

US EPA ARCHIVE DOCUMENT



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105-3901

April 2, 2014

Stephanie Jennings  
NEPA Document Manager  
U.S. Department of Energy  
4100 Guardian Street, Suite 160  
Simi Valley, CA 93063

Subject: Amended Notice of Intent to Prepare an Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory, Ventura County, CA

Dear Ms. Jennings:

The U.S. Environmental Protection Agency has reviewed the February 7, 2014 Amended Notice of Intent to prepare an Environmental Impact Statement for remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory. Our comments are provided pursuant to the National Environmental Policy Act, the Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and our NEPA review authority under § 309 of the Clean Air Act.

EPA provided the Department of Energy with scoping comments regarding this EIS on August 27, 2008. Since that time, EPA has conducted a background and on-site radionuclide investigation of Area IV and the Northern Buffer Zone. EPA's final data report for the Area IV and Northern Buffer Zone radiological study was issued in December 2012. The California Department of Toxic Substances Control is now leading the investigation into the clean-up of Santa Susana for both soil and groundwater. The enclosed comments identify the recommended scope and topics that should be included in the Draft EIS. Topics include contaminated soil and disposal, water resources, air quality, environmental justice, traffic, cumulative impacts, preservation of historic resources, tribal consultation and greener cleanups.

We appreciate the opportunity to review this Amended NOI and are available to discuss our comments. When the DEIS is released for public review, please send one hard copy and one electronic copy to the address above. If you have any questions, please contact Tom Plenys, the lead reviewer for this project, at (415) 972-3238 or [plenys.thomas@epa.gov](mailto:plenys.thomas@epa.gov). You may also contact me at (415) 972-3521.

Sincerely,

/s/

Kathleen Martyn Goforth, Manager  
Environmental Review Section

Enclosures: EPA's Detailed Comments

Cc: Ray Leclerc, Department of Toxic Substances Control  
Cassandra Owens, Los Angeles Regional Water Quality Control Board  
Susan Nakamura, South Coast Air Quality Management District

**US EPA DETAILED COMMENTS ON THE AMENDED NOTICE OF INTENT TO PREPARE AN ENVIRONMENTAL IMPACT STATEMENT FOR REMEDIATION OF AREA IV AND THE NORTHERN BUFFER ZONE OF THE SANTA SUSANA FIELD LABORATORY, VENTURA COUNTY, APRIL 2, 2014**

Alternatives Analysis

The National Environmental Policy Act requires evaluation of reasonable alternatives, including those that may not be within the jurisdiction of the lead agency (40 CFR Section 1502.14(c)). A robust range of alternatives will include options for avoiding significant environmental impacts. The DEIS should provide a clear discussion of the reasons for the elimination of alternatives which are not evaluated in detail.

The environmental impacts of the Department of Energy's proposed action and alternatives should be presented in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public (40 CFR 1502.14). The potential environmental impacts of each alternative should be quantified to the greatest extent possible (e.g., acres of wetlands impacted, cubic yards of soil to be transported, tons per year of emissions produced, etc.).

The DEIS should describe how each alternative was developed, how it addresses cleanup of soil and groundwater contamination, how it would be implemented and the timeframe for cleanup activity completion. The DEIS also should clearly describe the rationale used to determine whether impacts of an alternative are significant or not. Thresholds of significance should be determined by considering the context and intensity of an action and its effects (40 CFR 1508.27).

Scope of the EIS

The Amended NOI does not clearly define the scope of the EIS. In particular, it is not clear whether DOE's EIS will include the full nature and extent of contamination associated with historic activities within Area IV. EPA is concerned that some issues remain undefined, including the extent of contaminated groundwater.

The DEIS should disclose whether or not there is any evidence that releases of hazardous substances have migrated beyond SSFL Area IV; describe the full nature and extent of any such contamination; and incorporate cleanup alternatives that address any off-site impacts. Cleanup actions to address contaminated groundwater, as well as the potential for contaminated groundwater to migrate off-site, should be described.

