

If you need help accessing this document, please contact us at msfc-ssfl-information@mail.nasa.gov.

Appendix 4A
Response to Public Comments on the NASA
SSFL SEIS

This page intentionally left blank.

Response to Public Comments on the NASA SSFL SEIS

Introduction

The National Aeronautics and Space Administration (NASA) Santa Susana Field Laboratory (SSFL) Draft Supplemental Environmental Impact Statement (SEIS) was publicly released on October 25, 2019. Agency stakeholders, tribes, public officials, and members of the public were invited to comment on the Draft SEIS. The official Draft SEIS comment period was October 25, 2019 through January 8, 2020. The study team also hosted a series of public open houses on November 20-21, 2019.

All public comments were reviewed and evaluated by the study team. Many comments were similar in nature and conveyed similar themes; therefore, comments were categorized into the themes described in this document. The following discussion summarizes the public comments received during the Draft SEIS public comment period and provides responses to the substantive themes. A matrix of all the comments received, organized by the type of commenter and including their assigned category, is provided in Appendix 4B.

Comment Category 1: Support for AOC

NASA received numerous comments, including many form letters, requesting that it continue to abide to the commitments stated in the 2010 Administrative Order on Consent (AOC) (State of California Department of Toxic Substances Control [DTSC] Docket No. HSA-CO 10/11-038; DTSC, 2010).

Sample Comment: In 2010, NASA entered a legal agreement to clean up the Santa Susana Field Laboratory by 2017. Now, nearly a decade after executing that agreement, NASA is attempting to breach their agreement and produce revised cleanup levels that are up to 3 million times less protective than the original commitments and requirements. The Administrative Order on Consent (AOC) clearly outlined the necessary actions NASA was required to take to ensure the proper restoration of the site.

Response: *NASA entered into the 2010 AOC agreement in good faith with the expectation that the State of California would use sound regulatory discretion in calculating cleanup levels for the site that would be both fully protective of public health and practically and technically achievable. In 2013, DTSC established Look-Up Table (LUT) levels for SSFL that are much lower than any other DTSC-led cleanups in California or any other NASA cleanup sites across the United States. NASA has concerns about the implementability of such a cleanup and the significant environmental impacts to the valuable cultural and natural resources within the site. These concerns are explained in detail in the Executive Summary and Section 2.2 of the Final SEIS. NASA remains firmly committed to achieving a soil cleanup at SSFL that is protective of public health and the environment; uses the best available science and technology to minimize the risks to the surrounding communities; and preserves the site's natural, historic, and Native American cultural resources.*

Comment Category 2: Support for Risk Based Approach

NASA received comments in support of conducting a risk-based approach for soil cleanup at SSFL.

Sample Comment: The October 25, 2019 Draft Supplemental Environmental Impact Statement for Soil Cleanup Activities at Santa Susana Field Laboratory, presents clear and cogent documentation of the evaluation of a range of cleanup alternatives as required by NEPA. The executive summary provides the affected public and NASA management sufficient information to identify a preferred alternative that is fully protective of the public and the environment and, equally important, has significantly less negative impact on the environment and cultural resources. Without going into details, it is clear that the best

alternative from any rational perspective is the Recreational Cleanup and, by far, the worst is the AOC Cleanup. It has been known since 2010, that the AOCs were political, rather than environmentally or health based. It is time for NASA management to act responsibly, based on the information presented in the DSEIS. NASA should identify the Recreational Cleanup as its Preferred Alternative and plan to resist any attempted for DTSC to cling to the discredited AOCs.

