleanup underway at the SSFL site. To view the DTSC website regarding SSFL see [http://dtsc.ca.gov/SiteCleanup/Santa\\_Susana\\_Field\\_Lab/index.cfm](http://dtsc.ca.gov/SiteCleanup/Santa_Susana_Field_Lab/index.cfm) .

**Background Levels/Look Up Table Values** – The AOC requires that NASA clean up to an estimated level (referred to as "background") that the chemicals would be in the soil at local background levels. Sec. 1.7.2 of the AOC defines "Cleanup to Background Levels" as removal of soils contaminated above local background levels. The process of performing cleanup to background includes estimates for chemicals at levels that are detectable by modern analytic methods, known as a "look up table value." (DTSC Technical Memorandum, June 11, 2013) DTSC prepared look-up table values for over 130 chemicals. For more on DTSC look-up tables see [http://www.dtsc-ssfl.com/files/lib\\_look-uptables/chemical/66073\\_06112013LUTand\\_cover.pdf](http://www.dtsc-ssfl.com/files/lib_look-uptables/chemical/66073_06112013LUTand_cover.pdf)

**Treatability Studies** - NASA is conducting treatability testing, or treatability studies, to assess treatment in place (also known as *in situ* treatment) technologies, or other methods to achieve the required cleanup levels. Treatability testing is required to demonstrate the implementability, feasibility, and effectiveness of such technologies on particular chemicals at the levels present and under site specific conditions. The AOC requires that excavation and offsite removal must be used unless NASA can show DTSC that similar data or documentation or information exists to use other means of cleanup. Ongoing studies may eventually prove that some technologies are not capable of meeting the cleanup goals. The studies also may further refine specific site locations where technologies could achieve cleanup goals and thus reduce the need for excavation in some areas.

**Resource Conservation and Recovery Act (RCRA)** - enacted in 1976, is the principle federal law governing the disposal of solid waste and hazardous waste. (40 CFR Parts 260-299.) Site cleanup activities at SSFL began under the authority of the Resource Conservation and Recovery Act (RCRA) corrective action program and were transferred to the California State CERCLA process (see below) in 2008.

**Comprehensive Environmental Response, Compensation, and Liability Act** (CERCLA) – commonly known as “Superfund,” enacted by Congress on December 11, 1980 and amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986. CERCLA authorizes EPA to respond to release, or threatened releases, of hazardous substances that may endanger public health, welfare, or the environment. This is a cleanup procedure generally governed by the USEPA that applies to contaminated government sites that have been “listed” following certain evaluative procedures. It does not apply at SSFL.

California State CERCLA (Comprehensive Environmental Response, Compensation and Liability Act) Program. California State Senate Bill SB 990 was codified as California Health and Safety Code Section 25359.20, effective January 1, 2008. As a result of this new direction from the State legislature, the California Department of Toxic Substances Control (DTSC) transitioned their oversight of the SSFL cleanup from the State's RCRA Program to the California State CERCLA Program.

## **CULTURAL**

**Consulting Parties** - Section 106 of the NHPA of 1966 [36 CFR 800] requires that federal agencies consult with federal, state, and local agencies, Native American Tribes, other organizations, and members of the public having an interest, in considering the potential effects of proposed actions on historic properties.

NASA posted on its website a form for interested parties to request participation in the Section 106 consultation process and also announced the availability of the process at its EIS Scoping public meetings. More than 35 individuals had varying interests in the site and included representatives from California State Historic Preservation Office (SHPO), the Advisory Council on Historic Preservation (ACHP), and tribes. Consultation culminated with a Programmatic Agreement that includes mitigation measures to address the likely adverse effects to historic properties.

**Cultural Resources** – The resources include historical features as well as architectural and archaeological resources, traditional cultural properties, cultural landscapes, and Indian Sacred Sites. Multiple laws govern agency compliance regarding cultural resources including the National historic Preservation Act, the Archaeological Protection Act, the American Indian Religious Freedom Act to name a few. Additionally, Executive Order 13007 requires federal agencies to accommodate access to and ceremonial use of Indian sacred sites by religious practitioners and to avoid adversely affecting the physical integrity of such sites. To read more about the relationship between the requirements of 36 CFR Part 800, "Protection of Historic Properties," regulations implementing Section 106 of the National Historic Preservation Act (Act) and Executive Order 13007 regarding Indian Sacred Sites (E.O. 13007) see:

<http://www.achp.gov/eo13007-106.html>. The NASA-administered portion of SSFL has been designated an Indian Sacred Site by the Santa Ynez Band of Chumash Indians.

**Programmatic Agreement (PA)** - The document developed through consultation under Section 106 of the NHPA and signed by NASA, the California SHPO, and the ACHP, and the invited signatory the Santa Ynez Band of Chumash Indians. It identifies measures to be taken for the protection and preservation of cultural resources (including Native American elements as well as historic rocket testing features) during implementation of NASA's Proposed Action.