Contaminated Soils and Disposal

*Landfills*

According to the Amended NOI, the soil volumes potentially to be remediated could range from approximately 1 million to 1.7 million cubic yards of chemically contaminated soil, including

approximately 82,000 cubic yards of radiologically contaminated soil. We note DOE's proposal to use on-site treatment of contaminated soils and natural attenuation to reduce volumes of contaminated soil prior to transport, and disposal off-site of any soils that cannot be otherwise treated and remain on site. The Amended NOI does not provide an estimate of potential soil volumes that will require transportation to off-site landfills.

The DEIS should include annual estimates of contaminated soil volumes, chemical and radiological, to be transported off-site, for each alternative. The DEIS should also include the latest soil volume estimates to be removed by NASA and Boeing.

Given the potentially large soil volumes requiring transport from DOE's portion of SSFL, in conjunction with soil volumes from cleanup activities at other portions of the site, the DEIS should discuss coordination with solid and hazardous waste facilities, as necessary. While these facilities may have large permitted capacities, the DEIS should evaluate the ability of receiving waste disposal facilities to handle the potential volumes of contaminated soil from the proposed alternatives. This evaluation should include information regarding the magnitude of the volume being disposed relative to the available disposal capacity.

DOE should consider shipment to multiple facilities as a means to reduce impacts at the receiving facilities. To the extent possible, DOE should coordinate with Boeing and NASA on their remediation projects (e.g. schedules, disposal facilities and changes in soil volumes), so that its DEIS may contain as comprehensive a discussion of cumulative impacts as possible.

#### *Environmental Justice*

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (February 11, 1994) and the Interagency Memorandum of Understanding on Environmental Justice (August 4, 2011) direct federal agencies to identify and address disproportionately high and adverse human health or environmental effects on minority and low-income populations, allowing those populations a meaningful opportunity to participate in the decision-making process. Guidance<sup>1</sup> by CEQ clarifies the terms low-income and minority population (which includes Native Americans) and describes the factors to consider when evaluating disproportionately high and adverse human health effects.

The DEIS should include an evaluation of environmental justice populations within the geographic scope of the project. The DEIS should address the potential for disproportionate adverse impacts to minority and low-income populations, and the approaches used to foster public participation by these populations. Assessment of the project impact on minority and low-income populations should reflect coordination with those affected populations.

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<sup>1</sup> Environmental Justice Guidance under the National Environmental Policy Act, Appendix A (Guidance for Federal Agencies on Key Terms in Executive Order 12898), CEQ, December 10, 1997.

The potential increase in traffic and associated air emissions that would result from this action, in conjunction with NASA's and Boeing's SSFL cleanup activities, could impose an added burden to communities with environmental justice concerns near the potential receiving facilities, such as Kettleman City and Buttonwillow, as well as to the local community at the cleanup site. A detailed evaluation of environmental justice impacts in the DEIS would be valuable for those communities.

The DEIS should not rely on licensing of these facilities for analysis on potential effects of bringing designated and permitted waste to the sites. Additionally, a facility permit could be many years old, offering DOE an opportunity to implement more recently developed mitigation measures. The DEIS should also commit to using on-road heavy duty diesel trucks that meet or exceed EPA's emissions standard for 2010.

### *Waste Management*

To ensure waste shipments from the site are appropriate for receiving facilities, EPA recommends as much transparency in the matter of waste composition and management as possible. DOE would be best served to hear concerns regarding receiving facilities following publication of the DEIS or the public release of Best Management Practices, than much later in the soil removal process, when delays may hinder DOE's ability to meet its commitment under the 2010 Administrative Order on Consent.

The DEIS should include, or commit DOE to develop and publicly release, best management practices that include the following:

- a description of debris and soil screening or testing procedures for radiation and chemical contamination
- a decision matrix that identifies specific facilities or types of facilities (e.g. solid waste landfill, hazardous waste landfill) for debris and soil based on the screening or testing protocol.

### Water Resources

#### *Groundwater Cleanup*

The DEIS should describe groundwater cleanup in the same level of detail as it does demolition and soil removal. If a current cleanup system is being used, the DEIS should show the location of any current extraction wells, the lateral or vertical volume the wells are intended to capture, the volume of water removed from the aquifer, as well as the treatment method for extracted groundwater or identify its discharge location. The DEIS should also provide detailed mapping for contaminants, including their degradation products, and discuss the thickness of groundwater contaminant plumes.