Response: *NASA remains firmly committed to achieving a soil cleanup at SSFL that is protective of public health and the environment; uses the best available science and technology to minimize the risks to the surrounding communities; and preserves the site's natural, historic, and Native American cultural resources. Using a risk-based process that takes into account a number of well-established criteria, including the reasonably foreseeable future use of the land, to identify the appropriate cleanup standard is the accepted methodology employed by the U.S. Environmental Protection Agency (EPA) and the State of California when selecting a site cleanup remedy. This process is used for site cleanup activities that are conducted under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the National Oil and Hazardous Substances Pollution Contingency Plan, and applicable California state law. Employment of a risk-based assessment process is accepted practice in the United States generally, and the State of California specifically. The AOC LUT values are not based on risk of public exposure and do not take into account the reasonably foreseeable future use of the SSFL property. NASA's evaluation of alternatives in the SEIS demonstrates that implementation of the AOC LUTs would result in significant, adverse, and permanent environmental degradation within the region of influence and, in comparison to the other alternatives, including the preferred alternative, does not provide the surrounding communities with enhanced safeguards. Implementation of the AOC LUT would serve to prolong the cleanup activity without providing a measurable benefit to the public. Use of risk-based alternatives are proven to be protective of human health and the environment, and implementation of the preferred alternative would result in lower intensity environmental impacts than the AOC LUT alternative.*

Comment Category 3: Reference Availability

A number of commenters requested that NASA make all of the references used on the Draft SEIS available to the public.

Sample Comment: It has come to our attention that more than three fourths of the reference documents relied on in the Draft SEIS have not been made publicly available. NASA representatives acknowledged this failure to provide full public access to the reference documents at the public meeting held on Thursday, November 21st, 2019, and assured us that the documents are currently being prepared for posting on its website, although this would not occur until more than a week after the public meetings held to obtain comments and just a bit more than a week before written comments are due.

Response: *NASA appreciates these comments and has endeavored to ensure that all requirements for public involvement as set forth in 40 Code of Federal Regulations 1506.6 have been complied with. When crafting the Draft SEIS, NASA made sure to include the documents it relied on most to support its conclusions as appendixes, so that the information would be readily available to the public. NASA also provided links to secondary documents in the References section of the SEIS when links were readily available. While neither National Environmental Policy Act (NEPA) regulations nor agency practice requires all references to be provided along with a NEPA document, on December 11, 2019, NASA published all available SEIS references on its website. NASA published these references in response to the public's request and worked hard to prepare the reference materials for placement on the NASA SSFL website as quickly as possible. The documents were published 4 weeks prior to the end of the public comment period.*

Comment Category 4: Public Meeting Format

A number of individuals commented on the format of the public meetings.

Sample Comment: This was supposed to be a public hearing. Public hearings are generally in a large room with chairs, a hearing officer at the front, microphones where members of the public get up to speak, and where the rest of the public, the news media, elected officials and their staffs can hear what is said. NASA is so scared of public comment that they have turned this hearing on its head so it's no hearing at all, just posters with NASA people standing next to them and no ability for there to be testimony of the sort that you have at a hearing. And as I said, they physically blocked the presentation of PowerPoint slides, turned off a PowerPoint projector that people themselves had brought, and physically blocked the public from being able to exercise its rights under the National Environmental Policy Act.

Response: NEPA allows for a variety of public meeting options. NASA chose an open house format for its two SEIS meetings, with the goal of providing ample opportunities for one-on-one engagement by members of the public with NASA personnel and subject matter experts working at the site. Neither NASA nor any other group made a formal presentation. Instead, the public had the opportunity to interact with key NASA SSFL team members and provide formal comments for the record, either in writing or orally to a court reporter. The subject matter experts stationed at the information boards fielded many questions and had detailed conversations with numerous members of the public, many of whom expressed gratitude for the opportunity to speak directly with the people working on the project.

Comment Category 5: Comment Period Extension Request

A number of commenters requested that an extension to the public comment period be granted.

Sample Comment: I am therefore requesting an extension for comments of at least 45 days, so the public can properly review and comment on the SEIS. And please do not delay announcing a decision on the extension - please announce it immediately so that people know they have the additional time.

Response: NASA granted an extension to the comment period by publishing a notice in the Federal Register on December 9, 2019, and using its website and email distribution list. The original comment deadline was December 9, 2019, and the revised comment deadline was January 8, 2020, for a total of 75 days for the comment period.

Comment Category 6: Compliance with Law

NASA received a number of comments asserting that the actions described in the Draft SEIS did not abide with federal law, including NEPA and CERCLA.

