Responses to Comments

Agreements in Principle
State of California and the Department of Energy
State of California and the National Aeronautics and Space Administration

prepared by
Department of Toxic Substances Control
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Volume II

Detailed Responses to Comments

General Comments

The following comments were received from the public and stakeholders. The first groupings are those that were not considered unique in their message, and have been identified generally here.

1454 residents of Oak Park, Thousand Oaks, Agoura Hills, and Conejo Valley sent the following e-mail:

I commend the state and federal agencies for their historic agreement-in-principle on cleaning up the contaminated Santa Susana Field Laboratory.

I strongly support the proposed Agreement and urge that the parties immediately sign it and commence its implementation.

SSFL is contaminated with radioactive and chemical materials from decades of accidents, spills, and other releases. These nuclear and toxic materials pose significant risks to public health and the environment.

The decision to clean up the contamination to background levels is an excellent one from the standpoint of public protection. Having EPA perform the radioactive monitoring and confirmatory sampling adds a significant level of independence to the process of determining what needs to be cleaned up and confirming that it has been.

I am grateful to the agencies and elected officials who helped bring this historic agreement about, finally listening to the community who for so long have pushed for effective cleanup.

I urge that it be quickly signed and made into a final, binding, and legally enforceable agreement.

60 residents of Oak Park, Thousand Oaks, Agoura Hills, and Conejo Valley sent the following e-mail:

I am in support of the agreement for cleanup of the contaminated Santa Susana Field Lab.

I am grateful to the state and federal agencies and the elected officials (Linda Parks helped on this) who worked so hard to get this agreement.

I urge the DTSC to get the document signed and make it a final, binding and legally enforceable agreement.

62 general e-mails in support of the agreements

30 signatures in support of the agreements on the letter from the Physicians for Social Responsibility-Los Angeles

70 signatures by mail in support of the agreements from Teens Against Toxins.

FAX, including 11 signatures in support of the agreements

Detailed Comments Received

The following set of comments are those that were considered more unique, and which DTSC evaluated and, as warranted, provided specific responses to comments received as identified below. DTSC apologizes in advance for what might appear to be redundant or repetitive responses. Rather than force the reader to refer back in the document to a place where a similar response was provided, DTSC opted to repeat responses where similar comments or questions were presented.

The comments are presented in alphabetical order of the name of the commenter.

Note: At the end of this set of comments DTSC also included comments and questions it received from The Boeing Company. Neither of the Agreements in Principle with DOE and NASA relate to Boeing's obligations or responsibilities regarding the contamination for which it is responsible in Areas I and III at the Santa Susana Field Laboratory, so the applicability of Boeing's is not apparent. However, DTSC is also aware that Boeing broadly distributed its set of comments and questions throughout the community. Because of this, DTSC has responded to Boeing's comments and questions in this document in the interest of helping the community better understand the Agreements in Principle, and to help prevent any confusion or uncertainty that may have been caused through the dissemination of the comments and questions.

Michael Anderson
California Department of Fish and Game
Office of Spill Response and Prevention

As a former DTSC toxicologist (1998-2007), I reviewed and commented on numerous site ecological risk assessments and the existing Biological Conditions Report for the facility. The SSFL supports abundant wildlife habitat, including intermittent streams and perennial wetlands, as well as state-listed plant (i.e., Santa Susan Tar Plant, Southern California black walnut) and animal (i.e., at least 5 reptile, 7 bird, 5 mammal) species that have been observed or have a moderate to high probability of existing onsite. Cleaning up to background conditions, with the implication of destroying sensitive CA native wildlife habitat, must be recognized and addressed following CA state statutes, e.g., Fish and Game Code sections 1600 et seq., as well as those promulgated by the federal government.

Response: DTSC recognizes that any cleanup action to be taken must be in accordance with all federal, state and local requirements. The final Administrative Orders on Consent will establish that requirement, and all federal, state and local government agencies with jurisdiction will be consulted throughout the site characterization and cleanup process.

Three important State of California issues arise from this agreement that must be considered before any actions are implemented: First, it is my understanding that cleanup of the DOE portion of the facility will result in a high level of habitat destruction (i.e., millions of cubic yards of soil removed) and potential impacts to state-listed species. While the existing Agreement in Principle acknowledges DOE's consultation with the USFWS regarding federally-listed species, there is no such reference to consultation with the State Department of Fish and Game (DFG) for impacts to state threatened, endangered, or candidate species pursuant to Fish and Game Code section 2080 et seq.. DFG must be consulted for impacts to state listed species, species of special concern and fully protected species in order to substantively comply with DFG Applicable or Relevant and Appropriate Requirements (ARARS) for cleanup actions, and for necessary mitigation requirements related to cleanup actions and their impacts on plants, wildlife, and their habitats.

Response: Although the Agreements in Principle only reference federally endangered species as a possible exception to carrying our the described cleanup, DTSC recognizes the role and authority of the State Department of Fish and Game and intends to coordinate closely with the State Department of Fish and Game throughout the site characterization and cleanup process.

Second, the removal actions have the potential to affect on or off-site intermittent, seasonal, or perennial streams, wetlands, or ponds; DFG should be consulted for appropriate review and mitigation measures.

Response: DTSC recognizes the role and authority of the State Department of Fish and Game and intends to coordinate closely with the State Department of Fish and Game throughout the site characterization and cleanup process.

Third, the responsible parties (RPs) for this site may be liable for natural resource damages caused by the proposed cleanup actions. We are currently investigating whether a natural resource damage assessment is applicable.

Response: DTSC does not anticipate that there will be residual damage to natural resources due to DOE's and NASA's release of radiological or chemical contaminants into the environment that are not fully addressed at the completion of the cleanup anticipated by the Agreements in Principle. However, if there are, and an assessment of monetary damages as defined in statute is necessary, DTSC will consult and coordinate with the State Department of Fish and Game throughout the site characterization and cleanup process to ensure all legal requirements are fulfilled.

Before any soil or sediment removal actions are implemented at the SSFL, I recommend Helen Birss, DFG Environmental Program Manager (Region 5), at (562) 342-7151 as an initial point-of-contact to coordinate DFG's review and concurrence with any proposed soil removal work plans & related mitigation measures.

To discuss these issues further and answer any of your questions, I am available to meet with you and other DTSC staff at your earliest convenience.

Response: DTSC has already been in contact with staff from the State Department of Fish and Game and will maintain contact with and coordinate through any staff assigned to this project.

Caroline Aslanian
Concerned Citizen

My name is Caroline. My husband and I have three children and live in Oak Park. I am unable to attend the meeting tonight as it is Back to School night at my children's school. This is the one time I wish I had a clone.

Many friends and family wished and hoped to attend this important meeting. However, due to Back to School Night, they aren't able to. We discovered the truth about this disaster last year and were shocked that it was so well hidden. The partial nuclear meltdown has happened. Nothing we can do about that at this point (except making sure that the parties responsible for this are held accountable).

One thing that can be done now is the clean up. None of us can afford (physically) to wait any longer for what should have been done decades ago. I urge you to stand up for what is right and make a huge wrong a little right for the sake of our current and future health.

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Daniel Taylor
Director of Public Policy
Audubon California

On behalf of our more than 150,000 members and supporters Audubon California is pleased to support the proposed agreements for cleanup of the Santa Susana Field Lab.

As we know the Field Lab is contaminated with chemical and radioactive materials from decades of nuclear reactor and rocket testing. A partial nuclear meltdown occurred there, as well as other reactor accidents. Tens of thousands of rocket tests added significant contamination with toxic materials.

The affected community including members of our local chapter the San Fernando Valley Audubon Society worked for years to get the Responsible Parties to agree to clean up the contamination, facing significant resistance. In 2007, the legislature passed and the governor signed SB 990, which mandated strict cleanup of the site. Implementation of SB 990, however, has been slowed by disagreements between your agency, the Department of Energy, and NASA.

These new agreements between the federal and state agencies for cleanup to background levels of contaminants, with specified exceptions for endangered species considerations and Native American artifacts, will resolve this long controversy, promptly carry out SB990, and provide protection for the people living nearby as well as restoring the environment of the site that has been damaged by decades of pollution. We are particularly enthusiastic about how this important agreement and follow-up action will remediate the site so that it can be eventually considered for public open space or park use.

Response: While DTSC appreciates support for the proposed cleanup actions, neither the Agreements in Principle nor any final Administrative Order on Consent affect or influence decisions by the owners of the property regarding its planned future use. Those decisions will be a function of discussions between the property owners, the local government(s) that govern land use, and the community.

The affected community and environment have long awaited effective action on cleanup. We support the proposed agreement and urge that it be promptly signed and implemented.

Response: DTSC agrees that the terms and provisions of the Agreements in Principle must be embodied in final Administrative Orders on Consent to be enforceable and to accomplish what they describe. It is DTSC's intention to resolve remaining issues and

reach agreement as quickly as possible so that the activities described in the Agreements in Principle can be implemented.

DTSC desires to formalize these requirements quickly in final Administrative Orders on Consent. DTSC received overwhelming support from the affected community to in support of the Agreements in Principle and to wrap up negotiations and sign enforceable agreements quickly. Because there has already been a 30 day comment period and the Agreements in Principle have remained unchanged, DTSC does not believe that an additional comment period is needed for the public to verify that issues that they identified have been resolved. However, DTSC also received a handful of requests to review the final Administrative Orders on Consent before they are signed, and DOE has requested that an additional comment period be offered to the public on the final Administrative Orders on Consent. Because of these requests, DTSC will be providing an additional review period for the public to and to comment on any new issues raised by the final Administrative Orders on Consent.

DTSC recognizes that an additional review period delays finalizing the agreement and proceeding to implementation. As soon as the public review period has ended and any required adjustments to the documents made, DTSC will be working with DOE and NASA to sign the final Administrative Orders on Consent as soon as is practicable.

Thank you for your consideration of our views.

Michelle Barton
Concerned Citizen

I am writing because I am concerned about the state of the Santa Susana Field Lab. As a resident of the Agoura Hills area it is frightening to know that due to the nuclear tests that occurred at this facility that the health of my family is at risk. For the safety and welfare of my personal family, friends, and all other residents in the area I think it is absolutely vital that this site be cleaned up to prevent any damaging health effects due to radiation or other harmful chemicals that may be present at the old test site. I am fully in favor of the clean-up agreement for the site and would love to see the DTSC efforts succeed. Thank you for your time.

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Oliver Barreto
Concerned Citizen

It's great that the Department of Toxic Substances Control, the Department of Energy and NASA could agree on the issue regarding the cleanup of the Santa Susana Field Laboratory site. As soon as an agreement with Boeing can be reached the entire site should be fully cleaned up and re-soiled properly as soon as possible. Regardless of what Boeing or anyone else says, the entire area should be cleaned promptly no matter who owns it now.

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Carla Bollinger
Woolsey Canyon

I want to see the SSFL cleaned up but based on a rational clean up level, not determined by a few activists with a self-righteous agenda. To who and what purpose is it to destroy the oak woodlands, native plants, archaeological and cultural resources, Chumash artifacts, and remaining rocket test stands (historical monuments/testimony to America's and all humankind's glorious space exploration?)

Response: The cleanup of the Santa Susana Field Laboratory must be conducted in compliance with State law standards. DTSC believes that the clean up approach that is represented by the Agreements in Principle is one that is protective of human health and the environment and is fully consistent and compliant with state and federal clean up laws and regulations.

If the SSFL is cleaned up to the SB 990 and even more stringent-excessive agricultural/residential/parkland level, than this area in the Rim of the Valley Wildlife Corridor will be destroyed of its natural wonder. It doesn't make sense to kill all living things on this site so the future development, such as KB Homes 400+, can be built on and adjacent to the SSFL. Yes, clean up is necessary in compromised areas of the SSFL, sodium burn pit, high-levels of TCE and chemicals in particular areas, but that doesn't necessitate destroying the whole 2,280 acres. The EPA testing isn't even completed to properly analyze the level of contamination and locations. The deer, cougars, bobcats, raccoons, and all other wildlife, residents of SSFL, I have seen are doing just fine. By removing soil to bedrock, this will destroy their habitat.

Response: As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," the Agreements in Principle are based on the application of risk based criteria and other cleanup procedures and policies.

DTSC understands that to carry out the cleanup specified in the Agreements in Principle could result in significant removal of contaminated soils. It is regrettable that the actions of Boeing, DOE and NASA have resulted in contamination of the site to the extent that the volumes of soil requiring cleanup may be significant. It is also regrettable that the impacts of accomplishing the necessary cleanup may also be significant. DOE and NASA will need to identify, assess and mitigate any

environmental impacts that result in the course of carrying out their cleanup responsibilities.

I live at the Summit Mobile Home Park, within a mile radius of the SSFL. In the mid-late 1970's I lived in Simi Valley, my home located at the base of Runkle land. My three children and I are quite healthy. What will not be healthy for me is to have massive amounts of hazardous and non-hazardous dirt disturbed with particles flying around and a non-stop, on-going stream of large dump trucks running up & down Woolsey Canyon for ten years or more!

Response: DOE and NASA will need to identify, assess and mitigate any environmental impacts that result in the course of carrying out their cleanup responsibilities. The draft Remedial Action Implementation Plan must include a detailed soils management and transportation plan, and the accompanying CEQA documents must identify environmental impacts attributable to the transportation of soils and mitigation measures that are being proposed to mitigate those environmental impacts.

Where will the tons of hazardous and non-hazardous dirt be moved to? Places like Kettleman/Bakersfield already have higher levels of contaminants than healthy for humans; Beatty, Nevada is beautiful - why destroy it with our dirt? Is it good to put contaminated soil in our beautiful Mojave Desert - everyone's dumping ground?

Response: The draft Remedial Action Implementation Plan must include a detailed soils management and transportation plan, which will include specific destinations for the disposal of contaminated soils.

Where will replacement dirt come from if all the dirt is removed from the SSFL? Does it make sense to destroy an eco-system/woodland in the SSFL that is healthy-thriving to dump it in another place - even some of it in the SSFL? To make a determination of how to handle the necessary contamination clean up requires rational thinking, study, solution than the proposed (for political expediency) unacceptable stupidity of destroying all resources.

Response: DOE and NASA will need to identify, assess and mitigate any environmental impacts that result in the course of carrying out their cleanup responsibilities. The draft Remedial Action Implementation Plan must include a detailed soils management and transportation plan, and the accompanying CEQA documents must identify environmental impacts attributable to the transportation of soils and mitigation measures that are being proposed to mitigate those environmental impacts.

I do believe that the SSFL clean up level should be done to "Rural Residential", converted to an open space park-rocket history museum and incorporated in the Department of Interior's Rim of the Valley Wildlife Corridor.

Response: This comment is inconsistent with the commenter's previous comment. State law requirements in SB 990 require the site to be cleaned up to a level consistent with an assumed rural residential use (or suburban residential land, whichever yields cleanup standards that are more protective).

I have read Abraham Weitzberg, PhD, Nuclear Engineer, and Barbara Tejada, Archaeologists' reports on the clean up and believe their summation/recommendations are valid.

Response: The comments of Abraham Weitzberg, PhD, and Barbara Tejada are responded to separately in this Response to Comments.

As a resident on Woolsey Canyon, I am asking that there be a Public Comment Period for the Final Consent Order.

Response: DTSC desires to formalize these requirements quickly in final Administrative Orders on Consent. DTSC received overwhelming support from the affected community to in support of the Agreements in Principle and to wrap up negotiations and sign enforceable agreements quickly. Because there has already been a 30 day comment period and the Agreements in Principle have remained unchanged, DTSC does not believe that an additional comment period is needed for the public to verify that issues that they identified have been resolved. However, DTSC also received a handful of requests to review the final Administrative Orders on Consent before they are signed, and DOE has requested that an additional comment period be offered to the public on the final Administrative Orders on Consent. Because of these requests, DTSC will be providing an additional review period for the public to and to comment on any new issues raised by the final Administrative Orders on Consent.

DTSC recognizes that an additional review period delays finalizing the agreement and proceeding to implementation. As soon as the public review period has ended and any required adjustments to the documents made, DTSC will be working with DOE and NASA to sign the final Administrative Orders on Consent as soon as is practicable.

William Bowling
AEROSPACE CONTAMINATION MUSEUM OF EDUCATION

ACME has provided the below comments for the Agreements in Principle (AIP) Sampling and Analysis Plan (SAP) Report of the Santa Susana Field Laboratory (SSFL)

Dear DTSC,

The following Comments are intended to go into the record for both the Department of Energy (DOE) and the National Aeronautics and Space Administration (NASA) AIP.

The AIP document is very vague in some instances needs to have an addendum once the public comments are collected and implemented in the body.

Response: The Agreements in Principle will be accompanied by, and made enforceable through, final Administrative Orders on Consent. Many of the details of process, and definitions of key terms, will be contained in these documents.

We must hold these Responsible Parties to the strict guidelines of Senate Bill 990 (SB 990), a California Law to which this process must be measured. Over 1700 acres of this Facility feed the L.A. River during rainfall, with a potential of bringing toxins into the San Fernando Valley and beyond. As the headwaters to the Los Angeles River and with the recent decision from EPA regarding the true navigability of this waterway, the SSFL needs to be attacked head on with remediation techniques.

Response: As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," the Agreements in Principle are based on the application of risk based criteria and other cleanup procedures and policies.

DTSC believes that the clean up approach that is represented by the Agreements in Principle is one that is protective of human health and the environment and is fully consistent and compliant with state and federal clean up laws and regulations (including SB 990).

A concern, that could be a potential loophole for a lesser cleanup is the "Endangered Species" clause. The AIP, as it is written, Cleaning Up to Background Concentrations yet "No contaminated soil to be left in place" is contradicting, rewind to October of 2008 a

total of 1100 (Yes 1100, Perchlorate Containing Devices) Class C Explosives were found in the Northern Drainage Cleanup. They were found under an oak tree when it was removed. It was/is common practice, even in landfills today, to plant over trash. That is a potential scenario with the found explosives…They were buried and trees were planted over the waste. The protected species clause needs to be re-worded as maybe trees or plants older than the development of the Field Lab could be suspect.

When the SSFL was built, the entire site was grazed to a moonscape, then built upon. So any of the plant species after 1947 could be suspect. Are we going to leave contaminated soil in place if the Santa Susana Tarplant is thriving in contaminated soil? This concern should be addressed. The AIPs as written do not solve these issues we are facing at every corner.

Response: DTSC understands the concern being raised. However, the exercise of any of the proposed exceptions, including that for endangered species, in the implementation of any cleanup responsibility under the Agreements in Principle/final Administrative Orders on Consent, is intended to be limited in scope. DTSC expects that the endangered species exception may have limited application, and that endangered species issues will largely be addressed through the development and implementation of mitigation measures.

The Wind Provisions in the document (AIP) should be kept to lower than 15 miles per hour as ACME has observed first hand through the use of Time-Lapse Imagery that wind stronger than this can impact the surrounding communities. The Boeing Co. has now taken the idea of Time-Lapse Imagery and are using it in their recent cleanup activities in the Los Angeles Regional Water Quality Control Board (RWQCB) Interim Source Removal Action (ISRA) for the National Pollutant Discharge Elimination System (NPDES) permitted Outfall 008 and will share with the public the video imagery upon completion.

Response: The draft Remedial Action Implementation Plan must include detailed health and safety requirements. DTSC will ensure that this type of restriction is included in the draft plan. The public will also have an opportunity to verify that concerns such as this are addressed as they review the draft plan when it is released for public review and comment.

http://www.acmela.org/images/DTSC_to_NASA_Cesium_137_in_Area_II_ELV_of_SSFL_September_22_of_2010.pdf

The above letter from DTSC to NASA describes the Low Level Radioactive Waste (LLRW) that was found on the NASA property in AREA II of the SSFL. This raises the question: is there/were Radiological Operations in other areas aside from AREA IV and is DOE responsible? NASA has facilities in AREA IV (Building 100 – Computerized Tomography CT

Scanner) and was part of the Systems for Nuclear Auxiliary Power (SNAP) programs in the 1960's. Yet from former worker interviews the Cesium 137 found on NASA property as said in the above letter could have come from the Atomics International Equipment Lab that is what is now being referred to as the ELV (Expendable Launch Vehicle) area.

Response: DTSC will continue to work with NASA to address the possibility that radiological contaminants may be present outside of Area IV, and in NASA's Area II and portion of Area I, and ensure that the assessment of site conditions includes analysis for radiological contaminants.