--The PA is the culmination of two years of consultation with more than 35 consulting parties regarding the effects to historic properties resulting from the proposed actions for demolition and cleanup.

--Provides for the preservation of historic test stands through documentation and the potential retention of one test and control house.

-- Resolves adverse effects to Traditional Cultural Property thru Ethnographic History and Native American Advisory Board and other mitigation measures

--Minimizes impacts to archeological sites where feasible through avoidance and data recovery

**Historic District** - one of the five types of property that may be eligible for listing on the National Register of Historic Places. A Historic District is defined as: a geographically definable area, urban or rural, possessing a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united by past events or aesthetically by plan or physical development. A district may also comprise individual elements separated geographically but linked by association of history. The Alfa, Bravo and Coca Test Areas meet the definition of Historic District as the properties within each complex contain a concentration of properties (multiple test stands and associated structures integrated within natural settings) linked by design, historical events and function. NASA Historic Resources Survey: <http://go.nasa.gov/1m8YMQX>. Map of Historic Districts, p. 18 (unnumbered) of overview presentation: <http://go.nasa.gov/NqcoiS>

**Section 106** - (NHPA regulations 36 CFR 800) requires federal agencies to take into account the effects of their undertakings (actions) on historic properties and affords the Advisory Council on Historic Preservation a reasonable opportunity to comment. It involves a consultation process that includes the appropriate State Historic Preservation Officer/Tribal Historic Preservation Officer (SHPO/THPO) and a process to involve the public, and identify other potential consulting parties to resolve adverse effects of the proposed undertaking.

Section 106 regulation summary: <http://www.achp.gov/106summary.html>

NASA's Final Environmental Impact Statement Section 4.3 explains the Section 106 process and how NASA integrated it with NEPA under 36 CFR 800.8. The presence of two types of cultural features at SSFL triggers the Section 106 process for the land NASA administers: (i) three rocket test stand districts and (ii) extensive archaeology artifacts and features. To read more on the integration of Section 106 and NEPA at SSFL: <http://go.nasa.gov/N6a8qF>

**National Historic Preservation Act** of 1966 as amended (16 U.S.C. 470, P.L. 95-5 15) requires federal agencies to protect and preserve cultural resources in cooperation with state and local governments. It also governs the Section 106 Consultation process.

## **NEPA/ENVIRONMENTAL IMPACT STATEMENT**

**The National Environmental Policy Act (NEPA)** – [42 U.S.C. 4321 *et seq.*] requires federal agencies to integrate environmental values into their decision making processes by considering the environmental impacts of their proposed actions and reasonable alternatives. It also requires agencies consider a “no-action” alternative to serve as a basis of comparison.

As part of the 2010 DTSC-NASA Administrative Order on Consent (AOC), NASA must conduct activities under the AOC in accordance with the requirements of NEPA evaluation. (Sec. 4.2 of AOC.)

To learn more about NEPA:

[www.epa.gov/compliance/basics/nepa.html](http://www.epa.gov/compliance/basics/nepa.html)

Current Regulations:

14 CFR 1216 – Environmental Quality

42 U.S.C. 4321-4347 – The National Environmental Policy Act of 1969, as amended

40 CFR 1500-1508 – Regulations for Implementing NEPA

**Final Environmental Impact Statement (FEIS)** – NASA prepared a Final Environmental Impact Statement for proposed demolition and cleanup activities on NASA-administered property at SSFL. This FEIS was released on March 14, 2014.

NASA’s FEIS evaluated the environmental consequences of implementing the Proposed Action and the No Action alternative at SSFL.

To view the FEIS: <http://go.nasa.gov/1hEfY8a>

**Proposed Action** – The Proposed Action evaluated in the Final EIS is to remediate soil and groundwater contamination on the NASA-administered property of SSFL to a level that meets NASA’s environmental cleanup responsibilities and to undertake the demolition actions necessary to support both remediation and property disposition of the NASA-administered portion of SSFL.

To view the general SSFL EIS webpage: <http://go.nasa.gov/Pu4uM2>

**Notice of Availability (NOA)** – A Notice of Availability is a document published in the Federal Register to provide official notice of specified agency actions such as the release of a draft or Final EIS. The NOA for the proposed demolition and cleanup at SSFL was published on March 14, 2014 in the Federal Register:

<http://www.gpo.gov/fdsys/pkg/FR-2014-03-14/pdf/2014-05511.pdf>

**No Action Alternative** – required to be included as part of every EIS, this alternative identifies the expected environmental impacts in the future if existing conditions were left as-is with no action taken. The No Action Alternative at SSFL would mean that all structures would stay in place (no demolition); remaining soil contamination would not be removed; and existing interim groundwater treatment systems would continue to operate, but no additional groundwater cleanup or monitoring would occur.