Sample Comment: Even Were There No AOC, NASA Does Not Have the Authority to Decide How Much of Its Pollution It Will Clean Up – That Power, Under RCRA, Rests with DTSC: Had NASA not executed a legally binding cleanup agreement with DTSC, it still would have no power to determine how much of the contamination it created it will have to clean up. Under RCRA, that authority belongs to the regulatory agency that implements RCRA. In California, that is DTSC. NASA, as the polluter, does not set the cleanup standards for the pollution for which it is responsible. Even absent the AOC, NASA still could not legally do what it proposes in the DSEIS—functionally abandon the cleanup obligations established by its regulator, DTSC. NASA is bound to follow DTSC's cleanup directives, which the agency failed to acknowledge in the DSEIS and fails to adhere to in its actions.

Response: NEPA requires federal agencies to consider the environmental effects of all major actions, including all reasonable alternatives to that action. The cleanup of SSFL is a major federal action. Furthermore, a report from the NASA Office of Inspector General in March 2019 recommended that NASA pursue options to ensure that the soil cleanup at NASA-administered portions of SSFL is performed in an environmentally and financially responsible manner based on the intended future use of the property. The DTSC Draft Programmatic Environmental Impact Report (PEIR), 2017 Department of Energy (DOE) EIS, 2014 NASA Final Environmental Impact Statement (FEIS), and this SEIS identify many

significant and unavoidable environmental impacts to the site's valuable and protected natural, cultural, and biological resources associated with a cleanup to the AOC LUT values. Many of these impacts would be mitigated, or even eliminated, if a standard approach was applied to the site, such as the risk-based cleanup used at sites by DTSC throughout California and EPA throughout the United States. Finally, NASA and DTSC recognize that technical issues will likely preclude the agencies from successfully implementing the AOC cleanup. NASA will continue to work with DTSC and the community to conduct a cleanup that is based in science, is technically achievable, and is protective of the surrounding community and the natural environment.

Comment Category 7: Soil Quantity Estimates (overestimates and underestimates)

These comments claim that NASA grossly overestimates, and in a few cases, underestimates the quantity of soil to be transported.

Sample Comment (Overestimate): NASA Inflates Soil Cleanup Volumes so as to Be Able to Push for Weaker Cleanup Standards: NASA asserts in its DSEIS that large volumes of soil would need to be excavated to meet the cleanup requirements in the legally binding agreement it entered into with the state in 2010. Seemingly in order to try to build a case for breaking that agreement, NASA has heavily inflated those figures. It has done so with an indefensible assumption: that wherever there is soil contamination on the surface, soil would have to be removed down to bedrock or up to 20 feet below ground surface (BGS). So, wherever there are measurements showing the contamination is just at the surface, NASA nonetheless assumed all the soil above bedrock or down 20 feet would have to be removed. Where there are no measurements showing contamination beneath the surface, NASA again assumes all soil down to bedrock or up to 20 feet BGS would be removed. NASA admits that the DSEIS volume estimates are inflated: "These numbers ... represent the upper levels of expected excavated soil quantities...." (DSEIS, p. 2-12, emphasis added). Yet it uses these inflated numbers to create the false impression that a full cleanup would require "moonscaping" the site to bare rock and the neighborhoods having to tolerate huge numbers of trucks, all to the end of trying to get out of cleaning up the contamination its environmentally reckless operations at SSFL created and which it is bound to remediate by the AOC cleanup agreement it executed with the state in 2010. NASA fails to consider the option of taking more measurements to carefully delineate the contaminated areas so as to not remove soil that is, in fact, not contaminated.

Sample Comment (Underestimate): The replacement soil volume is too low and should be re-evaluated. All alternatives assume only one-third of the replacement soils will be returned to the excavated areas having an original soil depth of two feet or less (see Table ES-2 note c). Shallow areas such as streams and low areas subject seeps and springs generally support a significantly greater extent of localized biota than that of areas having deeper soil columns. These areas provide habitat for aquatic life and support a significant food chain. Reducing the depth of soil in shallow areas will by necessity increase exposed bedrock and will have significant negative and long term impacts to the recovery of native plants and other biotas in formerly verdant areas.

