

Dear Councilmember Blumenfield:

I write in response to a letter sent to you on February 11, 2019 from Abe Weitzberg regarding the Santa Susana Field Laboratory (SSFL.)

Mr. Weitzberg fails to identify himself as a consultant to the Department of Energy (DOE) and part of an organization quietly funded by DOE to lobby to help DOE get out of its cleanup obligations at SSFL. The DOE is of course one of the parties responsible for the contamination at SSFL whose recent Final Environmental Impact Statement (FEIS) violates the 2010 Administrative Order on Consent (AOC) that DOE signed with the Department of Toxic Substances Control (DTSC) to clean up its SSFL area to background levels of contamination. Instead, DOE'S FEIS proposes leaving 98% of its nuclear and chemical contamination on site permanently, where it will continue to threaten public health. DTSC sent DOE a strong letter on January 28 stating its opposition to DOE's FEIS, its violation of the cleanup agreement, and that DTSC would not renegotiate the cleanup agreements to allow DOE's proposal to walk away from its cleanup responsibilities (see attached.)

Weitzberg also failed to identify himself as former SSFL official who worked on the SNAP reactors, one of which experienced 80% fuel damage in an accident and the other which suffered 35% fuel damage. As indicated above, he also doesn't mention that he belongs to the SSFL CAG, which received \$34,100 from the DOE to oppose the cleanup. See <https://www.usaspending.gov/#/award/48523654> .In short, Mr. Weitzberg has a strong interest in peddling misinformation about the SSFL cleanup in order to relieve the responsibility parties from their cleanup obligations.

The vast majority of the people living in the communities near SSFL support the AOC cleanup agreements and a full cleanup of SSFL. Over 570,000 have signed a petition demanding full cleanup - see <https://www.change.org/santasusana>. Organizations such as Physicians for Social Responsibility-Los Angeles, Natural Resources Defense Council, Committee to Bridge the Gap, Southern California Federation of Scientists, and Rocketdyne Cleanup Coalition are among organizations that have long supported full cleanup and therefore oppose DOE's FEIS (see attached .)

In addition, the Los Angeles City Council, Los Angeles County Board of Supervisors, Ventura County Board of Supervisors, California Senator Henry Stern, U.S. Congressmembers Julia Brownley and Brad Sherman have submitted strong public comments in support of the AOC cleanup agreements. (See attached letters from the City of Los Angeles on DOE's DEIS and DTSC's DEIR.)

Independent federally funded studies show increased cancers associated with proximity to SSFL, and that SSFL contamination migrates offsite at concentrations in excess of EPA levels of concern. If SSFL is not fully cleaned up, it will continue to migrate and threaten the health of nearby communities. PSR-LA and communities near SSFL deeply appreciate the long standing commitment of the Los Angeles City Council to a full cleanup of SSFL. We urge a yes vote on item 19-0145.

Sincerely,

Denise Duffield
Associate Director

PS We have tried repeatedly to meet with you on this subject but have not been granted a meeting. We will re-initiate a request this week



Jared Blumenfeld
Secretary for
Environmental Protection



Department of Toxic Substances Control

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Gavin Newsom
Governor

January 28, 2019

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

DEPARTMENT OF TOXIC SUBSTANCES CONTROL'S COMMENTS ON THE DEPARTMENT OF ENERGY'S FINAL ENVIRONMENTAL IMPACT STATEMENT FOR REMEDIATION OF AREA IV AND THE NORTHERN BUFFER ZONE OF THE SANTA SUSANA FIELD LABORATORY, VENTURA COUNTY, CALIFORNIA

Dear Ms. Jennings:

The Department of Toxic Substances Control (DTSC) is writing in response to the Department of Energy's (DOE) Final Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory in Ventura County, California (Final EIS).

In the Final EIS, DOE ignores that its preferred alternative is inconsistent with the Administrative Order on Consent for Remedial Action (AOC) negotiated and executed by DTSC and DOE in 2010. The AOC clearly defines DOE's obligation to cleanup soils in Area IV to background levels, or reporting limits if no background value exists, on a point-by-point basis. DTSC remains fully committed to holding DOE accountable to the requirements of the AOC. DOE's assumption that DTSC would be open to renegotiating the AOC requirements regarding soils cleanup to accommodate DOE's preferred alternative is erroneous.

Notice of the Final EIS in the Federal Register was provided on December 28, 2018, and DOE is providing the public with only 30 calendar days – 21 business days taking into consideration the intervening holidays – to review and comment on the Final EIS. This abbreviated comment period is insufficient given the technical nature and volume of the Final EIS. To allow for meaningful public participation and opportunity for comment, DTSC requests that DOE extend the public comment period on the Final EIS for DTSC and for all interested parties up to and including March 1, 2019.

Ms. Stephanie Jennings
January 28, 2019
Page 2

If you have any questions regarding DTSC's comments, please contact me at Mohsen.Nazemi@dtsc.ca.gov or (714) 484-5321 or my Southern California Division Chief for the Site Mitigation and Restoration Program, Mark Malinowski, at Mark.Malinowski@dtsc.ca.gov or (916) 255-3607.

Sincerely,



Mohsen Nazemi, M.S., P.E.
Deputy Director
Site Mitigation and Restoration Program

Enclosure

cc: Mr. John Jones
Federal Project Director
DOE ETEC Closure Project
4100 Guardian Street, Ste 160
Simi Valley, California 93063

Jared Blumenfeld, Secretary
California Environmental Protection Agency

Meredith Williams
Acting Director
Department of Toxic Substances Control

Nancy Bothwell, Attorney
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Senior Engineering Geologist
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*The physician and health advocate voice for a world free from nuclear threats
and a safe, healthy environment for all communities.*



Physicians for Social Responsibility
Los Angeles

January 27, 2019

Mr. John Jones
Federal Project Director
Ms. Stephanie Jennings
NEPA Document Manager SSFL Area IV EIS
DOE ETEC Closure Project
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Re: Comments on U.S. Dept. of Energy's Final Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory

Dear Mr. Jones and Ms. Jennings:

Physicians for Social Responsibility-Los Angeles (PSR-LA) has participated in efforts to clean up the Santa Susana Field Laboratory (SSFL) for over three decades. As an organization dedicated to protecting public health from nuclear and environmental threats, we strenuously oppose the Final Environmental Impact Statement (FEIS) for the remediation of Area IV and the Northern Buffer Zone of SSFL issued by the U.S. Department of Energy (DOE.)

In 2010, DOE executed an agreement, the Administrative Order on Consent (AOC), with the California Department of Toxic Substances Control (DTSC) that requires SSFL to be cleaned up to background. DOE's FEIS for SSFL blatantly violates the AOC, as well as the National Environmental Policy Act (NEPA) and the Resource Conservation and Recovery Act (RCRA). Furthermore, the FEIS breaks DOE's promises to the community that it would repair the longstanding environmental damage and risk to public health that it created by decades of grossly negligent operations. The Trump Administration's flouting of a legally binding environmental agreement with California is also an affront to public trust.

FEIS Drastically Altered from DEIS — Violating NEPA

NEPA requires that the public be given a meaningful opportunity to formally review and comment on a draft EIS, followed by detailed responses to those comments by the publishing agency. No actions should be taken that were not part of this process. However, DOE has now taken away this right from members of the public who are invested in and concerned about the SSFL cleanup.

Instead, DOE has issued a virtually new EIS, in the guise of a FEIS, with no formal opportunity for review, comment, and agency response, in violation of the NEPA requirements.

The FEIS that was published following the DEIS has undergone drastic changes to many of its most integral parts. More than three quarters of the pages of the FEIS have been altered and nearly half of the pages have been completely changed. The preferred alternative for the remediation of soil chosen in the FEIS was not even considered in the draft. This new alternative, the “Conservation of Natural Resources, Open Space Scenario,” will leave in place 98% of the contamination. This scenario assumes that the only possible exposure scenario is on the occasion that individuals visit the site for walking or hiking. The people living nearby, however, are in their homes and yards every day. The FEIS grossly underestimates the risk to people living nearby from this extraordinarily weak new cleanup standard, all of which has been excluded from public review or comment.

Further, the entire “Appendix G: Evaluation of Remediation Activity Impacts on Human Health” was altered. This appendix provides the supposed basis and analysis for DOE’s claims that the Open Space Scenario poses little risk to offsite residents, and human health more generally. However, in violation of NEPA, the public was neither able to view or comment on this analysis or Open Space Scenario.

If the FEIS is approved, the public would have not been given the opportunity to comment on the majority of the document. This is a blatant violation of NEPA, which as stated prior, requires that the public be given the opportunity to comment and receive responses to such comments.

There is no justification for such drastic changes.

It is stated that the “Final EIS was revised to reflect the Grant Deeds of Conservation Easement and Agreement executed by Boeing and North American Land Trust, which restrict future land use of Boeing’s property to open space, including the property DOE is cleaning up.” However, the DEIS already noted that Boeing had declared that intention, so there is no basis for drastic revision of the FEIS cleanup proposal. Any such change must be recirculated for public review and comment.

DOE Preferred Alternative Leaves Behind 98% of Contamination — Violating AOC & Placing Public Health at Risk

The proposed action for cleanup of soil in the FEIS plans to leave in place 98% of the contamination—over 1.5 million cubic yards—untouched. Decades of nuclear and aerospace activities, accidents, spills and releases have left SSFL highly contaminated with dangerous radionuclides including cesium-137, strontium-90, plutonium- 239/240 and tritium and numerous hazardous chemicals. These toxic materials can cause cancers and leukemias, developmental disorders, genetic disorders, neurological disorders, immune system disorders, and more. Leaving virtually all of this material behind is not only unlawful, but a blatant disregard for the health wellbeing of the surrounding community.

Violation of RCRA

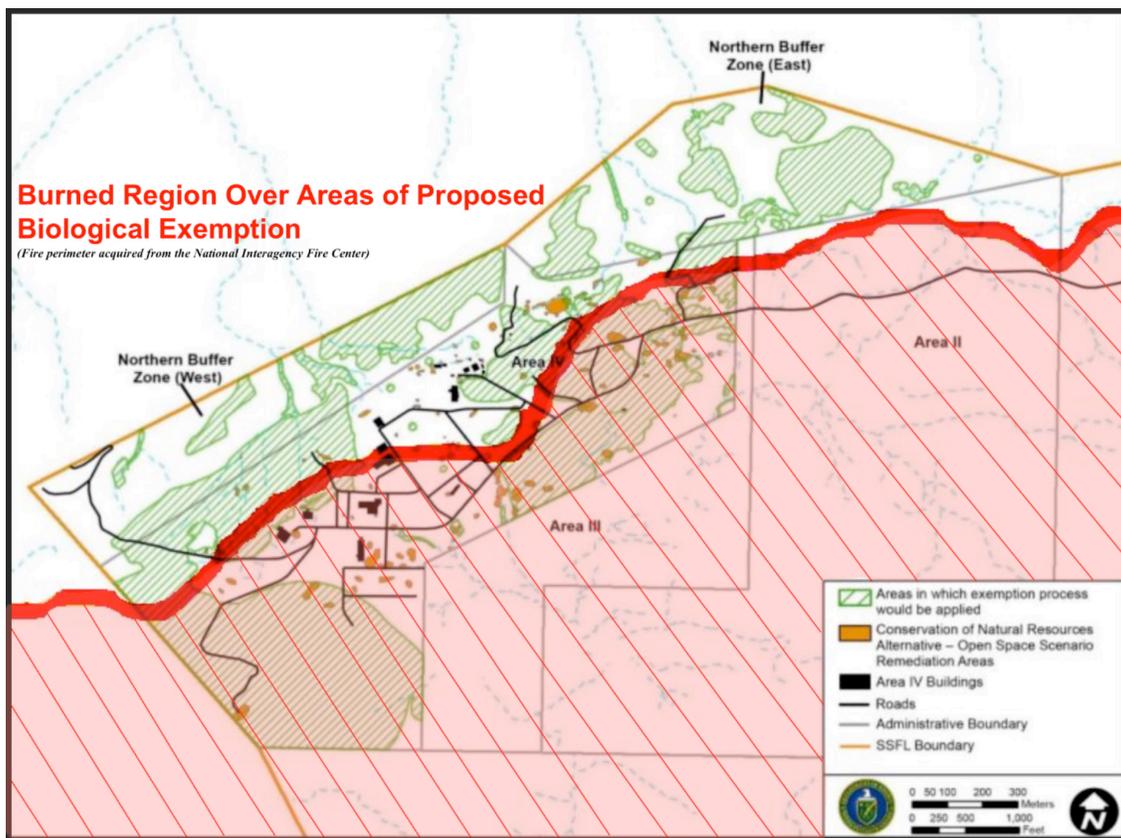
DOE has no authority/discretion to decide how much of the pollution it caused at SSFL will be cleaned up. Under RCRA, that authority rests with the regulator, DTSC. The Trump Administration is in essence thumbing its nose at the law, its agreement with California, and California's regulatory authority over it.

Biological Opinion Not Available in Draft, Inadequate in Final

The Biological Opinion was not included in the draft EIS, and therefore the public was unable to comment on it, in violation of NEPA. Further, the Biological Opinion that does exist is in violation of the AOC. DOE breached the AOC by failing to request consultation with the U.S. Fish & Wildlife Service for cleaning up Area IV and the Northern Buffer Zone to the standards outlined in the AOC. Instead, DOE requested consultation for an action that would violate the AOC (leaving 98% of the contamination). Furthermore, the Biological Opinion makes no jeopardy determination, which is required for any AOC exception to be considered.

The FEIS Is Silent About the Woolsey Fire

The graphic below overlays the fire path on the areas asserted in the FEIS for possible biological exceptions to cleanup. (The red hatched area represents the burned area, taken from DTSC's interim summary report about the fire.) Although discrete numbers are unavailable, it seems that nearly half of the area asserted for biological exceptions in the FEIS was destroyed in the fire. Therefore, there is no biological exception to cleanup even possible, a matter ignored in the FEIS.



In early November 2018, prior to the release of the FEIS, the devastating Woolsey fire ravaged the area surrounding SSFL, including much of the toxic site. Area IV, despite early claims made by DOE, was significantly affected. Further, much of the areas in which the biological exemption process would be applied as proposed by DOE burned. Therefore, the argument that these exemptions rest on is rendered moot by the occurrence of the Woolsey Fire. There no longer exists endangered species or critical habitat to protect in such areas, and no basis whatsoever therefore for exemption from cleanup. (As indicated above, even absent the fire there is no biological basis for an AOC exception, as there is no Biological Opinion asserting that a particular cleanup of any particular area would violate specified sections of ESA.)

Despite this, the FEIS fails to mention or provide any analysis on the effects of the Woolsey Fire. The section titled “Existing Conditions and Habitat Characteristics in the Action Area” is meant to describe the current state of the biological features of Area IV. However, it fails to do so. According to DTSC’s own interim report on the fire, the portion of the fire which ravaged Area IV is within the region listed as the primary habitat for Braunton’s milkvetch. The intensity of the Woolsey Fire was significant, and is likely to have caused great damage to the vegetation in that region, including the Braunton’s milkvetch. Regardless of the extent of the damage, it should at the very least have been discussed when determining the “baseline conditions” of the site.

Furthermore, the fire demonstrates the risk to offsite populations of not cleaning up SSFL and provides a mechanism for offsite risk not analyzed in the FEIS--fire causing release of contaminants and their transmission to the population in the area around SSFL.

Conclusion

The FEIS is essentially a fundamentally new EIS, shielded from public scrutiny, opportunity for meaningful comment, and agency analysis of and response to those comments required by NEPA. Essentially, DOE issued one DEIS for comment and then published a fundamentally different FEIS, without following the law requiring recirculation.

The cleanup option chosen had not even been considered in the DEIS. It completely violates the AOC--instead of cleaning up almost all contamination, it would fail to clean up almost all contamination. (This is true for both the soil and the groundwater contamination in the actions--or inactions--proposed to be adopted.)

DOE signed a legally binding cleanup agreement with California, which the Trump Administration is now proposing to trash. The AOC does not allow this. NEPA does not allow this. RCRA does not allow this. And protection of public health and the environment do not allow this.

DOE should reverse course, withdraw the FEIS, issue no Record of Decision based on it, and redo the FEIS, one fully compliant with the cleanup agreement it signed.

Sincerley,

A handwritten signature in black ink, appearing to read "Denise Duffield". The signature is fluid and cursive, with the first name "Denise" being larger and more prominent than the last name "Duffield".

Denise Duffield
Associate Director

Stephanie Jennings, NEPA Document Manager SSFL Area IV, U.S. Dept. of Energy
California Governor Gavin Newsom
U.S. Senator Dianne Feinstein
U.S. Senator Kamala Harris
Congressmember Julia Brownley
Congressmember Katie Hill
Congressmember Brad Sherman
California Senator Henry Stern
California Assemblymember Jesse Gabriel
California Assemblymember Christy Smith
Ventura County Supervisor Linda Parks
Ventura County Supervisor Steve Bennett
Los Angeles County Supervisor Sheila Kuehl
Los Angeles County Supervisor Kathy Barger
Los Angeles City Councilmember Greig Smith
CalEPA Secretary Jared Blumenfeld
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27 January 2019

John Jones
Federal Project Director
Stephanie Jennings
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DOE ETEC Closure Project
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by email: john.jones@emcbc.doe.gov, stephanie.jennings@emcbc.doe.gov

Re: Final Environmental Impact Statement for Remediation of Area IV
and the Northern Buffer Zone of the Santa Susana Field Laboratory

Dear Mr. Jones and Ms. Jennings:

The Department of Energy (DOE) has recently issued its Final Environmental Impact Statement (FEIS) for remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory (SSFL). The FEIS violates the National Environmental Policy Act (NEPA), 42 U.S.C. §4321, *et seq*; the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §6901 *et seq*; the Administrative Order on Consent (AOC) executed with the California Department of Toxic Substances Control (DTSC) in 2010; and other legal requirements, as well as commitments made by DOE. There are both unlawful fouls of process and fouls of substance that will harm Californians and foreclose meaningful cleanup for future generations. The decision by the Trump Administration DOE to move forward on the basis of this FEIS sets the stage for abandoning huge amounts of radioactively and chemically hazardous material and consigns this portion of Southern California, set in the midst of millions, to never be cleaned up. We urge DOE to reverse course, and to not approve a Record of Decision (ROD) based on this fundamentally flawed document.

NEPA Requirements

The Trump Administration DOE should be well aware that the fundamental requirement of the National Environmental Policy Act (NEPA) 42 U.S.C. § 4321, et seq., is to require the responsible federal agency to subject every major federal action to a “hard look” at the *environmental impact comparison of reasonable alternatives*.¹ The Council on Environmental Quality’s (CEQ) regulations governing implementation of NEPA direct that Federal agencies “shall to the fullest extent possible...(b)...emphasize *real environmental issues and alternatives*...(e) Use the NEPA process to identify and assess the *reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions* upon the quality of the human environment.”² In setting out the fundamental purpose of an EIS, CEQ’s regulations also state, “It [the EIS] shall provide full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of the *reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment*. Agencies shall focus on *significant environmental issues and alternatives*...”³ Satisfying these requirements is a non-discretionary duty of the DOE’s NEPA process and obligations under the law.

Bait-and-Switch – Fully Half of the FEIS is Entirely New

At the heart of NEPA, described above, is the requirement of the agency’s hard look and the public’s chance for review of that analysis. This means an opportunity for the public to conduct a thorough review of the major federal action at issue, comment on the matters at hand, and then followed by a concomitant response to those comments by the agency. Here, however, DOE has engaged in a kind of bait-and-switch behavior, thumbing its nose at those fundamental NEPA requirements. In short, DOE published for public comment one Draft EIS (DEIS), and then issued a FEIS that is almost completely different, without meaningful explanation to the comments filed on the initial draft.

More than half—the equivalent of more than a thousand full pages—of the FEIS (not counting the response to comments volumes) is completely new:

- Approximately 60% of the 124-page summary volume is new.
- Nearly half of the 857-page Volume I, Books 1 and 2, i.e., Chapters 1-14, is comprised of material that is new to the public and therefore was unavailable for review.
- Half of Appendix G, the deeply flawed Risk Assessment, comprising 157 pages, is entirely new.
- Appendix J, the Biological Opinion (discussed in more detail below) of 107 pages, did not exist in the DEIS and therefore has not been subject to any scrutiny or comment.

¹ See NEPA, 42 U.S.C. §4321, et seq.; see also 40 C.F.R. §1502.14, 10 C.F.R. 51.85, and § 51.10-125 and App A.

² 40 C.F.R. §1500.2 (emphasis added).

³ 40 C.F.R. §1502.1 (emphasis added).

³ 40 C.F.R. §1502.1 (emphasis added).

- The Biological Assessment of 201 pages, prepared by DOE, and the misrepresentations therein relied upon for the Biological Opinion, is also now released for the first time.
- At least half of the 131-page Appendix K is new material.
- Appendix L didn't exist in the DEIS.

The changes and new material go to the core of the EIS. In essence, DOE published one DEIS for comment and has now adopted an FEIS that is fundamentally different, on the central matters the EIS addressed, without recirculating it for public review and comment.

The FEIS's Proposed Action – Leaving 98% of the Contaminated Soil Not Cleaned Up – Wasn't Even Proposed or Considered in the DEIS

Most egregious, the action now proposed by DOE in the FEIS, its preferred alternative—cleaning up to what it calls an “open space” standard, and thus leaving 98% of the contaminated soil not cleaned up—was not even considered, proposed, or analyzed in the DEIS. By contrast, the legally binding AOC that DOE signed requires, with very narrow exemptions, cleanup to background levels of contamination. This new, extraordinarily weak “open space” proposed standard, based on risk to someone on the property rarely for hiking, would leave the half million people who live and work nearby at perpetual risk. The public has had no opportunity whatsoever to review, analyze, or comment upon the very proposed action DOE now intends to adopt. To depart the matter at this juncture without reissuance would allow DOE to move forward with no future obligation to consider and respond to comments.

DOE estimates in the FEIS that there are 1,616,000 cubic yards of soil in SSFL Area IV and the Northern Buffer Zone with concentrations of contaminants exceeding the AOC cleanup levels (Lookup Table values) [see Table S-2, “Preliminary Estimated Soil Volumes for Remedial Actions per 2010 AOC Considerations,” FEIS p. S-21]. DOE now proposes, however, to clean up only 38,200 cubic yards (FEIS p. S-42). This represents a mere 2%, leaving 98% of the soil with contamination above the AOC LUT values not cleaned up. This extraordinary breach of DOE commitments and affront to the public trust was not disclosed in any way in the DEIS and there has been no opportunity for meaningful comment on that precise proposal, wrong as it is.

There Have Been No Significant New Developments that Justify the New Proposed Action and the Essentially Completely New FEIS

DOE attempts to justify choosing a preferred alternative – that was not even considered in the DEIS – on the basis of purportedly changed circumstances; that is, a supposed change in the anticipated end-use of the land. DOE states in the FEIS (at p. 1-27) that the selection of a proposed action not even considered in the DEIS was because of the changed land use circumstances due to Boeing entering into a conservation easement for the land to be open space.

However, open space was precisely what the DEIS said would be the end use of the land. In section 1.4, “Future of Area IV and the Northern Buffer Zone,” p. 1-8 of Chapter 1 of the DEIS, it was stated: “Boeing is the landowner of Area IV and the NBZ; therefore, Boeing will decide the potential future land use of these areas. Boeing has stated that its intent is to maintain its portion of SSFL (including Area IV and the NBZ) as undeveloped open space. Further,

Boeing states that it would restrict future land use to prevent development for any commercial, industrial, agricultural, or residential purpose. Boeing also states that it would restrict future land use to ensure the property would be protected as undeveloped open space, regardless of zoning changes beyond its control (Boeing 2016b).” Boeing’s intentions have not changed since then; thus, there are no changed circumstance justifying choosing an alternative not included in the DEIS.

