



The Boeing Company
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Via E-mail and FedEx

October 1, 2010
In reply refer to SHEA-110426

Mr. Richard Brausch
SSFL Project Director
Department of Toxic Substances Control
1001 "I" Street, 25th Floor
Post Office Box 806
Sacramento, CA 95812-0806

Subject: Technical Comments to the "Agreements in Principle" between the State of California, DOE and NASA, Santa Susana Field Laboratory, Ventura, California

Dear Mr. Brausch:

Pursuant to The Boeing Company letter dated September 30, 2010, attached are our technical questions and comments to the nonbinding Agreements in Principle announced by the State of California, on September 3, 2010 between the State, the Department of Energy, and the National Aeronautics and Space Administration.

As you will see, our comments focus attention on the unintended environmental consequences from the scope of the proposed "clean up to background" approach which appears to omit key regulations that would balance the clean up and prevent potential damage to the environment and impact the surrounding community.

We are committed to clean up Santa Susana in an expeditious manner that protects human health and the environment, while minimizing impact to neighboring families and communities. To that end, we eagerly await your responses to our comments and questions and look forward to continued discussions with you.

Please contact me at (818) 466-8161 to discuss our comments.

Sincerely,

Thomas Gallacher
Director, Santa Susana Field Laboratory
Environment, Health and Safety

AJL:bjc
Attachment

cc: Mr. Mark Malinowski, Dept. of Toxic Substances Control
Mr. Gerard Abrams, Dept. of Toxic Substances Control
Ms. Laura Rainey, Dept. of Toxic Substances Control
Ms. Susan Callery, Dept. of Toxic Substances Control

**List of Technical Comments/Questions Prepared by The Boeing Company
October 1, 2010**

**Agreements in Principle Announced September 3, 2010
Regarding Clean-Up of Portions of the Santa Susana Field Laboratory**

and

**Draft Confirmation Protocol "Not to Exceed" Background Cleanup Standard for
Soils**

Grouping 1: Technical

1. The AIPs state that the resulting cleanup is to be as close to local background as practicable and provides a maximum 5% volume exclusion for unforeseen circumstances that prevent the cleanup from being achieved due to technical infeasibility (which presumably includes impacts on ecological resources, cultural resources, or endangered species and habitats not falling under the AIPs' "possible exception" under the federal Endangered Species Act). What is the State's basis for the maximum value of 5% for unforeseen circumstances?
2. The confirmation sampling protocol specifies that "sample averaging" cannot be used as it is at every other California and federal cleanup site, and that each and every sample with concentrations or activity above "Look-up Table" values have to be excavated and removed. This requirement is in direct conflict with USEPA and DTSC guidance that underpin the basis of risk assessments and clean-up verification sampling that use statistics to characterize and evaluate variability. What is the basis for applying this standard in these AIPs? Will this standard also apply to the federally-owned, NASA administered Areas I and II?
3. The confirmation sampling protocol specifies that for each source area that requires excavation, analytical test methods during confirmation sampling shall include all contaminants within the analytical suite associated with the contaminants of concern identified for that source area. The protocol also states that for radionuclides, the analytical suites shall be the same as those used by USEPA in its Area IV and Northern Undeveloped Area Radiological Study. Has the State considered the potential implications of this requirement associated with commingling of sources? What definition will the State apply to "source area"? How would this concept apply to down-slope and drainage locations?