Response: *The soil volumes and footprints were calculated based on a rigorous analysis of several factors, including soil analytical data and soil depth, regulatory criteria, site topography, and site operations. The same methodology was applied to all alternatives to provide an estimate of soil removal area and volume, as well as the necessary backfill. To address the public's concern regarding how the quantity of soil was calculated, a detailed explanation of the methodology is now provided in Appendix 2E of the Final SEIS and the text regarding this issue has been clarified throughout the document.*

Comment Category 8: Leaving Contamination Onsite

These comments suggest NASA will leave greater than 80% of the contamination on site by choosing an alternative other than the AOC.

Sample Comment: I am deeply concerned by NASA's Draft Supplemental Environmental Impact Statement for cleaning up contamination at the Santa Susana Field Lab, which proposes leaving up to 80% of the contaminated soil in NASA's portion of SSFL not cleaned up. This contamination includes highly toxic chemicals such as trichloroethylene, perchlorate, dioxins, heavy metals, and other hazardous chemicals which migrate offsite, posing a risk to those who live in the area around SSFL.

Response: *The quantity of soil is not equivalent to the amount of contamination at the site, because the majority of contamination is located in proximity to its original source, and the concentrations decrease with distance from the source. For example, a cubic yard of soil near a contamination source would contain more contamination than a cubic yard of soil many meters from that source. Therefore, the vast majority of contamination resides in areas that would be cleaned up under any of the cleanup alternatives that NASA evaluated in its SEIS.*

Furthermore, contamination from the NASA-administered property at SSFL has not been documented to result in offsite health effects to nearby residential communities or park users. A detailed discussion of the numerous studies performed documenting this finding can be found in Section 3.7.1.4, Offsite Health Risks, of the SEIS.

Comment Category 9: Resource Concerns (Cultural, Biology, Transportation, and Air Quality)

NASA received comments that pertained specifically to the resources analyzed in the EIS; these comments were given to resource authors and subject matter experts to address in the Final EIS. The following is a summary of the key comments received by resource category.

Sample Comment (Cultural): Cultural resources and artifacts reflective of the rich Chumash and other Native American tribes that frequented the area should be preserved, preferably in situ whenever possible. Lastly, I strongly urge that the Coca test stands be preserved given the geographic and historical nexus between prehistoric man's nascent curiosity about the heavens, as documented in the polychromatic painted cave, and the development of the capability to visit the heavens, which enabled America to not only enter the space age, but lead. No place on earth is known to encompass such features other than SSFL.

Response (Cultural): *While NASA's top priority at SSFL is soil cleanup, NASA also values the cultural significance of SSFL and is committed to protecting SSFL's resources. NASA is working closely with DTSC, the State Historic Preservation Officer, and tribal authorities to minimize impacts to cultural resources per the stipulations in the 2014 Programmatic Agreement, as amended in 2020, which is provided in Appendix 3.1A of the SEIS. NASA intends to use the least impactful technology available when working within archaeological sites and will avoid these sites when possible.*

Sample Comment (Biology): The importation and deposition of dissimilar fill materials will result in significant negative, avoidable and long term impacts on the long term viability of the NASA remediated areas at SSFL. Soil column moisture regimes will be changed thereby promoting the growth of nonnative plants, permanently affecting attendant wildlife food sources and possibly, migration patterns. Increased soil erosion may cause additional sediment loading at the SSFL outfalls. Surficial weathering patterns will be impacted, and groundwater recharge may be negatively affected. Finally, vegetation supporting Native American traditional practices may not be available to future generations within nearly half of the NASA area because these plants may not thrive in the replacement fill.

NASA must consider the use of replacement fill materials having a dissimilar texture than those removed.

Response (Biology): *NASA recognizes the significant detrimental effect that would occur from the removal of native soil and vegetation and the difficulties associated with re-establishing native vegetation with different backfill and topsoil properties than what is normally found at the site. DTSC's draft PEIR made it clear that these impacts are unavoidable for an AOC cleanup. One of the reasons NASA chose to evaluate other alternatives is to see if there are ways to minimize or eliminate some of the very impacts mentioned in the comment. These impacts are described in detail in Section 3.2.2.1.1, Native Vegetation Communities, of the SEIS. NASA has tried to identify suitable sources of backfill; however, while some backfill sources are available, these sources differ in physical and chemical composition, compared to the soil currently found on the site.*

Sample comment (Transportation): The transportation plan that was put out in the public sphere sat out there incorrectly, a complete false narrative to scare people about trucks and traffic, for five years. And that was a great way to rile up the local neighborhoods to fill an auditorium and make people afraid about being five minutes late to work on Valley Circle.