The AIP has no business redefining how waste should be classified. The ISRA issue with the Cesium 137 shows us that we cannot have an agreement that designates waste as LLRW when any soils found on NASA property cannot be classified this way because NASA did not hold a nuclear license.

Response: Existing regulations require that these soils be disposed in this manner. The Agreements in Principle do not define or classify wastes (either radiological or chemical). The Agreements in Principle only identify how the identified contaminated soils are to be disposed.

What about other nuclear contamination in the Boeing Owned Property, should DOE be liable?

According to the below document there was a shower in AREA I that men from the Sodium Reactor Experiment cleanup would be forced to use in the decontamination process.

http://www.acmela.org/images/The_Words_of_a_Deceased_SSFL_Worker.pdf

The Below photo illustrates the Power Plant Test Facility in the Boeing Owned AREA I otherwise known as the AI Tower and the Hot Fuels Area of Components Test Lab I (CTL I) where in the Resource Conservation and Recovery Act Investigations discovered Tritium. How will that be dealt with?

Other examples that should be added into the DOE portion of the AIP is the Bowl in the Boeing Owned AREA I of the SSFL. Below you see the brochure for the DOE Operated Energy Technology Engineering Center (ETEC) and the photo in the top right is AREA I and this is documented in reports drafted by SAIC.

The below photo to the right illustrates that the Nuclear AREA IV was once AREA III now owned by Boeing, This should be investigated further.

Response: Liability and responsibility are two different concepts. DTSC, through the Agreements in Principle and ultimately through the enforceable Administrative Orders on Consent, is not as concerned with who is liable and ultimately responsible to pay for the cleanup. More important to DTSC is not who specifically caused which contamination, but that DOE and NASA are willing to take full responsibility for all contaminants found in their respective areas, regardless of who placed it there.

DTSC
DTSC was involved in the Environmental Protection Agency (EPA) preliminary Scope of Work (SOW) that was subsequently released to the public in December of 2008. As part of the EPA study team and to save money for the State of California, DTSC was to share split samples collected and screen them for their Chemical Background Study. What was done is/was contrary to anything discussed in public meetings. This was quite some time ago and now we are still having issues, many of which are addressed in my yet to be responded to letter to Rick Brausch (DTSC) on September 7th, 2010.

http://www.acmela.org/images/ACME_to_DTSC_Budget_Contractor_Background_SSFL_September_7_of_2010.pdf

The below link is the ACME Comments on the Chemical Background Study and these comments should be included as comments to the AIP as well.

http://www.acmela.org/images/ACME_to_DTSC_Comments_on_the_Chemical_Background_Study_September_29_of_2010.pdf

After reading the September 7 and 29th, 2010 letters from ACME one needs to realize that the fact remains, not having a contractor in place, moving forward depends on the State's budget approval. Maybe there is a way that NASA and DOE can sign on for financial responsibility, to get a contract moving forward. I think it's very important that we focus on the key decisions that have been made in these historic agreements without surrendering to cleanup loopholes. We need to find a way to work together so we get the best most defensible background study for both radiological constituents and chemical contaminants. It is in the best interest of the surrounding communities to find a way to do just that. With "Agreements in Principle" reached within the DOE and NASA that read…The end state of the site (SSFL Area II, LOX and AREA IV) after cleanup will be background…yet we have not agreed on "Background" for the chemicals NASA or DOE left behind from their operations at the SSFL. Is The Boeing Co. responsible for the DOE Chemicals and not the Radiological Contamination that the Obama Stimulus monies are to detect? The Boeing Co., the majority landowner/operator are not part of the recent agreements by NASA and DOE. Yet the above illustrations prove that the Boeing land IS Radiologically impacted is a major concern.

Response: DTSC agrees that both background studies – U.S.EPA's Radiologic Background Study and DTSC's Chemical Background Study – are absolutely essential to implementing the approaches contained in the Agreements in Principle and are being prioritized to be completed as soon as possible.

In closing I would like to mention the Confirmation protocol says the the SSFL Southern Buffer Zone (SBZ) is a potential source for backfill soils, how can this be when the SBZ has not even been characterized in the RCRA RFI process. We must remember this is the area upstream from the AREA I Burn Pit where in November of 2008 the DTSC found Radium, a radionuclide that poses a heath risk, this one needs to be thought out a little more and reconsidered.

Response: According to the Confirmation Sampling Protocol for DOE, U.S.EPA will be responsible for developing a sample and analysis plan to verify that backfill/replacement soils are acceptable for use, irrespective of their source (onsite or offsite). A similar protocol will be developed for use with NASA.

Thank you for taking the time to review and consider my comments for the AIP.

George W. Brodt, GE
Santa Clarita, CA

Re: Comments regarding the draft agreements between the State of California and The Department of Energy (DOE) and The National Aeronautics and Space Administration (NASA)

As the grandparent of two children ages 3 and 6 who live right below the SSFL in Hope Town, Simi Valley, and as a licensed Geotechnical Engineer, I have reviewed the two agreements between the State of California and the National Aeronautics and Space Administration (NASA) and the U.S. Department of Energy (DOE) with interest. I have concluded that the agreements are not clear with respect to the cleanup of radioactive contaminants in Areas I and II. Since the cleanup of radioactive contaminants at the SSFL is clearly the responsibility of the Department of Energy, I suggest that the following changes be made to clarify this issue.

Agreement in Principle between The National Aeronautics and Space Administration and the State of California, Paragraph at the top of page 3 should be revised as shown below:
(Note: Text in red has been added. There are no deletions.)

"To the extent any radiological materials are determined to be present at this portion of the site, DTSC and NASA will *consult with the U.S. Department of Energy (DOE) to have them* develop an appropriate sampling and disposal plan for those materials. *Clean up of radioactive contaminants in Areas I and II of the SSFL shall be fully funded by DOE*."

Response: DTSC understands the concern being raised about radiological contaminants potentially being present in areas outside of Area IV. DTSC will continue to work with NASA to address the possibility that radiological contaminants may be present outside of Area IV, and in NASA's Area II and portion of Area I, and ensure that the assessment of site conditions includes analysis for radiological contaminants.

Agreement in Principle between The U.S. Department of Energy and the State of California, Paragraph 2 on page 4 should be revised as shown below:
(Note: Text in red has been added. There are no deletions.)

"Radioactive contaminants investigation/data gaps
U.S.EPA is responsible for the investigation of radioactive contamination. Investigation reports related to radioactive contaminants previously prepared for and submitted by DOE will not require revision – U.S.EPA's survey efforts will be sufficient for determining

the nature and extent of radioactive contamination and areas requiring cleanup of radioactive materials within Areas *I, II,* IV and Northern Buffer Zone.

U.S.EPA, in the course of conducting its radioactive contaminant survey, will determine where onsite levels exceed local background within Areas I, II, IV and Northern Buffer Zone."

Response: To DTSC's knowledge U.S.EPA is not able to take on responsibilities for areas outside of Area IV. U.S.EPA is conducting those activities as a result of Congressional direction and a specific appropriation. As stated above, DTSC will continue to work with NASA to address the possibility that radiological contaminants may be present outside of Area IV, and in NASA's Area II and portion of Area I, and ensure that the assessment of site conditions includes analysis for radiological contaminants.

Thank you for the opportunity to comment on this important work and for the many years of work that all of the agencies have put into resolving this problem.

Marge Brown

The following are my comments on the Agreement in Principle:

1. Ground water is not part of the agreement at this time. I understand that this will be handled and included at a later time, but I would certainly want to see it discussed and agreed upon prior to any signing of the final document. Ground water possibly containing radioactive substances or toxic chemicals is of great concern, since it is this element that continues to migrate down from the Field Lab on to surrounding communities.

Response: The Agreements in Principle address soils contamination only. However, although the Agreements in Principle only address soils contamination, that does not relieve DOE or NASA of their continuing responsibility to address the contaminated groundwater. Groundwater, and the parties' obligations regarding groundwater contamination, will continue to be addressed through the 2007 agreement.

2. Balancing criteria currently seem quite vague and need to be explained clearly, in more detail, and right up front.

Response: The discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria."

3. It appears that provision needs to be made for evaluating non-harmful chemicals, with the creation of an additional look up chart, so that we don't dig up harmless soil.

Response: The U.S.EPA Radiologic Background Study and the DTSC Chemical Background Study will provide background values for all radionuclides and potentially harmful chemicals expected to be found locally. As presented in the Agreements in Principle, "Look-up Tables" will be developed by both U.S.EPA and DTSC which are to contain the cleanup standards for radiological and chemical contaminants. These lookup tables will be used for the cleanup decisions at the site.

4. There needs to be more exploration and discussion about leaving either radioactive substances or toxic chemicals in place with a view to using other technologies than just digging everything up.

Response: The Agreements in Principle do not preclude the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment of

soils to achieve the identified cleanup standards. Although it is impossible to know until the site is fully characterized whether any soils may be able to be addressed in this way, DTSC agrees that the use of these approaches has the potential to significantly reduce the amount of soil requiring excavation and offsite disposal. The final Administrative Orders on Consent make clear that the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment is allowed, and requires treatability studies to be done to assess their viability.

Regarding the cleanup of Area IV:

1. In an area where there are Native American artifacts formerly recognized as Cultural resources, the agreement states that "Under no circumstances shall exceptions for unforeseen circumstances be proposed in excess of five percent of the total soil cleanup volume." What happens then to the other 95% of the soil containing artifacts? Does it just get dug up and carted off? What happens to the artifacts? Why only 5%? That seems to be so little...why even bother?

Response: DTSC believes the commenter is misinterpreting the Agreements in Principle. The 5% cap on exceptions refers only to the exercise of the exception related to circumstances where DOE or NASA desire to claim that cleaning up to the specified standards is not technically achievable. The other exceptions listed (limits of detection, protection of endangered species, and preservation of Native American cultural resources) operate without limitation.

2. I am happy for the statement that EPA will remediate the areal extent of any contiguous radiologic or chemical contamination of soil that emanates from Area IV....but how about contamination of surface soil that gets picked up an blown by heavy winds to surrounding communities? A step out procedure will apparently not reveal this process, if the contamination is being blown past the borders of the SSFL. The same question could be asked about contamination flowing along in a creek, starting on the SSFL.

Response: DTSC acknowledges that DOE's and NASA's obligations under the Agreements in Principle do not extend to radiologic or chemical contamination that does not demonstrate a contiguous relationship to the contamination on site. A link between a site and noncontiguous contaminants that may have been disseminated by wind is much more difficult to establish. Effects due to this type of mechanism have not been demonstrated for the Santa Susana Field Laboratory, but they have not been ruled out either.

Regarding the cleanup of NASA property..Areas I and II:

1. The same question regarding soil containing cultural artifacts....cleanup only 5% of the soil. I understand that Indian graves can be dug up and moved elsewhere...en todo.

Response: DTSC believes the commenter is misinterpreting the Agreements in Principle. The 5% cap on exceptions refers only to the exercise of the exception related to circumstances where DOE or NASA desire to claim that cleaning up to the specified standards is not technically achievable. The other exceptions listed (limits of detection, protection of endangered species, and preservation of Native American cultural resources) operate without limitation.

2. The same questions about leaving contaminants in place and using other technologies re: Toxic chemicals and radioactive chemicals
Response: The Agreements in Principle do not preclude the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment of soils to achieve the identified cleanup standards. Although it is impossible to know until the site is fully characterized whether any soils may be able to be addressed in this way, DTSC agrees that the use of these approaches has the potential to significantly reduce the amount of soil requiring excavation and offsite disposal. The final Administrative Orders on Consent make clear that the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment is allowed, and requires treatability studies to be done to assess their viability.

Overall, the agreement is a real breakthrough for the cleanup. Cleaning us soil to background would seem to simplify the whole endeavor, and not using the risk assessment procedure will save time and complications. I like the fact that the agreement specifies exactly which kind of licensed facility that the contaminated material should be sent to, as this has been contentious in the past. It is clear that the agreement still needs some additional work, and that we all be able to study the finished progress before it is hopefully signed by the responsible parties.

Response: DTSC desires to formalize these requirements quickly in final Administrative Orders on Consent. DTSC received overwhelming support from the affected community to in support of the Agreements in Principle and to wrap up negotiations and sign enforceable agreements quickly. Because there has already been a 30 day comment period and the Agreements in Principle have remained unchanged, DTSC does not believe that an additional comment period is needed for the public to verify that issues that they identified have been resolved. However, DTSC also received a handful of requests to review the final Administrative Orders on Consent before they are signed, and DOE has requested that an additional comment period be offered to the public on the final Administrative Orders on Consent. Because of these requests, DTSC will be providing an additional review period for the

public to and to comment on any new issues raised by the final Administrative Orders on Consent.

DTSC recognizes that an additional review period delays finalizing the agreement and proceeding to implementation. As soon as the public review period has ended and any required adjustments to the documents made, DTSC will be working with DOE and NASA to sign the final Administrative Orders on Consent as soon as is practicable.

Hopefully, also, Boeing Corp. will get on board and join in to this happy final solution.

Response: DTSC would be pleased to discuss any and all of these issues further with Boeing as we look to resolve issues and reach agreement on the cleanup of the site as a whole.

Charles Butcher
Concerned Citizen

Recently it has come to my attention there is conversation over a deal to clean-up the western hills of the San Fernando Valley, Los Angeles California. The Teens Against Toxins group thankfully are spreading the word to remind anyone who can be reached the continuing existence of Nuclear waste in this heavily populated city and efforts to get it cleaned up. The damage is untold and ongoing. All previous efforts to remove this deadly threat to life and the environment has shamefully gone nowhere, until now. Please support the implementation of Cal Senate Bill 990 standards and the clean up the Santa Anna Field Lab (SSFL).

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Sandy Capaldi
Concerned Citizen

I wholeheartedly support the proposed cleanup agreement for the SSFL. Our community has waited decades for this cleanup and this activity needs to happen now. Boeing will no doubt toss out all kinds of reasons why this should not go forward and why they do not want to be a part of it or tons of reasons to change it. MOVE FORWARD anyway. Boeing knew what they were in for when they bought the land and they need to live up to their responsibilities. They will NEVER be happy with any proposed cleanup plan. It is all a stalling tactic.

PLEASE, PLEASE let's move forward. No more delays. I am sure some also want to delay until after the November elections since a change of power can be a change for their side. Enough of the stalling and political maneuvers. Our neighborhoods have been through enough. The people who live in these areas deserve this. Make it happen.

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Jeannie Chari
Concerned Citizen

I want to congratulate the various entities including the DOE, NASA, the EPA and the DTSC for developing a comprehensive AIP that addresses the public's best interests.

One item that I would like included is a detailed account of the standards that will be followed during the clean up and removal of contaminated soil. It is important that weather be taken into consideration when excavating or transporting contaminated soil so that it does not spread unnecessarily.

I also urge DTSC to continue to demand that Boeing take responsibility for cleaning up the site in accordance with the AIP and to discontinue efforts to fight the requirements of SB 990.

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Darlynn Childress
Concerned Citizen

I am a recent transplant from West Los Angeles to Agoura Hills. We love the Conejo Valley and daily admire the beautiful hills surrounding us. It is to our utter dismay and disappointment to learn of a major contaminated area just north of us.

We have 2 young boys, 4 & 6, and we worry about their future health. We absolutely support the agreement for clean up of the contaminated Santa Susana Field Lab.

We are grateful to the state and federal agencies and the elected officials who worked so hard to get this agreement. We strongly request the DTSC have the agreement final. Making it binding and legally enforceable agreement.

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Elizabeth Crawford

Thank you for the opportunity to comment on the Agreement In Principle currently under consideration by DTSC and other Responsible Parties in the SSFL Cleanup program.

I apologize for being late with my comments by a few hours, and thanks for your consideration of our community's viewpoint in this extremely important matter.

First, I would like to applaud all parties for reaching an agreement that can open the way to determining an end to the issue regarding the extent and manner of the nuclear and chemical contamination at the Boeing/Rocketdyne SSFL; skipping the Risk Assessment step allows a 'jump-ahead' to achievable cleanup goals while extending health protections, de facto.

However, there are several areas of concern that remain, listed below:
1. Please ensure that radiological constituents are screened for throughout all areas of the SSFL and Buffer Zones, rather than just Area IV. I believe this is the case but I want to ensure that the potential for nuclear contamination is the considered, screened for, and eliminated as a potential residual health hazard, throughout the site and buffer zones — not just chemical contamination. Substantial evidence exists that nuclear materials were transported, stored, used, or variously disposed of across the site and not just Area IV, and a credible cleanup will certainly consider and prevent this potential exposure to remain.

Response: DTSC will continue to work with NASA to address the possibility that radiological contaminants may be present outside of Area IV, and in NASA's Area II and portion of Area I, and ensure that the assessment of site conditions includes analysis for radiological contaminants.

2. Please include groundwater testing, surveying and analysis — and recommended cleanup procedures — in the AIP, as the groundwater/soil interface is a continuing source of contamination and recontamination. In the event that soil is cleaned up to an acceptable level — and then contaminated groundwater comes into contact with it — the soil will become re-contaminated, and all efforts to remove contamination will have been wasted. And at this point in this long, never-ending story of SSFL Cleanup — everyone will have gone away, and the case will never be reopened. So — please include a structure for groundwater testing, analysis, and recommended cleanup and management in the AIP, or it will remain a single-solution approach to a multi-layered problem, and any 'cleanup' resulting will be temporary, wasteful, and tragically final.

Response: The Agreements in Principle address soils contamination only. However, although the Agreements in Principle only address soils contamination, that does not

relieve DOE or NASA of their continuing responsibility to address the contaminated groundwater. Groundwater, and the parties' obligations regarding groundwater contamination, will continue to be addressed through the 2007 agreement.

3. I am concerned that the only solution considered in the AIP is to remove and truck away all materials considered 'contaminated,' even if those materials are slightly above what is considered natural background measurements.

There are many promising treatments available for in-situ treatment of radiological and chemical contamination — phytoremediation, myceliоremediation, and bioremediation (plants, mushrooms, bio-organisms, and so on). Much promising data has resulted from these localized treatments, and we strongly recommend that their application in the SSFL cleanup be considered, tested and applied to further extents as results may indicate.

The 'lunarscape' that is likely to occur from a "remove everything above background' is of concern; the trucking movement of that much material (not all of which may pose substantive health risks) is of concern; and the stunting of developing alternative cleanup methods is of concern. On this site, at this stage, literally all potential solutions must be on the table.

I suggest developing a list of areas of contaminants that occur within margins of 'background,' and then apply natural remediation technologies as much as possible, to quickly devise the best methods of in-place remediation as can be achieved.

Response: The Agreements in Principle do not preclude the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment of soils to achieve the identified cleanup standards. Although it is impossible to know until the site is fully characterized whether any soils may be able to be addressed in this way, DTSC agrees that the use of these approaches has the potential to significantly reduce the amount of soil requiring excavation and offsite disposal. The final Administrative Orders on Consent make clear that the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment is allowed, and requires treatability studies to be done to assess their viability.

4. I am concerned that proper balancing criteria be established and employed when beginning to determine the resolution to these important decisions we'll be undertaking in this cleanup. We must develop the proper tools to be able to evaluate differing and competing dynamics in our cleanup decisions (percentage above background against removal impact against trucking impact against realistic health impacts, etc.) We must establish some method of evaluating each dynamic and then applying a reasonable

'balancing' procedure so that the best decisions can be made, at each step of the way.

The only way that skipping the Risk Assessment step in this cleanup can be achieved without harm to the ultimate cleanup goal is to develop these common-sense, believable balancing criteria to justify the important decisions we'll be making as we move forward, irreversibly, in this cleanup process. Only then can we be assured that community health will be ultimately protected.

Response: The discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria."

5. I am concerned about the removal, classification and disposal of nuclear waste. Waste classification should be done using EPA guidance for soil segregation and classification, not by imposing a seemingly arbitrary standard for acceptance on facilities outside the state.

Response: Existing regulations require that these soils be disposed in this manner. The Agreements in Principle do not define or classify wastes (either radiological or chemical). The Agreements in Principle only identify how the identified contaminated soils are to be disposed.

6. Ultimately, I feel that it is imperative we devise a solution that addresses proper detection, definition and sequestering of contaminants, source removal, erosion control, runoff migration, and a comprehensive soil/contaminant handling procedure throughout the cleanup.