The DEIS should include criteria for selecting a groundwater cleanup remedy. For example, the DEIS should include a discussion on what factors DOE or DTSC will consider in deciding between the technologies (e.g. short and long term effectiveness; reduction in contaminant

mobility, toxicity or volume; implementability; community acceptance). Timeframes for treatment technology operations should be estimated to the greatest extent possible. For each treatment technology, the DEIS should highlight both the advantages and disadvantages.

Energy use can also be a major cost and environmental impact of the operation and maintenance of a groundwater remedy. The DEIS should provide the energy use of the existing groundwater treatment system, if applicable, and estimates for the proposed alternatives. The DEIS should also estimate the associated priority pollutants or greenhouse gas emissions.

The DEIS should include:

- a thorough discussion of the no action alternative that discusses any current groundwater extraction and treatment systems, their energy use and a discussion of their effectiveness, as applicable;
- a thorough discussion of the site's geology;
- an explanation of three-dimensional groundwater flow and contaminant migration at the site;
- a thorough description of source areas (e.g., test stands, evaporation ponds, landfills, leach fields, etc.) and vadose zone contamination;
- a description of the interaction of groundwater and surface water, including the location of surface seeps and any subsurface movement or flow that would affect the remediated site's hydrology;
- an estimate of air emissions (priority pollutants and GHGs) associated with each treatment technology;
- a map of conceptual well networks necessary to implement potential groundwater cleanup technologies;
- the groundwater cleanup levels, based on a standardized risk assessment methodology. DOE should ensure that the methodology includes consideration of vapor intrusion into buildings where contaminated groundwater contains volatile organic compounds at shallow elevations;
- the goals or criteria that will be used in evaluating the vadose zone and groundwater cleanup technologies;
- a brief summary comparison of the advantages and disadvantages of each technology; and,
- identification of DOE's preferred groundwater cleanup technology.

#### *Surface Water*

It is our understanding that the entire SSFL site is covered by the Los Angeles Regional Water Quality Control Board's permit for the facility.<sup>2</sup> The DEIS should discuss any permit violations to date, as well as any interim source removal actions, treatment systems or Best Management Practices for any associated outfalls, as appropriate. The DEIS should include any draft

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<sup>2</sup> Waste Discharge Requirements for the Boeing Company, Santa Susana Field Lab, Order No. R4-2010-0090, NPDES No. CA0001309, California Regional Waste Quality Control Board, Los Angeles, Region, April 6, 2010, Revised May 20, 2010 and June 3, 2010.

Stormwater Pollution Prevention Plan and Erosion Control Plans, as well as any relevant actions currently in place or to be implemented (i.e. collections of BMPs).

The DEIS should include:

- a discussion of coordination between any interim source removal, demolition, and soil removal actions, including a map showing remaining demolition and soil removal actions;
- a summary of any BMPs currently in place to control the movement of contaminated sediment as well as any planned BMPs that will be used during demolition and soil removal;
- a current description of compliance with the Regional Board's permit; and,
- a current description of any monitoring in place or plans to evaluate the success of the source removal actions.

#### *Potential Cross Property Contamination*

The DEIS should discuss the potential for cross property contamination from DOE's portion of the site onto others (e.g. NASA, Boeing), or vice versa. If such potential exists, the DEIS should include a discussion on whether different standards for soil remediation may be used. The DEIS should also discuss the timing of the cleanup for any neighboring properties where cross property contamination may present an issue, as well as measures to prevent cross-contamination (pre-and post remediation). For example, if one entity completes soil removal prior to DOE, contamination from the DOE property might still migrate onto another's property, or vice versa.

