

October 1, 2013

Allen Elliott,
SSFL Program Director,
NASA MSFC AS01, Building 4494,
Huntsville, AL 35812

Subject: Comments regarding “Draft Environmental Impact Statement for Proposed Demolition and Environmental Cleanup activities at Santa Susana Field Laboratory (DEIS).”

Dear Mr. Elliot,

The DEIS is an important step towards the completion of the NASA-responsible cleanup at the Santa Susana Field Laboratories (SSFL). The comments presented here¹ offer constructive remarks intended to improve the project outcome.

The current DEIS is the outcome of two flawed decisions. First, NASA erred by including only one action alternative in the DEIS and not the full range of alternatives twice presented to the public. Granted, NASA has less responsibility for the outcome as Senator Boxer who interceded at various agency levels to reduce five action alternatives to one. The result is a DEIS based on an arbitrary, hastily crafted, single-option cleanup plan that is unique to established State and Federal environmental laws. The community can only comment on the options of ‘do nothing’ or stripping all soil, grass, plants and trees from over one hundred acres of land totaling roughly one quarter the NASA-administered property at SSFL.

NASA also erred by not combining their supporting NEPA analysis with the DOE for their respective cleanups at SSFL even though they are nearly identical projects in terms of cleanup requirements, remediation activities, transportation consequences, completion schedule and long-term impacts to the environment. The current DEIS represents a piecemeal analysis of a larger project that has been segmented for the convenience of two Federal agencies. Thus, the community has been denied the opportunity to consider the totality of the cleanup conducted by the Federal government at SSFL.

¹ The comments regarding the DEIS presented here represent solely the opinions of the author and do not necessarily represent the opinions of the SSFL Community Advisory Group of which the author is a member.

In large measure, the comments presented here focus attention on the various impacts of removing all impacted soils without consideration of the environmental consequences. The DEIS illustrates how a seemingly good idea (i.e., complete removal of contaminants from an expected parkland) results in a whole host of unintended and unacceptable environmental consequences.

Absent Meaningful Alternatives

The absence of meaningful alternatives within the subject DEIS has produced an incomplete analysis that can only be remedied by the inclusion of additional alternatives.

The origin and application of a single action alternative offered in the current DEIS unusual enough to deserve retelling. In July, 2011, NASA published their NEPA Notice of Intent announcing their intention to pursue seven alternatives (two demolition and five soil cleanup options) to be considered for the NASA-administered property.² A public scoping meeting followed on March 27th, 2012. Less than forty-eight hours later, Senator Boxer contacted NASA Administrator Charles Bolden to voice her concerns as Chairman of the US Senate Environment and Public Works Committee. The NASA Administrator was evidentially persuaded and all action alternatives, save the one favored by Senator Boxer, were withdrawn.

Advocating a single action alternative under NEPA is unusual. Given the degree of public scrutiny, a veil of legal legitimacy was required. Senator Boxer turned to the Council of Environmental Quality, chartered by NEPA to offer a degree of oversight and council. NEPA regulations developed by the CEQ requires the agency to:

“Encourage and facilitate public involvement in decisions which affect the quality of the human environment.”³

Ironically, Federal environmental regulations must not have seemed as compelling as the Chairman of the Senate Environment and Public Work Committee. The CEQ applied a “rule of reason” to justify the exclusion of a range of alternatives concluding “...NASA is not compelled to consider less comprehensive cleanup measures as alternatives.” Setting aside the skillfully deployed term “not compelled,” the CEQs support of a single alternative is puzzling since their regulations and cited case opinions argue for additional analysis, not less.⁴

² 76 FR 39443

³ 40 CFR 1500.2(d) see also (e) and (f).

⁴ It is arguable that NASA should have requested a decisive interpretation since “not compelled” is not exactly an instruction to abandon their noticed and scoped range of alternatives. Given the level of political involvement, however, it was understandable. And so the NASA DEIS was a fatally flawed document before it was written.