Response: The final Administrative Orders on Consent will establish the requirement for DOE and NASA to develop draft Remedial Action Implementation Workplans that present the specific remediation plans to address the contaminated soils that have been identified as a result of the radiological and chemical characterization efforts. This plan, along with all other workplans and reports, will be shared with the community for public review and comment.

7. The AIP needs to transform into an Administrative Order on Consent to be actionable; we strongly recommend that all Responsible Parties, including Boeing, sign this AOC, and these issues need to be addressed before the acceptance of this AIP, going forward.

Response: DTSC is in the process of negotiating Administrative Orders on Consent

that will accomplish the elements of the Agreements in Principle in a way that ensures that they are carried out, and enable the State to enforce the requirements as needed.

DTSC would be pleased to discuss any and all of these issues further with Boeing as we look to resolve issues and reach agreement on the cleanup of the site as a whole.

8. With DTSC's favorable response to these issues, our community can go forward confidently and support the development of a cleanup plan that follows these strictures; with the outline of an AIP/AOC as described above, our community will definitely turn to Boeing and request with full sentiment that they join us, DTSC, NASA and the DOE in accepting this long-term solution to our mutual long-term headache — the proper investigation and cleanup of the Boeing/Rocketdyne Santa Susana Field Laboratory.

Response: DTSC believes that the Administrative Order on Consent, and the cleanup that those agreements will accomplish, are responsive to the commenter and the issues presented.

Kim Delfino
California Program Director
Defenders of Wildlife

On behalf of Defenders of Wildlife and our more than 145,000 members and supporters in California, I am writing to urge you to sign and implement the proposed agreements to clean up the Santa Susana Field Laboratory in Southern California.

The proposed agreement between the California Department of Toxic Substances Control and the U.S. Department of Energy (DOE) and a parallel agreement between DTSC and the National Aeronautics and Space Administration (NASA) for the cleanup of their portions of the Santa Susana Field Laboratory (SSFL) are a major breakthrough.

SSFL is contaminated with chemical and radioactive materials from decades of nuclear reactor and rocket testing. A partial nuclear meltdown occurred there, as well as other reactor accidents. Tens of thousands of rocket tests added significant contamination with toxic materials.

The affected community has worked for years to get the Responsible Parties to agree to clean up the contamination, facing significant resistance. In 2007, the legislature passed and the Governor signed Senate Bill 990 (SB 990), which mandated strict cleanup of the site. Implementation of SB 990, however, has been slowed by disagreements between DTSC, DOE and NASA.

These new agreements between the federal and state agencies for cleanup to background levels of contaminants, with specified exceptions including but not limited to endangered species considerations and Native American artifacts, will resolve this long controversy, promptly carry out SB 990, and provide protection for the people living nearby as well as restoring the environment of the site that has been damaged by decades of pollution.

The affected community and environment have long awaited effective action on cleanup. These agreements are to be commended for breaking through the long impasse.

We support the proposed agreements and urge that they be promptly signed and implemented.

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Jessica Deltac
Concerned Citizen

My husband works in the Westlake Village area. We live south of Simi Valley and spend time in recreation near the contaminated location of the "HOT lab." Please clean up the toxins and radioactive nature of this site.

I only learned of this horrendous unchecked situation in the past year. I have lived in the area for 5 years and have birthed one child here. Part of the reason we didn't move to Boulder, Colorado was the number of birth defects as a result of just the same contamination from rocket and bomb testings.

I AM IN TOTAL Support the agreement for cleanup of the contaminated Santa Susana Field Lab.

I am incredibly impressed and thankful for the work of the state and federal agencies that elicited not only a response but an agreement from Rocketdyne to clean up their mess in our backyards. Please continue with this agreement offering me peace of mind about the health and welfare of my children as well as my personal health so that I might not get struck down with thyroid cancer and not get to watch them have children of their own.

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Diana Dixon-Davis
MA Demography/ Epidemiology
Chatsworth
I urge the State of California to not enter into the Santa Susana Field Laboratories Agreements in Principal (SSFL AIP's) as currently written because of legal jurisdiction conflicts, lack of proper characterization data, and unrealistic goals.
"Sign in haste and repent in leisure".

As a professional demographer and epidemiologist (MA UC Berkeley); as an advocate for the environment (Life Time Member and Board Member for 15 years of Santa Susana Mountain Park Association); and as an elected Board Member of the Chatsworth Neighborhood Council I find numerous errors, overly broad commitments, and unrealistic expectations codified in these agreements.

The AIP's as presented are based on invalid assumptions. Before "goals" are promised the background characterization studies should be completed for both the Santa Susana Mountains, Simi Hills, and surrounding canyons and flat lands.

Response: DTSC agrees that completing both background studies, U.S.EPA's Radiologic Background Study and DTSC's Chemical Background Study – are absolutely vital to implementing the approaches contained in the Agreements in Principle and must be prioritized to be completed as soon as possible.

An agreement made before accurate information is available, will commit the State and Federal Government to millions of dollars in cleanups that probably might be neither necessary nor desirable. With a list of 450 potential chemical and radioactive contaminants to check, there are few sites in North America that will meet these current strict criteria. Balancing criteria (per superfund regulations) must be applied before commitments are made.

The AIP's ignore, violate, and attempt to supersede portions of the State of California CEQUA (California Environmental Quality Act) , California State Superfund and Federal EPA, air pollution, etc. regulations. Further more, the AIP's also ignore local City and County ordinances (Oak Tree ordinances, local land use policies, etc). These AIP's throw out much of the previous legislation developed to handle just such an issue.

Response: As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," the Agreements in

Principle are based on the application of risk based criteria and other cleanup procedures and policies.

DTSC believes that the clean up approach that is represented by the Agreements in Principle is one that is protective of human health and the environment and is fully consistent and compliant with state and federal clean up laws and regulations (including SB 990).

A complete EIR needs to be done before any AIP is signed. Alternative cleanup scenarios, scientific characterization data, relative risk data, and ultimate use scenarios need to be compared:

1. For example, the current AIP's contain no language to asses the negative impacts that the planned grading and soil removal by trucks will have on traffic and the health and safety of the surrounding communities. Burial and or containment onsite for low level contaminated soil must be added to the agreement. An EIR could assess the relative risks! The current AIP prohibits this (see pg.3 DOE, pg.2 NASA)

Response: As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," the Agreements in Principle are based on the application of risk based criteria and other cleanup procedures and policies.

DTSC understands that to carry out the cleanup specified in the Agreements in Principle could result in significant removal of contaminated soils. It is regrettable that the actions of Boeing, DOE and NASA have resulted in contamination of the site to the extent that the volumes of soil requiring cleanup may be significant. It is also regrettable that the impacts of accomplishing the necessary cleanup may also be significant.

DOE and NASA will need to identify, assess and mitigate any environmental impacts that result in the course of carrying out their cleanup responsibilities. The draft Remedial Action Implementation Plan must include a detailed soils management and transportation plan, and the accompanying CEQA documents must identify environmental impacts attributable to the transportation of soils and mitigation measures that are being proposed to mitigate those environmental impacts.

2. Internationally recognized Native American religious (Burro Flats Cave) and historical sites are not directly protected.

Response: Native American artifacts, as cultural resources, are accounted for and included as a possible exception to implementing the prescribed cleanup standard.

3. The use for "clean fill" of the buffer zone Oak Forest will destroy a critical wild life corridors and habitat; destroy a pristine wilderness area; and lead to a strangulation and isolation of the national Santa Monica Mountains National Recreation Area and the Chatworth Nature Preserve.

Response: The Confirmation Sampling Protocol included a discussion of the possible onsite sources of backfill soils for excavations, but does not create an authorization or approval to use any particular onsite location for this purpose. As with the entirety of the anticipated cleanup activities, excavation for borrowing soils will be subject to all applicable federal, state and local requirements and must receive necessary permits to proceed. DTSC anticipates that these federal, state and local requirements will provide the necessary checks and balances to assess the legality and appropriateness of any proposal for the use of soils borrowed from any location, including sites that may be within the Santa Susana Field Laboratory.

4. Several endangered plants are not adequately considered.

Response: Although the Agreements in Principle only reference federally endangered species as a possible exception to carrying our the described cleanup, DTSC recognizes the role and authority of the State Department of Fish and Game and intends to coordinate closely with the State Department of Fish and Game throughout the site characterization and cleanup process.

5. Relative risk assessments must be done per EPA, EIR's, CEQUA, and California Super Fund legislation and regulations. The current AIP specifically discourages these analyses (see pg. 3 NASA, pg.4 of DOE), "Development of risk assessments will not be required". As a taxpayer and an advocate for parks and wildlife---I see these AIP's as a waste of taxpayer money. Though there are obvious spots that must be cleaned up (the burn pits, etc.); the rest of the cleanup must be better evaluated. There needs to be a prioritization and differential cleanups for different areas. The promised level of cleanup is totally non-commensurate with the use of this land as a park, wildlife preserve, and other passive forms of recreation. Clean up to Urban Residential, or even Rural Residential standards would be in excess of what is needed. This land was never used for, and will probably never be used for agriculture because it is so rocky, hilly, and dry. A true cost/benefit analysis needs to be done. The cost of various levels of clean up in dollars, in truck traffic, grading, destruction of habitat, plants and wildlife corridors, and of Native American artifacts and sites, etc. needs to be weighed against the supposed reduction of 5-10 cancer deaths over the next 100 years.

Response: As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," the Agreements in Principle are based on the application of risk based criteria and other cleanup procedures and policies.

DTSC believes that the clean up approach that is represented by the Agreements in Principle is one that is protective of human health and the environment and is fully consistent and compliant with state and federal clean up laws and regulations. State law requirements in SB 990 require the site to be cleaned up to a level consistent with an assumed rural residential land use (or suburban residential land use if that assumption proves more protective).

Ginn Doose, Clearlake, CA

At first read the agreement sounds too good to be true. A second read through would indicate several concerns. Is this a signed contractual agreement? Simple said, do we have a binding contract, or are we just whistling at the wind?

The wording; "settlement, frame work, final agreement in principle" imply a different meaning to this layperson than might be intended, therefore I'm concerned.

First; is this a settlement we can take as a solid binding contract?

Response: DTSC is in the process of negotiating Administrative Orders on Consent that will accomplish the elements of the Agreements in Principle in a way that ensures that they are carried out, and enable the State to enforce the requirements as needed.

Second; the wording, frame work indicates to me that DOE, NASA and DTSC have put together a proposal that is viable, but not set in concrete yet! This appears very vague.

Third; final agreement in principle, to be honest I'm not sure what you're saying here! Let's not overlook the wording, "in principle". One person's beliefs or [principles] aren't always the same mind set as another's.

Not to play the devil's advocate, I'm just being cautious, I question is this an actual final agreement, does it have the enforcement power of the State or Federal Government behind it, or is it resting solely on "principle" only? If so, what would be the motivator to get Boeing on board to clean-up the remaining two thirds of the SSFL site?

Response: DTSC would be pleased to discuss any and all of these issues further with Boeing as we look to resolve issues and reach agreement on the cleanup of the site as a whole.

I applaud the time and effort that that has gone into getting us this far. However, as previously stated I'm concerns at what this document actually means to us, the residents who have lived and raised our families in the surrounding area of the SSFL. What about the toxic levels of TCE in the water? Can we be absolutely sure that it didn't migrate offsite? I assure you my family wasn't the only ones who drank the water. This document in my opinion seems to be just dealing with the soil cleanup at the SSFL site. What about the water issues? Intellectually we know we can't go back to undue damage already done, but we can be cognizant of our responsible to the public, I don't see the wording "public Interest" in this document,

Response: The Agreements in Principle address soils contamination only. However, although the Agreements in Principle only address soils contamination, that does not relieve DOE or NASA of their continuing responsibility to address the contaminated groundwater. Groundwater, and the parties' obligations regarding groundwater contamination, will continue to be addressed through the 2007 agreement.

and it concerns me that ''no risk assessment is required".

Response: As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," the Agreements in Principle are based on the application of risk based criteria and other cleanup procedures and policies.

Having been briefed on comments made by Mr. Norman Riley, I would concur with [his] statement that, "the parties should have come together long before now". It gives me a great deal of satisfaction, and resolve to see this proposal coming together. Let's be cautious as we work towards our cleaaaaan-up goal.

The September 4, 2010 article in the Ventura County Star written by Jennifer Shaw speaks to the heart of the matter in my opinion. To quote Mrs. Shaw, "be cautiously optimistic, but restrain your joy, watch every state and local agency like a hawk, and be very, very aggressive in inserting a public interest lawyer's opinion about the actual wording of documents into [your] comments".

I don't think we can be two overstated in our concerns. We have all labored to long and hard at making sure the SSFL site is completely clean to be ***hoodwlnked*** at this stage of the game. We need to "nail down" a binding contractual agreement assuring enforcement compliance at the SSFL site. Like other commenter's, I'm very excited about the prospects of this proposal, however I would caution that we keep our eyes on the ball.

James Dotson
Concerned Citizen

This is a great play, go forward with it, have Boeing sign it also. This is a significant step forward in cleaning up the site to the highest environmental standard. I don't want a toxic environment, no one does. I'm glad to see that DOE and NASA have stepped up to the plate. These agreements are proof of DOE and NASA's dedication to the environment and community. Keep up the good work!

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Eric Estrin
Oak Park
Thank you for your part in helping to facilitate the tentative agreement to clean up the toxic mess at the Santa Susana Field Lab. My family, neighbors and friends are deeply concerned about the great harm done to the environment there and are finally now hopeful that future generations will be protected from exposure to the resulting contamination.

There are still things about the agreement that I find troubling, however. The DOE proposal requires the cleanup of both radioactive and chemical contaminants, but the NASA part of the agreement curiously glosses over that agency's commitment to a radioactive cleanup. Promising to "confer" with DTSC about radioactive cleanup or disposal is not good enough. There has been plenty of conferring – for years, if not decades. It is well past time for action.

Both radioactivity and chemical contamination must be cleaned up immediately to background levels. This is what the situation demands and what area residents deserve. DOE seems to recognize this, but I'm not sure about NASA. And of course, all the waste – both chemical and nuclear – must be safely and properly disposed of at licensed sites.

Response: DTSC will continue to work with NASA to address the possibility that radiological contaminants may be present outside of Area IV, and in NASA's Area II and portion of Area I, and ensure that the assessment of site conditions includes analysis for radiological contaminants.

I'm also concerned about the mention in NASA's proposal to continue discussions about the National Environmental Policy Act. I support NEPA, but it is a federal regulation, whereas this cleanup is being done under state control. This sounds to me like groundwork for an excuse to delay signing the agreement, and that worries me.

NASA has never brought up NEPA in this context before, nor should it. This cleanup should proceed immediately under state supervision, without regard to federal rules like NEPA that don't apply.

Response: DTSC is sensitive to the concerns about delays which may result from duplicative processes being administered to reach decisions. DTSC is not aware of any applicable NEPA requirements that would pertain to NASA. DTSC is coordinating with NASA to identify any applicable NEPA requirements, to the extent they exist.

Again, I am hopeful that these matters will be favorably resolved without further delay or risk to me and my family. Thank you for doing all you can to make this happen immediately.

Geoff Fettus
Senior Staff Attorney
Natural Resources Defense Council

Daniel Hirsch
President
Committee to Bridge the Gap

We appreciate the opportunity to comment on the proposed agreement between the California Department of Toxic Substances Control (DTSC) and the U.S. Department of Energy (DOE) and the proposed agreement between DTSC and the National Aeronautics and Space Administration (NASA) regarding the Santa Susana Field Laboratory (SSFL).

We represent two of the prevailing parties in *NRDC et al. v. DOE,* jurisdiction over which remains before U.S. District Judge Samuel Conti[1]. Our comments are predicated on a satisfactory approach to requesting potential conditional stay/suspension of portions of Judge Conti's Order in that case being reached among DOE, DTSC, and our parties.

NRDC v. DOE was filed because of concern that the plans then in effect for cleanup of SSFL were insufficiently protective of public health and the environment. The lawsuit was also brought because of concern that a long-promised radiation survey by the U.S. Environmental Protection Agency (EPA) had not occurred. The AIPs thus are a major step forward, as they provide for a protective cleanup standard and independent EPA radiation surveys.

At their core, the AIPs would result in cleanup of soil in the specified portions of SSFL to local background. In essence, the contamination that resulted from DOE and NASA will be removed. There are a number of limited exceptions for specified special circumstances including endangered species issues, Native American relics, detection limits, and unforeseen technical problems. EPA will, for the DOE agreement, determine for radioactivity the local background values, identify where contamination above background exists, confirm after cleanup that the contamination has been removed, and that replacement fill is clean.

We support these proposals, contingent upon resolution of the above-referenced matter regarding the case before Judge Conti, and believe agreements would, if carried out, provide significant protection of the public and help resolve long public concerns about this contaminated site.

Response: The final Administrative Order on Consent with DOE will contain provisions that address DOE's outstanding court ordered obligations and the need to coordinate those responsibilities with the implementation of the activities described in the Agreements in Principle.

We have a suggestion for consideration. The DOE and NASA agreements-in-principle are quite similar with one significant exception. Whereas the DOE agreement would require cleanup of both radioactive and chemical contamination to background, and disposal of both kinds of materials in disposal facilities licensed for that material, the draft NASA agreement at present requires cleanup to background and disposal in appropriate disposal facilities only for chemical contamination. For radioactivity, the draft merely says, should such contamination be found, NASA and DTSC will confer as to how to sample and dispose of such material. We think it is not a good idea to leave that matter dangling. There is no good reason why the NASA agreement should not be identical to DOE's in this regard. Nor should NASA's commitments regarding cleanup of chemical contamination not also include radioactivity. We respectfully suggest that the NASA agreement be revised to parallel the DOE AIP in this regard, so that radioactivity is also cleaned up to background and disposed of in sites licensed to receive low-level radioactive waste (LLRW).

Response: DTSC will continue to work with NASA to address the possibility that radiological contaminants may be present outside of Area IV, and in NASA's Area II and portion of Area I, and ensure that the assessment of site conditions includes analysis for radiological contaminants.

As an alternative, since radioactive contamination that might be found on the NASA property likely emanated from the nuclear part of the property that DOE has committed to clean up, the DOE agreement could be modified to commit DOE to cleaning up to background and disposing in a licensed LLRW site any radioactive contamination found on the NASA property. In any case, radioactive contamination on the NASA property should be cleaned up to background and disposed of in a licensed site, in the same fashion as in the DOE agreement.

Response: As stated above, DTSC will continue to work with NASA to address the possibility that radiological contaminants may be present outside of Area IV, and in NASA's Area II and portion of Area I, and ensure that the assessment of site conditions includes analysis for radiological contaminants. To the extent that any radiological contaminants are found in NASA's Area II or I, DTSC anticipates that additional efforts will be taken to determine the source of and responsibility for that contamination.

We also note that contamination of groundwater and other environmental media needs to be addressed, presumably by referencing back to the existing 2007 Consent Order and assuring that radioactive contamination is included.

Response: The Agreements in Principle address soils contamination only. However, although the Agreements in Principle only address soils contamination, that does not relieve DOE or NASA of their continuing responsibility to address the contaminated groundwater. Groundwater, and the parties' obligations regarding groundwater contamination, will continue to be addressed through the 2007 agreement.

And we strongly support the requirement that this agreement be legally binding and fully enforceable.

Response: DTSC agrees that the terms and provisions of the Agreements in Principle must be embodied in final Administrative Orders on Consent to be enforceable and to accomplish what they describe. It is DTSC's intention to resolve remaining issues and reach agreement as quickly as possible so that the activities described in the Agreements in Principle can be implemented.

We commend DTSC, DOE and NASA for their efforts in reaching these Agreements-in-Principle, the significant contribution they would make to protecting public health and the environment if carried out, and are prepared to discuss a mutually acceptable approach to addressing the matter that is before Judge Conti.

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[1] The City of Los Angeles is also a plaintiff in the litigation and appreciates the efforts of the parties to expeditiously clean up the site. The City, however, is not prepared to take an official position on the agreements until its counsel further reviews, evaluates, and discusses the matter with its client representative, the City Council of the City of Los Angeles

Craig Flashner
Concerned Citizen

I am writing to let you know I am in support of the agreement for the clean up of the contaminated Santa Susana Field Lab. As a resident of Oak Park for over 6 years I feel it is imperative that the site be cleaned up and would like to thank all of the state and federal agencies as well as the elected officials who worked so tirelessly to make sure an agreement was reached.