However, assuming *arguendo* that DOE’s assertion of dramatically changed circumstances were correct, NEPA would require the issuance of a *draft supplemental EIS*, with all the requirements of public notice and comment and agency response to those comments. NEPA does not allow an agency to bypass those requirements and issue what amounts to an almost entirely different EIS as a final, with alternatives chosen that weren’t examined in the DEIS, based on a claim of changed circumstances.

The Biological Opinion and Biological Assessment Are Entirely New; They—And Their Misuse in the FEIS—Have Thus Been Shielded from Public Review and Comment; And the Biological Opinion Triggers No Permissible Cleanup Exception Under the AOC

We—and many other commenters on the DEIS—noted the failure to include a Biological Opinion in it. The County of Los Angeles, for example, formally demanded that “the EIS should be recirculated for additional public review and comments after the USFWS Biological Opinion is submitted.” In response, DOE simply said it did not intend to do so; no explanation was given for this failure. [Volume 3, Book 1, p. 3-211.]

Central to the FEIS is DOE’s claim of exempting vast amounts of contaminated soil from cleanup on the basis of an asserted AOC biological exception. This claim is based purportedly on the Biological Opinion, which in turn is based on DOE’s Biological Assessment, neither of which were made available for public review and comment in the DEIS process.

However, the Biological Opinion does not in fact trigger any of the AOC possible exceptions. The AOC biological exception language is as follows (there is identical language for the radioactive contamination):

The end state of the site (the whole of Area IV and the Northern Buffer Zone) after cleanup will be background (i.e., at the completion of the cleanup, no contaminants will remain in the soil above local background levels), subject to any special considerations specified below.

· Clean up chemical contaminants to local background concentrations.
Possible exceptions (where unavoidable by other means):

· The framework acknowledges that, where appropriate, DOE will engage in an Endangered Species Act (ESA) Section 7(a)(2) consultation with the U.S. Fish and Wildlife Service (FWS) over any species or critical habitat that may be affected by a federal action proposed to be undertaken herein on a portion of the site. **Impacts**

to species or habitat protected under the Endangered Species Act may be considered as possible exceptions from the cleanup standard specified herein only to extent that the federal Fish and Wildlife Service, in response to a request by DOE for consultation, issues a Biological Opinion with a determination that implementation of the cleanup action would violate Section 7(a)(2) or Section 9 of the ESA, and no reasonable and prudent measures or reasonable and prudent alternatives exist that would allow for the use of the specified cleanup standard in that portion of the site.

(emphasis added)

DOE simply failed to request ESA§7(a)(2) consultation with the US Fish & Wildlife Service for cleaning up Area IV and the NBZ to background, the standard required in the AOC. Instead, it requested consultation for an action that would violate the AOC—failing to clean up most of the contamination.

In any case, the Biological Opinion issued makes no finding that the cleanup action would violate Section 7(a)(2) or Section 9 of ESA. Thus, no exception to the AOC requirement to clean up the full site to background is allowed. Nonetheless, DOE now intends to issue a Record of Decision, based on the FEIS, to leave 98% of the contaminated soil not cleaned up, despite the absence of an exception allowed under the AOC.

Failure to Examine the Implications of the Recent Fire

On November 8, 2018, weeks before the FEIS was released, a devastating fire, called the Woolsey Fire, broke out at SSFL. Southern California Edison reported a failure at its electric substation on Area IV (built in part to handle electricity from the SRE reactor that eventually suffered a partial meltdown). DOE estimates that as a result of the Woolsey Fire 80% of the entire SSFL burned. (Melissa Simon, quoting John Jones, “Calls Continue for Independent Study of Fire Impact,” *Thousand Oaks Acorn*, January 10, 2019.) After initially denying that any of DOE’s Area IV had been affected by the fire (DOE statement November 13, 2018), DOE subsequently had to admit that that assertion was incorrect and parts of Area IV did burn, including “Milk Vetch [sic] Hill” (DOE statement November 19, 2018).

Braunton’s milkvetch is the one endangered plant in Area IV and the NBZ, and the area which burned is the primary area identified by DOE for a possible AOC biological exception. Since it has now burned, any argument for an exception to cleaning up the contamination in that area because of the presence of the plant has now gone up in smoke. The FEIS does not address the implications arising from the fire, which, as indicated above, occurred before issuance of the document and thus could have been evaluated.

Furthermore, the fire makes clear the fallacy of the claims in the FEIS that there is essentially no public health risk from leaving virtually all the chemical and radioactive contamination in Area IV and the NBZ in place, as stated in the FEIS. DOE now argues that the site would be restricted to people hiking through it occasionally, regardless of what future

generations might do or intend with the contaminated land, and that risks of contamination migrating offsite to people who live and work in the area can be for all intents and purposes ignored. There are many reasons why this is inadequate as a cleanup decision, but among them is the now profoundly obvious potential for future fires causing releases of radioactive and toxic chemical contamination from SSFL if not cleaned up. That possibility is also not examined.

FEIS Proposed Action Would Also Fail to Clean Up Most Contaminated Groundwater

DOE's FEIS identifies as its proposed action treating groundwater to merely reduce somewhat the level of contaminants, leaving contamination at levels far above permissible levels. That remaining contamination in the groundwater would be simply left to hopefully (or wishfully) attenuate naturally over long periods of time.

Failure to clean up the contaminated groundwater is not an environmentally acceptable solution for California, is inconsistent with the 2007 Consent Order, and represents a further abdication of DOE's obligations to remedy the environmental pollution its poorly controlled operations caused.

The Entire Suite of Proposed Actions in the FEIS Violate the AOC

The AOC requires clean up of all soil (defined as including structures, debris and anthropogenic materials) to background, with extremely limited exceptions which, as discussed above regarding biological features, do not apply. The FEIS no longer even makes a pretense of complying with the AOC. The Trump Administration DOE admits in the FEIS that the proposed action would breach the AOC. It says merely it will "discuss" the matter with DTSC.

This is unacceptable. The AOC is a legally binding agreement. DOE does not have the authority to ignore it.⁴

DOE Mischaracterizes Both the AOC and the 2007 Federal District Court Decision

In the FEIS, DOE tries to defend its failure to comply with the AOC requirement of cleaning up Area IV and the NBZ by 2017 on its obligations under the decision by the US District Court for the Northern District of California. That decision by Judge Samuel Conti in *Natural Resources Defense Council, Inc., Committee to Bridge the Gap, and City of Los Angeles v. Department of Energy, et al.*, Case No. C-04-04448 SC, was issued May 7, 2007 (WL 1302498). There is no excuse for DOE to have dragged its feet for nearly a dozen years from the time of that order before issuing a FEIS; its own negligent conduct cannot excuse its failure to

⁴ There are numerous breaches of the AOC, besides the purported choice by DOE in the FEIS of an "open space" standard that would leave the great bulk of the contamination not cleaned up. For example, the AOC requires a "not to exceed" cleanup approach, whereby any soil that exceeds the cleanup level is remediated, with averaging high and low concentrations forbidden. The FEIS instead puts forward averaging. This violates both the AOC and EPA guidance, which says to not average if exposures might not be random. See US EPA, *Radiation Risk Assessment At CERCLA Sites: Q & A*, Directive 9200.4-40; EPA 540-R-012-13, May 2014.]

timely follow either the Conti Order or the AOC.

DOE also implies that its obligations under the AOC are “suspended” because of a section of the AOC that says that if there were inconsistencies between the AOC and the Conti Order, DOE would work with the parties to request any relief needed. This had to do with possible need to remove DOE buildings in order to take soil measurements beneath them for the FEIS. The Conti case parties discussed the issue and concluded no inconsistency existed and no relief necessary. And, in any case, DOE decided not to remove the buildings prior to issuing the FEIS. It is troubling, therefore, that DOE would attempt to misuse the Conti adverse ruling as an excuse for failing to comply with the AOC it, supposedly in good faith, entered into three years later.

The FEIS Violates NEPA, Because it is Entirely Based on Justifying Actions Which it Does Not Have the Discretion Under RCRA or the AOC to Take

NEPA, as we pointed out in comments on the DEIS, is triggered for major *discretionary* federal actions that can significantly affect the human environment. It is to provide environmental information and analyses useful to the federal decision-maker in making federal decisions. The original DOE scoping description⁵ for the DEIS was consistent with NEPA in this regard; it said that DOE didn’t have discretion to do anything inconsistent with the AOC requirement of cleanup to background, but the EIS would examine *ways to carry out* the AOC background requirement, which was within DOE’s discretion and NEPA purview:

DOE has signed two agreements with the California Department of Toxic Substances Control: the 2007 Consent Order of Corrective Action and 2010 Administrative Order on Consent for SSFL Area IV. Those agreements stipulate cleanup standards – how clean the site must be before cleanup can be declared completed. DOE is committed to full compliance with both the 2007 and the 2010 orders. However, neither Order dictates how DOE should accomplish the cleanup standards. For that reason, the EIS will explore if there are reasonable alternatives for accomplishing the cleanup levels that are stipulated in the Orders.

DOE agrees that the AOC committed DOE to clean up to background (as described in the “purpose and need” above), but the AOC did not provide adequate or detailed description of the best way to accomplish cleanup to background. DOE believes there may be more than one way to accomplish cleanup to background as described in the Administrative Order on Consent.

DOE subsequently broke those promises, and now we have a FEIS that is entirely based on actions DOE is legally barred by the AOC from undertaking.

⁵ DOE, “Public Participation in the Development of Alternatives to be Considered in the Santa Susana Field Laboratory Area IV Environmental Impact Statement,” May 2012

Additionally, even were there no AOC, under RCRA, it is the regulator—not the polluter—that decides how much contamination the polluter is required to clean up. DOE asserts that the great majority of the contamination is chemical. That is regulated by RCRA. DOE is subject to RCRA. RCRA in California is carried out by DTSC, pursuant to a delegation of authority by USEPA. DOE must follow DTSC directives, which are based on RCRA and the state’s hazardous materials laws. Quite simply, DOE has no authority to decide how much of its chemical contamination it will either clean up or abandon in place. That is up to the regulators. The entire FEIS thus is an attempt to illegally misappropriate authority for cleanup decisions from the regulators.

Conclusion

The Trump Administration DOE has issued what amounts to an entirely new and unreviewed EIS in the guise of a FEIS. The very action it proposes to now ratify with a ROD—cleanup to a purported “open space” standard that would leave 98% of the contaminated soil not cleaned up—was not even considered in the DEIS. Vast amounts of new material, absolutely critical to the issues at hand, have been added. These actions violate the fundamental purposes of NEPA—meaningful public participation in the review of environmental analysis.

Furthermore, DOE has walked away from compliance with the legally binding AOC it executed with California, which requires cleanup of all contamination that can be detected, with very limited exceptions. The DOE claims of exceptions that are essentially as large as the contamination itself are in direct contradiction to the exceptions allowed. Moreover, the cleanup standard DOE now puts forward explicitly violates the 2010 agreement.

Fundamentally, the FEIS is a usurpation of the authority of the California regulator, under both RCRA and the AOC. The polluter does not get to choose how much of its pollution it must remedy. As such, DOE has breached the public trust. DOE, and its predecessor the Atomic Energy Commission, conducted extremely dangerous operations at SSFL in an environmentally irresponsible fashion. This resulted in widespread contamination, which places at risk the people who live nearby. Our organizations had to challenge DOE’s actions in federal court in order to halt the then Bush Administration DOE from walking away from the contamination and leaving the mess in place. The Court ruled for the City of Los Angeles, NRDC and CBG, and required a serious, probing environmental review. Out of that process emerged the AOC, ultimately agreed to by the then Obama DOE and California. In 2010 DOE promised to clean up all the contamination, by 2017, in a legally binding agreement. Having failed to even commence the cleanup by that date, DOE has now issued a FEIS that breaches its solemn promises and the public trust.

We object, and urge DOE to withdraw the FEIS, issue no Record of Decision (ROD) based on it, and issue a new FEIS that is compliant with the AOC and with NEPA. Should it decline to do so, it should not issue any ROD based on the FEIS, but instead recirculate the FEIS for public comment, as it is in essence an entirely new EIS, the substance of which the public has never been able to review and comment upon in draft as required by NEPA. However, what

DOE should fundamentally do is stop evading its commitments to a full cleanup of the contamination it created and to cease violating the AOC it signed.

Sincerely,



Geoffrey H. Fettus
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Natural Resources Defense Council
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Daniel Hirsch
President
Committee to Bridge the Gap
PO Box 4
Ben Lomond, CA 95005
(831) 336-8003
dhirsch1@cruzio.com

cc: Governor Gavin Newsom
Senators Dianne Feinstein and Kamala Harris
Congressmembers Julia Brownley, Brad Sherman, and Supervisor Katie Hill
Cal. Senator Henry Stern
Assemblymembers Jesse Gabriel and Christy Smith
Ventura County Supervisors Linda Parks and Steve Bennett,
Los Angeles County Supervisors Sheila Kuehl and Kathy Barger
Los Angeles City Attorney Michael Feuer
Los Angeles City Councilmember Greig Smith
CalEPA Secretary Jared Blumenfeld
Special Assistant Attorney General for the Environment Arsenio Mataka



January 27, 2019

Mr. John Jones
Federal Project Director
DOE SSFL Closure Project
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

by email: john.jones@emcbc.doe.gov, stephanie.jennings@emcbc.doe.gov

Re: Final Environmental Impact Statement for Remediation of Area IV
and the Northern Buffer Zone of the Santa Susana Field Laboratory

Dear Mr. Jones:

We cannot begin to tell you how outraged we are by the Trump Administration's Department of Energy (DOE) attempting to break its solemn and legally binding commitments to clean up all the contamination it created over decades of environmentally irresponsible practices at the Santa Susana Field Laboratory (SSFL), right next to where we live. And we must be candid about our anger at your personal breach of your word, publicly given.

On February 5, 2014 at the SSFL Work Group, in front of the community, you stated:

"And at the end of the day, our perspective is that, it's what Dan mentioned. It was Ines Triay who said, I'm tired of fighting. Let's clean up to background, let's get this site closed. And that is what led to where we're at."

"The bottom line is, yes things happened, yes they were unfortunate, and we've made a commitment to clean it up. That's what all this is for. To meet the Administrative Order on Consent, to meet the EIS, and at the end of the day, because its the right thing to do. The right thing to how we get to a full and complete cleanup."

"Is DOE committed to the AOC? Yes."

You were videotaped making these public pledges. Your taped statement can be found at <http://bit.ly/DOE-2-5-14>.

Despite DOE having signed an Administrative Order on Consent (AOC) with the California Department of Toxic Substances Control (DTSC) which binds DOE to cleaning up all its contamination to background, during the holidays a few weeks ago DOE issued a Final Environmental Impact Statement (FEIS) for the cleanup of its portions of SSFL that would abrogate every commitment DOE—and you personally—made. The FEIS selects as its preferred “cleanup” decision to NOT clean up 98% of the soil it contaminated. The AOC requires cleaning up, with extremely limited exceptions, all of the contamination. The FEIS says to do just the opposite, leave almost all of it not cleaned up. We cannot begin to tell you how unethical that is.

The new proposal to only clean up the site to a supposed “open space” standard, so that thousands of times higher concentrations of contaminants should be allowed to remain because people would supposedly only be on the property a few hours at a time for hiking, is indefensible. It isn’t “open space” where we live and work nearby. If the site isn’t cleaned up, contamination will continue to migrate to where people like us live, 24/7. We are especially at risk when SSFL burns in wildfires, as it did in November during the Woolsey Fire that started and burned most of SSFL. Especially given the challenges of climate change, SSFL is likely to burn again and if it is not fully cleaned up, our community will once face increased risk of exposure to SSFL’s deadly contamination.

DOE’s proposed action is also grossly illegal. The alternative chosen in the FEIS, cleaning up to a supposed “open space” standard, was not even considered, identified, analyzed, or discussed in the draft EIS that was made available for public review and formal written comment and oral testimony at the EIS hearings. In fact, nearly 60% of the entire FEIS is new material that the public has never seen before and never had a chance to comment on in the DEIS process. This amounts to more than a thousand pages of entirely new material, much of it fundamentally different, in violation of law. DOE knows that what it is doing is shameful and indefensible, and thus is not even subjecting its outrageous new proposed action and new FEIS material to the public review, comment, and agency response required under the National Environmental Policy Act.

Furthermore, DOE in the FEIS is usurping the authority of its regulator. DOE, as the party responsible for causing the pollution by its irresponsible environmental practices, does not under the law get to decide how much of the damage it created it must remedy. DOE is merely a regulated entity, a polluter, and the decisions as to what it must do to undo the damage it created are not in its authority in the first place. It is bound by the AOC, and bound by the directions of its regulator.

DOE polluted our community through decades of extraordinary failures of basic environmental protection. It promised to clean up all the radioactive and toxic mess it created. A few weeks ago it announced it intends to break its word and its legal obligations. We object more strenuously than we can say.

DOE should withdraw the FEIS; it should issue no Record of Decision based upon it. It should issue a new FEIS 100% compliant with the AOC. And if it refuses to do these things, it should at minimum recirculate for formal public review and comment the FEIS, which is not in fact an

FEIS at all, but an entirely new EIS, which is not permitted under law to escape formal public review, comment, and agency formal response to comments. However, what really must be done is your agency, and you as its representative, must reverse course and live up to your word. Violating the cleanup commitments places all who live in the region around the contaminated site at perpetual risk.

Sincerely,

Marie Mason and Dawn Kowalski
Co-founders
Rocketdyne Cleanup Coalition

cc:

Stephanie Jennings, NEPA Document Manager SSFL Area IV, U.S. Dept. of Energy
California Governor Gavin Newsom
U.S. Senator Dianne Feinstein
U.S. Senator Kamala Harris
Congressmember Julia Brownley
Congressmember Katie Hill
Congressmember Brad Sherman
California Senator Henry Stern
California Assemblymember Jesse Gabriel
California Assemblymember Christy Smith
Ventura County Supervisor Linda Parks
Ventura County Supervisor Steve Bennett
Los Angeles County Supervisor Sheila Kuehl
Los Angeles County Supervisor Kathy Barger
Los Angeles City Councilmember Greig Smith
CalEPA Secretary Jared Blumenfeld
Arsenio Mataka, Special Assistant Attorney General for the Environment

Objections of
the Southern California Federation of Scientists
to the Department of Energy's
Final Environmental Impact Statement
for Remediation of Area IV and the Northern Buffer Zone
of the Santa Susana Field Laboratory
January 27, 2019

The Southern California Federation of Scientists (SCFS) strongly objects to the Trump Administration's proposed breach of its legally binding cleanup agreement with the State of California regarding the Santa Susana Field Laboratory (SSFL). SSFL is extensively contaminated with radioactivity and toxic chemicals due to decades of accidents, including a partial nuclear meltdown, and other lax environmental controls.

In 2010, the Department of Energy (DOE) executed with the California Department of Toxic Substances Control (DTSC) a cleanup agreement, known as the Administrative Order on Consent (AOC). The AOC mandated that all soil (defined as also including all structures, debris, and anthropogenic materials) be cleaned up to background, with extremely narrow exceptions.

DOE has now issued a Final Environmental Impact Statement (FEIS) that completely is in violation of the AOC—and of environmental law as well, including the National Environmental Policy Act (NEPA) and the Resource Conservation and Recovery Act (RCRA). Rather than clean up SSFL to background, DOE now proposes to walk away from ~98% of the contaminated soil. [Rather than clean up contaminated groundwater to legal limits for pollution, DOE also proposes to do very minimal treatment, leaving behind at levels in excess of pollution limits virtually the entire amount of groundwater that is now polluted.]

The soil cleanup standard put forward – a purported “open space” standard that is by far the least protective standard that exists and which would place at risk the half million people who live within fifty miles of the site – was not even identified or analyzed in the Draft EIS (DEIS). The public thus could not review or comment on it, and DOE thus did not respond to any comments that would have been submitted had there been a formal comment period. This is a fundamental change.

However, it is by no means the only significant change to the DEIS. Indeed, nearly 60% of the FEIS is new material that the public has never had a chance to review or comment upon, much of it fundamental.

The FEIS (not counting the three response to comments volumes, and title pages, blank pages, tables of contents) in ~1961 pages long.

- Of that, 811 pages (41%) are 100% new material.

- 180 pages (9%) have 75% new material.
- 212 pages (10%) have 50% new material.
- 298 pages (15%) have 25% of the page changed.
- only 468 pages (23%) have no changes.

All told, about 57% of the material in the FEIS, the equivalent of more than 1100 full pages of material, is new, much of it fundamentally important. For example, the risk assessment is largely new; the assessment for the option chosen, open space, is entirely new. It is completely flawed, deeply erroneous, and extraordinarily self-serving, arguing that the best thing for the environment and public health is for DOE to be excused from cleaning up any of the radioactive and toxic chemical contamination it has created. Yet that extremely important and flawed material has been completely shielded from independent scientific review and comment by hiding it until the FEIS.

Another example: at the core of the FEIS is a Biological Opinion, not made available for public comment during the DEIS process. DOE in the FEIS misrepresents it and the AOC biological exception; that misrepresentation completely undermines DOE's claims for excepting vast amounts of its contamination from cleanup. Yet all of this has been shielded from the notice-and-comment opportunity required under NEPA.

The actual AOC exception is only triggered if DOE initiates a consultation with US Fish & Wildlife over the *cleanup to background*, and if USF&W issues a Biological Opinion with a determination *that cleaning up a particular spot would result in a violation of violate Section 7(a)(2) or Section 9 of the ESA, and no reasonable and prudent measures or reasonable and prudent alternatives exist that would allow for the use of the specified cleanup standard in that portion of the site*. But, despite DOE's misrepresentations in the FEIS, there has been no such consultation over the cleanup to background, and no Biological Opinion with a determination that to do so would violate ESA §§7(a)(2) or 9. Indeed, the Biological Opinion makes no jeopardy determination whatsoever. Almost the entire basis for DOE's claim to leave 98% of the contamination not cleaned up is based on these misrepresentations—but they have been shielded from the formal notice-and-comment opportunities required by NEPA.

Not only is much of the FEIS completely and fundamentally new, even so, DOE fails to make available critical documents related to the new material. For example, references with active links are provided for most volumes, but access to no references whatsoever is provided for the Biological Opinion (Appendix J) and the Biological Opinion. [See screen shot, below, of the DOE SSFL FEIS website.] Requests to make the references available have been ignored.



 **Final SSFL Area IV EIS Document**

Click on a hyperlinked *Final Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory* document to open. The documents are in PDF format. This file format requires the Adobe PDF Reader to open and view the PDF documents. [The Adobe PDF Reader can be downloaded for free.](#)

Final SSFL Area IV EIS	Final SSFL Area IV EIS reference documents	
Summary	References for the Summary	References for Appendix F
Volume 1 (Chapters 1 - 14)	References for Chapters 1 through 8	References for Appendix G
Volume 2 (Appendices A - M)	References for Appendix B	References for Appendix H
Volume 3 (Comment Response Document)	References for Appendix C	References for Appendix I
	References for Appendix D	References for Appendix K
	References for Appendix E	References for Comment Response Document

 [Page Top](#)

We also must note that the FEIS fails, over and over again, to substantively and adequately respond to the comments received on the DEIS. Essentially, DOE is hell-bent to get out of its cleanup obligations and will allow no facts, no law, and no moral obligations to get in the way.

DOE polluted SSFL by cutting corners on safety. This placed the neighboring population at substantial risk. The 2010 cleanup commitments are essential to partially remedying these environmental and public health risks DOE has caused. The Trump Administration’s proposed breach of these obligations and laws cannot be allowed to stand.