#### *Clean Water Act Section 404*

DOE should coordinate with the U.S. Army Corps of Engineers to determine if the proposed project requires a Section 404 permit under the Clean Water Act. Section 404 regulates the discharge of dredged or fill material into waters of the United States (WUS), including wetlands and other *special aquatic sites*. The DEIS should describe all WUS that could be affected by the project alternatives, and include maps that clearly identify all such waters within the project area. The discussion should include acreages and channel lengths, habitat types, values and functions of these waters. The EPA recommends that DOE include a jurisdictional delineation for all WUS, including ephemeral drainages, in accordance with the 1987 *Corps of Engineers Wetlands Delineation Manual* and the December 2006 *Arid West Region Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*. A jurisdictional delineation will confirm the presence or absence of WUS in the project area and help determine whether or not the proposed project would require a Section 404 permit.

If a permit is required, the EPA will review the project for compliance with *Federal Guidelines for Specification of Disposal Sites for Dredged or Fill Materials* (40 CFR 230), promulgated pursuant to Section 404(b)(1) of the CWA. Pursuant to 40 CFR 230, any permitted discharge into WUS must be the *least environmentally damaging practicable alternative* available to achieve the project purpose. The DEIS should include an evaluation of the project alternatives in this context in order to demonstrate the project's compliance with the 404(b)(1) Guidelines. If,



under the proposed project, dredged or fill material would be discharged into WUS, the DEIS should discuss alternatives to avoid those discharges.

The DEIS should also:

- discuss the extent of features, by wetland and non-wetland waters, including any that are manmade, and include a figure that identifies areas of permanent and temporary impacts. If possible, this information should be based on an approved jurisdictional determination from the U.S. Army Corps of Engineers;
- include an assessment of the conditions and functions of the waters using a Corps approved assessment method; and,
- identify potential compensatory mitigation measures that DOE may propose in the CWA 404 permit application to offset unavoidable impacts.

#### *Clean Water Act Section 303(d)*

The CWA requires States to develop a list of impaired waters that do not meet water quality standards, and to establish priority rankings, and determine appropriate Total Maximum Daily Loads of pollutants for those waters, to improve water quality.

The DEIS should provide information on CWA Section 303(d) impaired waters in the project area, if any, and efforts to develop and revise TMDLs. The DEIS should describe existing restoration and enhancement efforts for those waters, how the proposed project would be coordinated with on-going protection efforts, and any mitigation measures that would be implemented to avoid further degradation of impaired waters.

#### Air Quality

##### *Mitigation*

The DEIS should provide a detailed discussion of ambient air conditions (baseline or existing conditions), National Ambient Air Quality Standards, criteria pollutant nonattainment areas, and potential air quality impacts of the proposed project (including cumulative and indirect impacts). This should include a description and estimates of air emissions from potential construction, cleanup and maintenance activities, as well as proposed mitigation measures to minimize those emissions. Such an evaluation is necessary to assure compliance with State and Federal air quality regulations, and to disclose the potential impacts from temporary or cumulative degradation of air quality.

We recommend the following be included in the DEIS:

- *Existing Conditions* – The DEIS should provide a detailed discussion of ambient air conditions, NAAQS, and criteria pollutant nonattainment areas in the vicinity of the project.
- *Quantify Emissions* – The DEIS should estimate emissions of criteria pollutants and green house gasses from the proposed project and discuss the timeframe for release of these emissions over the lifespan of the project. The DEIS should describe and estimate

emissions from potential construction, clean up and maintenance activities, as well as proposed mitigation measures to minimize these emissions.