- ***NASA must comply with established regulations relevant to the considered alternatives and scope of the DEIS.***

The rebuttable presumption of CEQs “rule of reason” justification is that the most restrictive cleanup is so superior that it need not be compared to any other action. Moreover, the CEQ assumes the action’s unintended consequences are less important than the existing condition so the project may proceed without the need to conduct an holistic analyses of possible negative outcomes. As discussed here, this logic proves to be tragically untrue at SSFL.

A full range of alternatives (such as those presented in the Notice of Intent and Scoping Meeting) would include a range of cleanup levels which would attempt to balance the detrimental effects of the cleanup against impacts to human health and the environment. The analysis of a broader range of alternatives would certainly provide new information to the community and those potentially affected regarding the reasonableness of the SSFL cleanup.

Removing the full range of alternatives withholds the opportunity for those potentially affected to consider the incumbent tradeoffs of the agency decision. For instance, community members exposed to the additional safety risk and other harm from the expected one hundred thirty five trucks per day are not allowed to consider a lesser cleanup standard requiring fewer trucks and the smaller risk of being engaged in a transportation -related accident.

Citizens may also want to know why a risk-based cleanup is being used for the groundwater cleanup while the surface soil cleanup is based on arbitrary standards regardless of the effect on the surrounding environment.

- ***The DEIS must be revised to include a meaningful range of cleanup alternatives as presented in the July, 2011 Notice of Intent and March, 2012 Scoping Meeting.***

Some of the Area II structures and buildings are considered historic, however, NASA removed two alternatives concerning their demolition from the DEIS. The public should have an opportunity to consider the fate of the NASA administered historic structures in Area II.

- ***The DEIS must be revised to include the two demolition-related alternatives presented in the July, 2011 Notice of Intent and March, 2012 Scoping Meeting.***

The AOC cleanup plan itself requires the removal of soils having one or more contaminants above the arbitrary background figure. Any and all soils exceeding background are removed but so too goes the ecosystem. Soil will be stripped, trees felled and anything living thing that can't move fast enough will be shoveled into a bin and carted through the neighborhood on its way to a far-off dump.

The cleanup plan at SSFL before the AOC arrived was to create risk-based limits that balanced the removal of contaminated soil with the impacts to the site ecosystem and those exposed to the hazards. Boeing, NASA and DOE together spent well over a million dollars and several years to produce a standardized, regulatory-approved approach to assess the human health and ecological risk of chemicals present in the SSFL water, soil and air in a document called "Standardized Risk Assessment Methodologies (SRAM)." The Department of Toxic Substances Control approved the 703-page SRAM in 2005 and it's revision in 2007.

The SRAM provided the public an opportunity to participate in the risk assessment process at SSFL as part of the site-wide Corrective Action program. Having a SRAM meant that granular risk assessment methods were in place, approved and at work, evaluating the risk of residual chemicals to the SSFL ecosystem. Environmental gearheads would have been offered the opportunity to noodle over the estimates of the exposure point values for soil invertebrates or something less interesting, if they liked.

The SRAM was perhaps the most important casualty of the AOC since it set aside the relative elegance of applied toxicology in favor of a knuckle-headed look up table.⁵

- ***The DTSC-approved SSFL Standardized Risk Assessment Methodologies must be used to implement a cleanup standard consistent with the future land use of administered parcels should be used by NASA.***

The SSFL should be preserved in its current state rather than suffer the additional harm to the ecosystem and surrounding inhabitants the preferred alternative poses. The action alternative will also cause the loss of potentially historic buildings without the consideration of meaningful alternatives by the community.

- ***The No Action alternative is preferred over the Proposed Action.***

⁵ The SRAM will be used by NASA for the groundwater evaluation but in a greatly reduced role since the ecosystem is much less exposed to groundwater than soil. Relying on the SRAM for NASA groundwater only serves to illustrate the absurdity of relying on two different cleanup standards on a vertical slice of earth. Note also that Boeing will apply the SRAM for their soils, which total some 70 percent of the SSFL surface area.

The DEIS Scope Has Produced An Incomplete and Piecemeal Analysis

The DEIS scope does not consider a similar environmental cleanup that will be completed concurrently by a different Federal agency at SSFL, thereby resulting in the piecemeal analysis of a larger cleanup project.