Quantified Changes to FEIS

	Total Number of Pages	100% new content	75% new content	50% new content	25% new content	no new content
Summary	124	31	31	24	24	14
Chapter 1	31	9	4	4	7	7
Chapter 2	150	56	27	24	28	15
Chapter 3	195	34	20	31	37	73
Chapter 4	246	63	38	54	66	25
Chapter 5	44	10	16	10	8	0
Chapter 6	19	0	1	3	5	10
Chapter 7	25	1	2	5	6	11
Chapter 8	27	0	2	5	16	4
Chapter 9	35	5	1	1	2	26
Chapter 10	37	1	4	9	16	7
Chapter 11 Glossary	12	0	0	0	1	11
Chapter 12	4	0	0	0	0	4
Chapter 13- preparers	11	0	0	0	0	11
Chapter 14 Distribution List	11	0	0	0	0	11
Appendix A	16	3	0	0	0	13
Appendix B	51	0	1	5	20	25
Appendix C	38	0	2	0	10	26
Appendix D	85	19	19	19	17	11
Appendix E	21	1	1	4	7	8

Quantified Changes to FEIS

	Total Number of Pages	100% new content	75% new content	50% new content	25% new content	no new content
Appendix F	29	2	5	4	9	9
Appendix G	157	157	0	0	0	0
Appendix H	81	35	5	9	12	20
Appendix I	48	4	1	1	7	35
Appendix J	110	110	0	0	0	0
Appendix K	131	65	0	0	0	66
Appendix L	18	0	0	0	0	18
Biological Assessment	205	205	0	0	0	0
Total	1961	811	180	212	298	460
Percentage of total	1.00	0.41	0.09	0.11	0.15	0.23
Percent of pages with no changes	0.23					
Percent of pages with changes	0.77					



ERIC GARCETTI
MAYOR

April 7, 2017

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

Dear Ms. Jennings:

Thank you for the opportunity to comment on the U.S. Department of Energy's (DOE) Draft Environmental Impact Statement (DEIS) for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory (SSFL), which DOE issued in January 2017.

Attached please find a Resolution passed by the Los Angeles City Council on March 3, 2017 that speaks to the City's concerns regarding three aspects of the DEIS, specifically:

1. The DEIS should be based on remediation of the Department of Energy's SSFL site to the levels stipulated in the Administrative Order on Consent (AOC) with the Department of Toxic Substances Control (DTSC) and not include consideration of alternatives that would violate this Order.
2. The inclusion of ineligible exemptions in the Draft EIS dramatically increases the risk of cancers.
3. The alternate transportation plans have not been analyzed and should include direct conveyance of contaminated materials from the site to rail and other options including the use of fire roads and routes with less impact to residents and reduced traffic impact.

Ms. Jennings

April 7, 2017

Page 2

A cleanup agreement was reached in 2010 and I urge swift action to address these concerns and ensure the most protective remediation as stipulated by the AOC. Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "E. Garcetti", with a horizontal line extending to the right.

ERIC GARCETTI

Mayor

cc: The Honorable Rick Perry, Secretary, U.S. Department of Energy
The Honorable Mitch Englander, Los Angeles City Councilmember, District 12
The Honorable Mike Feuer, City Attorney, City of Los Angeles
John Laird, Secretary, California Natural Resources Agency
Matt Rodriguez, Secretary, California Environmental Protection Agency
Barbara Lee, Director, California Department of Toxic Substances Control

TO CITY CLERK FOR PLACEMENT ON NEXT
AGENDA TO BE POSTED

RESOLUTION

3/8/17

#55

RULE 16

WHEREAS, any official position of the City of Los Angeles with respect to legislation, rules, regulations or policies proposed to or pending before a local, state or federal governmental body or agency must have first been adopted in the form of a Resolution by the City Council with the concurrence of the Mayor; and

WHEREAS, the US Department of Energy has released a Draft Environmental Impact Statement for the cleanup of their portion of the Santa Susana Field Lab Property and comments on this draft are due by March 14, 2017; and

WHEREAS, beginning in the 1940s the federal government conducted rocket and nuclear testing activities at the Santa Susana Field Lab in Ventura County with substantial disregard for the environment; one of its nuclear reactors experienced a partial nuclear meltdown in 1959, and two other reactors experienced accidents with significant fuel damage, causing releases of radioactivity into the air; this, in addition to napalm and dioxin incineration in open-air burn pits, dumping of over 500,000 gallons of trichloroethylene and perchlorate, and other contamination from over the 50 years of operations, left the site highly polluted with radioactive and chemical contaminants; and

WHEREAS, the parties responsible for cleaning up the Santa Susana Field Lab are the Department of Energy, NASA and the Boeing Company; and

WHEREAS, in 2010, a legally binding cleanup agreement called Administrative Order on Consent, were entered into by NASA and the Department of Energy with the California Department of Toxic Substances Control which requires all of the detectible radioactive and chemical contamination at their Santa Susana Field Lab operations be cleaned up to background levels similar to those before the site was contaminated; and

WHEREAS, in May, 2012, the Department of Energy issued a notice regarding preparation of an Environmental Impact Statement regarding the cleanup and a draft was released for comment in January 2017 and comments are due on March 14, 2017; however, the Environmental Impact Statement of the Department of Energy does not analyze the impacts of cleaning the Department of Energy site to levels stipulated in the Administrative Order on Consent; and instead, 500,000 cubic yards of soil, some with known significant chemical and radiological contamination that would be covered by the Administrative Orders on Consent, are exempted from remediation; and

WHEREAS, of the options analyzed in the Draft Environmental Impact Statement, Option 1 proposes to leave more than 39% of the contamination - over 1/2 million cubic yards - on site - exposing future users of the site and those in proximity to its runoff and detritus to unacceptable risk of future cancers and other maladies; and this is not, as the document suggests, compliant with the Administrative Order of Consent; and the even more untenable Options 2 and 3 leave up to 91% and 99% of pollution on site, respectively;

NOW, THEREFORE, BE IT RESOLVED, with the concurrence of the Mayor, that by the adoption of this Resolution, the City of Los Angeles hereby includes in its 2017-2018 Federal Legislative Program sponsorship and support of any administrative action by the US Department of Energy relative to the Draft Environmental Impact Statement for the cleanup of their portion of the Santa Susana Field Lab in Ventura County to incorporate the following comments:

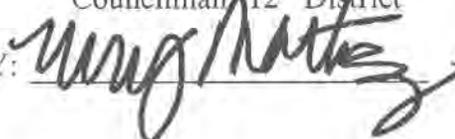
1. The Environmental Impact Statement should be based on remediation of the Department of Energy's Santa Susana Field Lab site to the levels stipulated in the Administrative Order of Consent and not include consideration of alternatives that would violate this Order.
2. Ineligible exemptions utilized in the Draft Environmental Impact Statement that dramatically increase the risk of cancers should be excluded.
3. Alternate transportation plans should be analyzed that include direct conveyance of contaminated materials from the site to rail and other options including the use of fire roads and routes with less impact to residents and reduced traffic impact.

MAY - 3 2017

PRESENTED BY:


MITCHELL ENGLANDER
Councilman 12th District

SECONDED BY:



ORIGINAL


ak



April 5, 2017

Ms. Stephe Jennings
NEPA Document Manager
SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

*Re: Comments on Draft Environmental Impact Statement for
Remediation of Area IV and the Northern Buffer Zone of the
Santa Susana Field Laboratory*

Dear Ms. Jennings:

Thank you for the opportunity to comment on the Draft Environmental Impact Statement (DEIS) for remediation of Area IV and the Northern Buffer Zone (NBZ) of the Santa Susana Field Laboratory (SSFL) prepared by the U.S. Department of Energy (DOE). In this transmittal letter we summarize our concerns. A detailed treatment of these concerns is set forth in the attachment.

Background – A Highly Contaminated Site With Half a Million People Living Nearby

SSFL is one of the most contaminated sites in the state. Over the years it housed ten nuclear reactors, a plutonium fuel fabrication facility, a “hot lab” for disassembling highly irradiated nuclear fuel, and open-air “burn pits” where radioactively and chemically contaminated items were burned. One reactor had a partial meltdown; three others had accidents; there were radioactive fires at the hot lab; and decades of open burning of contaminated items. The poor environmental and safety practices of DOE and its predecessor agency, the Atomic Energy Commission, resulted in numerous releases and spills which contaminated soil, groundwater, and surface water, as well as numerous buildings, with radioactivity and toxic chemicals.

SSFL was established seventy years ago and was supposed to be a remote field lab for work too dangerous to conduct near populated areas. However, over the decades the population nearby mushroomed, so that there are now more than 150,000 people living within 5 miles of the site and more than half a million people living within 10 miles.

Federally funded studies found significant increases in death rates from key cancers among the SSFL workers associated with their work exposures, offsite migration of pollutants at levels in excess of U.S. Environmental Protection Agency (USEPA) levels of concerns, and a greater than 60% higher incidence of key cancers among people living near SSFL than those living further away. Because SSFL is located in hills overlooking the City of Los Angeles and other populated areas below, the contamination migrates downgradient, where neighboring communities can be exposed. Cleanup of the contamination source is therefore critical. However, DOE has had a history of resisting those cleanup obligations.

NRDC, City of Los Angeles, CBG v. DOE Lawsuit Blocked DOE's Prior Attempt to Walk Away from Cleaning Up Most of the Contamination

Fifteen years ago, DOE proposed cleanup standards for SSFL that would have left the great majority of the contamination not cleaned up. The City of Los Angeles, the Natural Resources Defense Council (NRDC), and the Committee to Bridge the Gap (CBG) filed a lawsuit in U.S. District Court, challenging the legality of DOE's actions under the National Environmental Policy Act (NEPA), 42 U.S.C. §4321, *et seq.* In 2007, in an Order highly critical of DOE, Federal District Judge Samuel Conti, granted summary judgment for the plaintiffs and against DOE.¹

In 2010, DOE and the California Department of Toxic Substances Control (DTSC) executed an Administrative Order on Consent (AOC), a legally binding agreement requiring the cleanup of contaminated soil (including the buildings) in Area IV and the NBZ to local background levels, to be completed by 2017. *2017 has arrived and the promised cleanup not only has not been completed, it has not yet even begun.*

In 2012, DOE committed that any EIS would be limited, with the exception of the required No Action alternative, to cleanup alternatives that were compliant with the AOC's required cleanup to background. Any alternative would be about how, not whether, to comply with AOC requirements, as the agreement mandated.

The 2017 DEIS Breaches DOE's 2010 and 2012 Commitments

Despite the above commitments, all alternatives considered in the DEIS would violate the AOC. As DOE states on page S-12 in the DEIS: "DOE expects that, in order for the implementation of any alternative to be consistent with the 2010 AOC, changes to the AOC would be required."

¹ Citations for all sources referenced in this letter are found in the Detailed Comments, attached.

The AOC bars consideration of any “leave in place” alternatives. Yet all four of the DEIS alternatives would leave in place hundreds of thousands of cubic yards of contaminated soil, not cleaned up. **Alternative 1 would leave in place 34-39% of the contamination; Alternative 2 would leave in place 86-91%; Alternative 3 would leave in place at least 90%, and perhaps as much as 95 or 99%; and Alternative 4 would leave 100%.** For the second and third alternative, 98 of 116 toxic chemicals contaminating the area would not be cleaned up at all.

In Alternative 1, DOE proposes to exempt approximately half a million cubic yards of contaminated soil from cleanup. None of the claimed reasons comports with the very narrowly constrained exceptions allowed in the AOC.

In Alternative 2, DOE proposes to leave in place as much as a million cubic yards of contaminated soil. It proposes to not comply at all with the AOC’s cleanup standard for toxic chemicals and to instead do no cleanup until contaminant concentrations are hundreds or thousands of times, and in some cases, millions of times, higher than the AOC’s required cleanup levels. DOE asserts that these are risk-based limits based on DTSC’s suburban residential Risk Based Screening Levels (RBSLs). However, in fact, the DOE proposed concentrations are hundreds and thousands of times higher than the DTSC-approved suburban residential RBSLs. DOE does this by leaving out the required backyard garden component of the residential RBSL. The risks to human health from these high contaminant concentrations is, thus, far greater than DOE asserts.

In Alternative 3, DOE proposes to leave even more contamination behind. This alternative incorporates the weak standards of Alternative 2, but additionally averages contamination over wide areas, so that if there is contamination in one place, it would not be cleaned up because it would be averaged with many acres of soil further away. Additionally, in this alternative, DOE proposes to allow radioactivity levels hundreds of thousands of times higher than the U.S. Environmental Protection Agency’s preliminary remediation goals. Radiation doses equivalent to many chest X-rays a year would be allowed.

In Alternative 4, DOE proposes to do no cleanup whatsoever.

It is important to keep in mind that whatever the final end use of SSFL, large numbers of California citizens live nearby, with backyard gardens, and a primary purpose of the cleanup must be to eliminate the contamination source that puts them at risk from migrating pollution.

While claiming that its proposals to abandon large portions of the contamination are designed to protect biological features, in fact it is its contamination of the environment and reversal of promises to remediate that damage that pose the real ecological risks. DTSC has established ecological RBSLs, and the cleanup levels DOE now proposes to employ instead of those promised in the AOC are hundreds, thousands, and tens of thousands times higher. The refusal to clean up this contamination poses a risk to California’s environment and to public health.

DOE Lacks the Authority to Decide How Much Cleanup of its Contamination it Will Perform

An EIS is to be performed about *discretionary* federal agency actions. However, DOE has no discretion to ignore the requirements of the AOC. It is a legally binding set of obligations that DOE cannot unilaterally ignore.

Even were there no AOC, decisions as to how much of the chemical contamination to clean up are outside DOE's authority. Under the Resource Conservation and Recovery Act, those decisions are in the hands of DOE's regulator, DTSC. It is the regulator who decides how much cleanup is required, not the party that produced the contamination in the first place.

The DEIS Fails to Consider Reasonable Transportation Alternatives

Much of the DEIS appears to be an attempt to inflate the impacts of cleaning up while trivializing the risks of abandoning in perpetuity significant amounts of radioactive and chemical contamination. DOE asserts that there is little to no risk from the toxic and radioactive pollution but much inconvenience from the trucks needed to transport the contaminated soil for disposal. As discussed above, it does this by using risk-based screening levels that are orders of magnitude higher than the actual ones approved by DTSC and U.S. EPA, dramatically downplaying the true risks. At the same time, the DEIS fails to evaluate reasonable alternative methods of conveyance and routes.

Conclusion

DOE is obligated, having contaminated SSFL through its failure to follow proper environmental procedures, to clean the site up fully, as required by the AOC; to do so by the deadlines agreed to; and to mitigate impacts such as trucks hauling away contaminated material by a careful development of alternative transportation options in an EIS. Instead, DOE has dragged its feet for years since the AOC was issued, not only missing the deadline for completion of the cleanup, but not even beginning it. And now in a severely flawed DEIS, the federal agency flouts the authority of the California state agency charged with overseeing this important cleanup by proposing to breach the cleanup agreement it signed and instead leave the great majority of the contamination in place.

The public that resides in the area surrounding the site will be placed at continued and perpetual risk if DOE continues on this course. We call this day for extensive revision of the DEIS so that it is fully in compliance with the AOC and DOE's commitments for a complete cleanup of the contamination for which it is responsible.

Our detailed comments are attached. Supporting documentation is being sent separately on a CD.

Sincerely,


MICHAEL N. FEUER
Los Angeles City Attorney



GEOFFREY H. FETTUS
Senior Attorney
Natural Resources Defense Council



CATHERINE LINCOLN
Executive Coordinator
Committee to Bridge the Gap

Attachment:

Detailed Concerns Regarding the DOE Draft EIS on Cleanup of SSFL Area IV and the Northern Buffer Zone

cc:

Barbara A. Lee, Director, California Department of Toxic Substances Control, with Attachment
Matthew Rodriguez, Secretary, California Environmental Protection Agency, with Attachment
John Laird, Secretary, California Natural Resources Agency

TABLE OF CONTENTS

A. BACKGROUND.....	1
1. <u>A HISTORY OF SAFETY CONSIDERATIONS SUBORDINATED TO OTHER CONCERNS; ACCIDENTS, SPILLS AND RELEASES</u>	1
2. <u>DOE’S HISTORY OF RESISTING ITS CLEANUP OBLIGATIONS</u>	7
3. <u>THE 2007 AND 2010 CLEANUP AGREEMENTS</u>	9
a. <i>The 2007 Consent Order</i>	9
b. <i>The 2010 Administrative Order on Consent (AOC)</i>	9
B. DOE VIOLATES PAST COMMITMENTS ABOUT EIS SCOPE, PURPOSE AND NEED	11
1. <u>SCOPE OF EIS WAS TO BE HOW TO MEET THE AOC, NOT WHETHER TO COMPLY</u>	11
2. <u>THE DEIS HAS SHIFTED FROM MATTERS THAT WERE ARGUABLY WITHIN DOE’S DISCRETION (HOW TO MEET THE CLEANUP REQUIREMENTS) TO DECISIONS THAT ARE NOT ITS TO MAKE (WHETHER TO MEET THE CLEANUP REQUIREMENTS) AND IGNORES STATE AUTHORITY OVER THE CLEANUP</u>	13
3. <u>ERRONEOUS “PURPOSE AND NEED FOR ACTION” STATEMENT IN THE DEIS</u>	15
C. <u>ALL SOIL CLEANUP ALTERNATIVES VIOLATE THE AOC, DTSC RCRA AUTHORITY, AND THE 1995 DOE-EPA JOINT POLICY</u>	16
1. <u>ALTERNATIVE I – WHICH LEAVES IN PLACE 34-39% OF THE CONTAMINATED SOIL</u>	16
a. <i>Proposal to Leave in Place 150,000 cubic yards of soil contaminated with TPHs and PAHs</i>	18
b. <i>DOE Also Intends To Avail Itself of An Additional Asserted Exception For 5%, or 70,650 Cubic Yards, of The Contaminated Soil Volume, Again Violating the AOC’s Very Limited Exceptions</i>	20
c. <i>DOE’s Biological Features Exemption Claim Violates the AOC</i>	20
d. <i>Cultural Features Exemption Claim</i>	23
2. <u>ALTERNATIVE 2 – LEAVE IN PLACE 86-91% OF THE SOIL CONTAMINATION</u>	25
3. <u>ALTERNATIVE 3 – 25 MILLIREM/YR FOR RADIATION, AND AVERAGING CHEMICAL AND RADIOACTIVE CONTAMINATION OVER WIDE AREAS, LEAVING IN PLACE 91-99% OF THE CONTAMINATED SOIL, NOT CLEANED UP</u>	34
4. <u>ALTERNATIVE 4 – THE “NO ACTION ALTERNATIVE”</u>	39
D. <u>GROUNDWATER</u>.....	39
E. <u>BUILDING DEMOLITION AND DISPOSAL</u>	39
F. <u>FAILURE TO CONSIDER TRANSPORTATION OPTIONS</u>.....	42
G. <u>DOE ATTACK ON THE AOC IT EXECUTED</u>	44
H. <u>FLAWED RISK ASSESSMENT AND COST-BENEFIT ANALYSIS</u>	45
CONCLUSION	45

Detailed Concerns Regarding the DOE Draft EIS on Cleanup of SSFL Area IV and the Northern Buffer Zone

A. BACKGROUND

The history of the site provided in the Draft Environmental Impact Statement (DEIS) is inaccurate and minimizes the problems. We provide here a more complete picture.

1. A History of Safety Considerations Subordinated to Other Concerns; Accidents, Spills and Releases

The Santa Susana Field Laboratory (SSFL) was established in the late 1940s for rocket testing and in the early 1950s commenced nuclear reactor work. In this initial incarnation, the site was supposed to be a remote field lab for work too dangerous to conduct near populated areas, and the original siting criteria stated that “care must be taken to select an area where prospects for population growth in the near future are not anticipated.”¹ However, over the decades the population nearby mushroomed, so that there are now more than 150,000 people living within 5 miles of the site and more than half a million people are within 10 miles.²

SSFL housed ten reactors, plutonium and uranium fuel fabrication facilities, numerous nuclear “critical facilities,” and a “hot lab” wherein highly irradiated nuclear fuel from around the nation was cut apart. The facility was operated for the Department of Energy (DOE) and its predecessor agency the Atomic Energy Commission (AEC), as part of the national nuclear complex from the years 1953 to 1998.

Safety considerations were “subordinated to other concerns from the outset.”³ Despite being ranked 5th out of 6 candidate sites for the safety of meteorological conditions (in part because of nighttime migration of potentially contaminated air into the San Fernando Valley), the site was chosen as a nuclear testing site nonetheless, in large

¹ NAA-SR-30, *General Reactor Site Survey of the Los Angeles Area*, U.S. Atomic Energy Commission, June 1, 1949, as cited in *Report of the Santa Susana Field Laboratory Advisory Panel*, October 2006 (hereafter SSFL Panel Report), p. 8. <http://www.ssflpanel.org/files/SSFLPanelReport.pdf> The SSFL Advisory Panel was established at the initiative of local legislators in the early 1990s to oversee independent health studies of SSFL and the surrounding areas. Under its auspices, federally-funded worker studies by the UCLA School of Public Health were conducted in the 1990s, and in the next decade a series of studies about potential offsite effects funded by the State Legislature were prepared. This summary of the siting and accident history is drawn in part from the Panel’s 2006 report; the reader is referred to the full report for more detail and supporting citations, which is incorporated herein by reference.

² SSFL Panel Report, pp. 8-9.

³ *id.*, p. 8.

measure because of convenient drive times from nearby universities. To compensate for the poor site conditions, and because the reactors would have no containment structures, a reactor power limit was set to limit radioactive inventory. But a decade thereafter, the AEC chose to build the Sodium Reactor Experiment (SRE) with power twenty times the limit, despite people living much closer than the original rule recommended.⁴

Poor environmental and safety practices resulted in at least four of the reactors suffering significant accidents, including a partial nuclear meltdown.

First, in March of 1959, the AE6 reactor released fission gases as a result of malfunction.. Then blockage of coolant precipitated a power excursion and partial meltdown of the SRE in July 1959. The SNAP8ER accident damaged 80% of its fuel in 1964. A similar accident in the SNAP8DR resulted in damage to a third of its fuel in 1969.⁵ None of these reactors had a containment structure like modern reactors to prevent radiological releases into the environment.