- *Specify Emission Sources* – The DEIS should specify the emission sources by pollutant from mobile sources, stationary sources, and ground disturbance. This source specific information should be used to identify appropriate mitigation measures and areas in need of the greatest attention.
- *Construction Emissions Mitigation Plan* – The DEIS should include a draft Construction Emissions Mitigation Plan, which should also apply to cleanup and maintenance activities, as appropriate, and ultimately adopt this plan in the Record of Decision. In addition to all applicable local, state, or federal requirements, we recommend the following control measures be included in the Construction Emissions Mitigation Plan in order to reduce impacts associated with emissions of particulate matter and other toxics from construction-related activities:
  - Fugitive Dust Source Controls: The DEIS should identify the need for a Fugitive Dust Control Plan to reduce Particulate Matter 10 and Fine Particulate Matter 2.5 emissions during construction, clean up and maintenance activities. We recommend that the plan include these general commitments:
    - Stabilize heavily used unpaved construction roads with water, non-toxic soil stabilizer or soil weighting agent that will not result in loss of vegetation, or increase other environmental impacts.
    - During grading, use water, as necessary, on disturbed areas in construction sites to control visible plumes.
    - Vehicle Speed
      - Limit speeds to 25 miles per hour on stabilized unpaved roads as long as such speeds do not create visible dust emissions.
      - Limit speeds to 10 miles per hour or less on unpaved areas within construction sites on un-stabilized (and unpaved) roads.
      - Post visible speed limit signs at construction site entrances.
    - Inspect and wash construction equipment vehicle tires, as necessary, so they are free of dirt before entering paved roadways, if applicable.
    - Use sandbags or equivalent effective measures to prevent run-off to roadways in construction areas adjacent to paved roadways. Ensure consistency with the project's Storm Water Pollution Prevention Plan, if such a plan is required for the project.
    - Stabilize disturbed soils (after active construction activities are completed) with water, a non-toxic soil stabilizer, soil weighting agent, or other approved soil stabilizing method.
    - Cover or treat soil storage piles, as well as disturbed areas that remain inactive for longer than 10 days, with appropriate dust suppressant compounds. Provide vehicles (used to transport solid bulk material on public roadways) with covers.
    - Use wind erosion control techniques (such as windbreaks, water, chemical dust suppressants, and/or vegetation) where soils are disturbed in construction, access and maintenance routes, and materials stock pile areas. Keep related windbreaks in place until the soil is stabilized or permanently covered with vegetation.

- Mobile and Stationary Source Controls:
  - If practicable, lease new, clean equipment meeting the most stringent of applicable Federal<sup>3</sup> or State Standards.<sup>4</sup> In general, commit to the best available emissions control technology. Tier 4 engines should be used for project construction equipment to the maximum extent feasible.<sup>5</sup>
  - Where Tier 4 engines are not available, use construction diesel engines with a rating of 50 hp or higher that meet, at a minimum, the Tier 3 California Emission Standards for Off-Road Compression-Ignition Engines,<sup>6</sup> unless such engines are not available.
  - Where Tier 3 engine is not available for off-road equipment larger than 100 hp, use a Tier 2 engine, or an engine equipped with retrofit controls to reduce exhaust emissions of nitrogen oxides and diesel particulate matter to no more than Tier 2 levels.
  - Consider using electric vehicles, natural gas, biodiesel, or other alternative fuels during construction, clean up and maintenance phases to reduce the project's criteria and greenhouse gas emissions.
  - Plan construction scheduling to minimize vehicle trips.
  - Limit idling of heavy equipment to less than 5 minutes and verify through unscheduled inspections.
  - Maintain and tune engines per manufacturer's specifications to perform at CARB and/or EPA certification levels; prevent tampering, and conduct unscheduled inspections to ensure these measures are followed.
  
- Administrative controls:
  - Develop a construction traffic and parking management plan that maintains traffic flow, and plan construction to minimize vehicle trips.
  - Identify any sensitive receptors in the project area, such as children, elderly, and the infirm, and specify the means by which impacts to these populations will be minimized (e.g., locate construction equipment and staging zones away from sensitive receptors and building air intakes).
  - Include provisions for monitoring fugitive dust in the fugitive dust control plan and initiate increased mitigation measures to abate any visible dust plumes.

### *General Conformity*

The DEIS should address the applicability of Clean Air Act Section 176 and EPA's general conformity regulations at 40 CFR Parts 51 and 93 for those pollutants that do not exceed the

<sup>3</sup> EPA's website for nonroad mobile sources is <http://www.epa.gov/nonroad/>.

<sup>4</sup> For California, see ARB emissions standards, see: <http://www.arb.ca.gov/msprog/offroad/offroad.htm>.

<sup>5</sup> Diesel engines < 25 hp rated power started phasing in Tier 4 Model Years in 2008. Larger Tier 4 diesel engines will be phased in depending on the rated power (e.g., 25 hp - <75 hp: 2013; 75 hp - < 175 hp: 2012-2013; 175 hp - < 750 hp: 2011 - 2013; and  $\geq$  750 hp 2011- 2015).