Both NASA and DOE have been at SSFL for many decades. Both are planning their cleanups and eventual exit from SSFL. In 2010, their cleanup efforts were joined at the hip when both agencies signed their respective (but virtually identical) Administrative Order on Consent for Remedial Action (AOC) documents.

Various statements and actions of Federal and State governments have repeatedly presented indications to the public the project is a single major Federal action conducted by two different agencies. Yet the DEIS only concerns the NASA-administered areas and not the cleanup activities in Area IV. The following circumstances illustrate how the NASA and DOE cleanups at SSFL are effectively one major Federal action undertaken by two agencies:

- The DTSC commonly communicates to the public in terms of “SSFL cleanup” as a single project⁶ and was previously required by State law to apply a single soils cleanup standard to both NASA and DOE.⁷
- Both NASA and DOE signed nearly identical Agreement in Principle documents with the DTSC on the same day, September 3rd, 2010.
- Both NASA and DOE announced the signing of nearly identical AOC documents using a joint press release on December 6, 2010. DTSC noted the AOC will provide “a comprehensive cleanup is conducted” within their press release issued the same day.
- Both NASA and DOE cleanups involve the demolition and removal of existing buildings and the same numerical cleanup goals (using “look up tables”) for both chemical and radioactive constituents.
- Both NASA and DOE efforts will involve the removal of large amounts of soil from the site as the principal remedy.
- Both NASA and DOE are conjoined in regards to the SSFL site groundwater investigation and remediation as specified by a 2007 consent order.⁸
- Both NASA and the DOE have accepted exclusive responsibility for the cleanup of impacted soils within the 450-acre Area II and 290-acre Area IV, respectively.

⁶ Description of SSFL project, viewed on September, 2013:

http://www.dtsc.ca.gov/SiteCleanup/Santa_Susana_Field_Lab/ssfl_site_activities_overview.cfm

⁷ California SB990 (2007) codified at H&SC 25359.20

⁸ See MWH, 2013, “Report on Annual Groundwater Monitoring, 2012, Santa Susana Field Laboratory, Ventura County, California” Page 1-1 as a recent example of ongoing cooperation.

- At least one portion of the NASA cleanup is expected to encroach onto the DOE-responsible parcel.⁹
- Both agencies agreed to the same scheduled “soils completion date” of 2017 so the effects of the cleanup to both the site and the public are combined within the same timeframe.

Upon fair consideration of the above, one can only conclude NASA has artificially divided a major federal action into two smaller segments with the result being an incomplete analysis of the Federal cleanup at SSFL. Because the DEIS scope is seriously flawed, those interested are not able to evaluate the planned government-funded cleanup of SSFL in its entirety. The community (this author included) is denied the opportunity to respond to the complete extent of impacts to human health and the environment, including the cumulative impacts of the proposed Federal actions.

- ***The DEIS must be revised to include all Federal cleanup activities to be undertaken by both NASA and the DOE at the SSFL.***

Tangible Risk Communication Needed

The NASA portion of the SSFL cleanup forecasts a total of 500,000 cubic yards of soil to be transported through the adjacent neighborhoods and therefore transportation presents a tangible risk of harm. The DEIS presents risk in terms of percent exposure to children traveling to school but does not consider the additional risk to the parent returning home.¹⁰

Accident risk does not end when the truck enters the highway but continues to the disposal facility and back. The DEIS must consider the additional harm arising from of all project-related truck traffic. Tens of thousands of truck trips will be involved in the proposed action. All affected and potentially affected persons should have the opportunity to understand the additional hazards the cleanup poses.

- ***The DEIS must consider the harm to the entire exposed public, including those on the highways as well as non-children.***

As discussed above, the DEIS conveys risk in terms of percent exposed. This risk communication method is difficult to translate into real terms. In 2003, the DOE considered the transportation risk associated with the three evaluated alternatives within the NEPA Environmental Assessment for the closure of the ETEC facilities. The DEIS should take this approach as well.

⁹ DEIS, Section 4.5, page 324

¹⁰ DEIS, Table 4.5-5.