Response (Transportation): *The impacts to traffic and transportation were deemed minor to negligible for all of the alternatives, including the AOC cleanup alternative. NASA did not find that the impacts from increased truck trips would be significant, as it will be constrained on the number of trucks that can be processed through the site in a single day. This single-day restriction, while mitigating transportation impacts, affects the duration of the cleanup activities. For further details, refer to Section 3.8, Traffic and Transportation.*

Sample Comment (Air Quality): The SDEIS also states that the joint Boeing-DOE-NASA transportation plan for the Field Laboratory sites will limit the project truck roundtrips to an annual average of 16 per day, with a peak maximum of 32 per day, which is far fewer daily truckloads than the 314 daily loads presented in the 2014 FEIS. EPA appreciates that NASA has committed to use newer model-year haul trucks or alternative-fueled construction equipment to reduce criteria pollutant emissions during material hauling and construction activities. Since soil cleanup activities may take place over a period of up to 25 years or more; it is reasonably foreseeable that newer technology and zero-emissions trucks may become available. Recommendation: EPA recommends that Air Quality Mitigation Measures BMP-2 be revised to include a commitment for use of Tier 4 diesel engines for soil transport. We also recommend that the clean-up plan and BMP-2 be revised to accommodate, and commit to, future emissions reduction technologies when available and feasible (zero-emission and near zero emissions haul trucks, etc.).

Response (Air Quality): *The Final SEIS text has been revised to clarify NASA's commitment to requiring contractors to comply with regional regulations and encouraging newer and cleaner equipment to the degree practicable.*

Comment Category 10: Land Use Categorization

A few comments implied that NASA had miscategorized the future land use of the site.

Sample Comment: Furthermore, the current land use of the NASA property is open space. Section 8104-1.1 Open Space of the Ventura County Non-Coastal Zone Ordinance outlines the purpose and land uses of the Open Space Zone. NASA and Boeing incorrectly conclude that the future land use would be limited to recreational (DEIS, 2019, Executive Summary page 5, and Boeing, 2017a). The Open Space Zone in Ventura County allows for more than recreation, it also allows among other uses, agriculture and housing. Clearly, leaving contaminated soils with the potential for agriculture and housing would pose future health risks.

Response: *The future land use at SSFL is currently speculative because the land has not yet been transferred out of government control and it may not be. The General Services Administration will conduct a separate environmental review under NEPA for the action of transferring the land out of NASA's stewardship. In Section 1.6, Scope of the Analysis, it is explained that NASA expects the future land use at the site to be Open Space, per the Ventura County Ordinance. However, in consultation with the State of California and the General Services Administration, a Notice of Environmental Use Restrictions that limits potential future use and development of the property may be recorded in the appropriate land records office. The document has been updated for clarification.*

Comment Category 11: Missing Health Studies

A number of commenters pointed to various studies regarding potential health risks around SSFL and requested their inclusion in the SSFL SEIS.

Sample Comment: One final but not unimportant comment: Why didn't NASA reference the Health Studies for the area surrounding the Santa Susana Field Laboratory by Dr. Thomas Mack of USC, the former Chair of Cancer Surveillance for Los Angeles County, and the original and ongoing Chair of California's Prop 65 Committee which falls under OEHHA's jurisdiction? Were NASA SSFL personnel not present for his presentation at the DTSC Open House in 2014? His presentation to the community can be found here: "Cancer Occurrence in Offsite Neighborhoods Near the Santa Susana Field Laboratory Thomas Mack, M.D., M.P.H. Keck School of Medicine University of Southern California":

[https://www.dtsc-](https://www.dtsc-ssfl.com/files/lib_pub_involve/meeting_agendas/meeting_agendas_etc/66362_Santa_Susana_8.pdf)