<sup>6</sup> As specified in California Code of Regulations, Title 13, section 2423(b)(1)

NAAQS. Federal agencies need to ensure that their actions, including construction emissions subject to state jurisdiction, conform to an approved implementation plan.

EPA encourages DOE to work with the appropriate air quality management districts in developing the Draft General Conformity Determination for the project, to include all indirect and direct emissions associated with the project, and to identify additional mitigation measures that would be necessary to ensure conformity. DOE should begin such discussions with the appropriate air quality management districts as soon as practical.

The DEIS should also commit to using on-road heavy duty diesel trucks that meet or exceed EPA's emissions standard for 2010 and raise awareness of California's anti-idling rule among drivers (<http://www.arb.ca.gov/msprog/truck-idling/factsheet.pdf>).

### *Traffic*

Based on the information provided in NASA's 2014 Final EIS, NASA proposed soil removal could require 13,031 annual truck trips. NASA's Final EIS also notes that this would be in addition to the 65,625 annual truck trips that Boeing and the DOE will need to haul waste to disposal facilities from their portions of SSFL (Table 4.13-1). In light of the potentially significant increase in truck trips required to transport soils from DOE's site to off-site disposal facilities, the DEIS should identify reasonably expected routes to the various waste facilities and impacts on traffic levels. Specifically, the DEIS should:

- designate truck routes, particularly for the largest (Class VIII) trucks;
- provide explanations for any truck travel not on the most direct route to a given facility;
- evaluate the possible effects of landfill or other receiving facility selection on the truck route to ensure that all reasonably foreseeable traffic analyses are considered;
- to the extent possible, based on coordination with Boeing and NASA, DOE should update its traffic analysis to consider the cumulative impacts; and,
- offer rideshare or carpool program for construction workers to further reduce traffic impacts.

### *Effects and Potential Safety of School Children*

We strongly encourage an analysis of the potential impact of truck traffic on school children in DOE's DEIS. The analysis should include childcare centers, preschools, parks and recreation centers in its evaluation of truck traffic and children. While fewer children may walk to these facilities than to schools, their safety is relevant for consideration. The DEIS should also discuss measures that would mitigate unavoidable impacts on children's safety, such as providing funding for crossing guards, if busy intersections near schools are not currently staffed; and, target outreach material about the construction schedule and truck routes to schools and childcare centers and residents.

## Biological Resources, Habitat and Wildlife

Per the Amended NOI, we note that DOE is initiating formal consultation with the U.S. Fish and Wildlife Service as required under Section 7 of the Endangered Species Act. The DEIS should identify any petitioned or listed threatened and endangered species and critical habitat that occur within the project area. The document should identify and quantify which species or critical habitat might be directly, indirectly, or cumulatively affected by each alternative and discuss measures to mitigate impacts to these species. Emphasis should be placed on the protection and recovery of species due to their status or potential status under the federal or state Endangered Species Act.

The DEIS should include a discussion of how the proposed action would comply with ESA requirements, including the ESA Section 7 consultation efforts with the U.S. Fish and Wildlife Service. We recommend that any relevant documents associated with the ESA Section 7 consultation process, including Biological Assessments and Biological Opinions, be summarized and included in an appendix in the DEIS.

We also recommend that DOE coordinate across field offices and with USFWS and California Department of Fish and Wildlife, as necessary, to ensure that current and consistent surveying, monitoring, and reporting protocols are applied in protection and mitigation efforts. The DEIS should provide a recent status update on this topic if these actions have been or will be undertaken. The analysis in the DEIS should include:

- Baseline conditions of habitats and populations of the covered species.
- A clear description of how avoidance, mitigation and conservation measures will protect and encourage the recovery of the covered species and their habitats in the project area.
- Monitoring, reporting and adaptive management efforts to ensure species and habitat conservation effectiveness.