- ***The DEIS should be revised to include the transportation risk in terms of additional morbidity/mortality per transportation mile for the evaluated alternative.***

The DEIS Must Consider the Inability to Secure Suitable Backfill, the Excavation Backfill Schedule and Define “Local Background” for Replacement Soils.

The AOC requires offsite replacement soils not to exceed “local background” but the DEIS does not contemplate actions to be taken if suitable soil is not located. Under the AOC, backfill soils must not exceed the background levels for contaminants. However, given the stringency of the analytical requirements, an off-site soil may have one or more naturally occurring components thereby causing the soil to exceed the SSFL background and be rejected by the DTSC. NASA should consider and present the appropriate options and contingency responses the agency will undertake.

- ***The DEIS must be revised to present the course of action to be taken if sufficient quantity of acceptable replacement soil cannot be located.***

The DEIS is silent regarding the schedule for soil replacement once the impacted soils have been removed. To minimize harm to the environment, the excavated areas must be restored using the appropriate replacement soils and re-vegetated as soon as possible. Site restoration must not wait for a source of suitable replacement to be located and committed to the site.

- ***Excavation of impacted soils must not occur until an adequate volume of appropriate replacement soil has been located and committed to the project.***

It would not be appropriate to conveniently define “local background” definition in a way that would allow backfill soils meeting “local background’ at their off-site source to be used by NASA. Impacts to the SSFL NASA-administered parcel ecosystem and those affected must be minimized. It does not make sense to remove soil and habitat only to have the replacement soil that does not meet the original cleanliness criteria.

- ***Replacement soils must meet the “local background” established for SSFL and not a “local background” established for an off-site location.***

The Planned Soil Removal Volume Appears To Be Low

The method and assumptions used to estimate the quantity of soil to be removed is not presented but likely underestimates the actual amount removed by a significant margin.

The accurate assessment of the planned soil removal volume is important since it will affect the exposure from the harm associated with trucks carrying the impacted and replacement soils. It is also important to understand the extent of environmental impact the project poses.

Established evidence indicates contaminants exist in the areas shown within the DEIS. The difficulty is to accurately estimate the amount of soil which needs to be excavated to remove literally every trace contaminant above background. There are several reasons why it is difficult to estimate.¹¹

The remediation work cycle favors removing increased soil volumes: The remediation work cycle is a constraint-rich process involving a number of steps. Soil remediation requires the readying and staging of storage bins, manpower and equipment. The site is flagged and transition areas established to minimize the spread of contaminants out of the area. Then excavation removes all soil which includes “weatherized bedrock.” Verification sampling of the sidewalls follows and the laboratory produces results two to three weeks later. If the results are too high, the cycle is repeated. The cost and schedule impacts of unplanned recurrent remediation at a single site can be sever.

For the one hundred-plus acre NASA-administered site restoration, the key constraints are expected to be the availability and management of soil storage/transportation bins, equipment and manpower scheduling, laboratory analytical turn-around times and weather. Of these, weather will be most significant since the stormwater Best Management Practices discussed in Section 4.6.2 are labor and time intensive to establish within areas undergoing excavation. Stormwater is also of grave concern since it has ability to spread contaminants out of the excavation, thus increasing the volume of impacted soil and possibly cause NPDES permit exceedances.

The removal of additional soil is a practical and common response to successfully managing the noted project constraints. Removing soil beyond the initially identified area reduces cost and schedule risk and helps to reduce the spread of contaminants.

Contaminant maps tend to underestimate the remediation area: Soil samples retrieved to determine the presence/absence of contaminants are not performed to map an areal distribution of the contaminant but to bound the extent of contamination. In other words, the DEIS maps indicating the areas of soil removal are provided only as

¹¹ Author’s qualification statement: The author holds a B.S, Soil Science (1987), Cal Poly, San Luis Obispo and was involved in numerous environmental-related excavation field activities at the SSFL over a sixteen year period as a Boeing Project Manager. The author is no longer employed by Boeing nor any contractor conducting business at SSFL.

large scale representations which rely on some amount of educated guesswork. Maps represent only start and not the completion of a remediation project.