[ssfl.com/files/lib_pub_involve/meeting_agendas/meeting_agendas_etc/66362_Santa_Susana_8.pdf](https://www.dtsc-ssfl.com/files/lib_pub_involve/meeting_agendas/meeting_agendas_etc/66362_Santa_Susana_8.pdf)

Response: *The list of documents that commenters wished to see referenced in the SEIS include the following:*

- *2006 study "Potential for Offsite Exposures Associated with Santa Susana Field Laboratory" by UCLA's Dr. Yoram Cohen, Professor of Chemical Engineering and Director of the UCLA Center for Environmental Risk Reduction.*
- *A letter regarding the 2007 University of Michigan study, "Cancer Incidence in the Community Surrounding the Rocketdyne Facility in Southern California" from its author, Dr. Hal Morgenstern, to Senator Simitian on April 17, 2007.*
- *Health Studies for the area surrounding the Santa Susana Field Laboratory by Dr. Thomas Mack of USC.*

NASA has obtained copies of these documents and reviewed them. The 2006 UCLA study referenced in the first bullet is the draft version of the "ATSDR, 2007" document already referenced in the SEIS. However, the letter to Senator Simitian (University of Michigan, 2007) and the letter from Dr. Thomas Mack (University of Southern California, 2018) have been added as references to the Final SEIS. Subject matter experts reviewed these documents and confirmed that these documents further support the findings detailed previously in the Draft SEIS.

Comment Category 12: Soil Treatment Technologies

These comments imply that NASA should have more thoroughly considered potential soil technologies for the AOC or performed further analysis on the different proposed technologies.

Sample Comment: NASA attempts to reason for incompetence by reinstating its troubles and issues of Limited Treatment Technologies and Availability of Suitable Replacement Soil. However, the claims made on these issues were done by NASA with no scientific or referenced evidence of these risks and the Alternatives seem to be full of options of Soil Treatment Technologies. Indeed, NASA's own Soil Treatability Studies Summary Report, which is not cited at all in the DSEIS, found that many of these

treatment technologies would be fully capable of meeting the LUT values NASA is required to under the AOC. NASA believes that the option of Monitored Natural Attenuation (MNA) is a legitimate cleanup technology, but it's simply another phrase of flowering their way out of a true cleanup, as "MNA" is really just a fancy phrase for "leave it in the ground.". The insurance of the reliability for treatment technologies seems to be absent.

Response: *NASA considered the potential environmental effects of the feasible soil technologies and these impacts are disclosed in the introduction of each resource section. The Final Soil Treatability Studies Summary (NASA, 2018c), which is now referenced throughout the Final SEIS, discusses the applicability of the seven remedial technologies described in the SEIS. Of the seven remedial technologies, three were concluded to be infeasible for large-scale cleanup operations at SSFL (ex situ soil washing, ex situ chemical oxidation and in situ chemical oxidation). The four remaining onsite treatments (ex situ landfarming, ex situ thermal desorption, biological treatment, and soil vapor extraction) showed success in meeting some of the remedial objectives at SSFL. The COCs with the best potential for remediation were mostly organic in nature. However, the four remaining onsite treatment technologies were unable to effectively treat metals and dioxin contamination, which are found throughout the remedial areas across SSFL. Consequently, the effective use of onsite treatment technologies is limited to soil containing only those COCs proven to be treatable; if soil is mixed with COCs incapable of being treated onsite to meet LUT values, the treatments are no longer viable and a technology requiring excavation would need to be employed. NASA is committed to using onsite treatments where feasible. However, COCs that could be treated by onsite treatments are a fraction of the remedial area, and if treatments were ultimately proven ineffective, the soil would still have to be removed. For this reason, NASA chose to take the more conservative approach of assuming excavation would be necessary under all of the action alternatives. A soil remedial design planning document will be developed following the finalization of cleanup levels and after an official decision is made by DTSC.*

Comment Category 13: Alternative Justifications

These comments question the validity of alternatives that do not meet the AOC LUT requirements.