## Cumulative and Indirect Impacts

The cumulative impacts analysis should provide the context for understanding the magnitude of the impacts of the alternatives by analyzing the impacts of other past, present, and reasonably foreseeable projects or actions and then considering those cumulative impacts in their entirety. The DEIS should clearly identify the resources that may be cumulatively impacted, the time over which impacts would occur, and the geographic area that would be impacted by the proposed project. The DEIS should focus on resources of concern – those resources that are “at risk” and/or are significantly impacted by the proposed project, before mitigation. In the introduction to the *Cumulative Impacts Section*, identify which resources are analyzed, which ones are not, and why. For each resource analyzed, the DEIS should:

- Identify the current condition of the resource as a measure of past impacts. For example, the percentage of species habitat lost to date.
- Identify the trend in the condition of the resource as a measure of present impacts. For example, whether the health of the resource is improving, declining, or in stasis.
- Identify all on-going, planned, and reasonably foreseeable projects in the study area that may contribute to cumulative impacts.

- Identify the future condition of the resource based on an analysis of impacts from reasonably foreseeable projects or actions added to existing conditions and current trends.
- Assess the cumulative impacts contribution of the proposed alternatives to the long-term health of the resource, and provide a specific measure for the projected impact from the proposed alternatives.
- Disclose the parties that would be responsible for avoiding, minimizing, and mitigating those adverse impacts.
- Identify opportunities to avoid and minimize impacts, including working with other entities.

The DEIS should quantify cumulative impacts across resources areas, as well as describe and evaluate feasible mitigation measures to avoid and minimize the identified adverse cumulative impacts. Although these mitigation measures may be outside the jurisdiction of the lead agencies or project proponents, describing them in the DEIS would serve to alert other agencies or officials who can implement these extra measures.

To the extent possible, in coordination with Boeing and NASA, DOE should analyze the cumulative impacts (including Boeing and NASA soil removal) on traffic, children and air quality.

#### Coordination with Tribal Governments

Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments* (November 6, 2000) was issued in order to establish regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications, and to strengthen the United States government-to-government relationships with Indian tribes.

We understand NASA has consulted with the Santa Ynez Band of Chumash Mission Indians. We encourage DOE to consult with the tribe and address their concerns about the archaeological investigation performed to date. If DOE determines that any part of the federal land is a Sacred Site or Traditional Cultural Property, we also encourage you work proactively with the California Department of Toxic Substances Control and tribal representatives to mitigate the project's impacts.

The DEIS should describe the process and outcome of government-to-government consultation between DOE and each of the tribal governments within the project area, issues that were raised (if any), and how those issues were addressed in the selection of the proposed alternative.

#### National Historic Preservation Act and Executive Order 13007

Consultation for tribal cultural resources is required under Section 106 of the National Historic Preservation Act. Historic properties under the NHPA are properties that are included in the National Register of Historic Places or that meet the criteria for the National Register. Section 106 of the NHPA requires a federal agency, upon determining that activities under its control

could affect historic properties, to consult with the appropriate State Historic Preservation Officer/Tribal Historic Preservation Officer. Under NEPA, any impacts to tribal, cultural, or other treaty resources must be discussed in the EIS and measures that would mitigate those impacts must be identified. Section 106 of the NHPA requires that Federal agencies consider the effects of their actions on cultural resources, following regulation in 36 CFR 800.

Executive Order 13007, *Indian Sacred Sites* (May 24, 1996) requires federal land managing agencies to accommodate access to, and ceremonial use of, Indian sacred sites by Indian Religious practitioners, and to avoid adversely affecting the physical integrity, accessibility, or use of sacred sites. It is important to note that a sacred site may not meet the National Register criteria for a historic property and that, conversely, a historic property may not meet the criteria for a sacred site.

The DEIS should address the existence of Indian sacred sites in the project areas. It should address Executive Order 13007, distinguish it from Section 106 of the NHPA, and discuss how DOE will avoid adversely affecting the physical integrity, accessibility, or use of sacred sites, if they exist. The DEIS should provide a summary of all coordination with Tribes and with the SHPO/THPO, including identification of NRHP eligible sites, and development of a Cultural Resource Management Plan.