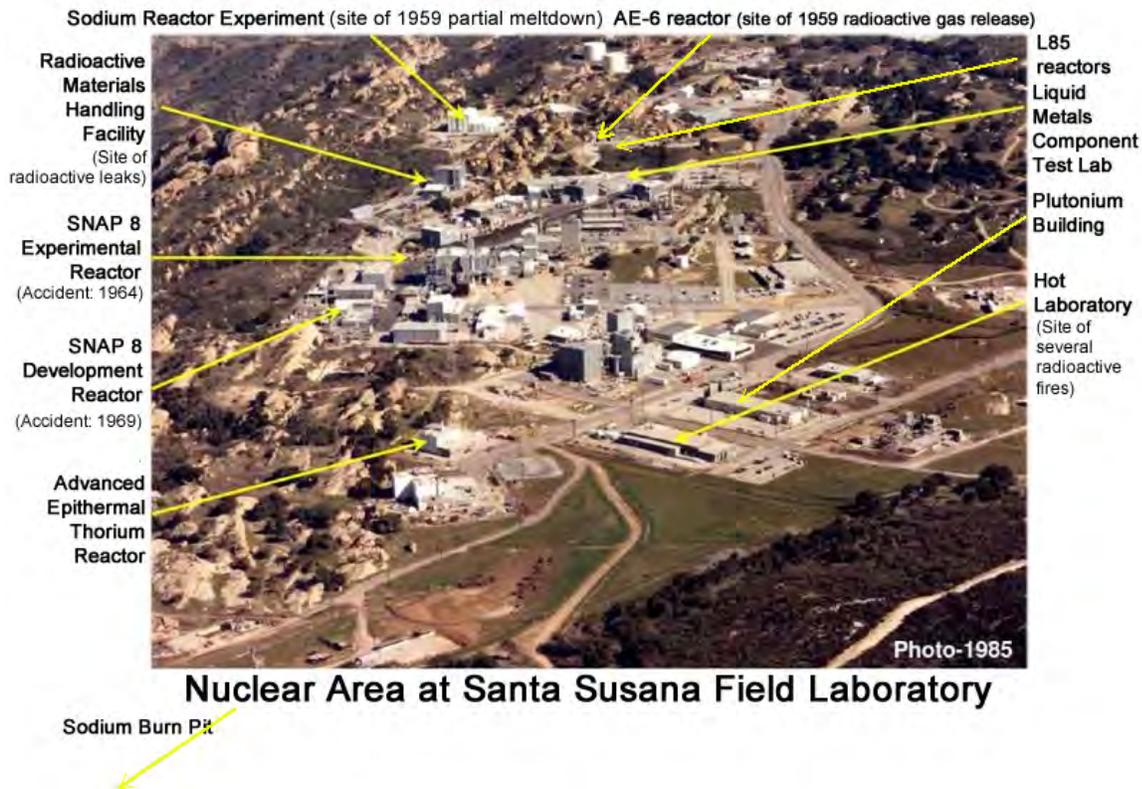


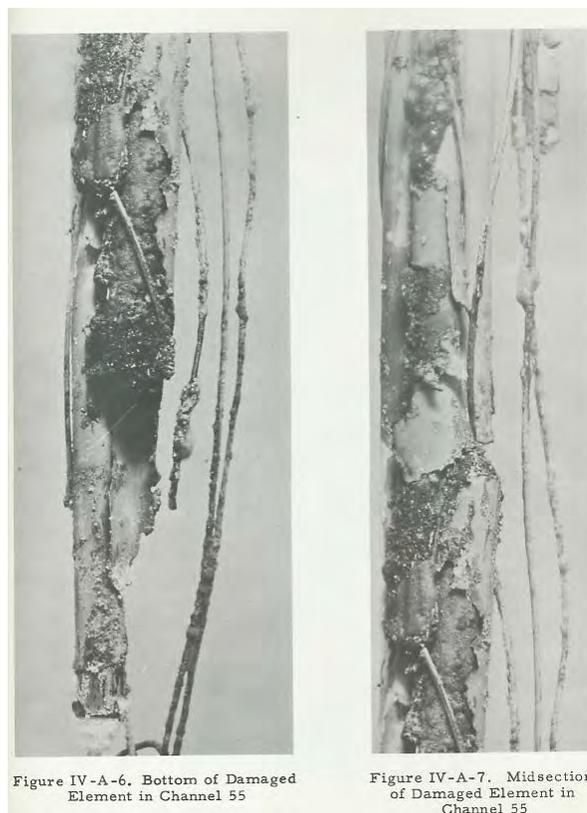
photo source: DOE; labels: SSFL Work Group⁶

⁴ *id.*, pp. 8-9.

⁵ SSFL Panel Report, p. 10.

⁶ <https://energy.gov/em/energy-technology-engineering-center>;
<http://www.ssflworkgroup.org/about-ssfl/>

The events of June, 1959 at the SRE are emblematic of the problems caused by a troubled safety culture at SSFL.⁷ On that date, a fuel rod at the SRE, coated with sodium, exploded when it was washed with water in a “wash cell.” The explosion lifted the shield plug out of the wash cell, and created “extremely high contamination levels within the entire building.”⁸ A couple of weeks later, on July 13, the SRE experienced a power excursion—the reactor power suddenly began to increase exponentially, out of control, and the reactor barely was able to be shut down, or “scrammed.” Yet, inexplicably, the operators of the reactor, unable to figure out what had caused the incident, started it up again two hours later, and continued to operate it for another week and a half, in the face of rising radioactivity readings (off-scale) and numerous other signs of reactor in trouble. When it was finally shut down, it was determined that 13 of 43 fuel elements had experienced melting.

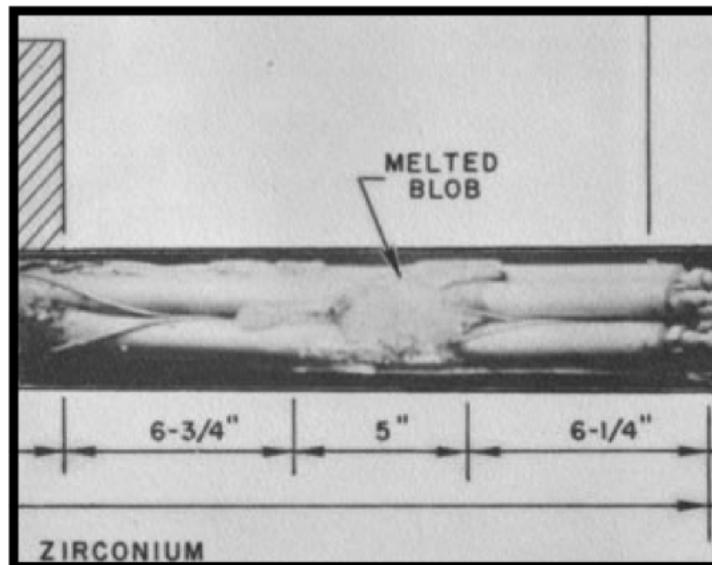


⁷ See, e.g., the review of the SRE accident performed for DOE by Dr. Thomas Cochran of NRDC, *Sodium Reactor Experiment Partial Fuel Meltdown*, 29 August 2009.

<http://www.etec.energy.gov/Library/Main/Cochran%20SRE%20Presentation.pdf>

⁸ See Committee to Bridge the Gap, *Past Accidents and Areas of Possible Present Concern Regarding Atomics International*, January 18, 1980, and the citations therein. (Atomics International was the name of the AEC contractor running the nuclear portion of SSFL at the time.)

Photo of Damaged Fuel Element; source: AEC/Atomics International



SRE Fuel “Melted Blob” (label in original); source: AEC/Atomics International

The accidents at the SRE, SNAP8ER and SNAP8DR all involved running the reactors for extensive periods of time while they were failing, despite clear indications of problems. As an AEC analysis⁹ of the SRE partial meltdown concluded:

[S]o many difficulties were encountered that, at least in retrospect, it is quite clear that the reactor should have been shut down and the problems solved properly. Continuing to run in the face of a known Tetralin leak, repeated scrams, equipment failures, rising radioactivity releases, and unexplained transient effects is difficult to justify. Such emphasis on continued operation can and often does have serious effects on safety and can create an atmosphere leading to serious accidents. It is dangerous, as well as being false economy, to run a reactor that clearly is not functioning as it was designed to function.

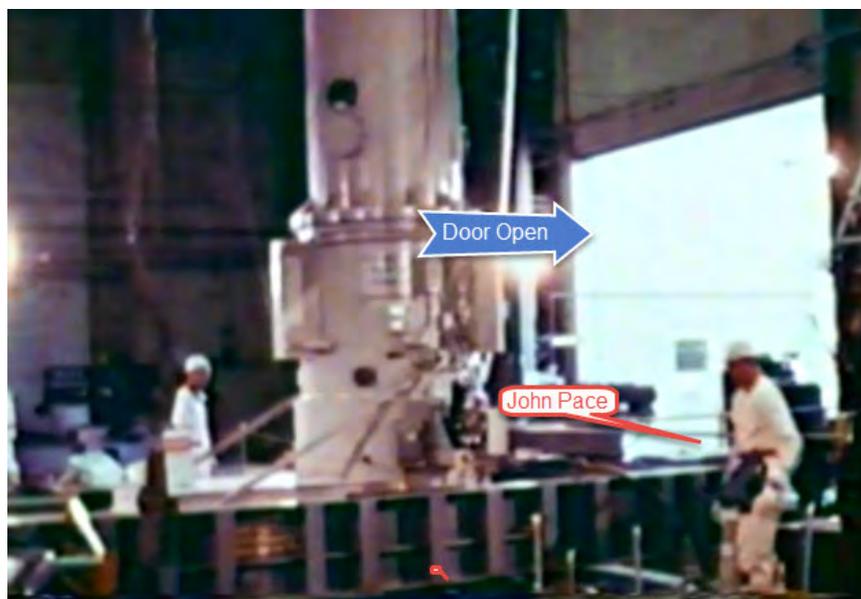
Nonetheless, the same pattern of continuing to operate reactors for long periods despite evidence of failing cores subsequently resulted in significant fuel damage in two other reactors at the site.

The problem of cutting safety corners was compounded by a culture of secrecy and a lack of candor. The AEC said nothing publicly about the SRE partial meltdown for

⁹ T. J. Thompson and J. G. Beckerley, *The Technology of Nuclear Reactor Safety*, prepared under the auspices of the US Atomic Energy Commission, 1964, p. 644

nearly five weeks. Finally, it issued a news release, embargoed for Saturday morning papers, saying that “a parted fuel element had been observed,” that there were no indications of unsafe operating conditions and no radioactive release. However, in fact, the fuel had experienced not just parting, but melting. A third of the core underwent partial melting, not just a single fuel element. It was a clear indication of unsafe operating conditions,, and radioactivity had been intentionally vented into the atmosphere for weeks.

Despite subsequent claims that only noble gases were released, independent experts have concluded that other radionuclides such as iodine-131 could have been vented into the atmosphere. One estimate is that over 260 times the I-131 released at the Three Mile Island accident could have been emitted by the SRE.¹⁰ The reactor had no containment structure; because of the coolant blockage, the coolant vaporized, and volatile radionuclides like iodine, cesium and strontium could have been emitted into the core cover gas, which was deliberately vented from the reactor and into the environment. Furthermore, a report by an eyewitness, John Pace, indicates that the reactor room became so radioactive that the large equipment door had to be kept open to vent radioactivity from the room to the outdoors.¹¹



¹⁰ Declaration of Arjun Makhijani, Ph.D., President of the Institute for Energy and Environmental Research, in *Lawrence O'Connor et al. v. Boeing North American, et al.*, U.S. District Court for the Central District of California, February 12, 2004, p. 24.

¹¹ <http://data.nbcstations.com/national/KNBC/la-nuclear-secret/> The above photograph is from an AEC film about the accident, taken during the recovery operation. The labels have been added. Pace says the door had to be opened for extended periods during the accident itself because of high radiation readings.

By no means was the SRE partial meltdown the only problem at SSFL that led to releases. Much of the work at SSFL involved radioactively contaminated liquid sodium coolants for reactors, which burn if exposed to air and explode in the presence of water. There were radioactive fires at the hot lab and numerous other radioactive and chemical releases and spills. In addition, for decades, despite requirements to the contrary, radioactive and toxic chemical wastes were burned in open “burnpits.” The resulting clouds of airborne contamination fell out over wide areas, including beyond the SSFL boundaries.

These and many other activities resulted in widespread radioactive and chemical contamination of air, soil, groundwater and surface water. Contaminants have repeatedly migrated offsite. The Los Angeles Regional Water Quality Control Board has fined Boeing more than a million dollars for scores of violations of pollution discharge limits for surface water leaving the SSFL site.¹²

DOE reports in its DEIS that the majority of the contamination is from over a hundred toxic chemicals. It has not explained how it managed to produce so much chemical contamination in addition to the radioactive pollution, and should do so. Some of the widespread chemical contamination likely came from the decades of open-air burning of wastes with toxic chemicals in burnpits, with the toxic plume spreading widely and resulting in airborne deposition. Any other poor practices that led to the chemical pollution should be disclosed.

A federally-funded study by the UCLA School of Public Health found markedly increased rates of death from key cancers for workers associated with their exposures.¹³ The most highly exposed workers had triple the deaths from those cancers as did less exposed SSFL workers.

A subsequent federally funded study by a team of researchers led by UCLA’s Professor Yoram Cohen found evidence of contaminants having migrated outside the site boundaries and exposing the public at levels in excess of EPA levels of concern.¹⁴ A study by Dr. Hal Morgenstern of the University of Michigan, also federally funded, found

¹² Summarized, with citations to Regional Board Orders, at <http://www.ssflworkgroup.org/files/FInes%20for%20Violations%20of%20Pollution%20Laws%20at%20SSFL.pdf>

¹³ Morgenstern, Froines, Ritz and Young, *Epidemiologic Study to Determine Possible Adverse Effects to Rocketdyne/Atomics International Workers from Exposure to Ionizing Radiation*, June 1997, at http://www.ssflpanel.org/files/UCLA_rad.pdf. See also *Santa Susana Field Laboratory Epidemiological Study: Report of the Oversight Committee*, September 1997, at http://www.ssflpanel.org/files/panel_worker_radiation.pdf

¹⁴ Yoram Cohen, et al., *Potential for Offsite Exposures Associated with the Santa Susana Field Laboratory*, February 2006, at <http://www.ssflworkgroup.org/potential-for-offsite-exposures-associated-with-ssfl/>

a greater than 60% increase in incidence of various cancers in people living near the site associated with their proximity to it.¹⁵

SSFL is located atop the Santa Susana mountains overlooking significant populations in the City of Los Angeles and elsewhere. The site is contaminated with a wide range of radioactive materials, such as plutonium-239, cesium-137, and strontium-90, and over a hundred hazardous chemicals, such as dioxins, PCBs, heavy metals, and volatile organic compounds. Contaminants at the site can migrate offsite and expose those communities. Thus, the cleanup of the source of pollution above these communities is critical to their health. The issue thus is not merely a question of exposure to people at the site in the future, but to the people who live nearby. As we shall show, the failure to recognize this is a fundamental failure of the DEIS.

2. DOE's History of Resisting Its Cleanup Obligations

Along with the history of weak environmental and safety controls at SSFL, the AEC – and its successor the DOE – have long resisted doing anything more than a minimal cleanup of the contamination for which it was responsible, at this or its other polluted facilities across the country.¹⁶

After incidents like the Rocky Flats fires in the 1970s, the Three Mile Island meltdown in Pennsylvania in the late 1970s, and the 1986 Chernobyl accident in the former Soviet Union raised concerns with the widespread environmental and safety problems throughout the DOE nuclear complex nationwide, tentative attempts at reform were undertaken. Reviews were undertaken of environmental problems at DOE sites; one performed by DOE contractor (and thereafter, NRDC engineer) James Werner found widespread chemical and radioactive contamination at SSFL.¹⁷ Admiral James Watkins was brought in as Secretary of Energy to attempt to change the troubled “safety culture” at DOE. In 1991 an investigative “Tiger Team” team found significant problems in the safety and environmental program at SSFL.¹⁸ In 1995, in an effort to bring DOE into the modern era of environmental regulation, it entered into a Joint Policy with the U.S. EPA

¹⁵ Hal Morgenstern, et al., *Cancer Incidence in the Community Surrounding the Rocketdyne Facility in Southern California*, March 2007, at <http://www.ssflworkgroup.org/files/UofM-Rocketdyne-Epidemiologic-Study-Feb-2007-release.pdf>. See also, Professor Hal Morgenstern letter to Senator Joe Simitian, then-Chair, California Senate Committee on Environmental Quality, April 5, 2007, summarizing his findings, at

http://www.ssflworkgroup.org/files/LettertoSen.Simitian_041507.pdf

¹⁶ See, e.g., National Governors Association, *Cleaning Up America's Nuclear Weapons Complex: 2015 Update for Governors*.

¹⁷ Environmental Survey, Preliminary Report, DOE Activities at Santa Susana Field Laboratory, February 1989; DOE/eh/OEV-33-P.

¹⁸ http://www.etec.energy.gov/Library/Main/DOE-EH-0175_ES&H_Tiger_Team_Assessment_of_ETEC.pdf

committing that all DOE nuclear sites in the country, irrespective of whether they were on the National Priority List, would be cleaned up consistent with EPA's CERCLA (Superfund) guidance.¹⁹ However, significant elements within DOE continued to resist these efforts at reform.

A clear example of this resistance can be found in the cleanup standards for the site. To wit, despite these critical findings and despite the Joint Policy entered into with EPA to carry out environmental remediation pursuant to EPA's CERCLA guidance, in the late 1990s, DOE and its contractor Boeing put forward cleanup standards for SSFL that were orders of magnitude more lax than the EPA CERCLA guidance and which would have left virtually all of the contamination not cleaned up.²⁰ In January 2002, DOE issued a Draft Environmental Assessment, and in 2003 a final Environmental Assessment and Finding of No Significant Impact approving those standards and its plan to leave substantially more than 90% of the radioactive contamination unremediated.²¹

Concerned about the plan to not clean up the great majority of the contamination and the failure to examine the environmental impacts of the harms associated with such weak cleanup choices, the City of Los Angeles, the Natural Resources Defense Council (NRDC), and the Committee to Bridge the Gap (CBG) filed a lawsuit in U.S. District Court, challenging the legality of DOE's actions under the National Environmental Policy Act (NEPA), 42 U.S.C. §4321, et seq. In 2007, in an Order highly critical of DOE, Judge Samuel Conti, granted summary judgment for the plaintiffs and against DOE.²²

In 2007, Judge Conti ruled against DOE. He noted, "Area IV is known to be radiologically contaminated and, in fact, was the location of at least one well-known nuclear meltdown....It is located only miles away from one of the largest population centers in the world....Among the primary purposes of NEPA, and the EIS process more specifically, is assuring the public is informed and aware of the potential environmental impacts of government actions....It is difficult to imagine a situation where the need for such an assurance could be greater." He therefore permanently enjoined DOE from "transferring ownership or possession, or otherwise relinquishing control over, any portion of Area IV until it completed an EIS and issued a Record of Decision pursuant to NEPA." The Court retained jurisdiction over the matter until it is satisfied that the DOE has met its legal obligations related to the remediation.

¹⁹ DOE & EPA, Policy on Decommissioning Department of Energy Facilities Under CERCLA, May 22, 1995, hereafter DOE-EPA 1995 Joint Policy.

²⁰ Approved Sitewide Release Criteria for Remediation of Radiological Facilities at the SSFL, December 12, 1998.

²¹ The EA was restricted to issues related to cleanup of radioactivity, recognizing that the cleanup of the chemicals was subject to the Resource Conservation and Recovery Act (RCRA) and those cleanup decisions were in the hands of the California Department of Toxic Substances Control.

²² 2007 WL 1302498 (N.D. Cal).

Shortly thereafter, DOE issued a Notice of Intent to prepare an EIS. However, DOE dragged its feet for a decade and only now has issued the DEIS for comment.

3. The 2007 and 2010 Cleanup Agreements

a. The 2007 Consent Order

In 2007, the California Department of Toxic Substances Control (DTSC), which regulates toxic chemicals in California pursuant to federal delegation under the Resource Conservation and Recovery Act (RCRA), entered into a Consent Order with DOE and the other SSFL Responsible Parties (Boeing and NASA) in which the Responsible Parties were obligated to complete cleanup of soil and installation of the permanent groundwater remedy by mid-2017.²³ Contrary to the DEIS's claim at p. 1-4, that Consent Order does not mandate a cleanup to suburban residential standards but instead requires cleanup to normal DTSC procedures.²⁴ Those procedures, as shall be discussed shortly, rely on current County zoning and General Plan land use designations, which in the case of SSFL, allows a wide range of agricultural and residential (with garden) uses and would result in the most protective cleanup standards being employed, comparable, DTSC has written, to a cleanup to background.²⁵

b. The 2010 Administrative Order on Consent (AOC)

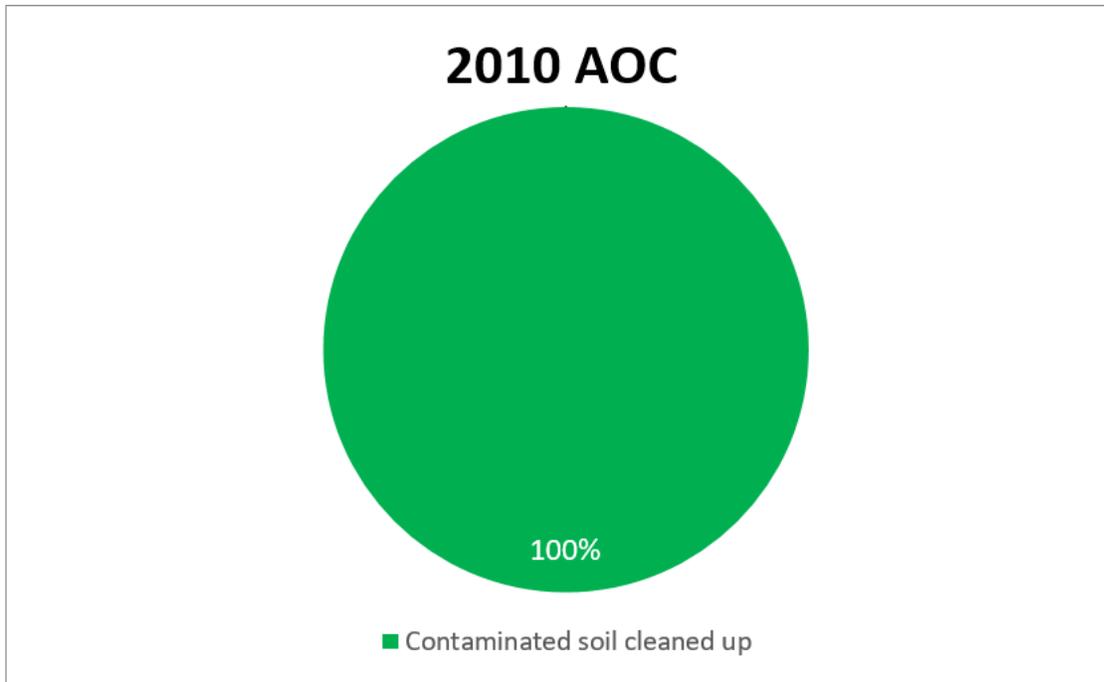
In 2010, in the face of mounting frustration by DTSC, the California Environmental Protection Agency (CalEPA), and state and federal legislators with what appeared to be continued foot-dragging by DOE mid-level personnel, Dr. Steven Chu, the Nobel-Prize winning physicist who was then the Secretary of Energy, and Dr. Ines Triay, the DOE Assistant Secretary for Environmental Management, proposed to the state that they enter into an agreement whereby the site would be cleaned up to local background; i.e., remove all the detectible contamination and return it to the condition it was in before DOE contaminated it. Over that year, there were numerous negotiating sessions with DOE and the state, with participation from some of the parties to the successful 2007 NEPA lawsuit, to hammer out the written agreement, first an Agreement in Principle (AIP) and then the full Administrative Order on Consent (AOC), which incorporated the AIP. After two rounds of opportunity for public comment, in which more than 3000 comments were received, of which all but a handful were strongly in favor, DTSC and DOE executed the AOC in December, 2010. The AOC resolved the primary concerns that had resulted in the filing of the action before Judge Conti in the first place.

²³ Consent Order, p. 20.

²⁴ The word "residential" appears in the Order only to describe the existence of residential areas near the facility, and never to specify a cleanup standard for SSFL.

²⁵ DTSC, Response to Comments, Agreements in Principle, State of California and the Department of Energy, of California and the National Aeronautics and Space Administration, (hereafter DTSC Response to Comments on Agreements in Principle), October 26, 2010, Volume I, pp. 11-12, 14-7, 21.

There are several key components of the AOC. (1) It is legally binding; DOE cannot unilaterally choose not to comply with any part of it. (2) Cleanup of soil shall be to local background. (3) For the purposes of the AOC, soil is defined to include structures, debris, and other anthropogenic materials. (4) There is to be no averaging; any contamination above background is to be cleaned up. (5) The deadline for full soil cleanup was 2017. (6) All waste with radioactivity above background must be disposed of in licensed or authorized low-level radioactive waste disposal facilities. (7) No risk assessment would be required, as the cleanup was to background. And (8) critically, no “leave in place alternatives will be considered.”