Spills and cross-contamination will increase soil volumes: The unprecedented cleanup standard of detect for most contaminants dictates the absolute control of impacted soils. Each movement of virtually every soil particle presents the opportunity to spread contamination into previously “clean” areas.¹² Cross-contamination resulting from the unintended mismanagement of impacted soils must be planned for.

The underlying bedrock is not a level surface: The bedrock underlying the soils is uneven with nearly continuous undulations characterizing the weathered bedrock surface. Planned soil removal estimates tend to be inaccurate since they do not factor in the volume represented by the highly variable subsurface low points.

Conclusion: Based on the factors discussed above and my experience at SSFL, I conclude the planned soil volume of 500,000 yd³ is less than what should be expected. I estimate that at least one-third additional volume (resulting in a total project volume of 665,000 yd³) of excavated soil should be expected from expanded excavations, mishaps and so forth.

- ***The DEIS must be revised to state the rationale for the planned soil removal volume.***
- ***The DEIS must be revised to include a margin of error for the planned soil removal volume and the resultant impacts.***

Only One-third the Volume of Excavated Soils Is To Be Replaced

Restoring the site with only one third the volume of soil removed was not evaluated for long term impacts.

The proposed action allows NSAS to restore the site using two thirds less soil than removed. The restored areas will therefore have a substantially reduced soil column which will drive permanent modifications of the existing habitat. Steeper surface gradients will result in greater erosion and in turn increased sediment loading over time, resulting in a negative long-term off site consequences to water quality.

The shallower soils will hold less moisture and dry out sooner so the restored locations will favor fewer oak trees and favor weedy and non-native plants thus resulting in dramatic visual and habitat modifications throughout the nearly twenty four percent of Area II where remediation is planned.

¹² Keep in mind that the use of large-sized equipment occasionally results in large-sized mistakes.

- ***The DEIS must be revised to consider the impacts of reduced replacement soil volume on the environment.***
- ***The DEIS must be revised to provide for the complete replacement of removed soils.***

Replacement Soil Materials May Not Be Similar to Those Removed

The replacement soils type should match the excavated soil type as much as possible.

Sandy loam soils which are rather light and porous predominate SSFL. A different soil type (such as a clay-type soil) will have contrasting characteristics such as less moisture infiltration rate, greater compaction which would lead to changes to the vegetation, groundwater recharge and other unforeseen habitat changes.

- ***The DEIS must be revised to specify that all replacement materials will have a similar soil type to those removed.***

General Comments Regarding the Practicability of Excavating Impacted Soils to Background

The many soil-related issues discussed here focus on just some of the unintended consequences of a perhaps well-meaning but impractical cleanup to background goal presented in the DEIS and AOC.

The CEQ justification applying their “rule of reason” for recommending the most stringent alternative appears disconnected from the reality of the site and the purpose of NEPA. Sadly, the CEQ’s arbitrary single alternative will have greater negative environmental consequences than the current conditions at SSFL. For this reason, NASA should select the DEIS no action alternative.

Finally, the on-site treatment of impacted soil should be discounted as means to reduce the soil removal/replacement volume. The excavation, movement and processing of impacted soils will be at best insufficient to remove all detectable traces of organic contaminants and at worse provide for the unintended spread of above-background contaminants (and/or their by-products) to the surrounding area.

Consideration of Ventura County Oak Tree Protection Law

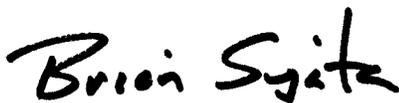
Although not specifically required, the DEIS should be responsive to the Ventura County ordinances requiring protection or mitigation of impacts to oak trees.

NASA should perform a physical survey to identify protected trees (including those potentially impacted by soil movement or encroaching equipment) and contemplate mitigation of the impacts caused by the cleanup.

- ***The DEIS should be revised to include the applicable protection and mitigations afforded to Oak trees by Ventura County ordinance.***

Thank you for the opportunity to provide comments regarding the subject document. I look forward the completion of a balanced environmental restoration at the NASA-administered SSFL sites.

Sincerely,

A handwritten signature in black ink that reads "Brian Sujata". The signature is written in a cursive, slightly slanted style.

Brian Sujata
Thousand Oaks