#### Greener Cleanups

We were pleased to note the green cleanup focus under Community-Developed Cleanup Concept #4 in DOE's Amended NOI. At EPA, Greener Cleanups refers to an approach at remediation sites in which EPA seeks to understand the environmental footprint resulting from site activities and identify opportunities to reduce that footprint. EPA has developed Principles for Greener Cleanups,<sup>7</sup> Best Management Practices for greener cleanups,<sup>8</sup> and a Methodology for quantifying the environmental footprint of a cleanup.<sup>9</sup> Each of these resources may be of use for the activities at the SSFL. Broadly speaking, the resources address the following aspects of a cleanup:

- Total Energy Use and Renewable Energy Use
- Air Pollutants and Greenhouse Gas Emissions
- Water Use and Impacts to Water Resources
- Materials Management and Waste Reduction
- Land Management and Ecosystems Protection

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<sup>7</sup> see [http://www.epa.gov/oswer/greenercleanups/pdfs/oswer\\_greencleanup\\_principles.pdf](http://www.epa.gov/oswer/greenercleanups/pdfs/oswer_greencleanup_principles.pdf)

<sup>8</sup> BMPs are listed at <http://www.clu-in.org/greenremediation/>.

<sup>9</sup> Methodology for Understanding and Reducing a Project's Environmental Footprint, U.S. EPA, February 2012 (EPA-542-R-12-002)

<[http://www.clu-in.org/greenremediation/methodology/docs/GC\\_Footprint\\_Methodology\\_Feb2012.pdf](http://www.clu-in.org/greenremediation/methodology/docs/GC_Footprint_Methodology_Feb2012.pdf)>

and Overview of EPA's Methodology to Address the Environmental Footprint of Site Cleanup, U.S. EPA, March 2012, EPA-542-F-12-023,

<[http://www.clu-in.org/greenremediation/methodology/docs/GR\\_Overview\\_of\\_Footprint\\_Methodology\\_FS\\_3-29-12.pdf](http://www.clu-in.org/greenremediation/methodology/docs/GR_Overview_of_Footprint_Methodology_FS_3-29-12.pdf)>

We offer the Principles, BMPs, and Methodology for use at remediation sites on a voluntary basis, but we also note that these resources may help to identify topics that should be included in the DEIS, depending on the potential significance of the impact [40 CFR 1502.2(b)]. For example, the DEIS should consider: quantifying certain aspects of the remedy such as the amount of water and materials used; extending the scope to off-site support activities, such as laboratory analysis and waste management; and identifying opportunities for reduction for these aspects of the remedy. In addition, DOE may want to make use of the ASTM Standard Guide for Greener Cleanups, released in November 2013, which outlines a voluntary process for evaluating and implementing activities to reduce the environmental footprint of a cleanup.<sup>10</sup> Karen Scheuermann, in EPA Region 9's RCRA Facilities Management Office, is available to assist DOE in understanding and applying the Greener Cleanups approach at SSFL. Ms. Scheuermann can be contacted at (415) 972-3356 or [scheuermann.karen@epa.gov](mailto:scheuermann.karen@epa.gov). We also note that DTSC's *Advisory for Green Remediation*<sup>11</sup> is compatible with EPA's Principles for Greener Cleanups.

DOE should consider EPA and DTSC resources for Greener Cleanups and take advantage of any aspects of these resources that may be beneficial in the cleanup of the Santa Susana Field Lab.

### Climate Change

Scientific evidence supports the concern that continued increases in greenhouse gas emissions resulting from human activities will contribute to climate change. Global warming is caused by emissions of carbon dioxide and other heat-trapping gases. Global warming can affect weather patterns, sea level, ocean acidification, chemical reaction rates, and precipitation rates, resulting in climate change.

The DEIS should consider how climate change could potentially influence the proposed project, specifically within sensitive areas, and assess how the projected impacts could be exacerbated by climate change.

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<sup>10</sup> The ASTM Standard Guide for Greener Cleanups (ASTM E2893 - 13) is available for a fee at: <http://www.astm.org/Standards/E2893.htm>.

<sup>11</sup> Interim Advisory for Green Remediation, California Department of Toxic Substances Control, December 2009 <[http://www.dtsc.ca.gov/OMF/upload/GRT\\_Draft\\_Advisory\\_-20091217\\_ac1.pdf](http://www.dtsc.ca.gov/OMF/upload/GRT_Draft_Advisory_-20091217_ac1.pdf)>