Sample Comment: Even if it was proper to include alternatives that would not satisfy the AOC standards (which it is not), the analysis of Alternatives B, C and D are further deficient because the Draft SEIS does not use clean-up standards adopted by DTSC for the SSFL site. The descriptions of Alternatives B, C, and D are misleading because they refer to soil screening levels as accepted standards for soil cleanup at the project site, without any technical explanation or support for their selection. For example, screening levels identified as "Revised LUT levels" in Alternative B (i.e., EPA Regional Screening Levels, California EPA Human Health Screening Levels) and screening levels identified as "cleanup levels for soil at SSFL" in Alternatives C and D (i.e., site-specific screening levels from the 2014 Standardized Risk Assessment Methodology Rev. 2 Addendum) have not been approved by DTSC as soil cleanup standards for any areas at the SSFL site. Indeed, as provided in the DTSC and EPA guidance cited in the SEIS, these screening levels were not intended for adoption as soil-cleanup standards without further site-specific risk analysis. Yet, the Draft SEIS does not disclose this critical information to the public and decision-makers nor does it provide any justification for the use of these screening levels. The SEIS simply refers to them with as cleanup levels, without evidentiary support for using them, ignoring all applicable guidance. This is misleading and violates the public disclosure mandates of NEPA. The Draft SEIS further fails to provide any sufficient technical rationale for the selection of seven soil contaminants that have revised LUT levels for Alternative B except to say that these are "the seven contaminants that result in the greatest disproportionate level of cleanup" between the AOC (i.e., LUT) and alternative cleanup levels. Under the AOC, NASA does not have the option to modify the LUT levels in order to reduce the level of effort associated with soil cleanup. If revision of the LUT level for any soil contaminant is necessary for successful implementation of soil cleanup in accordance with the AOC, that must be demonstrated through objective technical arguments. The Draft SEIS fails in this regard. These same

deficiencies are found in the Draft SEIS's analysis of Alternatives C and D. Further, the Draft SEIS states that each of the remedial alternatives provides equally beneficial protection of human health. However, for carcinogenic compounds, risk is generally understood to be proportional to concentration and exposure, so this statement is inaccurate. An assessment of the relative protection of human health should be provided for each alternative to adequately disclose the potential health impacts.

Response: *There are multiple reasons for evaluating several soil cleanup alternatives. First, NEPA and NASA regulations require that NASA evaluate all reasonable soil cleanup alternatives. Second, the DTSC PEIR identifies many significant and unavoidable environmental impacts to the site's valuable and protected natural, cultural, and biological resources associated with the AOC soil cleanup. The other alternatives greatly reduce or avoid these impacts. Third, a March 2019 report from the NASA Office of Inspector General recommended that NASA pursue options to ensure that soil cleanup at the NASA-administered portion of SSFL is performed in an environmentally and financially responsible manner based on the reasonably foreseeable future use of the property.*

With regard to the rationale for choosing the various alternatives, NASA used the following concepts in developing the alternatives in the SEIS. As published, the LUT values used background values for polycyclic aromatic hydrocarbons, dioxin/furans, antimony, silver, and aluminum and an instrument detection limit for total petroleum hydrocarbons and acetone. Soil background data may not be fully representative of the conditions at SSFL and instrument detection limits have no scientific basis for use in decision making for soil remediation activities. While evaluating data under a RCRA or CERCLA cleanup project, the data are first screened against background values (instrument detection limits are not used as screening values under a RCRA or CERCLA cleanup scenario). If the concentrations exceed background values, they are then screened against very conservative EPA or State of California concentration values to evaluate whether the parameters pose harm to human health or the environment. Alternative B uses this approach to revise 7 of the 139 AOC LUT COCs.

Alternatives C and D use a standard risk-based cleanup approach, similar to that used by DTSC throughout California and EPA throughout the United States. EPA and the State of California Regulatory Agencies have provided conservative screening values for use in screening parameters to protect human health and the environment. In addition, the DTSC-approved Standardized Risk Assessment Methodology (SRAM) specifically developed for SSFL provides additional risk assessment guidance to evaluate risk to human health and the environment, and this SRAM was used to assess potential impacts for Alternatives C and D. All of the Alternatives evaluated in the SEIS are protective of human health.

Comment Category 14: Wildfire Concerns

A number of commenters expressed concerns regarding the Woolsey Canyon fire, which occurred in November 2018.