Grouping 2: Implementation

1. The AIPs specify that the sole remedy for chemical and radiological contamination is excavation and off-site disposal. Has the State estimated the volume of soil (both on- and off-site) that would require excavation, a fundamental step in identifying and evaluating a range of remedial alternatives? Our comparison of available sample data to expected "Look-up Table" values for potential "background" levels indicates that, under the concept proposed in the AIPs, more than 1.6 million cubic yards of soil would likely need to be excavated across SSFL.
2. The AIPs specify a completion date of 2017. How has the State determined the ability to meet that deadline? The 2017 date was originally established for a risk-based cleanup to residential standards under the RCRA Corrective Action program in the 2007 Administrative Order on Consent. That 2017 date presumed remedies would be chosen using the typical evaluation of appropriate remedial alternatives, not excavation and off-site disposal of all impacted soils as the sole remedy, so that the amount of soil to be excavated and disposed of off-site would be far less than what we estimate the AIP's proposed "background" cleanup would require. Based on our recent experience in excavating and removing for disposal 10,000 cubic yards of soils to carry out the Interim Source Removal Action projects (ISRAs), it would take more than 11 years to truck from the site the more than 1.6 million cubic yards of soil required by implementing the AIPs site wide. Our estimates also indicate that the soil excavation and off-site disposal work would require approximately 100,000 large dump trucks (55-foot semi-trailers) to transport this volume of soil, and generate nearly 250,000,000 pounds of carbon dioxide and require more than 10,000,000 gallons of fuel. This would mean 35 trucks per day, 5 days per week, 50 weeks per year.
3. The AIPs do not specify that soil excavations require backfilling, only that backfill must meet "background" specifications. Will the State require excavations to be backfilled? Will the State require that grading permits be obtained from Ventura County for both federally- and Boeing-owned land?
4. We believe it is likely that any source of imported fill will exceed the expected background Look-up Table values for at least one chemical or radionuclide. How

does the State plan on determining what import backfill source will be acceptable if such an exceedance occurs? Will the State limit the distance from which import fill can be obtained? Having to obtain backfill soils from great distances would drastically increase the environmental impact of the clean up (e.g., truck traffic, greenhouse gas emissions, etc.).

5. How does the State plan on evaluating and communicating the potential impacts to natural and cultural resources of the soil excavation and off-site disposal to the surrounding community?
6. The AIPs specify the development of a remedial action implementation work plan. Does the State plan on submitting these work plans for public review?
7. Cleanup of bedrock is not mentioned or specified in the AIPs. What does the State plan on doing should Look-up Table values be exceeded in the deepest soil samples at the bedrock interface? Does the State plan on sampling and excavating the bedrock?
8. Has the State considered that vapors contained in bedrock in certain areas of the site will migrate into backfilled soils by diffusion and will re-contaminate imported fill to concentrations above Look-up Table values? For example, see Draft Group 8 RCRA Facility Investigation Report (2007) evaluation of the Former Sodium Disposal Facility (SWMU 7.3).

Grouping 3: Administrative and Regulatory

1. The AIPs significantly deviate from established California and federal cleanup processes applied throughout the State and the rest of the country, as follows:
 - Section 25359.20 (c) of the California Health and Safety Code (i.e., SB 990) states “A response action taken or approved pursuant to this chapter for the Santa Susana Field Laboratory site shall be based upon, and be no less stringent than, the provisions of Section 25356.1.5.”
 - 25356.1.5 (a) states “Any response action taken or approved pursuant to this chapter shall be based upon, and no less stringent than: The requirements established under federal regulation pursuant to Subpart E of

the National Oil and Hazardous Substances Pollution Contingency Plan (40 C.F.R. 300.400 et seq.), as amended.”

- 40 C.F.R. 300.430 (a) (1) (iii) requires that a range of alternatives be identified and evaluated for both removal and remedial actions, that the range of alternatives should reflect the scope and magnitude of the problem being addressed, and that (See as an example 40 CFR 300,430(e)) the following should be considered in developing appropriate remedial alternatives:

(A) ...treatment to address the principal threats posed by a site, wherever practicable. Principal threats for which treatment is most likely to be appropriate include liquids, areas contaminated with high concentrations of toxic compounds, and highly mobile materials.

(B) ...using engineering controls, such as containment, for waste that poses a relatively low long-term threat or where treatment is impracticable.

(C) ...using a combination of methods, as appropriate, to achieve protection of human health and the environment. In appropriate site situations, treatment of the principal threats posed by a site, with priority placed on treating waste that is liquid, highly toxic or highly mobile, will be combined with engineering controls (such as containment) and institutional controls, as appropriate, for treatment residuals and untreated waste.

(D)...using institutional controls such as water use and deed restrictions to supplement engineering controls as appropriate for short- and long-term management to prevent or limit exposure to hazardous substances, pollutants, or contaminants. Institutional controls may be used during the conduct of the remedial investigation/feasibility study (RI/FS) and implementation of the remedial action and, where necessary, as a component of the completed remedy. The use of institutional controls shall not substitute for active response measures (e.g., treatment and/or containment of source material) as the sole remedy unless such active measures are determined not to be practicable, based on the balancing of trade-offs among alternatives that is conducted during the selection of remedy.