Drs. Chu and Triay subsequently left DOE; the personnel who had frustrated past efforts at cleanup resumed their efforts; and *the deadline for completion of cleanup of soil and installation of the final groundwater remedy passed without either even starting*. In January 2017, DOE issued its DEIS. And in it, DOE broke its commitments in the AOC and its past promises about any EIS. Every alternative DOE presents in the DEIS would abandon in place large amounts of contamination, despite explicit prohibition against such a decision in the AOC. **Alternative 1 would leave in place 34-39% of the contamination; Alternative 2 would leave in place 86-91%; Alternative 3 would leave in place at least 90%, and perhaps as much as 95 or 99%; and Alternative 4 would leave 100%.** Furthermore, DOE also has broken its prior commitments that any EIS would be limited to different technologies that would conform to its obligations under the AOC to clean up all the detectible contamination, i.e., to local background, not whether to do so.

B. DOE VIOLATES PAST COMMITMENTS ABOUT EIS SCOPE, PURPOSE AND NEED

1. Scope of EIS Was to Be How to Meet the AOC, Not Whether to Comply

In 2011, NASA proposed an EIS that would have included numerous alternatives that would have violated the AOC. DTSC wrote to NASA that this was inconsistent with the AOC and demanded that it reverse course.²⁶

The matter was of such concern that Senator Boxer arranged a high-level meeting in Washington, D.C. with herself, the NASA Director, the Chair of the White House Council on Environmental Quality (CEQ), and the DTSC and CalEPA heads.²⁷ NASA asserted that the National Environmental Policy Act required it to evaluate alternatives that would breach the AOC.²⁸ The others disputed that notion, and it was agreed that CEQ, as the federal authority on NEPA, would issue an opinion.

CEQ issued that conclusion on June 19, 2012, finding that NEPA does not require the consideration of infeasible alternatives, and since NASA must comply with the AOC, alternatives that breach it need not be considered.²⁹ As the Chair of CEQ wrote, “there is no requirement that NASA consider alternatives that cleanup to other standards that differ from the agreement NASA signed with the State.” CEQ continued, “In view of NASA’s administrative cleanup resolution with the State of California, which turns upon NASA’s commitment to clean the site to local background levels, CEQ’s view is that – under this rule of reason – NASA is not compelled to consider less comprehensive measures as alternatives.” She noted further that “The Supreme Court has long recognized that CEQ’s interpretation of NEPA and its regulations is entitled to substantial deference.” NASA subsequently agreed to restrict its EIS accordingly.³⁰

In its efforts to get NASA to comply with the AOC in any environmental review, DTSC noted that DOE was preparing an EIS whose scope was consistent, looking at

²⁶ Letter from Debbie Raphael, DTSC Director, to Allen Elliott, SSFL Project Manager, NASA, September 19, 2011. See also letter from DTSC Director Raphael to NASA Administrator Bolden, May 22, 2012, demanding that “NASA modify the scope of its NEPA process to align itself with the project that NASA is actually undertaking – a cleanup to background levels of contaminants in compliance with the AOC – and not an evaluation of alternative cleanup standards that are not related to the project....”

²⁷ See letters of March 29 and 30, 2012, from Senator Boxer to NASA Administrator Bolden, and DTSC public announcement of March 30, 2012.

²⁸ See also letter of Allen Elliott to Debbie Raphael of August 9, 2011.

²⁹ Letter from CEQ Chair Nancy Sutley to Senator Barbara Boxer, June 19, 2012.

³⁰ See Allen Elliot, Program Director, SSFL, NASA, *Update on NASA’s National Environmental Policy Act Compliance for Santa Susana Field Laboratory*, July 19, 2012; and James Wright, NASA Associate Administrator, to DTSC Director Raphael, July 10, 2012.

various ways to achieve the required cleanup to background, not whether to fulfill the requirements of the AOC. Citing DOE's April 2012 fact sheet for its DEIS process, DTSC noted that DOE had made it clear "that it is defining its project as a cleanup to background levels, as required by its AOC. DOE has been careful not to identify potential alternatives that do not meet its AOC cleanup objective."³¹

Indeed, in May 2012, DOE issued a notice "Public Participation in the Development of Alternatives to be considered in the Santa Susana Field Laboratory Area IV Environmental Impact Statement." In it DOE acknowledged that DTSC was the regulator and had the regulatory authority over the cleanup, that DOE was obligated to carry out the AOC requirement to clean up to background, and that the EIS would be limited to alternative ways to achieve that cleanup standard:

What is the cleanup standard (how clean must Area IV be upon completion of cleanup)?

DOE has signed two agreements with the California Department of Toxic Substances Control: the 2007 Consent Order for Corrective Action and 2010 Administrative Order on Consent for SSFL Area IV. Those agreements stipulate cleanup standards – how clean the site must be before cleanup can be declared completed. DOE is committed to full compliance with both the 2007 and the 2010 orders. However, neither Order dictates how DOE should accomplish the cleanup standards. For that reason, the EIS will explore if there are reasonable alternatives for accomplishing the cleanup levels that are stipulated in the Orders.

DOE went on to say "DOE agrees that the AOC committed DOE to clean up to background," and that the EIS would therefore be restricted to how to do that. DOE stated that the "2007 and 2010 orders dictate how clean the site must be before the cleanup can be declared complete" but don't dictate how to achieve that level of cleanup. "[T]here may be more than one way to accomplish cleanup to background; DOE believes that it would be prudent to evaluate if there might be more than one way to accomplish the AOC's requirement of cleanup to background." In short, any EIS would be limited to analysis on how to achieve a cleanup to background, not whether to do so in the first instance.

³¹ Raphael May 22, 2012 letter, *supra*.

However, the DEIS that DOE just issued breaks those (previously) clearly articulated commitments. Indeed, every option examined would breach the AOC.³² DOE concedes this in the DEIS saying that the AOC

requires soil cleanup to the AOC LUT [Lookup Table] values, which are based on soil background levels or method/minimum detection limits. *DOE expects that, in order for the implementation of any alternative to be consistent with the 2010 AOC, changes to the AOC would be required.*

(emphasis added)³³

2. The DEIS Has Shifted from Matters that Were Arguably within DOE's Discretion (How to Meet the Cleanup Requirements) to Decisions That Are Not Its to Make (Whether to Meet the Cleanup Requirements) and Ignores State Authority Over the Cleanup

NEPA is triggered by *discretionary* federal agency actions. It is to inform federal agency decisions. In 2012, DOE fully recognized that DTSC was the regulator and decision-maker about how much contamination DOE must clean up. As it wrote then in its April 2012 notice:

Who is the regulator for cleanup of Area IV at SSFL?

The California Department of Toxic Substances Control (DTSC) has the regulatory authority to direct the cleanup at SSFL.

In the DEIS as issued, however, DTSC is barely mentioned. As it is currently written, the DEIS suggests the decisions as to how much of DOE's contamination DOE must clean up are DOE decisions, not ones that it will reach under the purview of its regulator for the cleanup of chemical contamination. There is an occasional reference in the text (e.g., at p. S-12) that to undertake any of the alternatives DOE proposes, the AOC would be breached, but no real acknowledgment that that is not DOE's decision to make. The AOC is an enforceable contract between DOE and its hazardous waste regulator the DTSC, and DOE has no discretion to ignore its obligations under the AOC. And in that

³² In so doing, DOE now makes the same arguments NASA had originally made and which CEQ had rejected.

³³ DEIS, p. S-12. The DEIS identifies a total of four soil cleanup alternatives, one of which is characterized as a cleanup to AOC lookup tables, but with roughly half a million cubic yards of contaminated soil excluded from the cleanup to those requirements. All four alternatives are inconsistent the AOC, as conceded here in the DEIS.

AOC, DOE consents (and indeed, has no recourse to do otherwise) to DTSC regulatory authority over all aspects of the chemical and radioactive cleanup.

Bluntly, even absent the AOC, under RCRA, DOE lacks the authority to unilaterally decide how much of its chemical contamination to clean up, unless the State of California expressly cedes its authority to the federal agency entirely, which it has not done so, here or anywhere else. RCRA contains a waiver of federal immunity, so DOE must comply with it like everyone else; and RCRA authority has been delegated in California to DTSC. It is for that reason that DOE's 2003 Environmental Assessment did not even attempt to cover chemical cleanup decisions, acknowledging that that matter is within DTSC's authority. But in the DEIS, DOE says *it* will make a decision—issue a Record of Decision—about what cleanup option *it* chooses for its toxic chemical pollution. This is not a matter it gets to choose. DOE is the polluter, the regulated entity; the decision about how much of its pollution it must address rests with the regulator, DTSC, not the polluter.

A remarkable fact about the DEIS is its virtual silence about either the legally binding nature of the AOC or the existence of DTSC and its duly entitled state authority over the cleanup. In the DEIS, DOE essentially pretends it is the “decider,” free to choose to ignore the AOC at will and free to decide to leave as much of its pollution not cleaned up as it wishes. Neither is true.

For example, the AOC is not even explicitly mentioned in the Introduction Section 1.0 as one of the requirements DOE must meet, nor in the Purpose and Need for Agency Action (Section 1.1) on p. 1-1. In Chapter 9, identifying the requirements that DOE must follow, the AOC is relegated to a short reference under “Waste Management.” p. 8-3, 8-20. The AOC, of course, controls far more than waste management; it governs the entire cleanup.

Similarly, the DEIS simply ignores the fact that DOE can't choose to walk away from the AOC, that it is a contract with DTSC, and that in the AOC, DOE concedes to DTSC the power over the cleanup decisions. Additionally, DTSC's authority over the chemical cleanup pursuant to RCRA, even absent the AOC, is essentially ignored. DOE has drafted a DEIS as though the binding nature of the AOC and the authority of its regulator DTSC under the AOC and under RCRA don't exist.

A central failing of the DEIS is that it has morphed into a decision document for the central matters about how much it will cleanup, which is not DOE's to decide in the first place and something that is already done, per the AOC. The DEIS is essentially an assault on the state's authority under RCRA and pursuant to the AOC. DOE does not get to decide the very issues it has chosen to prepare the DEIS for, making it invalid.

Furthermore, even were there no AOC—and there is—and no DTSC regulatory authority over DOE—and there is—DOE would still be required to follow EPA CERCLA guidance for the cleanup of the radioactive and chemical contamination, pursuant to the 1995 DOE-EPA Joint Policy. All of the options DOE has put forward are

at variance with that EPA guidance, in addition to breaching both the AOC and DTSC's RCRA authority.

3. Erroneous "Purpose and Need for Action" Statement in the DEIS

In 2012, DOE, noting that "NEPA requires a statement of the purpose and need for action in every NEPA document," defined the purpose and need as follows:³⁴

DOE needs to complete cleanup of Area IV and the Northern Buffer Zone in compliance with regulations, orders and agreements, *including the 2007 Consent Order (groundwater) and the 2010 Administrative Order on Consent (soil)*. The purpose of the project is to remove the remaining structures of Area IV of the SSFL and cleanup the affected environment in a manner that is protective of the environment and the health and safety of the public and Area IV workers.

(emphasis added)

However, the DEIS as issued has changed the "purpose and need for agency action" statement to now read:

DOE needs to complete remediation of SSFL Area IV and the NBZ to comply with applicable requirements for cleanup of radiological and hazardous substances. These requirements include regulations, orders, and agreements. To this end, DOE needs to remove the remaining DOE structures in Area IV of SSFL and clean up the affected environment in Area IV and the NBZ in a manner that is protective of the environment and the health and safety of the public and workers.³⁵

The explicit purpose and need to comply with the 2007 Consent Order for cleaning up groundwater and with the 2010 AOC for cleaning up soil has been dropped. This is no mere oversight, as indeed, all alternatives presented in the DEIS abrogate the AOC requirement of cleanup to background. The 2012 commitments have been breached, and the DEIS, rather than analyzing how to carry out the AOC cleanup to background, now merely presents four alternatives to breach it. The purpose and need statement must return to the 2012 promise, and any new iteration of the DEIS must comply with both the 2012 commitments and the AOC.

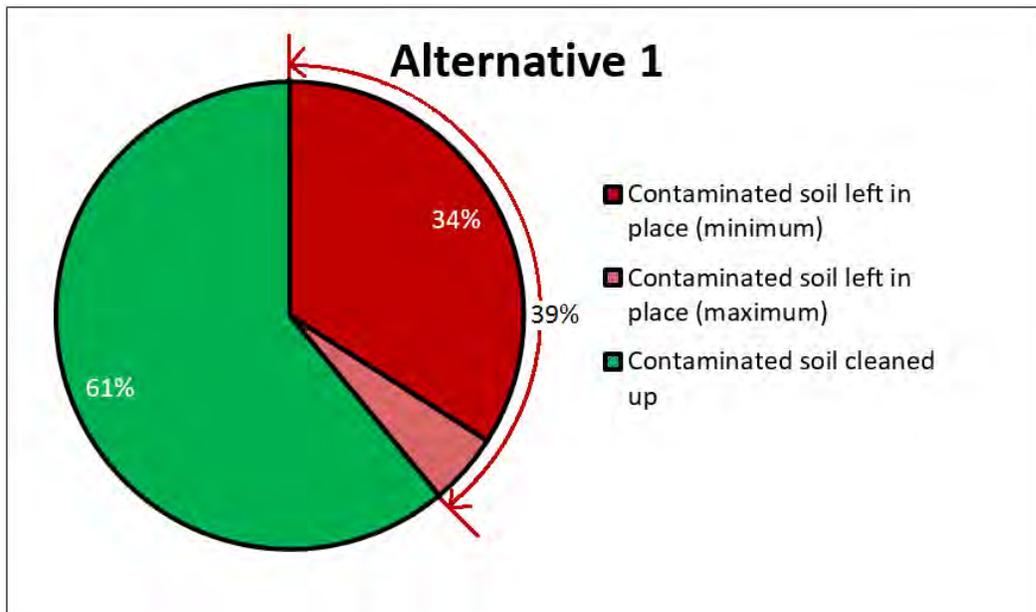
³⁴ DOE, Public Participation in the Development of Alternatives to be Considered in the Santa Susana Field Laboratory Area IV Environmental Impact Statement, May 2012.

³⁵ pp. S-2, 1-1.

C. All Soil Cleanup Alternatives Violate the AOC, DTSC RCRA Authority, and the 1995 DOE-EPA Joint Policy

We discuss each soil cleanup alternative below.

1. Alternative I – Which Leaves in Place 34-39% of the Contaminated Soil



While acknowledging in the DEIS that all alternatives breach the AOC, at other times DOE misleadingly suggests this first alternative is compliant with the AOC. It labels this option as cleanup to AOC Lookup Table (LUT) values. Yet DOE proposes to leave in place at least 480,000 cubic yards of the 1,413,000 cubic yards of soil contaminated above those limits, or 34%.³⁶ Because the DEIS says DOE also intends to assert an additional exception of up to 5% of total soil volume and leave that also in place, but hasn't included that leave-in-place volume in the totals,³⁷ this option, like all the others, can be an additional 5% higher, for a total of 39%, or 550,000 cubic yards, of the contaminated soil being left in place. As is repeatedly the case in the DEIS, there is no acknowledgment that DOE doesn't get to make that decision, that any such exceptions must comply with the AOC and must be approved by DTSC.

The AOC contains some very tightly delimited exceptions to the requirement to clean up all contamination to background.³⁸ Because DOE in the DEIS misrepresents them as it implies they allow it to leave in place more than half a million cubic yards of contaminated soil, reprinting the exceptions from the AOC here may be helpful:

³⁶ DEIS Summary, p. S-19.

³⁷ DEIS Summary, p. S-21.

³⁸ AOC, Appendix B, pp. 1-2.

SUMMARY: The end state of the site (the whole of Area IV and the Northern Buffer Zone) after cleanup will be background (i.e., at the completion of the cleanup, no contaminants will remain in the soil above local background levels), subject to any special considerations specified below.

- Clean up radioactive contaminants to local background concentrations.

Possible exceptions (*where unavoidable by other means*):

- The framework acknowledges that, where appropriate, DOE will engage in an Endangered Species Act (ESA) Section 7(a)(2) consultation with the U.S. Fish and Wildlife Service (FWS) over any species or critical habitat that may be affected by a federal action proposed to be undertaken herein on a portion of the site. Impacts to species or habitat protected under the Endangered Species Act may be considered as possible exceptions from the cleanup standard specified herein *only to extent that the federal Fish and Wildlife Service, in response to a request by DOE for consultation, issues a Biological Opinion with a determination that implementation of the cleanup action would violate Section 7(a)(2) or Section 9 of the ESA, and no reasonable and prudent measures or reasonable and prudent alternatives exist that would allow for the use of the specified cleanup standard in that portion of the site.*

- *The acceptance and exercise of any of the following exceptions is subject to DTSC's oversight and approval, and the resulting cleanup is to be as close to local background as practicable:*

- Detection limits for specific contaminants exceed the local background concentration, in which case the cleanup goal shall be the detection limits for those specific contaminants.

- *Native American artifacts that are formally recognized as Cultural Resources.*

- *Other unforeseen circumstances but only to the extent that the cleanup cannot be achieved through technologically feasible measures.* Under no circumstances shall exceptions for unforeseen circumstances be proposed in excess of five percent of the total soil cleanup volume.

(italics and underlining added³⁹)

³⁹ AOC, Appendix B, p. 1; there are identical exemptions for chemical contaminants on p. 2.

Thus, the only biological exception in the AOC to the requirement to clean up to background is if U.S. Fish and Wildlife Service issues a Section 7 Biological Opinion with a determination that implementation of the cleanup action would violate Section 7(a)(2) or Section 9 of the ESA, and no reasonable and prudent measures or reasonable and prudent alternatives exist that would allow for the use of the specified cleanup standard in that portion of the site. The only cultural exemption is for formally recognized Native American artifacts, and DTSC must approve the exception. And the up to 5% “unforeseen circumstances” exemption also requires DTSC approval and exists only to the extent that the cleanup cannot be achieved through technologically feasible measures. Furthermore, no exception can be applied unless it is demonstrated to be unavoidable by other means and the resulting cleanup is as close to background as practicable. As shall be discussed below, none of the conditions necessary to trigger an exception has been met. In apparent recognition of this, DOE admits that this option, like all the others, is not in compliance with the AOC and for it to go forward, the AOC’s requirements would have to be altered.⁴⁰

a. Proposal to Leave in Place 150,000 cubic yards of soil contaminated with TPHs and PAHs

DOE states that for all alternatives, it will leave in place 150,000 cubic yards of soil contaminated with Total Petroleum Hydrocarbons (TPHs) and Poly Aromatic Hydrocarbons (PAHs).⁴¹ It argues that these will be left in place to “naturally attenuate.” However, the AOC bars consideration of any leave in place alternative.⁴² The AOC expressly states, “No ‘leave in place’ alternatives will be considered.” Note that not only are leave in place alternatives prohibited from being employed, they are barred from even being considered.

DOE says natural attenuation could take up to 70 more years, whereas the AOC required cleanup in just a few years. If DOE did what it proposes, those contaminants would be left in place, available for offsite migration, for a lifetime. Given that the contamination was created as much as seventy years ago, it would thus have been not cleaned up for nearly a century and a half if DOE was able to breach the AOC this way.

But in fact the time period appears far longer. The source DOE cites for the 70 year estimate⁴³ merely refers to another source⁴⁴ for the number and correctly points out

⁴⁰ DEIS p. S-12.

⁴¹ DEIS p. S-21.

⁴² See p. 3, Appendix B, AOC. DOE tries to conflate the prohibition on “leave in place” alternatives with the prohibition on “onsite burial or landfilling of contaminated soil,” but these are separate prohibitions. DOE also appears to try to claim leaving it in place is on-site treatment, but it is of course just the opposite—no treatment at all, just leaving it there.

⁴³ CDM Smith 2015b.

⁴⁴ Nelson, et al. 2014.

that this was based merely on a “Phase I literature search.” In truth, the study relied upon (Nelson, et al. 2014) says the amount of time could be far longer, because the rates of attenuation slow dramatically after the easiest material degrades, which has already long ago occurred, and because site specific conditions of weathering also would tend to prevent degradation. The initial estimates were based on first-order approximations from the literature, but the report said site-specific studies were needed to determine likely attenuation rates at SSFL. As the Nelson, et al. study stated about the first-order estimate of ~70 years:

An important assumption in the above calculations was that the same first-order rate constant would be valid throughout the remediation period. As stated above, there are a couple of reasons this may not be a valid assumption: 1) The more easily biodegraded fractions of the hydrocarbon mixture will biodegrade first, leaving the more recalcitrant compounds towards the end, and 2) some fraction of the hydrocarbons will likely remain sequestered in the soil matrix and unavailable for biodegradation. For these reasons, longer remediation times than those calculated ... may be required at SSFL.

Nelson et al. concluded in that study, “It would be helpful to run microcosm experiments under conditions mimicking those at SSFL to get a better idea of potential biodegradation rates at SSFL.”

Nelson and his team (their studies were performed under contract to DOE) followed up that Phase I literature search with actual tests for SSFL-specific conditions. Those measurements under SSFL actual soil conditions resulted in “essentially no change” in concentrations for any of the unamended samples tested.⁴⁵ Thus, the actual studies prepared for DOE do not support the claim that the TPHs at SSFL can be left to naturally attenuate. But even were the claim of 70-year attenuation periods correct—and they aren’t—leaving the contamination in place for an additional 70 years would violate the AOC and pose continuing risks.

It is important to keep in mind that the DOE-funded Nelson studies were not aimed at natural attenuation but at identifying soil treatment options. The former is barred by the AOC but the latter, if it works effectively and quickly, is allowed. The Nelson studies concluded that natural attenuation wouldn’t work but that more research should be conducted on possible methods of treatment. One of the failures of the DEIS is the failure to adequately address possible treatment methodologies.

The refusal to clean up these 150,000 cubic yards of contaminated soil but rather leave them in place thus violates the AOC’s requirement that “no ‘leave in place’ alternatives will be considered, and they thus should not be considered.

⁴⁵ See Nelson, et al. reports to DOE, DEIS references 296-300.

b. DOE Also Intends To Avail Itself of An Additional Asserted Exception For 5%, or 70,650 Cubic Yards, of The Contaminated Soil Volume, Again Violating the AOC's Very Limited Exceptions

The AOC exception is limited to “unforeseen circumstances but only to the extent the cleanup cannot be achieved through technologically feasible measures” and requires DTSC approval. Remarkably, DOE is asserting now that it *foresees* claiming such *unforeseen* circumstances. DOE argues that deciding not to clean up contamination that is deeper than 5 feet below the surface would be among the requested unforeseen circumstances exception, even though there is nothing unforeseen about contamination being below 5 feet and that exception is limited to matters where cleanup cannot be achieved through technologically feasible measures, so it clearly doesn't apply.

Similarly, DOE's other example of not cleaning up in remote locations doesn't fit the exception, as it is neither an unforeseen circumstance nor is the cleanup not achievable by technologically feasible measures. And there is no showing that the application of the purported exception is unavoidable by other means. Finally, the AOC requires that even if an exception were granted by DTSC, the soil would still have to be cleaned up to as close to background as practicable. Instead, DOE just wants to walk away from cleaning up most or all of it. The DOE claim for “leaving in place” an additional 5% of the 1,413,000 cubic yards of contaminated soil thus violates the AOC in multiple ways.⁴⁶

c. DOE's Biological Features Exemption Claim Violates the AOC

DOE states that also for all alternatives, it will leave in place an additional 330,000 cubic yards of contaminated soil pursuant to what it implies are AOC exceptions for biological factors and cultural features.⁴⁷ However, the biological exception only occurs if the United States Fish and Wildlife Service (USFWS) issues a Biological Opinion that finds that the particular cleanup in a particular SSFL location would violate Section 7(a)(2) or Section 9 of the Endangered Species Act and no reasonable and prudent measures or reasonable and prudent alternatives exist that would allow for the use of the specified cleanup standard in that portion of the site, and the exception is unavoidable by other means.