Sample Comment: It has also come to my attention that nowhere in the DSEIS mentions the tragic incident of the Woolsey fire that occurred in November of 2018. There have been reports regarding that the fire has begun at NASA's portion of SSFL. If that statement were to be true, I'd assume it should be indicated in the analysis of the LUT and newly reported numbers of the contamination levels in the DSEIS. The Woolsey Fire should also be a re-evaluation of NASA's Best Management Practices (BMP) as stated in their DSEIS for their SSFL in order to ensure the prevention of wildfires in the near future to mitigate the ongoing effects of climate change.

Response: *The Woolsey Fire is mentioned several times in the Draft SEIS; please see the index in Section 7 for the full list of references in the document. The DTSC and a team of federal, state, and local agencies evaluated impacts of the Woolsey Fire on conditions at the SSFL site and in communities around the site using data from field inspections and computer simulations, physical samples, and air monitoring data from existing monitoring stations on the SSFL site and in nearby communities. Their analysis resulted in multiple lines of evidence that no hazardous materials from SSFL were detected in communities following*

the Woolsey fire. In addition, the California Department of Public Health, Cal EPA, the U.S. EPA, along with numerous other federal, state, and local agencies have reviewed the data and determined the fire did not present any risks other than those normally present in a wildfire situation. NASA continues to take preventive measures to meet or exceed state and local fire prevention guidelines.

Comment Category 15: Radiological Contamination

A few comments focused on NASA's role in cleaning radiological contamination on its portion of SSFL.

Sample Comment: 4. RADIOLOGICAL CONTAMINATION OF SOIL

Per the 2010 AOC, NASA is responsible for cleanup of soil having radiological contamination above background levels, regardless of the source of that contamination. If radioactive contaminants are present in soil above the provisional radiological LUT levels, NASA is required to address those conditions, and the provisional radiological LUT levels are the required cleanup criteria. The Draft SEIS discussion of Alternative A mentions the potential for radiological contamination of soil in the NASA cleanup areas, but there is no similar discussion of potential radiological contamination in the other Alternatives. Further, the Draft Provisional Radiological LUT Values (from Appendix B of DTSC's 2017 Draft PEIR) have not been referred to in the Draft SEIS, and they are not included with tables of other soil-cleanup criteria presented in Appendix 2. This oversight needs to be corrected.

Response: *NASA has never conducted nuclear activities or managed radioactive materials at SSFL. Radiation is mentioned in Alternative A because it is part of the AOC's radiological LUT. Extensive investigations of soil and buildings in NASA-administered areas have been conducted, and the data show no evidence of radiological contamination above background levels. However, NASA has and will continue to conduct radiological screening of disposal materials (soil and demolition debris) and manage them in accordance with applicable state and federal requirements.*

Comment Category 16: Cancer Concerns

These comments generally link the SSFL site to personal cancer experiences.

Sample Comment: I am 64 years old and was a first resident of homes built in 1959, just a few miles away from the site, in Canoga Park(near Valley Circle and Vanowen). That means that I was living there when the meltdown toxic fumes and everything else, was there!!! I have lost many of my family members from numerous types of cancer, including Hodgkin's Disease, colon cancer, lung cancer, pancreatic cancer, brain cancer and breast cancer! Is that a coincidence? I highly doubt it, since the facts show that the SSFL site is full of cancer causing chemicals. We were promised that it would be cleaned up so that future generations could live a healthier life. NASA needs to \do their job and clean up this horrific site with complete cleanup!

Response: *NASA understands and sympathizes with these concerns and is committed to achieving a cleanup that is protective of public health and the environment. SSFL is one of the most studied environmental cleanup sites in the country, and scientific data indicate that the contamination is primarily contained within the source areas inside the boundaries of SSFL. DTSC has conducted an extensive review of environmental data relating to SSFL—including measurements of air, soil, groundwater, surface water, and drinking water—as well as reviewed 13 health-related studies associated with SSFL. DTSC has concluded that there is no evidence that offsite contamination from SSFL poses any safety or health concern to residents of neighborhoods near SSFL. Human health considerations are discussed in detail in Section 3.7, Health and Safety.*