(E) ...using innovative technology when such technology offers the potential for comparable or superior treatment performance or

implementability, fewer or lesser adverse impacts than other available approaches, or lower costs for similar levels of performance than demonstrated technologies.

The AIPs do not require any risk assessment or anticipate identification or evaluation of alternatives consistent with the California Health and Safety Code or the National Contingency Plan, (incorporated by reference into Chapter 6.8 of the Health and Safety Code). Rather, they prescriptively state the cleanup will be to background and that clean-up will consist of soil excavation and off-site disposal. The prescriptive remedy described in the AIPs is not supported by an administrative record and is inconsistent with the fundamental framework of the California Health and Safety Code and the NCP.

2. The AIPs do not reference any analysis or compliance with the California Environmental Quality Act (Public Resources Code 21000-21117) and the CEQA guidelines. How does the State plan to evaluate the impacts of the specified remedy in the AIPs on natural and cultural resources in order to comply with CEQA, particularly when there is an arbitrary 5% limit on any exceptions based on unforeseen circumstances and ecological impacts?
3. The AIPs include a limited "possible exception" under the federal Endangered Species Act. Does the State believe there are circumstances where a federally protected endangered species or its habitat may be disrupted in order for excavation to proceed? Does the State believe that it does not have to protect California listed- or endangered-species, or comply with Ventura County oak tree ordinances during site clean-up? If so, what is the basis for believing these requirements do not apply?
4. Will the California Department of Fish and Game also be consulted for streambed alteration permits during cleanup described in the AIPs? What role would they play and could their involvement limit the extent of the cleanup described in the AIP?
5. Will the Army Corps of Engineers also be consulted for permits for site cleanup in drainages? What role would they play and could their involvement limit the extent of the cleanup described in the AIP?

6. The remedy specified in the AIP requiring soil “removal” for all chemical contamination is inconsistent with existing federal or state “presumptive remedy” guidance on site cleanups. Boeing encourages DTSC to consider US EPA and/or DTSC presumptive remedies, which are consistent with state and federal law, have broad acceptance and utilization at California and other sites, and are based on years of documented effectiveness, rather than pre-determining an excavation remedy.
7. The AIPs state that their framework is based upon the unique circumstances of Areas I and II (federal property administered by NASA), Area IV (federally-leased property), and the Northern Buffer Zone, including the nature of contaminant releases that have occurred. In fact, extensive data exist that indicate SSFL contaminant impacts are similar to and fall within the range of other sites in California and throughout the US that do not appear to be subject to these types of requirements. Therefore, why do the AIPs omit normal regulatory steps, such as a risk-based approach to develop cleanup goals, alternative evaluations for the types of clean up, and application of the NCP balancing criteria prior to remedy selection?
8. How does the federal court order requiring DOE to complete an EIS regarding the cleanup of Area IV, and the requirement that NASA either comply with CERCLA or carry out an EIS under NEPA for the federally-owned lands in Areas I & II, affect the AIP between DOE and the State, including adherence to the 2017 schedule?
9. There are both federal executive orders (13423 and 13514) and federal and State guidelines and policy regarding sustainable remediation. Boeing encourages the State to evaluate the proposed soil excavation and off-site disposal remedy for consistency with these orders, policies and guidance.
10. The AIP between DOE and the State specifies that soils containing any radioactive contaminant at concentrations above background must be disposed of at a licensed low-level radioactive waste (LLRW) disposal site or an authorized LLRW disposal site at a DOE facility. Does the State intend to engage in formal

notice and comment rule-making to alter existing regulatory provisions that would allow legal disposal of these soils at other disposal sites?

11. The NASA AIP specifies that the final agreement between the State and NASA shall be embodied in an Administrative Order on Consent (AOC). A similar document is not specified in the AIP between DOE and the State. What type of document is anticipated between DOE and the State for the final agreement? How will the final AIPs relate to the 2007 Consent Order for the site?