I personally know of many individuals in our area who have suffered from cancer and thyroid disease. While it is not possible to attach a direct link between the contamination and their illnesses, cleaning up the site will remove any doubt. Once again thank you for your help.

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Cindi Gortner
Concerned Citizen

I am writing to express my support of the AIP and to encourage you to get it signed and put into law ASAP. I am very grateful to you both for all the hard work you have put into getting us to this point. I attended the meeting yesterday at the Radisson Hotel. In my opinion, the community was not well represented there. Please don't let comments by a very few individuals cloud the issue of getting a major health hazard cleaned up so it won't possibly harm the hundreds of thousands of people who live within several miles of the site. I spent an hour and a half on the phone today with a friend who was just diagnosed with a late stage cancer. She has three children and no family nearby. Of course no one will ever know where her cancer came from. But lives can be saved by getting rid of carcinogens and rads, especially when there could be fires of such materials resulting in airborne ash.

I am confident that the bright people who will manage the cleanup will figure out how to mitigate harm from contaminants escaping from trucks and so on. Those details are not AT ALL a reason to slow down or diminish in any way doing the right thing and getting the site clean.

I am pleased that the EPA will be doing the independent measurement. I would ask that windy days be taken into consideration. As far as harm to the environment up there, I will repeat what one teenager said to Boeing when a Boeing person stated concern for how the cleanup could harm the SSFL environment. "Isn't the environment already harmed with all this pollution? Wouldn't a real concern for the environment mean getting rid of the contamination?"

For every busy mom that takes a minute to email you, there are hundreds more who are praying that their families are no longer going to be at risk and counting on their friends to speak up for them. I am one of those designated by my friends to let you know how we all feel. Thanks so much and God bless.

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Elizabeth Harris

As a resident of the nearby community and a public health specialist, I am offering the following comments on the Agreements in Principle (AIPs) between the Federal Department of Energy (DOE), NASA, and the Department ofToxic Substances Control (DTSC).

The AIPs released for public comment commit cleanup to "background levels" at the Santa Susana Field Laboratory (SSFL) property currently under the jurisdiction of DOE and NASA. "Background levels" is akin to reducing the area to a moonscape. There are many problems with this plan, which I will list in detail. Cleanup to background levels is problematic because:

1. It exceeds SB 990. SB 990 requires cleanup of the SSFL to "suburban residential or rural residential" levels.

At a time in which budgets are of primary concern, one wonders where this push for cleanup to this level is coming from. This push may easily be construed as a ploy to facilitate KB Homes to build their longed for development in nearby Runkle Canyon. The local media has been tracking the Runkle Canyon development since 2006. Imagine the renewed life the story will have when reporters start asking questions about who benefits most from this level of cleanup?

Response: DTSC disagrees that the Agreements in Principle exceed SB 990 requirements. State law requirements in SB 990 require the site to be cleaned up to a level consistent with an assumed rural residential land use (or suburban residential land use if that assumption proves more protective).

As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," the Agreements in Principle are based on the application of risk based criteria and other cleanup procedures and policies.

DTSC believes that the clean up approach that is represented by the Agreements in Principle is one that is protective of human health and the environment and is fully consistent and compliant with state and federal clean up laws and regulations.

2. It will destroy the Native American artifacts and cultural landmarks in the area. The exception for "Native American artifacts that are formally recognized as Cultural

Resources" is not consistent with the California Environmental Quality Act, or the National Preservation Act.

Imagine the embarrassment to the besieged Obama Administration when the word gets out to the Conservative Media that NASA and DOE were responsible for the destruction of sacred Chumash sites and artifacts which had formerly stood for 5,000 years, all to appease some a very small group of vocal white activists.

Response: Native American artifacts, as cultural resources, are accounted for and included as a possible exception to implementing the prescribed cleanup standard.

3. It will destroy protected oak forests and native plants, including the endangered milk vetch. As an Administration that is branding itself as "green", you risk far less embarrassment to your Commander in Chief by embarking on a science based, measured solution that involves cleaning up to background levels only the most contaminated locations (e.g., site of the meltdown).

Response: DTSC recognizes that any cleanup action to be taken must be in accordance with all federal, state and local requirements. The final Administrative Orders on Consent will establish that requirement, and all federal, state and local government agencies with jurisdiction will be consulted throughout the site characterization and cleanup process. In addition, *all* plans and reports that will be developed in the implementation of final Administrative Orders on Consent will be made available for public review and comment.

Remaining locations should be cleaned up to parkland status. Conversion of the SSFL to State or National Parkland is the most appropriate use of the land, in order to permanently protect its resources. Conversion of the property is obviously not under your immediate jurisdiction, but cleanup of the property represents an important first step toward Parkland.

Response: State law requirements in SB 990 require the site to be cleaned up to a level consistent with an assumed rural residential land use (or suburban residential land use if that assumption proves more protective).

Proceeding in this manner protects both the natural and cultural resources in the area. The green reputation of the Obama Administration is left intact, and any would-be allegations of collusion with the developer of KB Homes dissipates. Working toward what could become another National Park will be a lasting legacy for the Obama Administration, one that will remain long after his presidency has ended. Reducing the SSFL land to a moonscape guarantees that this land will never be fit for anything other than the developer's shovel.

Response: DTSC disagrees with the assumption that to accomplish a cleanup of the site and the process of correcting the environmental contamination will result in a "moonscape." There is no doubt that the magnitude of environmental harm that Boeing, DOE, and NASA caused in the course of their operations is significant. Cleaning up the site will result in ancillary environmental impacts that DOE and NASA will need to mitigate, including plans to restore and rehabilitate the ecosystems. DTSC will consult and communicate with habitat and ecosystem experts to ensure that DOE and NASA's restoration efforts are successful.

In closing, a public comment period is an absolute necessity for the final consent order if your process is to have any credibility whatsoever.

Response: DTSC desires to formalize these requirements quickly in final Administrative Orders on Consent. DTSC received overwhelming support from the affected community to in support of the Agreements in Principle and to wrap up negotiations and sign enforceable agreements quickly. Because there has already been a 30 day comment period and the Agreements in Principle have remained unchanged, DTSC does not believe that an additional comment period is needed for the public to verify that issues that they identified have been resolved. However, DTSC also received a handful of requests to review the final Administrative Orders on Consent before they are signed, and DOE has requested that an additional comment period be offered to the public on the final Administrative Orders on Consent. Because of these requests, DTSC will be providing an additional review period for the public to and to comment on any new issues raised by the final Administrative Orders on Consent.

DTSC recognizes that an additional review period delays finalizing the agreement and proceeding to implementation. As soon as the public review period has ended and any required adjustments to the documents made, DTSC will be working with DOE and NASA to sign the final Administrative Orders on Consent as soon as is practicable.

Michael Hermann
West Hills, CA

1. Congratulations.

2. Make Boeing comply with the new standards

Response: DTSC would be pleased to discuss any and all of these issues further with Boeing as we look to resolve issues and reach agreement on the cleanup of the site as a whole.

3. If they don't, seize the land and their bank accounts and use the funds to clean it up yourself.

Response: DTSC appreciates the commenter's desire to see Boeing comply with State law and clean up its portion of the site. There are a number of enforcement authorities that DTSC typically has available to it to affect compliance. In the case of Boeing, however, many of these authorities are being challenged in Federal Court through its lawsuit, and prevents DTSC from taking more aggressive action with respect to enforcing the more stringent SB 990 standards.

Laura Hocking
Ventura County
RESOURCE MANAGEMENT AGENCY
Planning Division

Thank you for the opportunity to *review* and comment on the subject document. Attached are the comments that we *have received* resulting from intra-county *review* of the subject document. Additional comments may *have* been sent directly to you by other County agencies.

Your proposed responses to these comments should be sent directly to the commenter, with a copy to Laura Hocking, Ventura County Planning Division, L#1740, 800 S. Victoria *Avenue,* Ventura, CA 93009.

If you *have* any questions regarding any of the comments, please contact the appropriate respondent. *Overall* questions may be directed to Laura Hocking at (805) 654-2443.

Pursuant to your request, this office has reviewed the subject Draft Confirmation Sampling Protocol at the link http://www.dtsc.ca.gov/SiteCleanup/Santa Susana Field Lab/SSFLAgreements.cfm]

PROJECT DESCRIPTION
The AlPs would have DOE & NASA cleaning up radioactive and chemical contamination in their respective areas at the Santa Susana Field Laboratory (SSFL) in the Simi Hills to background levels. The section on Sampling Methodology and Results Verification includes reference to operations such as soil excavation and backfill. The precise location of all work was not be easily discerned from the information provided.

WATERSHED PROTECTION DISTRICT PROJECT COMMENTS:
District jurisdictional red line channels located within the SSFL include Bell Canyon, Bell Canyon Tributary, & Burro Flats Canyon. These channels should be identified and located on any proposed work documents. Any activity in, on, over, under or across any jurisdictional red line channel will require a permit from the District. In addition, a project can not impair, divert, impede or alter the characteristics of the flow of water running in any jurisdictional red line channel.

Response: DTSC recognizes that any cleanup action to be taken must be in accordance with all federal, state and local requirements. The final Administrative Orders on Consent will establish that requirement, and all federal, state and local government agencies with jurisdiction will be consulted throughout the site characterization and cleanup process.

All anticipated cleanup activities will remain subject to all applicable federal, state and local requirements and must receive necessary permits to proceed.

Anna-Maria Huber
Thousand Oaks, CA

Every effort should be made to employ remediation methods that treat contaminated areas at SSFL in situ as documentation supports that contaminants are not actively moving offsite.

Response: The Agreements in Principle do not preclude the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment of soils to achieve the identified cleanup standards. Although it is impossible to know until the site is fully characterized whether any soils may be able to be addressed in this way, DTSC agrees that the use of these approaches has the potential to significantly reduce the amount of soil requiring excavation and offsite disposal. The final Administrative Orders on Consent make clear that the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment is allowed, and requires treatability studies to be done to assess their viability.

Excavating contaminated areas down to bedrock and hauling the soil offsite for storage or disposal is a poor solution to the issue. The pursuit of such a strategy creates several significant impacts:

1. This strategy would entail a vastly extravagant number of truck trips up and down Woolsey Canyon. It is common knowledge that this narrow, steep, and winding road is hazardous for heavy truck travel. The number of truck trips required to haul excavated materials offsite would also create unnecessary air pollution and carbon emissions, in addition to consuming significant quantities of fuel.

Response: DTSC understands that to carry out the cleanup specified in the Agreements in Principle could result in significant removal of contaminated soils. It is regrettable that the actions of Boeing, DOE and NASA have resulted in contamination of the site to the extent that the volumes of soil requiring cleanup may be significant. It is also regrettable that the impacts of accomplishing the necessary cleanup may also be significant. DOE and NASA will need to identify, assess and mitigate any environmental impacts that result in the course of carrying out their cleanup responsibilities.

2. Massive excavation would also threaten significant areas of sensitive habitat which would be slow to recover, if ever, from such an impact.

Response: There is no doubt that the magnitude of environmental harm that Boeing, DOE, and NASA caused in the course of their operations is significant. Cleaning up the site will result in ancillary environmental impacts that Boeing, DOE, and NASA will

need to mitigate, including plans to restore and rehabilitate the ecosystems. DTSC will consult and communicate with habitat and ecosystem experts to ensure that restoration efforts are successful.

3. Habitat restoration would be significantly hampered by the lack of native topsoil. The soil native to the site contains an extensive seed bank of native plant species, in addition to native soil organisms (mycorrhizae, etc.) that would be lost should soil be removed. Habitat restoration efforts at the site will be far more successful if performed with the site's native soil. The importation of foreign soil for restoration efforts would introduce a seed bank that is genetically inappropriate for the site. Significant risk also exists that imported soil would contain a seed bank of non-native invasive species (weeds). Currently, the weed population at SSFL is limited to a few species which occur in limited areas. The inadvertent introduction of weed seed to the site would create a significant source population of non-native plants which have the potential to rapidly colonize undisturbed habitat areas.

Response: DTSC will consult and communicate with habitat and ecosystem experts to ensure that restoration plans are appropriately developed and give those efforts the maximum opportunity for success.

Clean-up efforts should be appropriate for the intended future use of the site, which should be open space and/or parkland.

Response: For purposes of implementing a cleanup of the Santa Susana Field Laboratory, DTSC must implement the provisions of SB 990, which mandates that the anticipated land use in establishing cleanup standards be assumed to be rural residential or suburban residential, whichever is more protective. Even absent SB 990, 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.

Various successful on site remediation measures have already been implemented in certain areas of SSFL. In situ treatment methods create far fewer impacts than wholesale excavation activities would cause.

Response: The Agreements in Principle do not preclude the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment of soils to achieve the identified cleanup standards. Although it is impossible to know until the site is fully characterized whether any soils may be able to be addressed in this way, DTSC agrees that the use of these approaches has the potential to

significantly reduce the amount of soil requiring excavation and offsite disposal. The final Administrative Orders on Consent make clear that the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment is allowed, and requires treatability studies to be done to assess their viability.

In addition, the cost to taxpayers of such a large scale excavation would be enormous. Tax dollars should be spent in a more responsible way. Southern California has already sustained its share of development.

Response: DTSC understands that the costs associated with all of the required characterization and cleanup activities at the Santa Susana Field Laboratory will be significant. It is regrettable that the actions of Boeing, DOE and NASA have resulted in contamination of the site to the extent that the volumes of soil requiring cleanup may be significant. It is also regrettable that the impacts and costs of accomplishing the necessary cleanup may also be significant.

This site is a valuable habitat resource for adverse variety of native flora and fauna and should be preserved as such.

Response: Neither the Agreements in Principle nor any final Administrative Order on Consent affect or influence decisions by the owners of the property regarding its planned future use. Those decisions will be a function of discussions between and decisions made by the property owners, the local government(s) that govern land use, and the community.

Wick Irwin
Concerned Citizen

The toxic soup which remains at the Santa Susanna Field lab and the residual chemical pollution and radioactive waste that lingers poses a constant threat to the environment and surrounding communities. As a resident of Oak Park, I, my wife and three kids remain in harms way as long as nothing is done to clean-up this mess. With the recent Topanga fire toxic ash rained down upon our quiet hamlet and may have caused untold future health problems and possible life-threatening ailments on our community. Which is why I am writing today, to let you know that ours is a community that is not content to sit idly by and allow this mess to go on unresolved.

Therefore, I support the agreement that has been reached to clean up the Santa Susanna Field Lab. I would like to extend my thanks to the state and federal agencies, as well as our elected officials who worked tirelessly and relentlessly to see this agreement reached.

I would strongly urge the DTSC to get this agreement signed so as to finalize the document as a binding, legally enforceable agreement. Thank you for taking the time to consider my thoughts and opinions.

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Holly Huff

I am pleased that DOE and NASA have agreed to clean up to back ground.

I do have a problem with NASA. DOE has agreed to clean up both radiation and chemicals where as NASA has only agreed to clean up chemicals at this time. NASA should get on board and do as DOE has promised.

Response: DTSC will continue to work with NASA to address the possibility that radiological contaminants may be present outside of Area IV, and in NASA's Area II and portion of Area I, and ensure that the assessment of site conditions includes analysis for radiological contaminants.

I know there are a handful of people out there that don't want to see this cleanup. They have grand plans for a park with test stands and all. These people aren't sick. I am one of the people that have lived below this site for 51 years and I have been diagnosed with two rare illnesses, leukemia and thyroid problems. It's just all to close for comfort. I want the best cleanup possible, whatever it takes. There's no agreement for a park anyway, just words.

Response: While DTSC appreciates support for the proposed cleanup actions, neither the Agreements in Principle nor any final Administrative Order on Consent affect or influence decisions by the owners of the property regarding its planned future use. Those decisions will be a function of discussions between the property owners, the local government(s) that govern land use, and the community.

Boeing has told us for years that everything is fine up there and they released almost no contamination. Now they say they contaminated huge amounts of soil, sounds like every square inch. They can't have it both ways. You just can't believe them, ever.

They say now they are concerned about diesel fumes from trucks, but the site did rocket testing for 40 years with huge pollution and that they said don't worry about. After being responsible for all that contamination, today they pretend to be worried about the environment. All they are worried about is not cleaning up the site, But we live below it, and it has to be cleaned up.

SIGN THE AGREEMENT IMMEDIATELY.

Response: DTSC desires to formalize these requirements quickly in final Administrative Orders on Consent. DTSC received overwhelming support from the affected community to in support of the Agreements in Principle and to wrap up negotiations and sign enforceable agreements quickly. Because there has already

been a 30 day comment period and the Agreements in Principle have remained unchanged, DTSC does not believe that an additional comment period is needed for the public to verify that issues that they identified have been resolved. However, DTSC also received a handful of requests to review the final Administrative Orders on Consent before they are signed, and DOE has requested that an additional comment period be offered to the public on the final Administrative Orders on Consent. Because of these requests, DTSC will be providing an additional review period for the public to and to comment on any new issues raised by the final Administrative Orders on Consent.

DTSC recognizes that an additional review period delays finalizing the agreement and proceeding to implementation. As soon as the public review period has ended and any required adjustments to the documents made, DTSC will be working with DOE and NASA to sign the final Administrative Orders on Consent as soon as is practicable.

Barbara Johnson
Rocketdyne Cleanup Coalition

We strongly and enthusiastically support the agreements recently reached for the cleanup of SSFL.

The cleanup to background standard is marvelous. It contains flexibility for some reasonable exceptions, but those are limited. We think it is important that those be kept limited.

One suggestion is that we do think it important that the NASA agreement be modified to be like the DOE agreement and require cleanup to background and to require disposal at licensed sites for both radioactivity and chemicals.

Response: DTSC will continue to work with NASA to address the possibility that radiological contaminants may be present outside of Area IV, and in NASA's Area II and portion of Area I, and ensure that the assessment of site conditions includes analysis for radiological contaminants.

Boeing is making outrageous claims that these cleanup deals would result in having to clean up 1.6 million cubic yards of soil. One can't believe a word they say. For years they have told us they spilled almost nothing up there, that there were virtually no releases of chemical or radioactive materials. Now, to oppose these cleanup deals, they say don't believe what they said before, that they actually contaminated vast parts of the property. How can one believe a word they say? Either they didn't contaminate much, in which case not much has to be cleaned up; or they contaminated huge amounts, that will have to be cleaned up. The measurements haven't even been made yet - EPA is starting its radiation survey next month.

Large number of people live near the site. Whatever carcinogens Boeing and others spilled up on the hill should be cleaned up. Period. We applaud DTSC, DOE and NASA for reaching these agreements to do just that. Sign them immediately; no more delays, get on with the cleanup; protect us, finally.

Response: DTSC understands that to carry out the cleanup specified in the Agreements in Principle could result in significant removal of contaminated soils. It is regrettable that the actions of Boeing, DOE and NASA have resulted in contamination of the site to the extent that the volumes of soil requiring cleanup may be significant. It is also regrettable that the impacts of accomplishing the necessary cleanup may also be significant. The arguments being raised by Boeing apply equally to any amount of contaminated soils to be removed, so it is unclear what Boeing's intentions are in raising them, other than as an indication of the magnitude of the environmental harm

that Boeing, DOE, and NASA caused in the course of their operations, and as a preliminary indication as to the ancillary environmental impacts that Boeing, DOE, and NASA will need to mitigate in the course of carrying out their cleanup responsibilities.

And Boeing, which bought Rocketdyne, should just be ashamed of itself. It is responsible for the pollution up there. The other two responsible parties have agreed to do the right, moral thing. Boeing should stop acting like a spoiled child, not only refusing to clean up its mess, but now trying to stop others from cleaning up theirs.

Response: DTSC would be pleased to discuss any and all of these issues further with Boeing as we look to resolve issues and reach agreement on the cleanup of the site as a whole.

Lee D. Johnson
Concerned Citizen

I am writing in strong support of the agreement for cleanup of the contaminated Santa Susana Field Lab. I lost my husband at 44 from non-hodgkins lymphoma which is an uncommon cancer for someone that young. The 10 yrs prior (& at the time of his passing) we were living in West Hills quite close to the site. I now live in Oak Park and personally know way too many 40 & 50 year olds who are battling various cancers as well as a young teenager who recently passed away. I urge the DTSC to get the document signed & make it a final, binding & legally enforceable agreement. I am so grateful to the state, federal agencies, & local elected officials (Linda Parks in particular) for working so diligently to get this much needed agreement. Thank you.