**NASA Procedural Requirements (NPR)** – NASA-promulgated Agency-specific NEPA regulations and policies.

NASA followed these requirements to prepare the EIS for the Proposed Action at SSFL and meet NEPA requirements for the final EIS. To view the NPR pertaining to NASA's NEPA requirements see

[http://nodis3.gsfc.nasa.gov/npg\\_img/N\\_PR\\_8580\\_001A\\_/N\\_PR\\_8580\\_001A\\_.pdf](http://nodis3.gsfc.nasa.gov/npg_img/N_PR_8580_001A_/N_PR_8580_001A_.pdf)

**Risk-based Cleanup** – For sites similar to SSFL, cleanups are almost always conducted under the Resource Conservation and Recovery Act (RCRA) or the Comprehensive Environmental Recovery, Compensation, and Liability Act (CERCLA), commonly called Superfund. Cleanup is based on the type and extent of contamination present and the potential for a complete exposure pathway, and often addresses only chemicals that pose unacceptable risk to human or ecological receptors. NASA is proceeding with DOE and Boeing on a risk-based cleanup for groundwater at SSFL, as that cleanup is governed by the 2007 Consent Order.

**Human Risk Assessment and Ecological Risk Assessment** – For cleanups conducted under CERCLA and RCRA, Human Health Risk Assessments (HHRAs) and Ecological Risk Assessments (ERAs) often are conducted to evaluate whether hazardous chemicals in environmental media might have harmed or have a potential to harm exposed ecological or human receptors. The overall objective is to provide risk-based information to managers for decision-making to ensure that cleanup actions adequately mitigate risks. To address questions received during public comment NASA did a general review of the ecological and human risk assessments to compare the level of protectiveness of cleaning up soil to background, as required by the AOC, as compared with cleaning up only those chemicals that pose unacceptable risk to human and ecological receptors. See: <http://go.nasa.gov/1fuRFPN>

**Biological Resources** – refer to vegetation communities, wildlife, sensitive species, weed species, and wetlands occurring on the NASA-administered portion of SSFL. The criteria for evaluating biological resources in the EIS included disturbance, displacement, and mortality of plant and wildlife species and destruction of sensitive habitat.

**Section 7 of the Endangered Species Act** – The Endangered Species Act (ESA) directs all federal agencies to work to conserve endangered and threatened species and to use their authority to further the purposes of the Act. Section 7 of the Act, called "Interagency Cooperation," is the mechanism by which federal agencies ensure the actions they take, including those they fund or authorize, do not jeopardize the

existence of any listed species. On January 6, 2012, the United States Fish and Wildlife Service initiated the formal “Section 7” consultation process in response to a letter NASA sent requesting a species list pertaining to the NASA-administered property at SSFL. USFWS concurred (December 13, 2013) with NASA’s determination that the project may affect, but is not likely to adversely affect federally threatened or endangered species.

**Jurisdictional Determination** – The United States Army Corps of Engineers is responsible for making decisions about jurisdictional authority and the possible need for permits for work conducted in wetlands. NASA completed a Wetlands Delineation Field Survey in January 2012 to identify and map boundaries of water features including wetlands on the property administered by NASA at SSFL. On February 12, 2013, USACE responded to NASA with an approved Jurisdictional Determination.

**Cumulative Impact** – The CEQ regulations implementing NEPA define it as the impact on the environment, which results from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes the actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR Section 1508.7). The EIS considered the Proposed Action with the adjacent environmental cleanup activities being conducted by DOE and Boeing. When considered together, cumulative impacts would result from trucks on the local roadway networks, further degraded roadway conditions, demolition of structures, safety risk to children, and increased noise levels. Similarly, soil and vegetation removal and other SSFL restoration and remediation

Section 4.13 of the NASA final EIS discusses cumulative impacts in more detail.

**de minimis thresholds** - The General Conformity rule was created to prevent federal projects from jeopardizing a state’s ability to achieve air quality standards. [40 CFR 93 § 153](#) defines *de minimis* levels as the minimum threshold for which a conformity determination must be performed, for various criteria pollutants summarized here: <http://www.epa.gov/oaqps001/genconform/deminimis.html>

The FEIS discusses air quality in Sections 3.5 and 4.7 and discusses “de minimis” provisions at 4.7.1.2.

**CEQA** - the California Environmental Quality Act is a statute that requires State and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. (California Code of Regulations, Ch. 3, Tit. 14) The document produced pursuant to CEQA is an Environmental Impact Report (EIR).

NASA and DTSC are coordinating their respective NEPA and CEQA activities. NASA provided the EIS and underlying studies to DTSC so that DTSC may use that information in its Environmental Impact Report. NASA may not commence soil and groundwater cleanup activities until DTSC completes its CEQA process.