No such USFWS Biological Opinion has been issued. The AOC exception does not apply.

And we note that the agency did issue a Biological Opinion a few years ago for EPA's intrusive radiation survey work that involved cutting back much of the vegetation

⁴⁶ The DEIS does not clearly spell out whether DOE intends to apply the 5% carve-out just for this alternative or for all. In the absence of DOE ruling it out, we here assume the 5% additional leave-in-place volume as part of the upper limit for all the DEIS cleanup alternatives.

⁴⁷ DEIS, p. S-21.

in the area.⁴⁸ USFWS approved, indicating in part that the activity would actually be helpful to the natural species by making possible cleanup of the environmental contaminants. The Biological Opinion further indicated that soil disturbance often helps the Braunton milkvetch, a federally listed species, but in any case measures such as tagging and avoiding plants or storing seeds and reseeded thereafter could be undertaken. The Biological Opinion concluded, further, that even were there a loss of a great majority of the Braunton milkvetch at Area IV and the NBZ, “adverse effects caused by this project will not occur throughout a significant portion of the range of the species (only plants in approximately 2 percent of the range of Braunton’s milkvetch would be affected by the project).” But in any case, mitigation measures can be undertaken.

DOE is attempting to get out of remediating the damage to the environment it has caused by decades of pollution by saying it now wants to protect biological features by not cleaning up the radioactive and toxic chemicals with which it contaminated them.

Further, the DEIS asserts that the contamination is concentrated around certain facilities.⁴⁹ But the biological features were long ago scraped away by DOE to construct those facilities; it is not pristine land, even leaving aside the contamination. Somehow, after decades damaging the SSFL land with radioactivity, toxic chemicals, and intensive industrial activity, suddenly DOE now claims that it shouldn’t have to live up to its commitments to remediate the damage it has done to those very biological resources.

Perhaps in recognition that the AOC’s narrow exception has not been met, DOE has tried to confuse the issue by speaking in the DEIS in broad terms about “conserving biological resources.” But that, of course, is not the actual AOC exception.

The DEIS lists nine federally and state-listed plant species, but then goes on to admit only two of them are known to exist in Area IV and the NBZ. DEIS p. 3-63. And DOE in the DEIS has tried to conflate the AOC exception, which is limited to a USFWS Biological Opinion barring a specific aspect of the cleanup as violating ESA, into a misleading effort to get the California Department of Fish and Wildlife (CDFW) to support DOE’s efforts to avoid complying with the AOC cleanup requirements.

On September 12, 2016, DOE wrote to CDFW misleadingly asserting that the AOC had a generic exemption for protection of biological resources and “to employ an exemption, DOE requires the opinion of the California Department of Fish and Wildlife that an exemption to the AOC soil cleanup is critical for protection of the species.”⁵⁰

⁴⁸ Biological Opinion for the Santa Susana Field Laboratory Area IV Radiological Study Project, Ventura County, California [EPA Contract # EP-S7-05-05] (8-8-10-F-12), May 25, 2010.

⁴⁹ DEIS, p. S-1.

⁵⁰ Letter from DOE’s John Jones to CDFW’s Mary Meyer, September 12, 2016, including Attachment A, “Supporting Analysis, Effects of Soil Remediation on Santa Susana Tarplant (*Deinandra minthornii*) in SSFL Area IV, August 25, 2016.

DOE attached a very misleading document, purporting to show that there is no health risk whatsoever from not cleaning up the site and supposed extreme risk to the tarplant if it is. (The tarplant is not a federally listed species at all, and is not listed by the state as endangered or threatened, but is identified as rare.) Note that CDFW would have no way of knowing that the AOC exception is restricted to a specified narrow finding in a Biological Opinion by the *U.S.* Fish and Wildlife Service, not the CDFW, and that the standard DOE suggests is also far broader than that contained in the AOC.

Intriguingly, the DOE submission to CDFW indicates that the tarplant has thrived in formerly developed areas at SSFL where facilities were removed followed by interim restoration. It is conceded that the tarplant grows in previously disturbed areas (“including cracks in paved areas”) and that “Boeing has had success at getting Santa Susana tarplant to reestablish at sites where soil has been removed as part of remediation.” Area IV and the NBZ contain about 850 plants total, or about 2 per acre; it estimates an average of only about 13 plants per acre it proposes as exemption areas in Area IV. Clearly one could simply work around those few plants if one wished.

The core of the DOE assertions to CDFW is the claim that “With exceptions, these exceedances of LUT values are at a low level and do not warrant cleanup when human health and ecological receptor Risk Based Screening Levels (RBSLs) are used to determine where potential soil cleanup may occur.” This statement, as will be shown in detail later, is false. DOE used human health RBSLs that are orders of magnitude higher (less protective) than the true RBSLs, and if it left the contamination in place as it proposes, the risks would far exceed human health RBSLs. And nowhere in the DEIS is there an analysis of the contamination compared to the ecological RBSLs. In fact, the cleanup standards DOE now proposes are also orders of magnitude higher than the ecological RBSLs.

In other words, in the guise of trying to protect biological features, DOE proposes to walk away from its obligation to clean up the radioactive and chemically toxic pollution with which it contaminated those features, and leave behind concentrations far above the established Risk Based Screening Levels for ecological receptors, let alone for human health.

None of this was explained to CDFW by DOE. On the day DOE issued the DEIS, DTSC’s Director Barbara Lee wrote to DOE Assistant Secretary Regalbuto expressing significant dismay about DOE’s misleading approach to CDFW, asserting that it was essentially violating the AOC.⁵¹ DTSC stated,

We are concerned that DOE is proposing cleanup actions inconsistent with the Administrative Order on Consent (AOC) between DOE and the Department of Toxic Substances Control (DTSC), and is basing these proposals on assumptions unsupported by needed data and analysis.

⁵¹ January 6, 2017, DTSC letter “Initial DOE Assessments Related to the Santa Susana Field Lab Cleanup.”

First, and most importantly, we note that it appears DOE is proposing cleanup approaches that fail to fully recognize the AOC provisions that apply to sensitive plant and animal species located at SSFL. These provisions allow limited exceptions to cleanup activities to safeguard protected species. As you know, DTSC is committed to implementing and enforcing the AOC. DTSC requests DOE to discontinue early consultation until we can discuss with DOE and CDFW how the requirements of the AOC apply to this process.

Second, DTSC is concerned that DOE may not have supported its initial assessments of key issues with sufficient data and analysis.

Further, it does not appear that DOE has analyzed individual, location-specific approaches to minimizing and mitigating potential impacts to the Tar Plant and other sensitive habitat and resources consistent with the AOC.

We are also concerned that this consultation has been initiated without sufficient discussion with DTSC.

In sum, DOE is attempting to claim a biological exception for which it does not qualify. That exception is only triggered by a USFWS Section Biological Opinion finding a proposed cleanup action on part of the property to violate specified sections of the ESA, with no reasonable and prudent measures or reasonable and prudent alternatives that would allow for the use of the specified cleanup standard in that portion of the site. No such USFWS Biological Opinion exists. No such showing of the unavailability of mitigation measures has been made by DOE. Cleaning up the radioactive and toxic damage DOE did to the SSFL environment would help biological features in the long run, not harm them.

The proposed exemption areas in the DEIS include some of the most contaminated areas on the property—for example, the SRE, site of the partial meltdown, and the burnpit.⁵² These areas are the opposite of pristine natural areas, and it is troubling that DOE would attempt to claim a biological exception for which it does not qualify under the AOC as a way of avoiding cleaning up among its biggest toxic impacts.

d. Cultural Features Exemption Claim

Additionally, the DEIS asserts an exemption that it describes as for cultural features, but the AOC exception is limited to Native American *artifacts* that have been

⁵² DEIS, p. 2-23.

formally recognized. *The DEIS discloses in an appendix, however, that there are no formally recognized Native American artifacts in Area IV or the NBZ.*⁵³ Like its attempt to expand the narrow exception for a USFWS Biological Opinion to a shotgun set of claims about biological features generally, DOE similarly tries to inflate the narrow exception for formally recognized Native American *artifacts* to cover far broader claims not allowed under the AOC. Furthermore, this exemption is not in DOE's purview to declare; according to the AOC, DTSC must decide whether it is to be used. Again, DOE leaves out the fact that these decisions are not its to make.

A study performed by DOE for site cleanup found three small rockshelters and one bedrock mortar in Area IV, ineligible for formal recognition:

*Due to their failure to satisfy the criteria of inclusion, these four sites have been determined not eligible to the National Register of Historic Places. Based on this determination, the proposed closure and remediation program is determined to have no effect.*⁵⁴

A subsequent cultural features survey performed for the USEPA radiation survey identified some additional rockshelters and similar features and isolated small artifacts such as the mano stone, a few inches across, pictured below. These were flagged and either avoided during the survey or carefully collected and then returned to their original location, which could be done as well during the cleanup.⁵⁵



mano stone, source: DOE DEIS Ref. 465 (Corbett 2012)

What artifacts have been found – although none is formally recognized—have generally been quite small and isolated, whereby one can readily work around them or, as was done in the EPA survey, carefully collect and then return them. There is no basis, as

⁵³ Appendix F, F-16.

⁵⁴ W&S Consultants, *Class III Inventory/Phase I Archaeological Survey of the Santa Susana Field Laboratory, Area 4, Ventura County, California*, September 24, 2001 This reference is cited in the DEIS (reference 502) but the DOE link to it takes one to a statement that DOE is not making it available. We found it elsewhere.

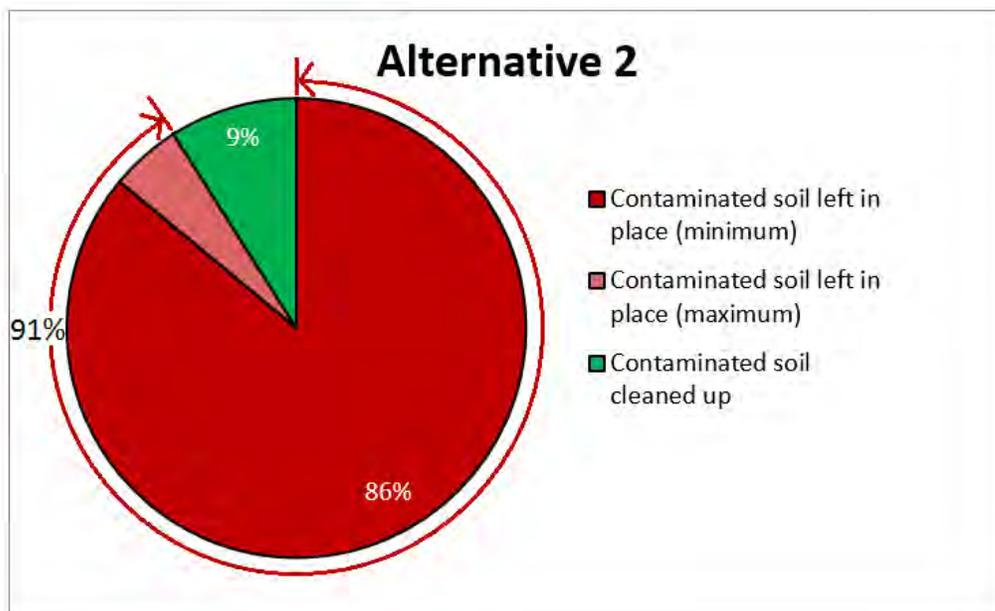
⁵⁵ DOE DEIS Ref. 465 Corbett 2012.

DOE has done, to propose exempting a vast amount of the contamination from cleanup because of isolated small artifacts, which can be fully protected while also allowing the site to be returned to its natural state before DOE polluted it.

DOE states it will include a USFWS Biological Opinion, if issued, and information on cultural exemptions in the final EIS. Similarly, DOE suggests post-DEIS cultural feature efforts to declare exceptions based on future cultural feature considerations. But that of course prevents public review and comment in the NEPA process, amounting to a game of hide the ball. DOE has had years, indeed decades, to have obtained the Biological Opinion and any necessary Native American artifacts consideration, and its delay in doing so impermissibly shields from NEPA review the basis for cleanup exemption claims. One notes that EPA was able to timely obtain its USFWS Biological Opinion and its cultural features review for its activities at Area IV and the NBZ, and that neither Opinion indicated that the activity would cause an unacceptable impact and could be readily conducted in a way that was acceptable. DOE's efforts to exempt 330,000 cubic yards of contaminated soil from cleanup for purported biological and cultural reasons violates the narrow AOC exceptions and is unsupported upon careful examination.

Thus, Alternative 1 breaches the AOC and would, despite the prohibition on "leaving in place," leave in place 34-39% of the contamination. None of the exceptions that DOE cites are currently met.

2. Alternative 2 – Leave in Place 86-91% of the Soil Contamination



DOE characterizes this alternative as using alternative Lookup Table (LUT) values, alternative to those required by the AOC. As such, it is a direct violation of the AOC. The AOC requires cleanup to LUT values established by DTSC based on

background and detection limits. It is not up to DOE to set these values; it is solely DTSC's authority, pursuant to the AOC. Once again, DOE in its DEIS is usurping the authority of its regulator, DTSC, about a matter not in DOE's purview, and attempting to adopt cleanup values that violate the AOC.

The cleanup standards DOE now puts forward in this alternative violate the AOC, the 1995 Joint Policy with EPA, and longstanding DTSC and EPA guidance.⁵⁶ DOE estimates under this option, only 192,000 of the 1,413,000 cubic yards of contaminated soil would be cleaned up (leaving 86% in place). With the additional 5% exemption they are improperly assuming, but not including in the total, that means up to 91% could avoid cleanup.⁵⁷

The alternative LUT cleanup levels DOE proposes are orders of magnitude more lax than the AOC LUT values, as can be seen by comparing the AOC LUT values and the DOE proposed alternative RBSLs in Table D-3 of the EIS.⁵⁸ The thyroid disrupter perchlorate, for example, is supposed to be cleaned up to levels of 1.63 micrograms per kilogram. That is what DOE promised to do. Now it wants to leave concentrations as high as 53,300 micrograms/kg. That is 32,700 times higher. Dioxins, an extraordinarily toxic group of chemicals (2,3,7,8-TCDD TEQ) have a LUT value of 0.912 picograms/gram under the AOC. DOE instead wants to not have to clean the dioxins up until they reach a level of 4800 — more than 5000 times higher. Acenaphthene has an AOC LUT cleanup value of 2.5 microgram/kg; DOE wants to not clean it up until the level reaches 3,230,000, more than a million times higher.

⁵⁶ See, e.g., Land Use in the CERCLA Remedy Selection Process, EPA OSWER Directive 9355.7-04, and DTSC Response to Comments on Agreements in Principle, p. 11-12.

⁵⁷ As indicated above, the DEIS is not clear about whether DOE proposes to use the 5% purported "unforeseen circumstances" additional exemption for all three alternatives. This should be clarified.

⁵⁸ DEIS Table D-3, pp. D-8-11.

Here are a few more examples:

DOE Proposed Cleanup Level in EIS VS. AOC levels

Chemical	DOE Proposed Cleanup, Supposed Suburban Residential RBSL (mg/kg)	AOC Levels (mg/kg)	How much more of each chemical does DOE propose to leave? (Compared to AOC)
Bis(2-ethylhexyl)phthalate	173	0.061	2,836 times more
Naphthalene	14.6	0.0036	4,055 times more
2-Methylnaphthalene	162	0.0025	64,800 times more
Methylmercury	7.61	0.00005	152,200 times more
Pyrene	1650	0.0056	294,643 times more
Flouranthene	2,200	0.0052	423,076 times more
Benzo(g,h,i)perylene	1,650	0.0025	660,000 times more
Phenanthrene	16,400	0.0039	4,205,128 times more
Anthracene	16,400	0.0025	6,560,000 times more

A complete comparison of AOC LUT cleanup values for the more than one hundred toxic chemicals found to be elevated at SSFL Area IV and NBZ versus the levels DOE proposes to be permitted to leave behind is attached hereto.

DOE claims that under this alternative, it would clean up the chemical contaminants to what it purports is a risk-based standard. The standard it says it would use are Risk Based Screening Levels that it says are specified in the DTSC-approved Standardized Risk Assessment Methodology (SRAM). DOE in the DEIS claims the SRAM mandates the use of a suburban residential standard and that that is what DOE proposes to use in this alternative. Both assertions are incorrect. The SRAM does not mandate the use of the suburban residential standard as opposed to a more conservative rural residential standard. Furthermore, the RBSLs that DOE says it wants to use even for the suburban residential scenario are thousands of times less protective than the suburban residential RBSL in the SRAM.

The SRAM includes RBSLs for several scenarios, including not just the suburban but also the rural residential one. Generally, the latter would be the most protective standard, as it includes the greatest exposure. Under EPA and DTSC practice, one is to clean up to the exposure scenario that produces the greatest risk and which is allowed under current County zoning and General Plan designations.⁵⁹ As DTSC described the process⁶⁰:

⁵⁹ See, e.g., Land Use in the CERCLA Remedy Selection Process, EPA OSWER Directive 9355.7-04, and DTSC Response to Comments on Agreements in Principle, p. 11-12.

One of the primary assumptions that these calculations rely upon is the land use. The Superfund process requires the assumption to be based upon the reasonably anticipated land use. *The local government General Plan land designations and local zoning designations are the most reliable expressions of prospective land use.* OSWER Directive No. 9355.7-04 .“Land Use in the CERCLA Remedy Selection Process,” May 25, 1995, p. 2, 4-5. *DTSC and U.S.EPA, in implementing the Superfund process, defer to local governments’ land use plans and zoning decisions, and base their cleanup level calculations on the assumption that the land will be used as the land use requirements would allow, irrespective of its current use.*

(emphasis added)

As DTSC said in 2010, its normal practice, even if there were no AOC or site-specific law, would be to require SSFL to be cleaned up to the rural residential/agricultural standard because that is what the site is zoned for and allowed under the General Plan:

Even absent SB 990 [an SSFL-specific statute], DTSC, in implementing its cleanup authorities, would defer to local governments’ land use plans and zoning decisions. In this instance, the Ventura County zoning maps specify that the site and much of the surrounding area are currently zoned as rural agricultural. Carrying out the cleanup specified in the Agreements in Principle is consistent with both SB 990 and with local land use decisions.

(emphasis added)⁶¹

DTSC after analyzing various contaminants at SSFL, stated that such a cleanup using its standards for all sites in the state, i.e., relying on local land use designations, would result in a cleanup at SSFL essentially equal to a cleanup to background.⁶² Thus, a genuine risk-based cleanup would be the same as the AOC, whereas what DOE puts forward would leave on the order of 90% not cleaned up.

Ventura County in 2015 confirmed for DTSC that its land use designations for the property allow a wide range of residential (e.g., with gardens) and agricultural (rural residential) uses.⁶³ Thus, were there no AOC, any risk-based cleanup would have to be to the most protective of those exposure scenarios.

⁶⁰ DTSC Response to Comments, *supra*.

⁶¹ *id.*, p. 21.

⁶² *id.* pp. 14-17.

⁶³ Letter of July 20, 2015 from Kimberly L. Prillhart, Director, Ventura County Planning Division, to Mark Malinowski, DTSC.



Cow on SSFL Area IV source: *William Preston Bowling*



Cows grazing near Area IV⁶⁴ source: *William Preston Bowling*

⁶⁴ The agricultural cleanup standards are designed to assure that, for example, cows are not grazing on grass growing in contaminated soil, so that those who drink the milk and eat the meat are not put at risk.

Throughout the DEIS, DOE claims it is using the suburban residential RBSLs from the DTSC-approved SRAM. However, buried in a footnote, DOE concedes it isn't using even the suburban residential standard, but only one aspect of a standard, not the standard *in totem*. Specifically, DOE, for its own purposes that are not identified, avails itself of only the direct contact aspect of the standard (e.g., getting some soil on your hand), and does not include the part of the suburban residential standard that is associated with exposure from consumption from backyard fruit trees or vegetable garden.⁶⁵ The backyard garden part of the suburban residential scenario is required to be included, barring some extraordinary situation (e.g., where soil conditions prevent anything growing).⁶⁶ DOE claims it is using only the direct contact part of the suburban residential scenario and excluding the backyard garden part per the SRAM. But the SRAM doesn't say that. In fact, it requires calculation of the backyard garden part of the risk and provides RBSLs for that component of the suburban residential standard.⁶⁷ Indeed, DTSC has recently directed Boeing that the backyard garden part of the suburban residential exposure pathway must be incorporated.⁶⁸

The significance of DOE claiming it is using a suburban residential standard but in fact using a standard that excludes the key component of that standard is that the RBSLs it purports are the suburban residential RBSLs are, for many chemicals, hundreds or thousands of times less protective than the actual suburban residential RBSL from the DTSC-approved SRAM. Here are a few examples (a complete comparison table is attached hereto).

⁶⁵ See fn 32, p. S-21. (Note that it misrepresents the backyard garden scenario as requiring 100% of one's fruits and vegetables from the garden.)

⁶⁶ See, e.g., EPA's Preliminary Remediation Goals for radionuclides, <https://epa-prgs.ornl.gov/radionuclides/>

⁶⁷ Final SRAM, Rev. 2 Addendum, August 2014, , pdf pp. 1071- 1074 It also provides RBSLs for rural residential/agricultural exposures.

⁶⁸ Letter of August 23, 2016, from DTSC's Roger Paulson to Michael Bower of Boeing p. 3.

DOE Proposed Cleanup Level in EIS, Supposed Suburban Residential RBSL VS. True Suburban Residential RBSL with Garden

Chemical	DOE Proposed Cleanup Level in EIS, Supposed Suburban Residential RBSL (mg/kg)	True Suburban Residential RBSL with Garden (mg/kg)	How much more of each chemical does DOE propose to leave? (Compared to Suburban Residential RBSL with Garden)
Mercury	16.8	0.0504	333 times more
Methyl Mercury	7.61	0.00131	5809 times more
Cadmium	4.6	0.00165	2787.9 times more
Perchlorate	53.3	0.0158	3373.4 times more
Acenaphthene	3230	18.7	172.7 times more
Antimony	26.4	0.139	189.9 times more

Because a RBSL is defined as the concentration that will produce a cancer risk of one in a million or a hazard index of 1 for non-cancer risks, the right-most column above also tells one how many times above the risk goal DOE’s desired standards are. In other words, DOE promised that its cleanup alternatives would leave behind a one in a million cancer risk and an acceptable risk from other health effects, but in fact its proposed standards would result in risks hundreds or thousands of times higher.

In addition to trying to adopt cleanup standards orders of magnitude higher than the promised AOC LUT values or even true suburban residential risk-based levels, DOE has used these grossly inflated RBSLs to eliminate completely from any cleanup 98 of the 116 toxic chemicals found contaminating its property – without explicitly disclosing so. Table D-3 of the DEIS gives LUT and purported RBSL values for 116 toxic chemicals, but in Table D-4, DOE shrinks the list of contaminants of concern for which there are cleanup levels under its alternative 2, “alternative LUT values,” to 18. The source from which Table D-3 is taken, CDM Smith 2017, identifies more than a hundred hazardous chemicals detected in Area IV and the NBZ at levels in excess of LUT values, i.e., contamination above background. Yet what DOE has quietly done is thrown out all chemicals that exceed LUT values but are below its purported RBSL values, which, as we have seen, are hundreds or thousands of times higher than true suburban residential RBSL values. In short, in alternative 2, DOE proposes to clean up only 18 of 116 contaminating chemicals, and for those that will be considered for cleanup, do so only if they reach levels orders of magnitude higher than the promised AOC LUT values or true suburban residential RBSLs, which includes a garden.⁶⁹

⁶⁹ We note that DOE is not even clear that it will clean up contamination that reaches the astronomical levels it purports are suburban residential RBSLs. Instead, it merely says a “cleanup decision” would be made if contamination is found over those levels.