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Dr. Richard Jones
Dr. Inga Jones
Concerned Citizens

We are a young family residing in Oak Park for over 17 years. Over the years, we have had an alarming number of friends and neighbors in our community diagnosed with cancer. These cancers have taken the lives of grandparents, mothers, fathers and even children. Many have fought horrible battles in the end leaving their young families after losing their battle with cancer. Our children have lived through the devastation multiple times of losing a classmate to cancer and experiencing a friend's loss of a parent due to cancer. Sometimes it's only weeks or days that pass from the news of one new victim in our community to the next. Whose door will the cancers knock on next?

We write to you today to express our concern for the well being of the people living in and around this and the surrounding communities. My husband and I are grateful for the efforts made and are in support of the agreement for cleanup of the contaminated Santa Susana Field Lab. We are grateful to the state and federal agencies and the elected officials who have worked so hard to get this agreement. We urge the DTSC to get the document signed and make it a final, binding and legally enforceable agreement.

With sincerity, great concern and appreciation for the efforts to finalize the agreement for cleaning up the contaminated Santa Susana Field Lab.

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Teresa Jordan

While it is refreshing to read that: 1. USEPA will be taking "on an expanded role under the" "proposed new agreements" (Ventura County Star, September 3, 2010 article "Agreement reached to clean up Santa Susana Field Laboratory"). 2. USEPA's "efforts" will "accelerate the cleanup time line" (September 10, 2010, Simi Valley Acorn, "Landmark agreement reached to clean up SSFL"), and 3. That these "negotiations" are a "major breakthrough in the cleanup of the Santa Susana Field Lab (SSFL) site" (CalEPA, September 3, 2010, "State Reaches Agreements in Principle on SSFL Cleanup with DOE and NASA"), I am opposed to the aforementioned documents for the following reasons.

#1 - The documents are "Frameworks", therefore subject to change.

#2 - The documents are agreements in "Principle", therefore subject to change.

Response: DTSC agrees that the terms and provisions of the Agreements in Principle must be embodied in final Administrative Orders on Consent to be enforceable and to accomplish what they describe. It is DTSC's intention to resolve remaining issues and reach agreement as quickly as possible so that the activities described in the Agreements in Principle can be implemented.

#3 - The documents "only relate to soil" (VCstar article).

Response: The commenter is correct that the Agreements in Principle address soils contamination only. However, although the Agreements in Principle only address soils contamination, that does not relieve DOE or NASA of their continuing responsibility to address the contaminated groundwater. Groundwater, and the parties' obligations regarding groundwater contamination, will continue to be addressed through the 2007 agreement.

#5- Duplication of efforts is being avoided. This does not speak well of truly doing right by the people.

Response: DTSC believes that the Agreements in Principle will allow cleanup of the Santa Susana Field Laboratory to proceed more quickly, a goal that the community surrounding the site has been seeking for many years.

#6 - Costs are being shunned. This does not speak well of truly doing right by the people.

Response: DTSC understands that the costs associated with all of the required characterization and cleanup activities at the Santa Susana Field Laboratory will be significant. It is regrettable that the actions of Boeing, DOE and NASA have resulted in

contamination of the site to the extent that the volumes of soil requiring cleanup may be significant. It is also regrettable that the impacts and costs of accomplishing the necessary cleanup may also be significant.

#7 - The documents state that "Development of risk assessments will not be required".

Response: As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," the Agreements in Principle are based on the application of risk based criteria and other cleanup procedures and policies.

The Agreements in Principle recognize that the preparation of risk assessments, while part of a typical cleanup process, are largely unnecessary because of the factors presented in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments.

#8 - SSFL material is sent to disposal facilities where the people's health is of great concern.

Response: The Agreements in Principle specify that contaminated soils may only be disposed at sites authorized and appropriately permitted to receive those wastes. For contaminated soils from this site and from any other cleanup site, DTSC must rely upon the proper operation and management of disposal facilities that are authorized to receive the wastes, and defers to those agencies with jurisdiction over those facilities to assess their safety and compliance.

#9 - "Onsite soils that do not exceed local background may be used as backfill/replacement soils" (Page 3, DTSC/DOE document; Page 2, DTSC/NASA document) .

Response: The Confirmation Sampling Protocol included a discussion of the possible onsite sources of backfill soils for excavations, but does not create an authorization or approval to use any particular onsite location for this purpose. As with the entirety of the anticipated cleanup activities, excavation for borrowing soils will be subject to all applicable federal, state and local requirements and must receive necessary permits to proceed. DTSC anticipates that these federal, state and local requirements will provide the necessary checks and balances to assess the legality and appropriateness of any proposal for the use of soils borrowed from any location, including sites that may be within the Santa Susana Field Laboratory.

JOINT SETTLEMENT FRAMEWORK (AGREEMENT IN PRINCIPLE) TEMPLATE

While it appears that the template for the DTSC's NASA, and DOE Joint Settlement Framework Agreement in Principle documents is the same, there are textual format inconsistencies.

1. Page 1, the DTSC/DOE document states "FINAL". The DTSC/NASA document does not include "FINAL".

2. Page 1, the DTSC/DOE document has a period at the end of the "Clean up radioactive contaminants to local background concentrations" sentence (1st bullet point) The DTSC/NASA document does not.

3. Page 1, the DTSC/DOE document has a space between "Possible exceptions ... " and "The framework acknowledqes…" sentences. The DTSC/NASA document does not have such a space.

4. Page 1, the DTSC/DOE document has an indentation between the last two sentences ("cannot be achieved through technologically feasible measure. Under no circumstances shall exceptions for unforeseen circumstances be proposed in excess of five percent of the total soil cleanup volume"). The DTSC/NASA document does not.

5. Page 3, the DTSC/DOE document has the sentence "backfill/replacement soils that are acceptable for use shall be verified as follows: " aligned with the two bullet points' sentences. The DTSC/NASA document does not (Page 2).

6. Page 5, the DTSC/DOE document states the following "Following completion of the characterization studies by EPA and DTSC, DOE will develop a remedial action implementation work plan that describes the Area IV and Northern Buffer Zone cleanup activities". The DTSC/NASA document on Page 3 states "Following completion of the characterization studies by DTSC, NASA will develop a remedial action work plan that describes the cleanup activities in Areas I and II administered by NASA".

7. Page 5, the DTSC/DOE document's last bullet point states "This framework concerns SSFL area IV and Northern Buffer Zone only and is between the Department of Energy and the State of California represented by the Department of Toxic Substances Control and the California Environmental Protection Agency". The DTSC/NASA document on Page 4 states "This agreement in principle concerns SSFL Areas I and II administered by NASA only and is between NASA and the State of California represented by the Department of Toxic Substances Control and the California Environmental Protection Agency".

Response: DTSC acknowledges the differences between the two Agreements in Principle. These were not intended to be identical documents, but were intended to reflect differences where appropriate. The format and punctuation inconsistencies noted are not substantive.

ADDITION

1. Page 2, the DTSC/DOE document, to the end of the second bullet point'" sentence add a "period" to be consistent with the format on Page 1.

Response: The format and punctuation inconsistencies noted are not substantive.

QUESTIONS

1. Where in the DTSC's Santa Susana Field Laboratory Website is the public notice posted that spells out the public review and comment period, the October 1, 2010 comments' submittal deadline, the contact person, the e-mail and facsimile information, and the title of the subject—some of this information I have extracted from the newspaper articles, and some from CalEPA's September 3, 2010 "State Reaches Agreements in Principle on SSFL Cleanup with DOES and NASA" News release? If there is no formal legal public notice for this supposed public review and comment period on the Joint Settlement Framework Agreement in Principle documents, then this is another reason that I am opposed to these conceptual documents.

Response: The public notice for the comment period on the Agreements in Principle can be found at:
http://www.dtsc.ca.gov/SiteCleanup/Projects/upload/SSFL_PN_Draft_Agreements.pdf. Notification of the comment period was also distributed to everyone on DTSC's Santa Susana Field Laboratory mailing list, as well as SSFL List Serve.

2. If Boeing does not finalize an agreement with DTSC, or with the rest of the "responsible parties", does this mean that DTSC, USEPA, DOE and NASA will be trespassing on Boeing property since The Company owns most of the Santa Susana Field Laboratory (SSFL) site?

Response: DTSC, DOE and NASA are incorporating provisions into the final Administrative Orders on Consent to ensure that access can be obtained from Boeing so that the work obligations, and DTSC oversight, can be carried out.

3. Does NASA have to 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"? I ask because Page 1 of the DTSC/DOE document states "(ESA) Section 7(a) (2)" and "(a) (2)" is missing on the DTSC/NASA Joint Settlement Framework Agreement in Principle document (Page 1)?

Response: The citation inconsistency noted is not substantive. The Endangered Species Act exceptions under the NASA Agreement in Principle will operate in the same way as with DOE under its Agreement in Principle.

Mr. Brausch, the DTSC's separate entity documents versus one document with all of the "responsible parties" ("Respondents") at this point of the consent order for corrective (response) action process is ingenious.

Response: DTSC has recognized that a single agreement with a combination of federal agencies and a private corporation presents challenges in drafting and establishing the necessary legal provisions that would apply to each. The purpose of establishing separate agreements is to separate these legal issues and to establish clear responsibilities for each party.

Mark Kalbfeld
Concerned Citizen

It is my understanding that the agreement to cleanup the containment of the Santa Susana Field Lab has not yet been signed. PLEASE sign this agreement so the clean up can begin as soon as possible. I live in Oak Park and we are so grateful to our State and federal agencies and the elected officials that have worked so hard to put this agreement together. So please, whomever needs to sign and move this agreement forward, please do so and make this document final and binding and legally enforceable.

There are too many questionable cancer illnesses that could possibly be linked to the Santa Susana Field Lab and this needs to be cleaned up correctly and quickly. Thank you for your time.

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Grace Kastenberg
Concerned Citizen

I am a resident of the community of Oak Park that lies just beyond the Santa Susana Field Lab. On behalf of myself, my family and adjacent communities, it is imperative that the Santa Susana Field Lab be cleaned up. I am grateful to the state and federal agencies and the elected officials that have worked hard to create the agreement to cleanup this toxic site.

I implore you to take the responsible action to get this document signed and to finalize, bind and legally enforce this agreement to clean-up the Santa Susana Field Lab.

I am pleased that the EPA will be conducting an independent soil evaluation instead of the DOE or NASA. Please do the right thing.

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Bonnie Klea
Resident

I applaud this historic agreement between DOE and NASA on the cleanup of Santa Susana. I have already lost a whole generation of 1959 settlers in my neighborhood to cancer and the workers cancers already have topped 1,000. Keep up the good work.

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Natalie Kostner-Giannulli
Vice President, Employee Programs and Initiatives
Warner Brothers Entertainment, Inc.

Personally, I find it quite frightening that I am even in the position of writing such an email -- to urge the government to clean up nuclear contamination. NUCLEAR CONTAMINATION!! As a 5 year resident of Simi Valley, it's shocking to me what this City has gone through to get someone to pay attention and clean up this waste. We have children and the thought that they have somehow been exposed is utterly horrifying to me. I strongly urge you to do what's right --- clean up that mess and hold the appropriate people accountable.

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Kathy LaForce
Board Member
Susana Knolls Homeowners Association

Finally, this horrible mess can begin to be cleaned up. It was been extremely depressing to watch many of my friends and residents die from strange cancers here in my neighborhood, The Santa Susana Knolls. Thank you!

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

John Luker

These are my comments on the Agreements in Principal and Confirmation Protocols between DTSC, DOE and NASA.

From the document; ***#: EO-93-001, Department Compliance with the Requirements of the California Environmental Quality Act***

It describes the process that DTSC MUST use for compliance with CEQA in all remediation and mitigation projects.

Purpose and Objectives

The Legislature enacted and the Governor signed CEQA into law in 1970. The primary purpose of this law is to require public agency decision makers ***to consider and document the environmental implications of their actions.*** *In addition to this primary purpose, the Legislature set forth the following objectives of CEQA:*

1. *to disclose to decision makers and the public the significant environmental effects of proposed activities;*
2. *to identify ways to avoid or reduce environmental damage;*
3. *to prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures;*
4. *to disclose to the public reasons for agency approvals of projects with significant environmental impacts;*
5. *to foster interagency coordination; and*
6. *to enhance public participation.*

The prime objectives of this act is to require the State to consider the probable beneficial uses of any site after the clean up has been accomplished and to quantify how the contamination AND the remedial actions needed to clean it up will impact those probable beneficial uses. In effect; how much damage will be done to the property will need to be quantified BEFORE it is cleaned up. At this point that cannot be accomplished, therefore, these agreements need to be substantially modified.

The stated purpose of these agreements "cleanup will be background" and the methods used to achieve that goal cannot be quantified until the EPA and DTSC completes their respective radiological and chemical background studies. All the assumptions about feasibility and scope of work will be based on the results of those studies. Those studies will not be completed until late 2011 or early 2012. If I were one of the RPs I would not sign any agreement with this amount of uncertainty. These agreements effectively put the "cart before the horse".

Several of the above CEQA objectives, I believe, have either been circumvented or suppressed by the proposed AIPs.

Response: As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," the Agreements in Principle are based on the application of risk based criteria and other cleanup procedures and policies.

DTSC understands that to carry out the cleanup specified in the Agreements in Principle could result in significant removal of contaminated soils. It is regrettable that the actions of Boeing, DOE and NASA have resulted in contamination of the site to the extent that the volumes of soil requiring cleanup may be significant. It is also regrettable that the impacts of accomplishing the necessary cleanup may also be significant. DOE and NASA will need to identify, assess and mitigate any environmental impacts that result in the course of carrying out their cleanup responsibilities.

These requirements usually kick in after the consent order and refer to how work plans develop. However, in the DTSCCEQA Compliance, it states; "CEQA compliance for particular projects may occur at any given point in the cleanup process... Often, it is difficult to assess the point(s) at which CEQA compliance is required."

The time to assess compliance is now.

Response: At or near the same time that the draft Remedial Action Implementation Plan is developed and shared with the community for public review and comment, CEQA documents will also be developed that present the assessment of environmental impacts and proposed mitigation options.

DTSC needs to Contact PEAS (Planning & Environmental Analysis Section) to discuss a CEQA compliance strategy. "The function of the PEAS is to ensure consistent procedural implementation of CEQA by all Department programs, including both headquarters and the Regional Offices." (DTSCCEQA)

Has that contact been made and who are the CEQA specialists that you use to advise on compliance?

Response: DTSC is in regular contact with departmental staff that are familiar with the operation of CEQA and how CEQA requirements are applied to cleanups that it oversees.

As of this writing, I have only scratched the surface of CEQA. It is a daunting set of interconnected laws and regulations that govern how the State of California must approach environmental projects. They are rules of behavior. As large as CEQA is, there is also the federal law that CEQA sprang from; The National Environmental Quality Act (NEPA). Federal agencies like NASA and DOE must follow NEPA guidelines as well. Specifically sec 106, as it relates to historic assets. I want DTSC to follow ALL environmental and preservation guidelines.

Response: DTSC recognizes that any cleanup action to be taken must be in accordance with all federal, state and local requirements. The final Administrative Orders on Consent will establish that requirement, and all federal, state and local government agencies with jurisdiction will be consulted throughout the site characterization and cleanup process.

All anticipated cleanup activities will remain subject to all applicable federal, state and local requirements and must receive necessary permits to proceed.

PROBLEMS with AIPs and Confirmation Sampling Protocol

There are three exceptions to the "Clean to Background" orders.

1. The Endangered Species Act (ESA). No mention of California Endangered Species such as the Susana Tarweed? Will those rules be enforced as well? What about non-endangered "Critical Habitat" like Oak Forests? Will this mean that the southern 1/3 of Area IV will remain untouched? It is habitat for 18,000 examples of Bronsen's Milk Vetch. A VERY rare plant.

Response: Although the Agreements in Principle only reference federally endangered species as a possible exception to carrying our the described cleanup, DTSC recognizes the role and authority of the State Department of Fish and Game and intends to coordinate closely with the State Department of Fish and Game throughout the site characterization and cleanup process.

There is no doubt that the magnitude of environmental harm that Boeing, DOE, and NASA caused in the course of their operations is significant. Cleaning up the site will result in ancillary environmental impacts that Boeing, DOE, and NASA will need to mitigate, including plans to restore and rehabilitate the ecosystems. DTSC will consult

and communicate with habitat and ecosystem experts to ensure that restoration efforts are successful.

2. Archaeological exemptions; "Formally recognized". Approximately 40% of archaeological areas have been un-explored. I discovered a grinding/cupula area and a bedrock mortar that had not been previously identified. They were just a few paces from the bus. Much Survey work needs to done.

"Artifacts" needs much more definition. The caves are not "artifacts". How would it treat a "Site"?

The Burro Flats Complex of caves and village has only been completely investigated on NASA property. The entire drainage from outfall 18 to outfall 2, as well as the drainage immediately east of STL-IV needs thorough investigation. It should all be considered Archaeologically Sensitive. That property straddles Areas I, II, III and the Southern Buffer Zone.

Response: Native American artifacts, as cultural resources, are accounted for and included as a possible exception to implementing the prescribed cleanup standard.

All archaeological reviews should be conducted through Beverly Folkes and Gilbert Unzueta, working in conjunction with a trained archaeologist. They represent the best of their people. I highly recommend them or others associated with them as Native Monitors for the project.

Response: DTSC recognizes that any cleanup action to be taken must be in accordance with all federal, state and local requirements. The final Administrative Orders on Consent will establish that requirement, and all federal, state and local government agencies with jurisdiction will be consulted throughout the site characterization and cleanup process.

3. Exceptions for 5% of total excavation are arbitrary. Until we know how much soil needs removal, how can we talk about any exceptions to the order? 5% of what?

Response: The 5% refers to the proportion of the total amount of contaminated soil identified in the Remedial Action Implementation Plan. The 5% cap on exceptions refers only to the exercise of the exception related to circumstances where DOE or NASA desire to claim that cleaning up to the specified standards is not technically achievable. The other exceptions listed (limits of detection, protection of endangered species, and preservation of Native American cultural resources) operate without limitation.

Excavation only, No "Leave in place" disregards use of newer technologies. This seems to be in direct opposition to elements of CEQA. Other technologies and other methods than excavation need to be explored. If a technology is proven to work, it should be allowed. The reduction in truck traffic alone should make people want to look for alternatives.

Response: The Agreements in Principle do not preclude the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment of soils to achieve the identified cleanup standards. Although it is impossible to know until the site is fully characterized whether any soils may be able to be addressed in this way, DTSC agrees that the use of these approaches has the potential to significantly reduce the amount of soil requiring excavation and offsite disposal. The final Administrative Orders on Consent make clear that the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment is allowed, and requires treatability studies to be done to assess their viability.

From the Confirmation protocol; "The "Look-up" levels cannot be exceeded by any sample. The analytical result level shall be the number that the laboratory reports, not including (i.e. not adding or subtracting) the standard deviation (analytical error)" (Confirmation Protocol)

These "Look Up Numbers" are too defined, there is no flexibility. All we do is clean to a number. Can Oak Forests be considered as exceptions? Can Archaeological Sites? There is a need to balance resources, human health and the environment. What happened to the "9 Balancing Criteria"? I see no reason that these protections cannot continue to be used. The potential exists under these rules, that we will be hauling away soil that, anywhere else, would be considered "Clean Fill". Again, if this is not ignoring CEQA, it certainly ignores the spirit of CEQA.

Response: This comment appears to be based on the premise that the outcome of the exercise of any available balancing criteria, in the context of the cleanup requirements for the site that are specified in State law (SB 990) as well as dictated by local land use decisions, would yield a result different than what is described in the Agreements in Principle. Please refer to the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments for the discussion of the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria."

The Agreements in Principle anticipate that the U.S.EPA and DTSC will be, through their respective Radiologic Background Study and Chemical Background Study, using appropriate statistical methods that are to account for the natural variations that are

to be expected to be found in background. These statistical approaches are intended to avoid or significantly reduce the possibility of concluding that observed concentrations that are within expected background concentrations ranges are erroneously identified as contamination. In the coming months, both U.S.EPA and DTSC will be proposing Statistical Evaluation Plans that contain the statistical approaches to be employed, and the use of the derived background values as cleanup values will be addressed in those plans. DTSC suggests that comments related to these background calculations be directed toward those discussions.

No Risk assessment. CEQA will demand an EIR, or is DTSC planning on getting an exception? What about the EIS required by the Court Order? Only way to know what the damage is going to be. Again according to Guidelines, CEQA requires it.

