

Statement of The Boeing Company on SB 990 (Kuehl)

SB 990 prohibits the sale, transfer or lease of any part of Santa Susana Field Laboratory (SSFL) for any use, unless the Director of the Department of Toxic Substances Control (DTSC) certifies that the land has undergone complete remediation, pursuant of the most protective cleanup standards (this implies a 10^{-6} risk level) that have been promulgated by the U.S. Environmental Protection Agency (this implies CERCLA¹ guidance) for sites that contain chemical and radioactive contamination and that are based on the most restrictive potential land use for these sites (this implies agricultural land use).

The Boeing Company opposes SB 990 for the following reasons.

Regulatory Hurdles

The DTSC has no regulatory jurisdiction over radioactive materials in the State of California. As such it has no personnel with the requisite training or expertise to implement the radiological mandates of SB 990.

Technical Feasibility

CERCLA regulations require an analysis of the “implementability” or “technical feasibility” of proposed remedial actions.

Technical feasibility is discussed in detail in EPA 402-R-96-011-A², “Radiation Site Cleanup Regulations – Technical Support Document for the Development of Radionuclide Cleanup Levels for Soil.”

In February 2002, EPA published preliminary remediation goals (PRGs) for agricultural soil based on a 10^{-6} risk level³. Using these PRGs, a comparison of detectability and distinguishability from background can be made using the same technical feasibility criteria employed in EPA 402-R-96-011-A.

The conclusion of this EPA-based analysis that it is technically impossible to implement and verify a 10^{-6} risk level for an agricultural land use scenario. In effect one would be implementing a “cleanup to background” policy rather than implementing a science-based cleanup standard that is fully protective of human health and the environment.

¹ EPA, [“Comprehensive Environmental Response, Compensation and Liability Act of 1980.” Public Law 96-510. 42 U.S.C. 9601 et seq.](#)

² EPA 402-R-96-011-A, “Radiation Site Cleanup Regulations – Technical Support Document for the Development of Radionuclide Cleanup Levels for Soil”, September 1994, (<http://www.epa.gov/rpdweb00/docs/cleanup/402-r-96-011a.htm>), Chapter 7.2 “Technical Feasibility Issues Associated with Implementation”, pp 7-14 through 7-41, Tables 7-4 through 7-10 and Table O-6.

³ OSWER 9355.01-83A. “Distribution of OSWER Radionuclide Preliminary Remediation Goals (PRGs) Superfund Electronic Calculator.” February 7, 2002. <http://epa-prgs.ornl.gov/radionuclides>

Cost Benefit

CERCLA regulations require analysis of the “costs” and the “effectiveness” of proposed remedial actions. These have been conducted using cost-benefit analysis following Nuclear Regulatory Commission (NRC) guidance⁴.

Analysis of the costs and benefits of cleanup to 10^{-4} and 10^{-6} risk levels for both residential and agricultural land use has been made for the 290 acres of Area IV of SSFL. Current remedial goals ($\sim 10^{-4}$ residential), and risk levels achieved ($\leq 10^{-5}$), result in no additional theoretical radiation induced cancers for hypothetical future users of the land. Additional costs for implementing the mandates of SB 990 would be significant without achieving any added level of safety to future users of the land.

Reasonably Anticipated Future Land Use

EPA guidance on land use for CERCLA sites⁵ states,

“Discussions with local land use planning authorities ... will assist in understanding the reasonably anticipated future uses of the land ...”

“Remedial action objectives developed ... should reflect the reasonably anticipated future land use.”

“Future land use assumptions allow the baseline risk assessment and the feasibility study to be focused on developing practicable and cost-effective remedial alternatives.”

The California Health & Safety Code Section cited in SB 990 includes a paragraph⁶,

“The exposure assessment of any risk assessment prepared in conjunction with a response action taken or approved pursuant to this chapter shall include the development of reasonable maximum estimates of exposure for both current land use conditions and reasonably foreseeable future land use conditions at the site.”

The EPA has recently stated in an email to the SSFL Workgroup⁷,

“DOE, not EPA has the authority to make a final determination regarding the reasonably anticipated future land use and the appropriate cleanup levels and remedy ... EPA generally defines unrestricted land use to mean residential use ... It is appropriate to use residential exposure as the baseline for unrestricted use ... EPA has never taken the position that subsistence farming is the appropriate exposure scenario for setting cleanup levels at the site.”

⁴ NRC NUREG-1727, "NMSS Decommissioning Standard Review Plan", Appendix D, ALARA Analysis, September 2000.

⁵ EPA OSWER Directive No. 9355.7-04, "Land Use in the CERCLA Remedy Selection Process", May 25 1995

⁶ California Health & Safety Code 25356.1.5(d)

⁷ Email from John Beach (EPA, Region IX) to SSFL Workgroup Participants, "EE/CA Issues for Workgroup", April 18, 2007, 03:55 pm.

Both CERCLA, the California Health & Safety Code and EPA are clear and in agreement on the need to remediate and perform risk assessment for reasonably anticipated future land use. EPA is clear in its position that the appropriate unrestricted land use scenario should be residential, not agricultural. SB 990 violates this guidance by mandating remediation and risk assessment using agricultural land use.

Boeing has no intention of pursuing an agricultural use of the property. Boeing intends to put institutional controls into place to prohibit future agricultural use and use of groundwater. Cleanup to agricultural standards is not required.

DOE will continue using the conservative residential cleanup standards that are fully protective of human health, rather than the current "industrial" or the reasonably anticipated "open space" land use scenarios.

Unfortunately, this conservative use of residential cleanup standards to guide remediation has been misinterpreted to imply that Boeing's intent is to sell the land for residential housing.

Past Experience and Future Plans

Post-remedial risk analyses at SSFL's prior radiological cleanup sites demonstrate that residential risk levels achieved are below the lower 10% of the CERCLA 10^{-6} to 10^{-4} risk range. (i.e. $< 10^{-5}$) and in many cases less than 10^{-6} .

The remaining two radiological facilities owned by the DOE at SSFL are planned for clean up consistent with CERCLA, and following preparation of an Area IV Environmental Impact Statement (EIS). SSFL is not currently on the National Priorities List (NPL) and is not a CERCLA Superfund site, though the EPA is currently performing a (third) hazard ranking assessment to determine if SSFL should be listed on the NPL. Furthermore, the EPA and DOE agreed in a joint policy statement⁸ that DOE decommissioning activities will be conducted as non-time critical removal actions consistent with CERCLA, effectively integrating EPA oversight responsibility, DOE lead agency responsibility, and state and stakeholder participation.

⁸ USDOE and USEPA, "Policy on Decommissioning Department of Energy Facilities Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)." May 22, 1995.