DOE has no logical reason for the hidden exclusion of the backyard garden portion of the risk-based screening level, nor for excluding the agricultural/rural residential standards. For this alternative DOE states it would use the AOC LUT values for radionuclides but not for chemicals, with no rationale.⁷⁰ For chemicals, DOE proposes far less protective cleanup standards than required by the AOC LUT values. DOE states that for chemicals it will assume suburban residential exposures, but then excludes the garden component of the suburban residential standard. In support for this arbitrary exclusion, DOE states that Boeing wants to use the suburban residential standard without a garden for other portions of the site, citing to a letter in response to a letter by LA Supervisor Kuehl, LA City Councilmember Englander, and then-Senator Pavley to DTSC Director Lee (DOE includes the Boeing letter but not the electeds' letter to which it purportedly responds).⁷¹ But it is DTSC that decides Boeing's cleanup levels, not Boeing, and DTSC has told Boeing it cannot exclude the backyard garden part of the suburban residential standard but must include it in the total risk.⁷² And further, DTSC has said that in the establishing of cleanup levels it defers to local zoning and General Plan designations, which allow both suburban residential with a garden and agricultural/rural residential uses, as discussed above. There is thus no basis, even were it not bound by the AOC, for DOE to propose cleanup that wouldn't meet the agricultural/rural residential standard, nor the suburban residential standard with garden.

DOE, a Responsible Party (RP) under DTSC regulation, is relying on another Responsible Party's cleanup wish, when it is up to neither RP, but to the regulator. And the regulator's requirements are cleanup based on land use designations by the County, which allows agricultural/rural residential uses and also suburban residential with a garden.

DOE claims Boeing has stated that its desire is to place restrictions on the property [in perpetuity?] so it cannot be used for residences, backyard gardens, etc., but rather for open space. But DTSC and EPA procedures don't allow the Responsible Parties to avoid of cleanup obligations by declaring the property too contaminated for unrestricted use. If that were allowed, every polluter would simply do so and walk away from their obligation for cleanup. It is local land use authorities that determine what uses are allowable and thus, under regulator procedures, what cleanup standards apply.

Furthermore, DOE states in the DEIS that, despite Boeing's stated desire for the land to be open space, that couldn't be counted on, and for that reason, DOE would assume residential uses could occur and would set RBSLs accordingly. It is thus completely contradictory to assume a residential exposure scenario and then exclude a backyard garden on the grounds that Boeing says it intends to place restrictions so that it can't be used for residences or gardens. The Responsible Parties here don't get to have it both ways.

⁷⁰ DEIS, p. S-30.

⁷¹ *id.*, p. 2-13, citing letter dated December 15, 2015.

⁷² Aug 23, 2016 ltr., *supra*.

Further, it is important to recall that a main reason for cleaning up SSFL is to protect the people who live or engage in agriculture nearby. Many of the homes have gardens; and cows graze now on contaminated grass next to and on the site. Someone drinks that milk, eats that meat. Even were SSFL restricted in its future use to non-residential or non-agricultural activity,⁷³ the people living near it and subject to exposure to the migrating contamination are not.

Therefore, using cleanup standards based on suburban residential use with no garden, standards hundreds or thousands of times less protective than the true RBSLs for suburban residential with garden, puts at risk people who live nearby and who do have gardens, and all the agricultural uses. Even were there never a residence on SSFL, leaving contamination thousands of times the true suburban residential RBSL could mean that migration, even with possible reduction of concentrations,⁷⁴ could result in unacceptable exposures to the people nearby.

DOE's Alternative 2, which could leave in excess of 90% of the contamination in place, obviously violates the AOC. But even in the absence of an AOC, it also violates DTSC's procedures for risk-based cleanups, which are to rely on local government's land use designations.

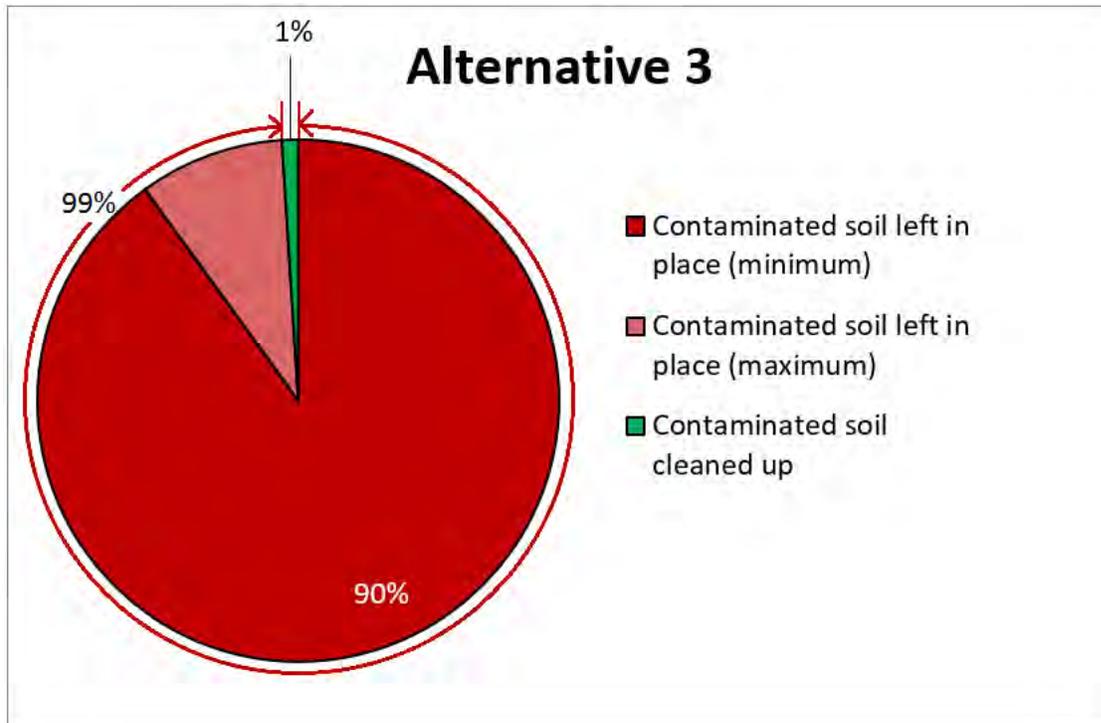
Additionally, Alternative 2 violates the DOE-EPA 1995 Joint Policy requiring cleanup of all DOE sites, whether they are on the National Priority List or not, to EPA's CERCLA guidance. The relevant guidance similarly relies on local government land use designations.⁷⁵ Interestingly, the stated intentions of the Responsible Parties (i.e. the polluters) for how they would want to restrict the land to avoid more protective cleanup obligations is not one of the factors identified in EPA guidance to be considered.

⁷³ Furthermore, institutional controls cannot be relied upon when institutions can be counted on to exist for only a fraction of the time over which the toxic materials are dangerous. See, e.g., Hirsch, *50 Years of Power, 500,000 Years of Waste*, December 20, 2013, in U.S. Nuclear Regulatory Commission docket for Waste Confidence Rule and Generic EIS, NRC-2012-0246.

⁷⁴ For example, a ten-fold dilution factor would still result in hundreds of times the risk based level for residences. And there is nothing to guarantee that contaminants wouldn't concentrate offsite; e.g., where they tend to accumulate in sediments.

⁷⁵ "Land Use in the CERCLA Remedy Selection Process," EPA OSWER Directive 9355.7-04.

3. Alternative 3 – 25 Millirem/yr for Radiation, and Averaging Chemical and Radioactive Contamination Over Wide Areas, Leaving in Place 90-99% of the Contaminated Soil, Not Cleaned Up



This alternative, which would leave from 90% to as much as 99% of the contamination not cleaned up, is cynically referred to by DOE as the *Conservation of Natural Resources* alternative.⁷⁶ After polluting those natural resources for sixty years,

⁷⁶ DOE estimates in the DEIS (p. S-33, S-39) that this alternative involves cleaning up 148,000 cubic yards of soil, out of the 1,413,000 cubic yards it estimates are contaminated, thus leaving about 90% not cleaned up. The DEIS, however, indicates that this option involves the As Low As Reasonably Achievable (ALARA) principle, in which DOE will decide whether to clean up 44,000 cubic yards of soil contaminated above AOC LUT limits. It is not clear from the DEIS whether the 148,000 cubic yard estimate presumes cleanup of all, or none of the 44,000 cubic yards (i.e., whether the baseline is 104,000 cubic yards with up to 44,000 cubic yards of additional soil perhaps cleaned up pursuant to ALARA). Further complicating the matter is that DOE has included the same 44,000 cubic yard figure in two different places in the table in question, on p. S-39, making it uncertain which group of contaminated soil it is identifying for prospective ALARA analysis. In practice, ALARA rarely results in additional cleanup. If the correct estimate is 148,000 cubic yards, that represents an alternative in which 90% is not cleaned up. (Because of the unclear language in the DEIS regarding the ALARA matter, we have assumed the minimum cleaned up is the figure the DEIS reports of 148,000 cubic yards). If the 5% “unforeseen circumstances” exceptions DOE claims for Alternative 1 is also claimed for Alternative 3, that would

DOE purports to “protect” them by not remediating the toxic and radioactive damage it has done.

This alternative would violate the AOC, DTSC requirements, and the 1995 EPA-DOE Joint Policy. It involves cleaning up the radioactivity to a supposed dose of 25 millirem per year. That is the equivalent of a dozen unnecessary chest X-rays per year, or one a month from the moment of conception to the moment of death. EPA has long declared that dose to be “non-protective” and bars its use under its CERCLA guidance.⁷⁷

But this proposed DOE standard is even worse than it sounds at first. Because DOE in the DEIS calculates the dose based on suburban residential *without* a garden, and since the garden produces hundreds to thousands of times higher risk than the suburban residential without a garden, the true dose for the standard required suburban residential exposure scenario would be thousands of chest X-rays annually.

EPA has a Dose Compliance Calculator by which one can calculate the dose received by a member of the public in a suburban residential exposure scenario. DOE has proposed for this alternative allowing, for example, an astronomical 1200 pico-curies of strontium-90 per gram of soil (1200 pCi/g). EPA’s actual risk-based Preliminary Remediation Goal for Sr-90 is 0.0036 pCi/g, 330,000 times lower (more protective). According to the EPA Dose Compliance Calculator, the cleanup level of strontium-90 DOE is proposing for a suburban resident would produce a dose, not of 25 millirem/year, but an astounding 1540 millirem per year. That is the equivalent of 770 chest X-rays a year, about two a day from conception on, for decades. We urge that DOE not suggest this is a reasonable exposure for the public.

The situation is even worse for other radionuclides. The plutonium-239 cleanup level DOE proposes for this alternative, 640 pico-curies per gram, is 104,065 times higher than EPA’s PRG for Pu-239, which is 0.00615. EPA’s Dose Compliance Calculator estimates a dose of 4,220 millirem/year from the DOE proposed cleanup level, the equivalent of 2,110 chest X-rays per year, nearly six a day, for decades.

leave 95% not cleaned up. And if the 44,000 cubic yard figure for ALARA is the one from the furthest right column in the table on S-39, then as much as 98 or 99% of the contamination would be left in place, taking into account uncertainties of measurements and estimates. Even if Alternative 3 resulted in “only” 90% not cleaned up, that would still be an extraordinary breach of the AOC and of the necessity to protect the public health and ecological features.

⁷⁷ EPA, “Radiation Risk Assessment at CERCLA Sites: Q&A,” OSWER 9285.6-20, June 13, 2014; see p. 28. Dose is not to be used at CERCLA sites as a cleanup standard unless there is an Applicable or Relevant and Appropriate Requirement (ARAR) that is at a substantially lower dose; if there is no such ARAR (and only Maine has one), one is to not use dose and to use CERCLA’s process of aiming for a one in a million risk, which is roughly equivalent to a few hundredths of a millirem per year.

Radiation Dose from DOE SSFL Clean-up Levels

source: EPA Dose Conversion Calculator

Radionuclide	EPA estimated dose for DOE proposed cleanup level (mrem/year)	How many CHEST X-RAYS would DOE levels be per year?
Nickel -59	5,290	2,645
Strontium-90	1,540	770
Americium -241	2,180	1,090
Plutonium -239	4,220	2,110
Thorium -232	3,330	1,665

Comparing DOE’s Alternative 3 proposed cleanup levels for radioactivity for a supposed suburban residential standard against EPA’s preliminary remediation goals (PRGs) for suburban residential exposure shows the extraordinary increases DOE proposes. As indicated above, DOE’s strontium-90 proposed cleanup level is more than 330,000 times higher than EPA’s PRG for suburban residential exposure; for plutonium-239, they are proposing a cleanup level more than 100,000 times higher than the EPA PRG.

DOE SSFL Clean-up Levels vs. EPA Preliminary Remediation Goals (PRGs)

Radionuclide	Department of Energy (DOE) Levels (pCi/g)	Environmental Protection Agency (EPA) Levels (pCi/g)	How much higher is DOE than EPA?	What’s the cancer risk?
Strontium-90	1,200	0.0036	332,410	28%
Plutonium -238	700	0.00178	393,258	33%
Plutonium -239	640	0.00615	104,065	10%
Uranium -238	240	0.00176	136,364	13%

Using EPA's PRG calculator set to estimate cancer risk at the concentrations DOE proposes, the estimated risk for strontium-90 is 28% -- a bit more than every fourth person on average would get a cancer from the radiation exposure. That is in addition to their regular cancer risk. For plutonium-238, the additional risk is every third person getting cancer from the exposure.

EPA aims for a one in a million risk, and DOE says in the DEIS that that is what its proposed cleanup levels would produce. But that clearly is not the case. The risks associated with their proposed cleanup levels are hundreds of thousands of times higher than the promised risk level, and far outside EPA's and DTSC's acceptable risk range.

Further, (and indeed, plaintiffs find this wearying), this proposed alternative is even worse than just described. EPA guidance provides that one should not average contamination across areas for exposure scenarios such as residential where the exposure is non-random, for the obvious reason that someone can be exposed to high levels of contamination in one place even though another place is lower.⁷⁸ Yet DOE states for this alternative it will average the contamination across areas, resulting in high levels of contamination in one place not getting cleaned up.⁷⁹ So, if contamination existed in one location at the immense concentrations DOE is proposing for its cleanup standard, it still wouldn't get cleaned up, because DOE proposes averaging the contaminated soil with less contaminated soil elsewhere. This also violates the 1995 Joint Policy, as well as the AOC, which bars averaging.

DOE claims that the excess cancer risk from any of the alternatives would be trivial, one in a million (10^{-6}).⁸⁰ The true risk would be greatly higher, because DOE is uses RBSLs that are a thousand times weaker than true suburban or rural residential RBSLs, leaves out the garden or the rural residential standard entirely, and then weakens them further by averaging elevated concentrations in one location with lower concentrations elsewhere.

To show how extraordinarily high the risks would be, note that Boeing did risk assessments for parts of Area III, which borders DOE's Area IV, and concluded that risks

⁷⁸ EPA, Radiation Risk Assessment at CERCLA Sites: Q&A, June 13, 2014, OSWER 9285.6-20.

⁷⁹ The DEIS indicates that this averaging would be over the entire NBZ, or over subareas in Area IV, which are tens of acres. See. p. 2-33, 3-108 - 3-111. The NBZ itself is 182 acres and Area IV is 290 acres. *Final Radiological Characterization of Soils Area IV and the Northern Buffer Zone Area IV, Radiological Study, Santa Susana Field Laboratory, Ventura County, California*, prepared by HGL for USEPA, December 12, 2012, p. 1-1.

⁸⁰ Elsewhere in the DEIS, DOE suggests it wouldn't clean up to its proposed RBSLs, but merely use them for making cleanup decisions, indicating it might then leave contaminants behind at up to several hundred times the RBSL. Further it indicates that when multiple contaminants are present, it would leave them not cleaned up, instead of using the "sum of the fractions" rule normally applied when there are multiple contaminants. These matters are of concern and should be clarified.

for the suburban residential scenario would be as high as 96 cancers produced per 100 people exposed, essentially a million times higher than DOE is claiming just on the other side of the boundary, by using its various improper weakening factors.⁸¹ Even after cleaning up to the standard DOE is proposing for Alternatives 2 and 3, suburban residential without garden, Boeing estimates remaining risks a thousand times higher than the one-in-a-million level claimed by DOE, which is far outside EPA’s risk range that DOE is supposed to be following.⁸²

DOE attempts to characterize Alternative 3, which involves taking no steps to clean up the great majority of environmental damage it caused at SSFL, as “Conservation of Natural Resources.” What is remarkable is that the DEIS nowhere actually compares its proposed cleanup standards to the actual Ecological Receptor Risk Based Screening Levels (EcoRBSLs), established by DTSC in the SRAM. When one does so, the results are stark: the cleanup levels proposed by DOE exceed the EcoRBSLs by orders of magnitude. In other words, in the guise of protecting natural resources, DOE proposes to leave behind, uncleaned up, toxic materials at levels far in excess of the levels considered a risk to biological species.

Here are a few examples (the more detailed analysis is in the attached spreadsheet).

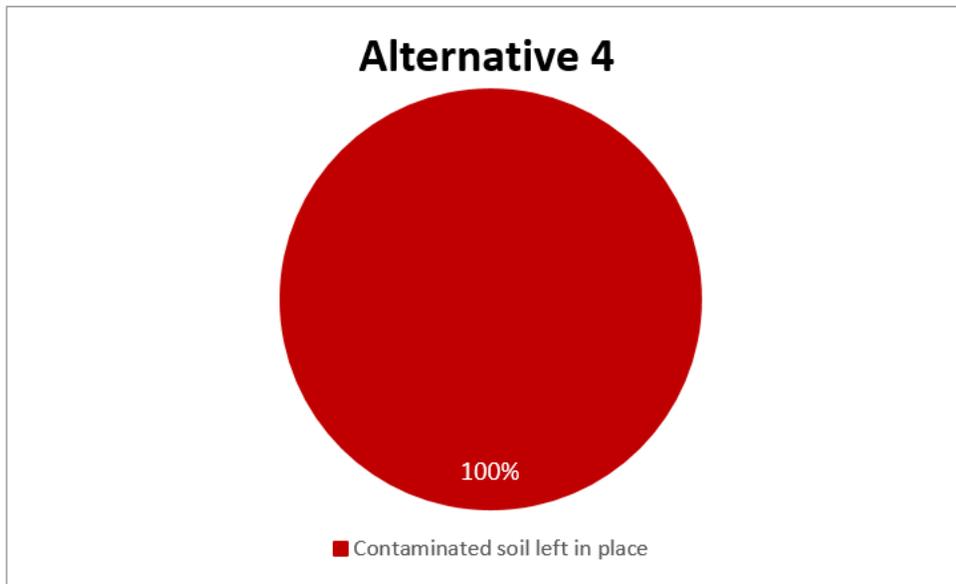
DOE Proposed Cleanup Level in EIS, Supposed Suburban Residential RBSL VS. ECO RBSL

Chemical	DOE Proposed Cleanup Level in EIS, Supposed Suburban Residential RBSL (mg/kg)	ECO RBSL (mg/kg)	How much more of each chemical does DOE propose to leave? (Compared to ECO RBSL)
Mercury	16.8	0.1	168 times more
Bis(2-ethylhexyl)phthalate	173	0.32	540.6 times more
Silver	230	.99	232 times more
Perchlorate	53.3	0.5	106.6 times more
Pyrene	1,650	1.2	1375 times more
Acenaphthene	3,230	1.1	2,936 times more

⁸¹ See December 2015 letter by Supervisor Kuehl, Councilmember Englander, and then-Senator Pavley to DTSC Director Lee.

⁸² See Boeing risk assessments for Subarea 5/9 South, at http://www.dtsc.ca.gov/SiteCleanup/Santa_Susana_Field_Lab/ssfl_document_library.cfm

4. Alternative 4 – the “No Action Alternative”



This is an alternative for analysis purposes required in NEPA. However, in this case, it is little different than Alternatives 2 and 3, which would take no action for cleanup of the great majority of the contamination.

D. Groundwater

The 2007 Consent Order requires cleanup of the chemically contaminated groundwater, with the permanent remedy in place by 2017. The 2010 AOC included radioactive contamination in groundwater to be also remediated, via the 2007 Consent Order, by the same deadline. We are now in 2017 and no permanent remedy is in place. Instead, in the DEIS, DOE now says it is considering just leaving in place the contamination and hoping for natural attenuation over time. Furthermore, the plume from SSFL has already migrated offsite. The groundwater must be cleaned up, and there is no plan put forward in the DEIS to do so.

E. Building Demolition and Disposal

The AOC covers cleanup of all soil at SSFL to local background and defines soil as including structures, debris, and anthropogenic materials.⁸³ All buildings and the debris from dismantling them are therefore covered. The cleanup to background is to a

⁸³ AOC, p.p. 4-5.

“not to exceed standard,” with averaging prohibited.⁸⁴ And all waste above background must be disposed of in a licensed low level radioactive waste (LLRW) disposal site or authorized LLRW disposal facility at a DOE site.⁸⁵

The DEIS is unclear as to whether DOE intends to comply fully with these requirements. At p. 2-46 of the DEIS, DOE asserts that “materials from buildings with a radiological history would be managed as radioactive waste for disposal purposes unless they can be suitable for free release. Free-released debris and free-released hazardous debris do not exhibit radioactivity above background levels.” However, DOE is silent on whether it would average contamination, either within a part of a building or over part of the debris, or would comply with the prohibition on averaging and the requirement for treating as contaminated any samples that exceed background. DOE is also silent as to how background for buildings will be determined. Will the values be taken from other buildings at SSFL, which could also be contaminated? Furthermore, the AOC requires EPA to set the background values.⁸⁶

Additionally, DOE states in the DEIS that it will declare as non-radioactive, and dispose of as such, all wastes from any structure that it does not know to have a “radioactive history.”⁸⁷ However, such process knowledge extending over half a century or more is quite imperfect and unreliable. Furthermore, even if buildings weren’t explicitly used for radioactive work, they were located in areas where there is radioactive contamination. Contamination clearly wasn’t limited to the interior of buildings where radioactive work was done; there were extensive releases, which is why so much soil is contaminated. There is no basis to assume that either the outsides or insides of these buildings are clean; they should be thoroughly surveyed, and only to the extent that no radioactivity above background is found, should they be allowed to be disposed of as other than LLRW.

Finally, DOE elsewhere in the DEIS (p. D-1) appears to contradict the claim at p. 2-46 that buildings will be considered “free released” only if they are free of radioactivity above background. At p. D-1, however, DOE says “For a building to be free released, it must meet the conditions of DOE Order 458.1, *Radiation Protection of the Public and Environment*, which limits doses to the public from DOE activities to either 25 millirem per year (or as low as reasonably achievable) or requires the surface contamination levels to meet the default limits expressed in DOE Order 5400.5 (same title as DOE Order

⁸⁴ “Residual concentrations “not to exceed” local background concentrations i.e., if during site survey efforts or during confirmatory sampling the levels of an constituent detected in a soil sample is above local background levels, step-outs will be taken to delineate the contamination and removed; soil above background will not be averaged with any other soil.” AOC Attachment B p. 3, ; see also Attachment C, “Confirmation Protocol ‘Not to Exceed’ Background Cleanup Standard.”

⁸⁵ AOC Attachment B p. 3.

⁸⁶ id., p. 2.

⁸⁷ DEIS, p. 2-46.

458.1 and superseded by that Order) and U.S. Nuclear Commission [sic] Regulatory Guide 1.86, *Termination of Operating Licenses for Nuclear Reactors*.”