Response: At or near the same time that the draft Remedial Action Implementation Plan is developed and shared with the community for public review and comment, CEQA documents will also be developed that present the assessment of environmental impacts and proposed mitigation options.

2017; a fantasy? Again with no estimates as to soil removal, how can a judgment be made? Truck estimates of soil being removed show years of hauling ahead of us. Then, years of hauling bringing in clean soil. Then how may years of mitigation and remediation?

Response: As to the projected cleanup completion date, the commenter is correct in its observation that accomplishing cleanup by that date is dependent upon actual soil volumes that will be detailed in the anticipated Remedial Action Implementation Plan. When characterization is complete, and that Plan is developed, schedules for implementation and completion will be presented.

This comment appears to be erroneously based on the premise that the outcome of the exercise of any available balancing criteria, in the context of the cleanup requirements for the site that are specified in State law (SB 990) as well as dictated by local land use decisions, would yield a result different than what is described in the Agreements in Principle. Please refer to the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments for the discussion of the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria."

In addition, the commenter presents an argument that the scope of the cleanup as described in the Agreements in Principle would extend the implementation of the

cleanup beyond what may have otherwise been the case. DTSC disagrees, and believes that the Agreements in Principle, by condensing the oftentimes lengthy and contentious procedural requirements of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," presents the only practical way by which the goal of 2017 may actually be met. Regrettably, the delays that have been presented by Boeing, DOE and NASA in negotiating revised agreements to implement State law standards has presented the most real challenge to achieving this date.

From the Confirmation protocol; "If an onsite or offsite source of backfill soils that achieves all Look-up Table values cannot be reasonably found, then DTSC, DOE and USEPA shall enter a consultation process and DTSC shall determine the best available source of backfill."(Confirmation protocol)

The preceding paragraph really DOES say what I think it does. We will haul away contaminated soil, and since we can't find any soil that can meet all the criteria, we'll bring in OTHER soil contaminated with something else. Why is this not absurd? Is this really what this paragraph says?

Response: According to the Confirmation Sampling Protocol, U.S.EPA will be responsible for developing a sample and analysis plan to verify that backfill/replacement soils are acceptable for use, irrespective of their source (onsite or offsite). In the development of the Confirmation Sampling Protocol, technical staff from DTSC, U.S.EPA, and DOE collaborated to develop procedures that could account for the various outcomes that could be anticipated.

DTSC believes that the procedures in the Confirmation Sampling Protocol, provide both structure to guide the decision-making as well as necessary flexibility. DTSC anticipates that the technical staff from both U.S.EPA and DTSC, in exercising their expertise and professional judgment, will successfully avoid what the commenter fears will be nonsensical outcomes. A similar protocol will be developed for use with NASA.

From the Confirmation protocol; "Backfill/replacement soils may be from onsite or offsite locations, with a preference for onsite locations. For purposes of this protocol, "onsite" locations are those within the geographic boundaries of the SSFL site, including the Northern and Southern Buffer Zone areas."(Confirmation Protocol)

Unacceptable!

Response: The Confirmation Sampling Protocol included a discussion of the possible onsite sources of backfill soils for excavations, but does not create an authorization or approval to use any particular onsite location for this purpose. As with the entirety of the anticipated cleanup activities, excavation for borrowing soils will be subject to all applicable federal, state and local requirements and must receive necessary permits to proceed. DTSC anticipates that these federal, state and local requirements will provide the necessary checks and balances to assess the legality and appropriateness of any proposal for the use of soils borrowed from any location, including sites that may be within the Santa Susana Field Laboratory.

Consultation with State and Federal resource specialists needs to be initiated now and consultation with State personnel needs to be added to the documents. A reasonable approach to mitigation needs to be identified and the people who will eventually be the custodians of this property need to be consulted about the process.

Response: DTSC recognizes that any cleanup action to be taken must be in accordance with all federal, state and local requirements. The final Administrative Orders on Consent will establish that requirement, and all federal, state and local government agencies with jurisdiction will be consulted throughout the site characterization and cleanup process.

How can DTSC enter into an agreement with NASA and DOE and obligate a 3rd party (Boeing) to provisions of that order? This order does that by NASA, DOE agreeing to use Boeings Property for a source of backfill. Is this an area of legal exposure?

I see no utility to tearing out habitat, then destroying habitat in order to mitigate the first. Then do we mitigate the damage to the second habitat as well by ripping out a third site???

Response: The Confirmation Sampling Protocol included a discussion of the possible onsite sources of backfill soils for excavations, but does not create an authorization or approval to use any particular onsite location for this purpose. As with the entirety of the anticipated cleanup activities, excavation for borrowing soils will be subject to all applicable federal, state and local requirements and must receive necessary permits to proceed. DTSC anticipates that these federal, state and local requirements will provide the necessary checks and balances to assess the legality and appropriateness of any proposal for the use of soils borrowed from any location, including sites that may be within the Santa Susana Field Laboratory.

RISK

Is it safe to live here? A simple question. DTSC needs to answer it. Too many people are scared. When a woman shows up at a Workgroup meeting from Oak Park, weeping. Terrified her home is going to kill her children. DTSC needs to step up.

In my estimation, the greatest risk to health is the fact we are going to mobilize this contamination. Hauling offsite for disposal in another state opens up many transport mechanisms for dust and debris. No one has any idea how the surrounding communities will react to poison being hauled through their back yards.

Boeing is talking about building a new road through Runkle Canyon and enlarging Black Canyon Road as well. Boeing estimates 100,000 trucks hauling waste 8 hrs/day 5 days/week. Has anyone told local residents? DTSC needs to make estimates of their own.

Response: It is impossible to calculate the amount contaminated soils that could require removal at this time (although DTSC is aware that The Boeing Company has performed mathematical extrapolations based on a number of assumptions that may not be accurate – DTSC has not received a copy of any of Boeing's actual calculations nor a complete explanation of the assumptions it used in calculating its estimates). Based on comments from Boeing representatives, we know that they assumed that in situ or other on site treatment could not be used, that background values may have been based on averages rather that upper limits, and also assumed that soil vapor would cause the removal of soils. All of these inaccurate assumptions could greatly inflate any estimates of soil volumes.

The community is being educated by the community. Much information that is being presented as fact, is in reality a brazen attempt to scare and frighten people. People in Oak Park have been told their cancer came from SSFL. Runkle Canyon, Simi Valley, Susana Knolls, the Chatsworth Nature Preserve and Dayton Canyon have all been demonized beyond the reality of the situation. Media reports that are just plain false are allowed to go unchallenged. Why? It all perpetuates itself to no good end.

I would like to see a series of statements by Toxicologists, Statisticians, Geologists and Staff from DTSC about potential transport mechanisms and the risk to the community posed by SSFL today, as well as projections about future risks based on these documents, WHICH MUST INCLUDE ADEQUATE DISCLOSURE OF THE ENVIRONMENTAL COST (IE, 100,000 TRUCKLOADS). I want to hear from experts not stakeholders with a political agenda.

Response: DTSC understands that the costs associated with all of the required characterization and cleanup activities at the Santa Susana Field Laboratory will be significant. It is regrettable that the actions of Boeing, DOE and NASA have resulted in contamination of the site to the extent that the volumes of soil requiring cleanup may

be significant. It is also regrettable that the impacts and costs of accomplishing the necessary cleanup may also be significant.

Extreme views dominate the discussion. Moderation and discussion with community, experts and political leaders is needed now. New people, by necessity, are coming forward now. These people are smart, deliberative and more, they know what they're talking about. I hope their words are being given the appropriate weight. I look forward to working within the DTSC Public Participation Group to help move this discussion in a more positive direction.

Many people involved in the AIPs have been saying the rush is on to sign this agreement before the next election. They are unsure of the political climate after November.

Response: DTSC desires to formalize these requirements quickly in final Administrative Orders on Consent. DTSC received overwhelming support from the affected community to in support of the Agreements in Principle and to wrap up negotiations and sign enforceable agreements quickly. Because there has already been a 30 day comment period and the Agreements in Principle have remained unchanged, DTSC does not believe that an additional comment period is needed for the public to verify that issues that they identified have been resolved. However, DTSC also received a handful of requests to review the final Administrative Orders on Consent before they are signed, and DOE has requested that an additional comment period be offered to the public on the final Administrative Orders on Consent. Because of these requests, DTSC will be providing an additional review period for the public to and to comment on any new issues raised by the final Administrative Orders on Consent.

DTSC recognizes that an additional review period delays finalizing the agreement and proceeding to implementation. As soon as the public review period has ended and any required adjustments to the documents made, DTSC will be working with DOE and NASA to sign the final Administrative Orders on Consent as soon as is practicable.

<u>Political Expediency</u> is the LEAST important reason to rush into an order that has the potential to have such far-reaching consequences.

I have said frequently that SSFL will not be cleaned to either an agricultural OR a residential Standard; it will be cleaned up to a POLITICAL Standard.

This agreement reinforces that belief.

Response: DTSC does not agree that the Agreements in Principle represent a politically expedient decision. State law requirements in SB 990, which were enacted

over three years ago, require the site to be cleaned up to a level consistent with an assumed rural residential land use (or suburban residential land use if that assumption proves more protective).

As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund processes and the exercise of the "balancing criteria," the Agreements in Principle are based on the application of risk based criteria. DTSC believes that the clean up approach that is represented by the Agreements in Principle is one that is protective of human health and the environment and is fully consistent and compliant with state and federal clean up laws and regulations, including SB 990.

SOLUTIONS:
Wait until USEPA and DTSC background studies are complete.

Response: DTSC does not believe delay is warranted or necessary. State law requirements in SB 990 were enacted over three years ago. There is sufficient information available to know that cleanup is required, and establishing an enforceable relationship through the Administrative Orders on Consent is necessary to achieving that goal.

Accurate estimations of soil removal need to be made. I hear that the RP numbers are "Vastly inflated" but DTSC has no figures to counter them. I've been told "…we can't make estimates until the site is characterized" There are more than 4 MILLION pages of characterization in 11 different RCRA Group Reports. Group 5 is 1 million pages alone. There's PLENTY of characterization available for a very educated guess. Currently, NASAs best estimate is 500,000cy/yds for Area II alone and DOE estimates 497,000cy/yds for Area IV, Boeing; 1.6 million cu/yds. My estimate… 750,000-1million cu/yds.

Response: It is impossible to calculate the amount contaminated soils that could require removal at this time (although DTSC is aware that The Boeing Company has performed mathematical extrapolations based on a number of assumptions that may not be accurate – DTSC has not received a copy of any of Boeing's actual calculations nor a complete explanation of the assumptions it used in calculating its estimates). Based on comments from Boeing representatives, we know that they assumed that in situ or on site treatment could not be used, that background values may have been based on averages rather that upper limits, and also assumed that soil vapor would cause the removal of soils. All of these inaccurate assumptions could greatly inflate any estimates of soil volumes.

It is regrettable that the actions of Boeing, DOE and NASA have resulted in contamination of the site to the extent that the volumes of soil requiring cleanup may be significant. It is also regrettable that the impacts of accomplishing the necessary cleanup may also be significant. Although there is no way to validate or verify the estimates being circulated (and very little benefit to doing so), they do serve as an indication of the magnitude of the environmental harm that Boeing, DOE, and NASA caused in the course of their operations, and as a preliminary indication as to the ancillary environmental impacts that Boeing, DOE, and NASA will need to mitigate in the course of carrying out their cleanup responsibilities.

Resource experts from the State of California and the Federal government need to be engaged now. They do this for a living and they do it well. They are the eventual custodians of this property and they should have a say in how things are mitigated. Particular attention should be paid to the Rim of the Valley Study, currently under scoping by the National Parks Service. This important study will determine the direction of preservation efforts in the Southern California area for the foreseeable future. This mountain needs the protections that this study can provide. I hope DTSC would welcome the study researchers.

Response: DTSC recognizes that any cleanup action to be taken must be in accordance with all federal, state and local requirements. The final Administrative Orders on Consent will establish that requirement, and all federal, state and local government agencies with jurisdiction will be consulted throughout the site characterization and cleanup process.

Engage CEQA now. Make contact with PEAS about a CEQA compliance strategy. I believe there are loopholes in these documents that you could drive a truck through. They need to be addressed now in order to head off legal action later.

Response: At or near the same time that the draft Remedial Action Implementation Plan is developed and shared with the community for public review and comment, CEQA documents will also be developed that present the assessment of environmental impacts and proposed mitigation options.

Expand NPS service area to encompass the So Buffer Zone. This will need the cooperation of Legislators, NPS, DTSC and Boeing. I am now working to this end.

Response: Neither the Agreements in Principle nor any final Administrative Order on Consent affect or influence decisions by the owners of the property regarding its planned future use. Those decisions will be a function of discussions between the property owners, the local government(s) that govern land use, and the community.

In the meantime, continue working under the 2007 Consent Order and start digging in the Area I Burn Pit. That should take a couple of years and while that's happening, we can iron out these other, very important resource issues. It is unconscionable, in my mind, that the Area I Burn Pit has not yet been touched.

Response: Since the Area I Burn Pit is within Boeing's operational area, DTSC would be pleased to discuss any and all of these issues further with Boeing as we look to resolve issues and reach agreement on the cleanup of the site as a whole.

While work has been and continues to progress under the terms and conditions of the 2007 Consent Order, the resolution of, and Boeing's acceptance of, the cleanup standard required by State law is becoming more and more critical. Investigation and sampling efforts to date, and measurements made, are insufficiently sensitive to be able to achieve State law standards. The more work that is completed to these less sensitive standards, the more work will be required to be repeated at some later point. All of these insufficient measurements will comprise a data gap that is growing ever larger with each incomplete work product delivered.

Although under other circumstances DTSC could use any number of enforcement authorities to affect compliance, in the case of Boeing, many of these authorities are being challenged in Federal Court through its lawsuit. As such, the lawsuit prevents DTSC from taking more aggressive action with respect to enforcing the more stringent SB 990 standards, and as a result, the gap in the adequacy of the body of data will continue to grow larger.

For the first meeting of the Public Participation Group, I would like a presentation and discussion of the new Consent Order. Hopefully, the public comment period on the draft Order will be open and the documents will be available.

Response: DTSC anticipates that the Agreements in Principle, and the Administrative Orders on Consent, whether they are still in draft form or have been signed and are being implemented, will be of much continuing interest and will be one of the topics of continuing discussion in DTSC's forming Public Participation Group.

I'd like to thank DTSC and the fine people they have working for them. Keep up the good work. I look forward to a productive discussion of these and other issues. Thank you for listening.

ADDENDUM

This morning new information comes to me. Next week, NASA will be starting work in an oak forest that I have been particularly interested in for several years. Attached is a map

of the work area and a photograph of the forest that is in danger of removal. The work starts on Oct 5th.

I believe the draconian remedies in these AIPs will result in the removal of this forest as well as other "Micro-Habitats" like it. A CEQA review is essential right now.

Response: The NASA work the commenter refers to is unrelated to the Agreements in Principle. DTSC believes this work may be at the direction and under the oversight of the Los Angeles Regional Water Control Board. DTSC suggests the commenter discuss these habitat destruction and "micro-habitat" issues with NASA and the Los Angeles Regional Water Control Board to determine what level and type of environmental review was conducted regarding this cleanup action.

Marie Mason
Vice President
Santa Susana Knolls HOA

We appreciate the opportunity to comment on the agreements-in-principle reached for cleanup of the Santa Susana Field Laboratory.

First of all, we want to express our enthusiastic support for the agreements. The Susana Knolls is located directly beneath the contaminated site and we have been concerned for decades about the pollution at SSFL. Many of us have been active in trying to get those responsible for the pollution to stop dragging their feet and obstructing the cleanup. We were enthusiastic supporters of SB990, the law that requires strict cleanup of the site.

Many of the homeowners in the Knolls have attended meeting after meeting over the years, experiencing substantial frustration with the agencies, Boeing, and the slow pace of progress toward cleanup. We live here. We have raised our children here. They play in creeks running off the hill.

When SB990 passed, we thought finally the site would get cleaned up. It was the law now, after all. But the responsible parties resisted complying with the law. This has been very disillusioning. So, we are thrilled that DOE and NASA have "seen the light" and agreed to a binding agreement that would comply with SB990 and get on with the cleanup. But we are no longer naïve—we know that there remain people within both agencies who have resisted the cleanup for years and we will not breathe easier until there is a signed, enforceable agreement, which needs to happen NOW.
We understand that the proposal to break through the long impasse and to clean up to background came from DOE Secretary Chu himself, and we want to express our appreciation.

We now provide comments about the specific provisions in the agreements-in-principle.

Department of Energy Agreement

Cleanup Standard Being Background. We very much like the summary statement of the cleanup standard agreed to—cleanup to background. It is understandable, protective, and compliant with SB990, and, if carried out, as good a standard as one can get. At the end of the process, no contaminants will remain in soil above local background—that's great. Finally, the contamination would be removed. We like that it is clear it is LOCAL background; we have had too many instances where RPs have tried to compare to very elevated background values far away from SSFL, in other states or even other countries.

Both Radioactivity and Chemicals Covered. We are glad about this as well. It doesn't matter to us whether it is radioactive or chemically toxic—either can cause cancer, and both should be cleaned up.

The exceptions. At first these made us a little nervous, as exceptions can often get enlarged so that they swallow the basic deal, but they seem fairly narrowly drawn, which we appreciate. *Our basic message is that these exceptions need to be kept quite limited and narrow.*

Endangered Species. We acknowledge that if the Fish and Wildlife Service says one cannot take an action, then one cannot take it; and if they require steps to mitigate harm one must take those. This exception seems narrowly drawn so that one will do cleanup and mitigate unless absolutely barred from doing so. But let's be crystal clear—we live beneath the site, and we want it cleaned up. We presume cleanup will be permitted and effective mitigation measures put in place; like replanting if necessary thereafter. The environment of the site has been horribly mangled by decades of polluting activities by the RPs. This agreement is a plan to restore that environment and undo those decades of polluting damage. Any endangered species consideration should be, in our view, such that it doesn't stop cleanup but rather requires measures after cleanup to replant or something similar.

Detection Limits. We also understand that one cannot require someone to cleanup contamination they cannot detect. But we worry that pressures will be placed by RPs on DTSC and EPA to allow detection limits that are weaker than technically necessary. This shouldn't be used as an excuse to leave contaminants behind—there must be effective measures to assure the best possible detection limits.

Native American Artifacts that are formally recognized as Cultural Resources. Again, we understand that a pre-Columbian cave painting, for example, should not be damaged if there is contamination slightly above background on it. But the chances of such an issue arising are slim—the artifacts are likely in rock, and this deal is about soil, and removing contaminated soil should not affect true Native American Artifacts. Again, we are concerned that such an exemption should not be expanded to, for example, declare large areas of contaminated soil somehow to be captured by the exception and not get cleaned up. The exception seems narrowly crafted, which we appreciate.

"Other Unforeseen Circumstances". This category seems at first pretty vague, but there are some limits to it that we think appropriate. It is limited to circumstances where the cleanup cannot be achieved through technologically feasible measures and cannot exceed 5% of the total contaminated soil. Presumably that means that such an

exception must occur at the end of cleanup, as one will not know the total soil volume until then.

EPA Role Very Much Appreciated. We really trust Gregg Dempsey of the EPA, who goes back with this site and this community more than twenty years, and therefore we are very appreciative of the part of the agreement that leaves all of the radiation monitoring to the EPA. We think it is great that the EPA will determine background, identify what on site is above background and needs to get cleaned up, and after it has been cleaned up, will confirm that all contamination was in fact removed, and that the fill to be used is also clean. This is an excellent component of the agreement.

No Averaging. We like this a lot as well. We just do not want contamination remaining up there, and we do not want to have to play these continuing games about letting some contamination stay because other areas are lower in concentration and someone wants to average. No soil remaining should exceed the cleanup standard—not some can remain if other soil is lower and one averages. Again we are very happy about no averaging.

No “Leave in Place” or Onsite Landfilling Options. This is also appreciated. Clean the site up—don’t leave the contamination there. We want the contamination off the hill that is above our homes. Moving it from one place on the site to another, or keeping it on the site but covering it up (like the so-called “interim measure” for the sodium burnpit that so infuriated us years ago and continues to frustrate us) just is not acceptable. Clean it up so no contamination remains there to flow down to the families that live below this site.

Fill to be Proven Clean. Boeing at one point was pushing to use contaminated soil as fill. We are glad that the agreement with DOE (and NASA) does not permit this.

Radioactive and Chemical Wastes to Go to Disposal Sites Licensed for Those Kinds of Wastes. We have had trouble with Boeing, its predecessor Rocketdyne, and other RPs trying to send particular radioactive wastes to sites not licensed to receive low-level radioactive waste. Reactor building debris went to local municipal landfills, for example Bradley and Calabasas. Some waste went to a ranch in Ventura County and contaminated metals went to a metal recycler in San Pedro. Radioactive soil went to Buttonwillow and Kettleman Hills, neither of which is licensed for low-level radioactive waste, and both of which are in poor communities already terribly burdened. Many of us actually demonstrated against radioactive waste being taken from SSFL to Buttonwillow, and spoke against it going to Kettleman (with its cluster of birth defects), neither of which are licensed low level radioactive waste disposal facilities. So we are very pleased by the provisions requiring such waste to go to licensed sites.

EPA-DTSC Split Samples We also like this provision, as it saves money that can be used for more sampling and cleanup, speeds things up, and utilizes extensive information the EPA is acquiring about where to take samples for radioactive contamination to help also with the chemical sampling. Some of us recently attended the EPA meetings about their upcoming sampling and were very impressed with the work done with things like ground penetrating radar to identify buried items and other indications of good places to sample. This provision of the agreement utilizes that the EPA information for the chemical sampling and is efficient because one can use the EPA's team to pull split samples for both the radiation and chemicals.

Risk Assessments Not Needed. This is also a really good aspect of the agreement. Risk assessment paperwork takes years and millions of dollars, and is now unnecessary since the cleanup will be to background, so the risk cannot be lower. No need to waste time and money on that paperwork; devote the money to cleanup and speed up the cleanup. Enough time and money have been spent on endless wasteful paperwork.
Radioactive and Chemical Data Gaps This provides a way to complete the surveying for contamination in a fashion compliant with SB990, filling in gaps in the data. Good.

Following contamination wherever it leads. This provision makes clear that if you find contamination and it crosses a boundary, you will follow it and clean it up anyway. That is very important to the families who live below this site.

2017 Cleanup Deadline Remains We are REAL IMPATIENT for the cleanup to be done, since we have now been waiting for this cleanup for 21 years and have participated in hundreds if not thousands of meetings. The year 2017 seems a long way off, but a nice thing about the agreement is that at least now we can have a reasonable expectation that the 2017 deadline should now be possible to be met. Instead of fighting over SB990 and risk assessment and other diversions, cleanup will be able to start.

DTSC Regulatory Oversight. We are glad that DOE and NASA now acknowledge that they must comply with DTSC regulation. There were too many times when they implied they were above not only state control but any control.

Legally Binding and Enforceable Agreement Again, this is a very important component. DOE in particular has a history of violating past agreements. It is critical that these commitments be fully binding and legally enforceable.

TWO KEY CONCERNS ABOUT THE AGREEMENT

(1) Contamination of Things Other than Soil (for example, Groundwater) The agreement says it covers soil but that groundwater will be handled separately. It is important that

the contamination is groundwater, by chemicals and radioactivity, be fully addressed in the complete agreement.

Response: The Agreements in Principle address soils contamination only. However, although the Agreements in Principle only address soils contamination, that does not relieve DOE or NASA of their continuing responsibility to address the contaminated groundwater. Groundwater, and the parties' obligations regarding groundwater contamination, will continue to be addressed through the 2007 agreement.

(2) Public Participation We are grateful to DTSC for providing this opportunity to comment on the agreement-in-principle before it is finalized. We are troubled, however, by indications by a lower-level DOE staff person at the last Work Group meeting that they want to delay signing an agreement by making us go through a comment period all over again. WE ARE SICK AND TIRED OF DELAYS. We have given you our comments. Consider them, and then sign a final, binding agreement. GET ON WITH THE CLEANUP. Tolerate no more delays, foot-dragging, and games. We don't have to do this all over again. Sign the agreement.

Response: DTSC desires to formalize these requirements quickly in final Administrative Orders on Consent. DTSC received overwhelming support from the affected community to in support of the Agreements in Principle and to wrap up negotiations and sign enforceable agreements quickly. Because there has already been a 30 day comment period and the Agreements in Principle have remained unchanged, DTSC does not believe that an additional comment period is needed for the public to verify that issues that they identified have been resolved. However, DTSC also received a handful of requests to review the final Administrative Orders on Consent before they are signed, and DOE has requested that an additional comment period be offered to the public on the final Administrative Orders on Consent. Because of these requests, DTSC will be providing an additional review period for the public to and to comment on any new issues raised by the final Administrative Orders on Consent.

DTSC recognizes that an additional review period delays finalizing the agreement and proceeding to implementation. As soon as the public review period has ended and any required adjustments to the documents made, DTSC will be working with DOE and NASA to sign the final Administrative Orders on Consent as soon as is practicable.

NASA Agreement
To the extent that the NASA agreement is identical with the DOE agreement, our comments about the DOE deal apply as well. However, there are a couple of troubling differences, which we think should be fixed.

Failure To Adequately Cover Radioactive Contamination. The DOE agreement requires both radioactive and chemical contamination to be cleaned up to background, and both kinds to be disposed of in sites licensed for that particular kind of waste. For some reason, the NASA proposal makes those commitments for radioactive contamination, but not for chemical. For the chemicals, it merely says NASA and DTSC will confer over cleanup and disposal. THIS SHOULD BE CHANGED. Make the NASA agreement identical to the DOE one. Treat radioactivity just as chemicals are in the NASA agreement. Both should be cleaned up to background; both should go to licensed sites (in other words, radioactive waste to a licensed low level radioactive waste site). We have been troubled by NASA's efforts to send soil contaminated with cesium-137 first to Kettleman Hills, then to a site in Idaho, neither of which is a licensed low level radioactive waste is site. FIX THIS. Make the NASA agreement cover both radioactive and chemical waste the same, and the same way they are in the DOE agreement; cleanup to background for both, and appropriate disposal for both.

Response: DTSC will continue to work with NASA to address the possibility that radiological contaminants may be present outside of Area IV, and in NASA's Area II and portion of Area I, and ensure that the assessment of site conditions includes analysis for radiological contaminants.

National Environmental Policy Act (NEPA) The NASA agreement has a provision not found in the DOE agreement about further discussions about the National Environmental Policy Act. Those of us who live nearby and have watched NASA's behavior over the years find this almost funny. NASA has never done anything under NEPA regarding its cleanup. There is no Environmental Impact Statement for any of NASA's cleanup activities to date. Now, all of a sudden, when there is a deal to do cleanup that would be protective, NASA makes noises about backing out of the deal for flaky NEPA reasons. Our understanding is that the chemical cleanup has always been done under state regulation, for which federal NEPA doesn't apply, and that this deal would be done under the state, so this NEPA business is just a diversion. NASA has wasted enough of our time with their efforts to transfer the land which would again be against SB990 which is state law. NASA SHOULD STOP MAKING EXCUSES AND JUST SIGN THE AGREEMENT AND GET ON WITH THE CLEANUP. Again, the NASA deal in this area should be the same as DOE's..

Response: The discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria."

DTSC is sensitive to the concerns about delays which may result from duplicative processes being administered to reach decisions. DTSC is not aware of any applicable NEPA requirements that would pertain to NASA. DTSC is coordinating with NASA to identify any applicable NEPA requirements, to the extent they exist.

Conclusion

We who live below the SSFL in the Susana Knolls have waited for years, indeed decades, for this moment to arrive. We are very grateful to the DOE Secretary Chu for breaking through years of impasse, proposing cleanup to background, and to DTSC, DOE, and NASA for working through these agreements. WE WANT NO MORE DELAY. NO MORE EXCUSES ABOUT WHY NOT TO CLEANUP. NO MORE RISK TO US. GET IT CLEANED UP. NO GAMES ABOUT WHY NOT TO SIGN THE AGREEMENT NOW. NO MORE DELAYS. SIGN THE AGREEMENTS NOW.

Response: DTSC desires to formalize these requirements quickly in final Administrative Orders on Consent. DTSC received overwhelming support from the affected community to in support of the Agreements in Principle and to wrap up negotiations and sign enforceable agreements quickly. Because there has already been a 30 day comment period and the Agreements in Principle have remained unchanged, DTSC does not believe that an additional comment period is needed for the public to verify that issues that they identified have been resolved. However, DTSC also received a handful of requests to review the final Administrative Orders on Consent before they are signed, and DOE has requested that an additional comment period be offered to the public on the final Administrative Orders on Consent. Because of these requests, DTSC will be providing an additional review period for the public to and to comment on any new issues raised by the final Administrative Orders on Consent.

DTSC recognizes that an additional review period delays finalizing the agreement and proceeding to implementation. As soon as the public review period has ended and any required adjustments to the documents made, DTSC will be working with DOE and NASA to sign the final Administrative Orders on Consent as soon as is practicable.

Mike Meuser
Concerned Citizen

I have kids and grandkids that live just a few miles downwind from the Rocketdyne site at Santa Susana. It's hard to believe that the meltdown accident happened there over 50 years ago, not to mention all the other releases from nuclear and rocket development/testing, yet we're still talking about a full cleanup of toxic and radioactive contamination. It's about time to do it and do it right.

Also, I think you should be checking the community. One good way is to check for strontium in baby teeth that have been replaced with permanent. Many researchers have used this technique in the past.

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Bill Magavern
Sierra Club California

Sierra Club California strongly supports the proposed agreements for cleanup of the Santa Susana Field Lab.

We actively supported SB 990 (Kuehl, 2007), which mandates strict cleanup standards for the contaminated Santa Susana Field Lab (SSFL). We have been disappointed by the resistance of the Responsible Parties (RPs) to complying with SB 990 and thus we are very gratified that the Department of Energy (DOE) has now proposed an agreement whereby it would clean up its part of SSFL to background. The Club is also very pleased that NASA has approved a similar agreement-in-principle.

The DOE and NASA agreements have numerous laudable components.

Cleanup to background--in essence, cleaning up everything DOE and NASA spilled that can be detected--is simple, understandable, and protective of public health and the environment. By picking the best cleanup standard that there is, so that no residual contamination remains, the need for lengthy and expensive risk assessment procedures is eliminated, and the money and time that would be diverted into that paperwork can now be devoted to cleanup, speeding up that long-delayed process. Relying on USEPA for all the key radiological monitoring tasks -- determining background, identifying where contamination in excess of background exists, thereafter confirming it has been fully cleaned up, and assuring fill is clean -- provides a significant level of independence and enhances public confidence. Not permitting averaging but requiring that the cleanup standard be met for any soil that exceeds background is also important, as averaging could result in leaving behind elevated levels of contaminants in one place by averaging with lower concentrations somewhere else. The exceptions to the cleanup-to-background requirements for detection limits, endangered species considerations, Native American artifacts, and unforeseen technical impediments (limited to 5% of the contaminated soil) appear thoughtful and appropriate--permitting flexibility while not creating exceptions so large that they can engulf the rule.

SSFL housed ten reactors, a plutonium fuel fabrication facility, a "hot lab" for conducting initial reprocessing work on irradiated nuclear fuel from around the country, and a "burn pit" in which radioactive wastes were burned in the open air. Four of the reactors suffered accidents, one of which was a partial meltdown. Radioactive contamination resulted from poor practices and accidents. Thousands of rocket tests were conducted, with toxic materials contaminating air, soil, and water, with some of that contamination migrating offsite. The community has fought for a long time to get the site cleaned up, and these agreements, when signed and carried out, can finally address their concerns and protect them. Furthermore, these decades of polluting activities have damaged the

environment at SSFL, and these agreements would finally mandate environmental restoration.

We have two suggestions for consideration.
(1) The NASA agreement, while generally paralleling the DOE agreement, leaves potential radioactive contamination, if found, as an issue to resolve by consultation with DTSC. The DOE agreement, by contrast, requires cleanup to background for both chemical and radioactive contamination, and disposal of either type of contaminated material in a disposal site expressly licensed for it. NASA's agreement makes those commitments for chemical contamination, but leaves uncertain the cleanup standard and disposal requirements for radioactive materials.

We think the NASA agreement should be revised to keep everything consistent -- cleanup of both chemical and radioactive contamination should be to background, and radwaste should have to be disposed of in a licensed low level radioactive waste disposal facility.

Response: DTSC will continue to work with NASA to address the possibility that radiological contaminants may be present outside of Area IV, and in NASA's Area II and portion of Area I, and ensure that the assessment of site conditions includes analysis for radiological contaminants.

(2) We appreciate the opportunity to comment on the agreements-in-principle. We believe that the agreements should be signed as soon as possible. Any effort to delay or block that achievement should be resisted. The parties should sign enforceable agreements embodying the agreements-in-principle immediately.

Response: DTSC desires to formalize these requirements quickly in final Administrative Orders on Consent. DTSC received overwhelming support from the affected community to in support of the Agreements in Principle and to wrap up negotiations and sign enforceable agreements quickly. Because there has already been a 30 day comment period and the Agreements in Principle have remained unchanged, DTSC does not believe that an additional comment period is needed for the public to verify that issues that they identified have been resolved. However, DTSC also received a handful of requests to review the final Administrative Orders on Consent before they are signed, and DOE has requested that an additional comment period be offered to the public on the final Administrative Orders on Consent. Because of these requests, DTSC will be providing an additional review period for the public to and to comment on any new issues raised by the final Administrative Orders on Consent.

DTSC recognizes that an additional review period delays finalizing the agreement and proceeding to implementation. As soon as the public review period has ended and

any required adjustments to the documents made, DTSC will be working with DOE and NASA to sign the final Administrative Orders on Consent as soon as is practicable.

We congratulate DOE Secretary Steven Chu for having broken the long impasse on SSFL cleanup by proposing cleanup to background. We applaud DTSC, DOE, and NASA for having reached these agreements, and urge that they be signed and implemented immediately.

Mark Osokow
San Fernando Valley Audubon Society

The purpose of this letter is to provide comments regarding the Agreements in Principal (AIP) and Confirmation Sampling Protocol being considered by the Department of Energy (DOE), National Aeronautics and Space Administration (NASA), and the Department of Toxic Substances Control (DTSC). In our opinion, these agreements or protocols are seriously flawed and should be modified in accordance with the following considerations.

GENERAL CONSIDERATIONS

Certainly, in terms of public health, it is in everyone's best interest to assure that the Santa Susana Field Laboratory (SSFL) is left in a condition suitable for public use. However, the final conditions to be accepted must be grounded in a realistic consideration of the purpose(s) for which the property will be used after its final disposition by DOE, NASA, and the Boeing Corporation. In addition, concern for public health must also be carefully balanced against other environmental concerns; such as, public enjoyment of the area, ecological functioning, and historical preservation.

Response: State law requirements in SB 990 require the site to be cleaned up to a level consistent with an assumed rural residential land use (or suburban residential land use if that assumption proves more protective).

The Boeing Corporation has publicly stated in a number of venues, and such statements are recorded in the public record (for example, The Boeing Company v. Maziar Movassaghi, U. S. District Court for the Eastern District of California, Case No. 09-cv-03165-GEG-KJM, among others), that the company wants to reserve the property it owns at the SSFL for public open space. Under these circumstances, it is difficult to understand why the DTSC wishes to impose the most rigorous possible health standards, the rural residential (agricultural) standard, as the baseline for disposition of the property by Boeing and NASA. The possibility that the property would be used for agriculture is zero or very close to it.

Response: Irrespective of any statements from Boeing regarding the future use of the site, State law requirements in SB 990 require the site to be cleaned up to a level consistent with an assumed rural residential land use (or suburban residential land use if that assumption proves more protective).

For purposes of implementing a cleanup of the Santa Susana Field Laboratory, DTSC must implement the provisions of SB 990, which mandates that the anticipated land

use in establishing cleanup standards be assumed to be rural residential or suburban residential, whichever is more protective. Even absent SB 990, 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.

Furthermore, although NASA has produced publications describing the important historical and archeological values present on the property, neither they nor any other government agency have made any commitment to open space of which we are aware. To be sure, the NASA-DTSC AIP contemplates the disposition of the NASA property through the General Services Administration, thereby leaving the door open to future use of the area for any purpose, including those that could cause even worse degradation of the environment than currently exists, and this would occur after the trouble and expense of cleaning up the site. Therefore, imposition of the agricultural standards by DTSC on the SSFL, under cover of the authority of California State Senate Bill 990, appears to be unnecessarily punitive towards Boeing and is not in the public interest.

Response: State law requirements in SB 990 require the site to be cleaned up to a level consistent with an assumed rural residential land use (or suburban residential land use if that assumption proves more protective, DTSC has no option but to implement State law requirements that apply to the Santa Susana Field Laboratory.

A proper AIP would take into consideration the best future use of the property for public open space, which would be supported by the overwhelming majority of voters in the western San Fernando Valley area of Los Angeles County. This is where the only paved access road to the SSFL begins and where all trucks laden with all manner of toxic wastes from the clean-up site would have to pass through en-route to a landfill. If DOE, NASA, and DTSC were truly concerned with the public interests, as government agencies are presumably supposed to be, they would orient all activities towards bringing about the desirable end of converting the property to public open space.

Response: For purposes of implementing a cleanup of the Santa Susana Field Laboratory, DTSC must implement the provisions of SB 990, which mandates that the anticipated land use in establishing cleanup standards be assumed to be rural residential or suburban residential, whichever is more protective. Even absent SB 990, 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.

By contrast, Boeing, a profit making business that does not have as its raison d'être the public interest requirements of a government agency, has taken definite steps to promote the disposition of its SSFL holdings as public open space. They have opened up the property to public tours, during which Boeing employees and consultants escort tour groups through the property. These tours have focused on history, archeology, and the natural environment, as well as on the ongoing clean-up efforts. Some of our board members and committee chairpersons (including Mr. Osokow, see signers) have participated in tours, which have focused on the natural environment. In that connection, we have been extremely impressed with the potential of the site for passive recreation, scientific study, and environmental education. That impression extends to Boeing's willingness to cooperate with others, such as non-profit organizations, which offer no obvious monetary or other tangible benefit. In addition, they have produced a number of publications promoting the history, archeology, and natural environment of the site.

Response: Irrespective of any statements from Boeing regarding the future use of the site, State law requirements in SB 990 require the site to be cleaned up to a level consistent with an assumed rural residential land use (or suburban residential land use if that assumption proves more protective).

SPECIFIC CONSIDERATIONS

Criteria for Clean-up

The DTSC-NASA/DOE AIP's, essentially, set the clean-up standard for contaminants as being equal to the background level, as determined from similar uncontaminated sites. While, in theory, this may be a laudable target, in actuality these standards may cause more harm to health and the environment than good as explained below. However, in no case should these remarks be interpreted as an argument for ignoring the presence of highly toxic contaminants in high concentrations.

In the first place, no discussion of how exposure to the contaminants would occur appears in the documents. Unless the contaminants are within a few inches of the surface, random exposures to pedestrians, hikers, and others casually utilizing the area are not likely to occur, and these would likely be of short duration involving minimal levels of contact. It is far more likely that an individual would be exposed to a toxic dose of poison oak or some other natural allergen or toxin on the site than to many or most of the contaminants that might cause acute toxicity, cancer or some other form of chronic toxicity. These circumstances of minimal exposure would occur in the case of the property being preserved as open space. Add to this the risk of being attacked by a swarm of Africanized bees, being bitten by a rattlesnake or by a rabid squirrel, falling

from a cliff, being struck by lightning, or other natural hazards, and one can readily see the importance of placing the unlikely exposure to toxins in its proper perspective.

Moreover, in the absence of industrial or construction activity, there is no mechanism by which the public might be exposed to the contaminants without actually entering the site. (Ironically, excavation of contaminants during clean-up might result in a substantial release of contaminants that could have public health consequences on and off-site. See below). Therefore, there is no practical basis for utilizing a standard based on one cancer in ten thousand at the most, with one cancer in a million being the desired target, or any other cancer rate. The effect on cancer rates for individuals utilizing the site, based on a few short-term exposures would be, essentially, un-measurable for the vast majority of contaminants, whether the effects are additive or not, in the absence of clean-up. Similarly, there would be no way to evaluate success or failure of the clean-up based on public health criteria.

Response: As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," the Agreements in Principle are based on the application of risk based criteria and other cleanup procedures and policies. DTSC is required to apply the risk based criteria and cleanup policies in a manner consistent with their application in other cleanup sites in California.