This statement raises a number of concerns. It would appear to contradict the commitment at p. 2-46 that only buildings and debris that exhibit no radioactivity above background will be released, as set forth in the AOC. As indicated in the discussion of Alternative 3 above, 25 millirem per year, about a dozen chest X-rays annually, has long been declared by EPA to be non-protective and not allowed by EPA guidance, which DOE has committed in the 1995 Joint Policy to follow. Similarly, under both the AOC and the Joint Policy, other agency guidance such as Reg. Guide 1.86 (which would allow release far above background and outside the EPA risk range), is also not to be employed.⁸⁸ Risks from the Reg. Guide 1.86 levels are orders of magnitude higher than the one-in-a-million risk goal and above the upper end of EPA’s acceptable risk range, according to the EPA’s Building PRG calculator.⁸⁹ Furthermore, Reg. Guide 1.86 is more than four decades old, was issued by the AEC (which no longer even exists), was not designed to be based on health protection but rather on what hand-held detectors in the 1960s could readily detect, and has been withdrawn by the NRC as outmoded.⁹⁰

However, the central issue is that to not clean up buildings to local background and to dispose of waste above background in other than LLRW⁹¹ sites would violate the AOC. In one part of the DEIS, DOE appears to promise to comply with those requirements, but elsewhere questions are raised about that commitment. This should be clarified, making fully clear that the AOC requirements (cleanup to background, no averaging, disposal of everything above background in an LLRW site) will be strictly followed.

Finally, the DEIS only addresses radioactively contaminated buildings in Area IV that are owned by DOE and is silent about the demolition and disposal of radioactive buildings in the area that are owned by Boeing. Efforts to dismantle those radioactive buildings and send radioactive debris from them to non-LLRW sites resulted in a preliminary injunction still in effect.⁹² The AOC covers all soil in Area IV and the NBZ.⁹³ Soil is, as indicated above, defined as including buildings and debris. DOE thus

⁸⁸ See EPA Radiation Risk Q&A, *supra*.

⁸⁹ https://epa-bprg.ornl.gov/cgi-bin/bprg_search

⁹⁰ *Release of Solid Materials at Licensed Facilities: Issues Paper, Scoping Process for Environmental Issues, and Notice of Public Meetings*; *Federal Register* / Vol. 64, No. 125 / Wednesday, June 30, 1999; see also 83 FR 53507, August 12, 2016, “Regulatory Guide Withdrawal.”

⁹¹ We note that the DEIS, rather than using the term of art and the term used in the AOC, LLRW, refers instead to LLW. See e.g., DEIS p. 1-12. The proper term, LLRW, should be used throughout.

⁹² Sacramento Superior Court, *Order After Hearing, Granting Preliminary Injunction*, Physicians for Social Responsibility et al. v. California Department of Toxic Substances Control et al., the Boeing Company real party in interest, December 11, 2013.

⁹³ AOC p.1, 5.

agreed to clean up all soil, as defined, in Area IV and NBZ, irrespective of who owned it or who contaminated it. Indeed, all of the contaminated land is owned by Boeing, but DOE is nonetheless responsible for its cleanup. Therefore there is no basis for the DEIS to exclude the cleanup to background of Area IV buildings and disposal of resulting debris above background at LLRW sites, no matter who might own the buildings.

F. Failure to Consider Transportation Options

DOE has worked energetically to inflate soil volume estimates and thus the estimated number of truck trips to try to scare people near the site into supporting DOE's efforts to get out of having to clean up the contamination it created.⁹⁴ The fact that for decades vast numbers of trucks hauled immensely more dangerous material to and from the site while it operated (e.g., high level radioactive waste/highly irradiated nuclear fuel/plutonium) is ignored.

DOE arbitrarily declined to consider transportation options such as the nearby rail line, the use of conveyor systems, or the use and potential upgrade of alternative vehicular routes that would pass few houses. It did so claiming to consider such options would delay the project, because it would require study and otherwise take time.⁹⁵ But DOE has had at least fifteen years, since it first did its Environmental Assessment, to address ways of avoiding truck impacts on neighborhoods if it wished to, and its refusal over all those years to take any step to consider alternatives is not defensible.

There are numerous routes off the site that would involve passing few if any homes.⁹⁶ None is considered in the DEIS. There are other methods of conveyance besides trucks, e.g., a conveyor system to a nearby rail line; DOE has refused to consider it.⁹⁷ There are rail lines within a mile or so of the site that could be reached without passing a single home⁹⁸; DOE refuses to consider it, and instead, its only rail option is to truck the material 60 miles to Puente Hills to a rail depot that isn't even open yet.⁹⁹

⁹⁴ See the analysis by the Southern California Federation of Scientists (SCFS) of how the volumes estimates were inflated, submitted by SCFS March 21, 2014, during the scoping proceeding. With the exception of the soil fluffing matter, all of the concerns SCFS raised continue to be a problem with the soil volume (and thus truck trip) estimates.

⁹⁵ DEIS pp. 2-11,12.

⁹⁶ See, e.g., SSFL Transportation Options Taskforce, Preliminary Overview of Alternative Transportation Options for Santa Susana Field Laboratory Cleanup, August 7, 2014.

⁹⁷ *id.*

⁹⁸ *id.*

⁹⁹ DEIS p. H-10.



railroad near SSFL



covered conveyor system



conveyor

G. DOE Attack on the AOC It Executed

DOE raises several spurious issues in its attack on the agreement it signed. The first is that it is supposedly difficult to find clean fill that meets the LUT levels. But the data in the DEIS shows the Gillibrand fill meets all the requirements except with a minor exception for two constituents, which DOE itself says pose no risk, and where the measurements are identified as “J,” meaning there is no confidence in the concentration estimated. But in any case, as DOE concedes, the AOC says if there is any difficulty getting replacement soil that meets the LUT, DTSC and DOE will discuss it and DTSC will decide on the best fill available (which would appear readily to be the Gillibrand soil.) So that is a non-issue that doesn’t call into question the AOC, but in fact shows it has reasonable provisions that work.

Secondly, DOE disagrees with the LUT value for Total Petroleum Hydrocarbons (TPHs), saying it is hard to reliably detect TPHs at the LUT levels. But that is a decision for DTSC, which the AOC grants to DTSC, and DTSC has determined that labs can readily detect TPHs at the LUT value. If DOE can demonstrate that not to be the case, then DTSC can decide to change the LUT. DOE also asserts that some of the TPH detections may have been related to organic material not associated with SSFL pollution. But the report they cite actually indicates the organic contribution is just a few percent of the total measurement.¹⁰⁰ Again, that is a matter for their regulator, DTSC, not DOE. In any case, the TPH issue does not call into question the AOC. DOE estimates that of the 1.4 million cubic yards of contaminated soil, a total of 150,000 cubic yards has only TPHs, only PAHs, or TPHs and PAHs. Thus the soil contaminated with just TPH can’t explain 90% or more of the soil contamination at SSFL, which has other contaminants in it and must be cleaned up, irrespective of any question about TPHs.

¹⁰⁰ Nelson, DEIS reference 300; the naturally occurring material is estimated at only 5-8% of the total reading.

Lastly, DOE asserts it may be difficult to demonstrate compliance with the LUT values because of the potential for some false readings as above background when they aren't. But DTSC, at EPA recommendation, set LUT values based on background that were very inflated, using a rare statistical test called Upper Simultaneous Limit (USL) that produces an extremely high confidence that a reading is indeed above background. It errs, unfortunately in many people's eyes, by guaranteeing soil that isn't above background isn't cleaned up, instead of erring by guaranteeing that soil that is contaminated is cleaned up. This issue was raised during the EPA radiation survey. EPA dismissed it as a non-issue and indeed it turned out to be when the data came in. Although measurements were made for scores of radionuclides, EPA found contamination for the radionuclides as expected, and didn't find false positives to be a problem. Again, this is a matter not in DOE's jurisdiction; it agreed in the AOC that DTSC would set the LUT values. And it is not timely, since the LUT values were established by DTSC years ago and DOE had every opportunity to comment then, and didn't.

In short, DOE in 2010 proposed and committed to the cleanup to background; nothing has changed technically. All that has changed is that the top leadership of the agency has changed, and the DEIS shows DOE is now trying to avoid complying with the legally binding AOC.

H. Flawed Risk Assessment and Cost-Benefit Analysis

Because DOE used Risk Based Screening Levels that are thousands of times higher (less protective) than the true RBSLs approved by DTSC in the SRAM and by EPA in its PRG calculator, all risk estimates and the entire cost-benefit analysis are completely erroneous. By improperly averaging, leaving out nearly 90% of the toxic chemicals found at the site, failing to even analyze for the ecological RBSLs, and using the wrong human health RBSLs, all of the conclusions are without basis. Accurately performed risk estimates and cost-benefit analyses would show that the promised AOC cleanup is essential. But in any case, the risk assessment and cost-benefit analyses are irrelevant, because DOE is bound by the AOC requirement to clean up to background.

Conclusion

DOE has a clear obligation, having contaminated SSFL through its failure to follow proper environmental procedures, to clean the site up fully, as required by the AOCs; to do so by the deadlines agreed to; and to mitigate impacts such as trucks hauling away contaminated material by a careful development of alternative transportation options in an EIS. Instead, DOE has dragged its feet for years since the AOCs were issued, not only missing the deadline for completion of the cleanup, but not even beginning it. And now in a severely flawed DEIS, the federal agency flouts the authority of the California state agency charged with overseeing this important cleanup by proposing to breach the cleanup agreement it signed and instead leave the great majority of the contamination in place.

The public that resides in the area surrounding the site will be placed at continued and perpetual risk if DOE continues on this course. We call this day for extensive revision of the DEIS so that it is fully in compliance with the AOC and DOE's commitments for a complete cleanup of the contamination for which it is responsible.¹⁰¹

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¹⁰¹ In so doing, we call attention to the resolutions passed by the Los Angeles County Board of Supervisors, the Ventura County Board of Supervisors, and the Los Angeles City Council all similarly calling on DOE to alter the DEIS so that it is fully in compliance with the AOC requirements. Copies are enclosed.

We acknowledge the technical contributions to this analysis provided by the Program on Environmental and Nuclear Policy at the University of California, Santa Cruz.



December 7, 2017

Secretary Matthew Rodriquez
California Environmental Protection Agency
1001 I Street
Sacramento CA 95812

Director Barbara Lee
California Department of Toxic Substances Control
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Re: *Comments on the Draft Program Environmental Impact Report and Draft Program Management Plan for the Santa Susana Field Laboratory*

Dear Secretary Rodriquez and Director Lee:

Thank you for the opportunity to comment on the September 2017 Draft Program Environmental Impact Report (PEIR) for remediation of contamination at the Santa Susana Field Laboratory (SSFL). We object to the approval of the project as currently proposed based on various deficiencies in the PEIR described here and in other submitted comments.

Background – A Highly Contaminated Site With Half a Million People Living Nearby

SSFL is one of the most contaminated sites in the state.¹ Over the years, the site maintained ten nuclear reactors, a plutonium fuel fabrication facility, a “hot lab” for disassembling highly irradiated nuclear fuel, and open-air “burn pits” where radioactively and chemically contaminated items were burned. The poor environmental and safety practices of the Responsible Parties [the Department of Energy (DOE), NASA, and Boeing] and their predecessors resulted in numerous releases and spills on the site which subsequently

¹ The PEIR (p. 2-1) indicates that the cleanup of SSFL is in part pursuant to State Superfund law, which is for the most contaminated sites in the state.

contaminated soil, groundwater, and surface water with radioactivity and toxic chemicals, as well as numerous buildings. Examples of poor practices and negligence included a partial meltdown in one reactor; three others had accidents; radioactive fires occurred in the hot lab, and decades of open burning of contaminated items.² Tens of thousands of rocket tests and associated activities further contributed to widespread contamination with highly toxic substances such as polychlorinated biphenyls (PCBs), dioxins and furans, metals, perchlorate, and volatile and semi-volatile organic compounds.³

SSFL was established 70 years ago and was supposed to be a remote field lab for work too dangerous to conduct near populated areas. However, over the decades the nearby population mushroomed so that there are now more than 150,000 people living within 5 miles of the site and more than half a million people living within 10 miles.

Federally funded studies found significant increases in death rates from key cancers among previous SSFL workers associated with occupational exposures(s).⁴ Additionally, studies have measured offsite migration of pollutants at concentrations in excess of U.S. Environmental Protection Agency (USEPA) levels of concerns, with a greater than 60 percent higher incidence of key cancers among people living near SSFL than those living further away.⁵ Because SSFL is located in hills overlooking the City of Los Angeles and other populated areas below, the contamination migrates downgradient, where neighboring communities can be exposed. Cleanup of the contamination source is therefore critical. However, the Responsible Parties have had a history of resisting those cleanup obligations.

NRDC, City of Los Angeles, CBG v. DOE Lawsuit Blocked DOE's Prior Attempt to Walk Away from Cleaning Up Most of the Contamination

The Responsible Parties have had a history of resisting previous cleanup obligations. Fifteen years ago, DOE proposed cleanup standards for SSFL that would have left the great majority of the contamination not cleaned up. The City of Los Angeles, the Natural Resources Defense Council (NRDC), and the Committee to Bridge the Gap (CBG) filed a lawsuit in U.S. District Court, challenging the legality of DOE's actions under the National Environmental Policy Act (NEPA), 42 U.S.C. §4321, *et seq.* In 2007, in an Order highly critical of DOE,

² HydroGeoLogic, Final Historical Site Assessment, Santa Susana Field Laboratory Site, Area IV Radiological Study, October 2012, prepared for US EPA

³ Draft PEIR §2.2.2, Figure 3-5

⁴ Morgenstern, Froines, Ritz, & Young, UCLA School of Public Health, Epidemiologic Study to Determine Possible Adverse Effects to Rocketdyne/Atomics International Workers from Exposure to Ionizing Radiation June 1997; and, same authors, Epidemiologic Study to Determine Possible Adverse Effects to Rocketdyne/Atomics International Workers from Exposure to Selected Chemicals, January 1999

⁵ Yoram Cohen et al., Center for Environmental Risk Reduction, UCLA, The Potential for Offsite Exposures Associated with Santa Susana Field Laboratory, Ventura County, California, February 2, 2006; and Hal Morgenstern et al., Cancer Incidence in the Community Surrounding the Rocketdyne Facility in Southern California, February 2007; both prepared under contract to the federal Agency for Toxic Substances and Disease Registry

Federal District Judge Samuel Conti, granted summary judgment for the plaintiffs and against DOE.

In 2010, DOE, NASA, and the California Department of Toxic Substances Control (DTSC) executed Administrative Orders on Consent (AOC), legally binding agreements requiring the cleanup of contaminated soil (including the buildings) to background, i.e., to the condition it was in before being polluted. In 2010, DTSC committed that Boeing would be required to clean up its portion of the property to background concentrations so as to be safe for all land use designations allowed under the Ventura County General Plan.

As per the 2007 Consent Order and 2010 AOCs, the soil cleanups were to be completed by 2017. However, *2017 is nearly over and the promised cleanup not only has not been completed, it has not yet even begun.*

The 2017 Draft PEIR Breaches DTSC's Cleanup Commitments

The project description states that the primary objective of the proposed project is to implement the 2007 Consent Order and the 2010 AOCs. The Draft PEIR for the SSFL site cleanup, however, is at odds in numerous respects with this stated primary project objective and DTSC's longstanding commitments in the orders. These defects taint the entire PEIR from the proposed project description and analysis, to the selection and analysis of project alternatives, to the proposed mitigation. Examples are:

1. The AOCs bar consideration of "leave in place" alternatives.
 - a. Yet, in the Draft PEIR, DTSC proposes to leave in place large amounts of contamination in the hope that over long periods of time concentrations would "naturally attenuate."
 - b. DTSC also proposes to leave in place large amounts of contamination based on biological and cultural considerations that appear to go far beyond the tightly delimited exemptions allowed in the AOCs. Proposing to exempt contaminated areas from cleanup for supposed biological reasons would have a contrary effect – allowing biological receptors to be damaged by radioactive and toxic chemical contamination at levels well above concentrations DTSC has already determined to cause adverse effects. It is the failure to clean up the contamination that would place those ecological receptors at risk, yet the Draft PEIR fails to analyze those risks and proposes cleanup levels and cleanup exemptions that would allow exposures far above the level DTSC itself has determined would put them at risk.
2. For the Boeing-controlled areas, DTSC had stated in 2010 that its normal procedures applicable to all cleanups required a cleanup so that all of the land uses allowed by local zoning and General Plan designations would be safe; DTSC noted that those designations for SSFL allow a wide range of suburban residential and rural residential/agricultural uses, the latter of which is the most protective standard; and that cleanup to that standard would be equivalent to the cleanup-to-background standard of the AOCs.

a. However, in the Draft PEIR, DTSC does not propose cleanup to any of these promised standards, and indeed, removes each of them from even consideration. In the Draft PEIR, DTSC declares that the cleanup required will be less rigorous than that required by the AOCs; it removes from consideration cleanup to background; and it does not even mention or in any fashion consider cleanup to the promised rural residential/agricultural standards.

b. Both Boeing and DTSC had long promised that the cleanup of the Boeing-controlled portion of SSFL would at least be to a suburban residential standard, so that the people living nearby would be reassured as to their safety. That standard, which includes risks from consumption of fruit and vegetables from a backyard garden, was established in the Standardized Risk Assessment Methodology (SRAM) prepared by Boeing and approved by DTSC, as the SRAM-based suburban residential garden standard.

- i. However, in the Draft PEIR, DTSC removes from consideration its own SRAM-based suburban residential garden standard and instead asserts that it will only consider cleanup to levels that are more than 25 times less protective. Elsewhere in the Draft PEIR, even weaker standards are put forward, approximately 60 times less protective than DTSC's official SRAM-based suburban residential standard. This would leave the great majority of contamination not cleaned up.
- ii. Furthermore, Boeing has recently announced it is reversing its longstanding promise to a suburban residential standard at all and wants to instead use a recreational standard, even weaker than the extremely lax cleanup levels being considered in the Draft PEIR, that would relieve them of cleaning up virtually any of the contamination.

3. The AOCs require cleanup of all structures, anthropogenic materials, and debris to background and that all wastes with radioactivity above background be disposed of in offsite licensed/authorized Low Level Radioactive Waste disposal facilities. However, in the Draft PEIR, DTSC ignores these requirements and says buildings in the SSFL areas controlled by the AOCs can be demolished and disposed of without DTSC approval and the debris sent to recyclers and disposal sites not licensed or authorized for Low Level Radioactive Waste.

The Draft PEIR is deficient in other ways, including:

4. A draft Environmental Impact Report has at its core the requirement for full disclosure of what project is being proposed, the alternatives, and the proposed mitigation. These requirements under CEQA facilitate the statute's informational role and are to allow the public, not involved in the preparation of the draft document, to understand and consider meaningfully the environmental issues raised by the proposed project. These requirements have not been met by the PEIR. DTSC is years late in issuing the Draft PEIR. It has had plenty of time to include the true program proposal. There is no good reason why what is actually being contemplated and the alternatives to be considered are not specified and properly evaluated in the Draft PEIR. For example,

a. DTSC states in the Draft PEIR that it intends to allow an unspecified amount of soil at unspecified locations that is contaminated with unspecified concentrations of unspecified contaminants to "naturally attenuate" over unspecified times based on unspecified mechanisms of attenuation according to unspecified sources.

b. DTSC additionally says in the Draft PEIR that it intends to allow an unspecified amount of soil at unspecified locations that is contaminated with unspecified concentrations of unspecified contaminants to be exempted for unspecified purported biological or cultural reasons with no attempt to even try to demonstrate how that would comply with the very narrow exemptions allowed in the AOCs.

c. Furthermore, DTSC states that the actual amount of contamination it will consider allowing Boeing to avoid cleaning up will not be disclosed until after finalization of the Draft PEIR, nor will the alternative amounts it will choose from be disclosed in the Draft PEIR. Additionally, the Draft PEIR does not disclose how much contamination is in the Boeing areas, so there is no way to precisely assess how much contamination is being contemplated to not be cleaned up.

d. Particularly troubling is that DTSC has failed to make publicly available the documents referenced in the Draft PEIR as forming the basis for assertions and conclusions therein, making it impossible to meaningfully comment on the Draft PEIR and to ascertain the validity of many of the Draft PEIR claims.

5. An EIR also has as its core the requirement for a thorough examination of the environmental impacts of the alternatives being considered, including the No Action Alternative. However, this Draft PEIR contains hundreds of pages identifying the purported negative impacts of cleaning up contamination at SSFL, but essentially no analysis of the environmental impacts of not cleaning up part or all of it. There is basically no review of the environmental impacts of the radioactive and toxic chemical contamination and the impacts that would ensue were DTSC to break its commitment to a full cleanup. As such, the Draft PEIR becomes not a genuine environmental review but instead a kind of advocacy, attacking the very commitments DTSC had made without a word about the impacts were it to break those promises to remediate the pollution. This results in the extraordinary claim in the Draft PEIR that the environmentally superior alternative is the No Action Alternative, because it supposedly involves no environmental impacts. That assertion is baseless, and can only be made because DTSC failed altogether to analyze any impact from the contamination that is what led to the need for cleanup in the first place.

6. DTSC argues for not requiring the full cleanup it had promised in the AOCs in part based on generalized assertions about protecting biological features, despite the fact that the AOCs already have carefully tailored provisions for such protection, which DTSC now appears to intend to go far beyond. However, DTSC fails in the Draft PEIR to consider impacts on plants and animals from the contamination that DTSC now is contemplating not cleaning up. DTSC has Ecological Risk-Based Screening Levels (EcoRBSLs) for the contaminants at SSFL, levels set to determine what levels one needs to bring concentrations down to in order to protect ecological receptors such as birds, mammals, and various plants. The Draft PEIR needs to use the invertebrate, plant, and Ecological Low TRV-Based RBSLs.

7. The Draft PEIR simply repeats, without critical review, soil volume estimates by DOE and NASA that grossly inflate the actual volume of contaminated soil. At the same time, the Draft PEIR accepts soil volume estimates by Boeing that grossly underestimate the amount of contaminated soil it should clean up.

8. Much of the Draft PEIR appears to be an attempt to inflate the impacts of cleaning up while trivializing the risks of abandoning in perpetuity significant amounts of radioactive and chemical contamination.

9. The Draft PEIR fails to identify and meaningfully evaluate reasonable alternative methods of contaminated soil conveyance and routes, including direct site to rail conveyance and other options including the use of fire roads and routes with less impact to residents and reduced traffic impact. Instead, straw men are put forward and rejected. The Draft PEIR is also silent about the harm from the toxic and radioactive pollution but spends many pages about the inconvenience from the trucks needed to transport the contaminated soil for disposal. Transportation alternatives, including alternative routes and means of conveyance that could reduce truck impacts, are not seriously examined.

Draft Program Management Plan

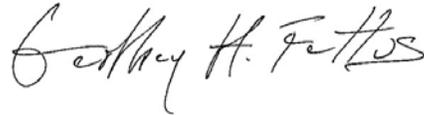
The Draft Program Management Plan is deficient in that it provides very little detail as to what is actually proposed regarding cleanup and defers to a post-PEIR, post-CEQA phase most identification of actual cleanup proposals.

Conclusion

The Draft PEIR is deficient in that it violates longstanding DTSC commitments for a full cleanup, is not clear in its disclosure of the proposed remediation, and does not address the negative ecological and human health impacts from exposure to the contamination itself and which would occur were the promised full cleanup not to occur. What DTSC appears to be contemplating is to leave in place the great majority of the contamination.

The public that resides in the area surrounding the site will be at continued and perpetual risk if DTSC continues on this course. CEQA also requires that the long term protection of the environment must be the guiding criterion in public decisions. Because the Draft PEIR is so fundamentally and basically inadequate and conclusory in nature, meaningful public review and comment have been precluded. We therefore request extensive revision and recirculation of the Draft PEIR, and careful selection of a responsible remediation approach that is fully in compliance with the DTSC's previous commitments for a complete cleanup of the SSFL contamination.

Sincerely,



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