An additional difficulty is presented by contaminants that have minimal toxicity. Here, contaminant concentrations found might be far in excess of the background level, yet present no cognizable risk to public health or the natural environment. This may be true of the majority of toxins on the site. Clean up of such toxins to background level would be unhelpful from either a public health or environmental protection standpoint and would utilize funds and other resources that could be better applied elsewhere, as well as causing substantial and unnecessary damage to the environment.

Response: The commenter provides no basis upon which to categorize any of the contaminants present at the site as lesser than or "minimal." The toxicological principles and risk assessment approaches being applied in this case are identical to their application at all other contaminated sites in California. The Agreements in Principle are based upon the application of risk assessment guidance and policies used at all other cleanup sites under DTSC's jurisdiction.

To make matters worse, application of the criteria leads to potential absurdities. For example, free chlorine residuals are not normally found in lakes. The background

level is essentially zero. However, some lakes used to provide potable water are treated with chlorine compounds to control bacterial or algal contamination. If background level standards were applied in the manner of the AIP's, these lakes could not be so treated. This could have serious consequences for public health. There might be similar, but less obvious, situations extant at SSFL.

Response: The U.S.EPA Radiologic Background Study and the DTSC Chemical Background Study will provide background values for all radionuclides and chemicals expected to be found locally.

Clean-Up Methodology

Unfortunately, the AIP's were produced prior to the necessary site contaminant characterization referenced therein. This has resulted in a heavy handed and rather primitive intellectual approach to the clean-up methodology. The AIP's essentially call for excavating and removing all soils contaminated to above the background level (simply described above). This may involve the intrusion of heavy equipment into areas best left undisturbed in deference to the remaining natural environment; for example, oak woodlands or savannas. Protections under the Endangered Species Act (ESA) and other laws are inadequate to protect the vast majority of the area from such intrusions, even though substantial natural values might be present at or near the excavation sites. Furthermore, the continuous movement of heavy equipment into and out of the area will result in the dispersal throughout of invasive plant species, fungal and bacterial pathogens thereby causing additional environmental damage.

Response: DTSC understands that to carry out the cleanup specified in the Agreements in Principle could result in significant removal of contaminated soils. It is regrettable that the actions of Boeing, DOE and NASA have resulted in contamination of the site to the extent that the volumes of soil requiring cleanup may be significant. It is also regrettable that the impacts of accomplishing the necessary cleanup may also be significant. DOE and NASA will need to identify, assess and mitigate any environmental impacts that result in the course of carrying out their cleanup responsibilities.

However, of greater importance is the requirement to backfill the excavated sites with uncontaminated soil from elsewhere. While the intentions may be good, this is a patently destructive approach that sacrifices one uncontaminated site to restore the contours of a previously contaminated site for which no future use has been planned. Depending on the amount of material excavated, the location of the make-up site and other factors, the damage to the make-up site can range from minimal to extreme. A worst case scenario would involve the removal of something upwards of one and a half million cubic yards of material and replacing it with material from the SSFL's Southern Buffer Zone (SBZ). The latter is probably as close to pristine as any site in Southern

California and appears to be a prime candidate for inclusion in a possible national park encompassing the Rim of the Valley Corridor, the studies for which have just begun. The SBZ supports a number of endangered, threatened, or rare species and relatively undisturbed habitats that are rapidly disappearing in the area and are necessary for the health of wildlife populations, including such diverse organisms as mountain lions, migratory birds, and migratory butterflies. At the same time, the area offers numerous opportunities for exploration, study, or passive recreation. Its inclusion in the AIP's as a possible source for backfill is an extremely serious blunder that can be easily remedied by taking it out of the AIP's as a potential source of backfill.

Response: The Confirmation Sampling Protocol included a discussion of the possible onsite sources of backfill soils for excavations, but does not create an authorization or approval to use any particular onsite location for this purpose. As with the entirety of the anticipated cleanup activities, excavation for borrowing soils will be subject to all applicable federal, state and local requirements and must receive necessary permits to proceed. DTSC anticipates that these federal, state and local requirements will provide the necessary checks and balances to assess the legality and appropriateness of any proposal for the use of soils borrowed from any location, including sites that may be within the Santa Susana Field Laboratory.

Concerning health, individuals might be exposed to contaminants during excavation for the clean-up or during other construction/de-construction activities. Protective clothing would be needed to prevent these exposures. Injuries or deaths from accidents or ailments, such as heat stress aggravated by protective clothing, could result. Furthermore, the AIP's contain no information on preventing dust or other sources of contaminants from becoming airborne after excavating to expose and access contaminants. When airborne, such materials could create chronic or acute health risks downwind in areas where no such risks currently occur. If treated with water to prevent dust, other problems might result. Presumably, there are standard procedures for dealing with these contingencies; however, the AIP's contain no reference to them. Nevertheless, accidents occur, procedures are sidestepped, and injuries or deaths can result.

Response: The draft Remedial Action Implementation Plan must include detailed health and safety requirements. DTSC will ensure that this type of restriction is included in the draft plan. The public will also have an opportunity to verify that concerns such as this are addressed as they review the draft plan when it is released for public review and comment.

Following excavation, contaminated material is to be loaded into trucks and driven to a landfill hundreds of miles away. Estimates of the amount of material that would have to be disposed of are as high as one hundred thousand truckloads over a

period of five to nine years. There are bound to be accidents resulting from even a much lower level of truck traffic. Spills of contaminants could occur, especially if correct procedures are not followed or defective materials are used. This could result in extended traffic snarls, acute or chronic health effects, lawsuits, and even forced abandonment of commercial, institutional, or residential property along the route.

The resulting injuries and deaths that could occur from these events must be added to those already mentioned above. The upshot of this is that the risk of injury or death from the clean-up activities exceeds the public health risk from the current state of contamination left in place. Less heavy handed approaches would reduce these risks.

Response: DOE and NASA will need to identify, assess and mitigate any environmental impacts that result in the course of carrying out their cleanup responsibilities. The draft Remedial Action Implementation Plan must include a detailed soils management and transportation plan, and the accompanying CEQA documents must identify environmental impacts attributable to the transportation of soils and mitigation measures that are being proposed to mitigate those environmental impacts.

ALTERNATIVES

It is understood that various other options for clean-up have been or are being considered and some are currently being utilized. These include on-site treatment and bio-remediation among others. It is our impression that these techniques can be utilized with greater effect than that to which they have heretofore been put. It is also our impression that impatience with the perceived slow pace of the clean-up, exacerbated by political expedience, is as much a driving force for utilizing the primitive "dig and truck" method as concern for the public interests. We, therefore, recommend that the agencies take a step back from this process and reconsider modified AIP's following the completion of the site contaminant characterization.

Response: The Agreements in Principle do not preclude the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment of soils to achieve the identified cleanup standards. Although it is impossible to know until the site is fully characterized whether any soils may be able to be addressed in this way, DTSC agrees that the use of these approaches has the potential to significantly reduce the amount of soil requiring excavation and offsite disposal. The final Administrative Orders on Consent make clear that the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment is allowed, and requires treatability studies to be done to assess their viability.

RECOMMENDATIONS

The following recommendations are based on the foregoing and should not be considered comprehensive.

1. Delay further consideration of the AIP's until the site contaminant characterization has been completed;

Response: DTSC does not believe delay is warranted or necessary. State law requirements in SB 990 were enacted over three years ago. There is sufficient information available to know that cleanup is required, and establishing an enforceable relationship through the Administrative Orders on Consent is necessary to achieving that goal.

2. After the site contaminant characterization, begin re-consideration of AIP's with appropriate modifications based on the characterization;

Response: DTSC understands that to carry out the cleanup specified in the Agreements in Principle could result in significant removal of contaminated soils. It is regrettable that the actions of Boeing, DOE and NASA have resulted in contamination of the site to the extent that the volumes of soil requiring cleanup may be significant. It is also regrettable that the impacts of accomplishing the necessary cleanup may also be significant. The arguments being raised by Boeing apply equally to any amount of contaminated soils to be removed, so it is unclear what Boeing's intentions are in raising them, other than as an indication of the magnitude of the environmental harm that Boeing, DOE, and NASA caused in the course of their operations, and as a preliminary indication as to the ancillary environmental impacts that Boeing, DOE, and NASA will need to mitigate in the course of carrying out their cleanup responsibilities.

3. Discard the agriculture standard of SB 990 in favor of a less restrictive and more nuanced set of standards more realistically related to the health of the public and the environment with the property being used as public open space;

Response: State law requirements in SB 990 require the site to be cleaned up to a level consistent with an assumed rural residential land use (or suburban residential land use if that assumption proves more protective). DTSC has no option but to implement State law requirements that apply to the Santa Susana Field Laboratory.

4. In any AIP, emphasize probable beneficial uses of the property and environmental concerns; such as, public enjoyment of the area, ecological functioning, and historical preservation;

Response: Irrespective of any statements from Boeing regarding the future use of the site, State law requirements in SB 990 require the site to be cleaned up to a level consistent with an assumed rural residential land use (or suburban residential land use if that assumption proves more protective).

5. Both NASA and DOE should announce their intention to promote the preservation of the property as public open space, except as described below;

Response: Neither the Agreements in Principle nor any final Administrative Order on Consent affect or influence decisions by the owners of the property regarding its planned future use. Those decisions will be a function of discussions between the property owners, the local government(s) that govern land use, and the community.

6. NASA and DOE should jointly sponsor the construction of a museum on the site devoted to the contributions of the SSFL to nuclear, aviation, and space exploration progress;

Response: Neither the Agreements in Principle nor any final Administrative Order on Consent affect or influence decisions by the owners of the property regarding its planned future use.

7. Minimize the need for excavation through judicious application of standards; and minimize the number of truckloads passing through populated areas of the San Fernando Valley;

DTSC understands that to carry out the cleanup specified in the Agreements in Principle could result in significant removal of contaminated soils. It is regrettable that the actions of Boeing, DOE and NASA have resulted in contamination of the site to the extent that the volumes of soil requiring cleanup may be significant. It is also regrettable that the impacts of accomplishing the necessary cleanup may also be significant.

DOE and NASA will need to identify, assess and mitigate any environmental impacts that result in the course of carrying out their cleanup responsibilities. The draft Remedial Action Implementation Plan must include a detailed soils management and transportation plan, and the accompanying CEQA documents must identify environmental impacts attributable to the transportation of soils and mitigation measures that are being proposed to mitigate those environmental impacts.

8. Develop criteria for evaluating the impact on public health and the environment from the clean-up, and develop a monitoring program, including more comprehensive offsite testing, for evaluating the impact based on those criteria;

Response: The commenter provides no basis upon which to categorize any of the contaminants present at the site as lesser than or "minimal." The toxicological principles and risk assessment approaches being applied in this case are identical to their application at all other contaminated sites in California. The Agreements in Principle are based upon the application of risk assessment guidance and policies used at all other cleanup sites under DTSC's jurisdiction.

9. Incorporate protections for wildlife habitat and wildlife in general, not just species protected under the ESA, into the AIP's;

Response: Although the Agreements in Principle only reference federally endangered species as a possible exception to carrying our the described cleanup, DTSC recognizes the role and authority of the State Department of Fish and Game and intends to coordinate closely with the State Department of Fish and Game throughout the site characterization and cleanup process.

10. Develop procedures for preventing the introduction of invasive species, fungal and bacterial pathogens onto the clean-up site:

Response: DTSC will consult and communicate with habitat and ecosystem experts to ensure that restoration efforts are successful.

11. Eliminate the Southern Buffer Zone from consideration as a backfill source;

Response: The Confirmation Sampling Protocol included a discussion of the possible onsite sources of backfill soils for excavations, but does not create an authorization or approval to use any particular onsite location for this purpose. As with the entirety of the anticipated cleanup activities, excavation for borrowing soils will be subject to all applicable federal, state and local requirements and must receive necessary permits to proceed. DTSC anticipates that these federal, state and local requirements will provide the necessary checks and balances to assess the legality and appropriateness of any proposal for the use of soils borrowed from any location, including sites that may be within the Santa Susana Field Laboratory.

12. Develop contingency plans for use in the event of accidental spills of waste:

Response: DOE and NASA will need to identify, assess and mitigate any environmental impacts that result in the course of carrying out their cleanup responsibilities. The draft Remedial Action Implementation Plan must include a detailed soils management and transportation plan, and the accompanying CEQA documents must identify environmental impacts attributable to the transportation of

soils and mitigation measures that are being proposed to mitigate those environmental impacts.

13. Adjust planning so that the risk to the public health and environment is less during and after the clean-up than before, based on using the site as public open space.

Response: State law requirements in SB 990 require the site to be cleaned up to a level consistent with an assumed rural residential land use (or suburban residential land use if that assumption proves more protective). DTSC has no option but to implement State law requirements that apply to the Santa Susana Field Laboratory.

We believe that if these recommendations are implemented there will be a more effective and safer cleanup that will also have the benefits of being less disruptive and costly.

Arlyn Parks & Lance Parks
Concerned Citizens

I write this email to show my support of the agreement for cleanup of the contaminated Santa Susana Field Lab. It is tremendously encouraging to know that an agreement has been reached and you are ready to implement the cleanup measures necessary to insure that the future health of communities impacted by the contamination aren't compromised. We are grateful to the state and federal agencies and our elected officials who worked so diligently to get the agreement. Please do not let anything deter you from activating this agreement and begin the cleanup process. We urge you to finalize the agreement so that it becomes a legal & enforceable document. On behalf of my family and especially my children, thank you for insuring that the well-being of those neighborhoods is protected by the signatures on the agreement so that cleanup may begin.

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

FRAN PAVLEY
California State Senator, 23rd District

JULIA BROWNLEY
Assemblywoman, 41st District

LINDA PARKS
Ventura County Supervisor, 2nd District

ZEV YAROSLAVSKY
Los Angeles County Supervisor, 3rd District

GREIG SMITH
Los Angeles City Council, 12th District

TO WHOM IT MAY CONCERN:
As elected officials whose constituents are directly impacted by the activities that have taken place at the Santa Susana Field Laboratory ("SSFL"), we write in strong support of the Agreements in Principle ("AIP") that have been reached between the State and the Department of Energy and NASA.

We respectfully submit the following comments:
1. We believe that the agreement to clean up to background standards is the correct one, insuring that all detectible contamination is removed. This is consistent and in compliance with SB990, current state law.

2. It is critical that the agreement between the state and the Federal parties be fully and unconditionally legally binding and enforceable.

Response: DTSC agrees that the terms and provisions of the Agreements in Principle must be embodied in final Administrative Orders on Consent to be enforceable and to accomplish what they describe. It is DTSC's intention to resolve remaining issues and reach agreement as quickly as possible so that the activities described in the Agreements in Principle can be implemented.

3. We are pleased that USEPA has lent its credibility to the process by agreeing to perform the radiation surveys to determine what background is, and to confirm when the site has been cleaned up to background level.

These AIPs mark an enormous step forward in getting this highly contaminated site made safe for the health and safety of the citizens that we have the privilege of

representing. We congratulate the parties on reaching this historic agreement, and now urge them to execute the final agreements as soon as possible and to begin the work.

Response: DTSC desires to formalize these requirements quickly in final Administrative Orders on Consent. DTSC received overwhelming support from the affected community to in support of the Agreements in Principle and to wrap up negotiations and sign enforceable agreements quickly. Because there has already been a 30 day comment period and the Agreements in Principle have remained unchanged, DTSC does not believe that an additional comment period is needed for the public to verify that issues that they identified have been resolved. However, DTSC also received a handful of requests to review the final Administrative Orders on Consent before they are signed, and DOE has requested that an additional comment period be offered to the public on the final Administrative Orders on Consent. Because of these requests, DTSC will be providing an additional review period for the public to and to comment on any new issues raised by the final Administrative Orders on Consent.

DTSC recognizes that an additional review period delays finalizing the agreement and proceeding to implementation. As soon as the public review period has ended and any required adjustments to the documents made, DTSC will be working with DOE and NASA to sign the final Administrative Orders on Consent as soon as is practicable.

Shell Plotkin
Southern California Federation of Scientists
Los Angeles, CA

We strongly support the proposed agreements with DOE and NASA for cleanup of the Santa Susana Field Laboratory and urge that they be promptly executed in binding form.

Response: DTSC desires to formalize these requirements quickly in final Administrative Orders on Consent. DTSC received overwhelming support from the affected community to in support of the Agreements in Principle and to wrap up negotiations and sign enforceable agreements quickly. Because there has already been a 30 day comment period and the Agreements in Principle have remained unchanged, DTSC does not believe that an additional comment period is needed for the public to verify that issues that they identified have been resolved. However, DTSC also received a handful of requests to review the final Administrative Orders on Consent before they are signed, and DOE has requested that an additional comment period be offered to the public on the final Administrative Orders on Consent. Because of these requests, DTSC will be providing an additional review period for the public to and to comment on any new issues raised by the final Administrative Orders on Consent.

DTSC recognizes that an additional review period delays finalizing the agreement and proceeding to implementation. As soon as the public review period has ended and any required adjustments to the documents made, DTSC will be working with DOE and NASA to sign the final Administrative Orders on Consent as soon as is practicable.

We have a few comments and suggestions.

The Southern California Federation of Scientists was founded shortly after the Second World War by former Manhattan Project Scientists. Ever since, we have worked to reduce the threat from nuclear activities of all kinds.

We have been involved in the SSFL matter for three decades, initially by providing technical advice about the 1959 partial meltdown of the Sodium Reactor Experiment at SSFL when it was revealed in 1979. A decade later we intervened in the Nuclear Regulatory Commission relicensing proceeding for the Hot Lab at the site. I have served on the SSFL Inter Agency Work Group since its inception, and also served on the Advisory Panel for the SSFL epidemiological studies. We were strong supporters of SB990, the SSFL cleanup law. We thus have had a long interest in and involvement with efforts to get the site cleaned up.

We are thus extremely pleased that an agreement has been reached with DOE and NASA for SSFL cleanup. And we are particularly pleased with a number of technical aspects of the agreement.

Comments

1) Standard of Background Scientifically Defensible, Appropriate, and Protective.

The choice of local background as the cleanup standard – a proposal we understand was made by Steven Chu, the Nobel laureate who is the Energy Secretary - is superb. It is scientifically sensible, rational, and protective.

It is not only fully compliant with SB990, it would appear that the parties have correctly concluded it is what would have ended up being required by SB990 anyway, so there is no need to delay matters and waste time and money on unnecessary risk assessments that would lead to a cleanup to background standard anyway. We note that in presentations by Rick Brausch about the agreement, comparisons of current background values for strontium-90 and cesium-137, plus certain chemicals against the 10-4 upper end of the risk range were provided for the SB990 land use required assumptions. Those comparisons show that, for example, cesium-137 background (95% confidence level) levels exceed the 10-4 risk level. Since SB990 requires cleanup within the risk range unless background levels are higher than the upper end of the risk range, in which case the cleanup standard defaults to the background value, cleanup to background is where one would end up anyway. This is particularly true because one must sum the contaminants. So, a very rational decision has been made: one is going to have to clean up to background anyway under SB990, so stop resisting, get on with it, and at the same time save time and money by not having to do risk assessments that are unnecessary if you are going to clean up to background anyway. Risk assessment only matters if the risk is within the 10-6 to 10-4 risk range. Here one is already outside it and must cleanup to background. So the agreements recognize reality - a fundamentally appropriate scientific approach - and speed up the cleanup and direct money away from paper studies to actual cleanup. We applaud. (It is also scientifically correct to use, as the agreements do, local background. That is the only way to determine if there is added radioactivity or chemicals by DOE or NASA.)

2) "Not to Exceed" Approach is Appropriate

We also applaud the use of a "not to exceed" approach, rather than averaging. Averaging could leave behind elevated levels of contaminants.

3) EPA Role is a Positive Feature

We find very valuable the role EPA is to play in making these agreements possible, by determining for radionuclides local background, identifying onsite where concentrations exceed background, and doing confirmatory work after cleanup to assure all contamination has been removed.

4) Requirement of Disposal at Licensed Sites Important

We were pleased to see in the DOE agreement the requirement that radioactive wastes be disposed of in a licensed low-level radioactive waste (LLRW) site. There has been a history at this facility of attempts to do otherwise, and it is a valuable provision that wastes with radioactivity above local background will have to be disposed of in a licensed LLRW site.

Suggestions

Our suggestions relate largely to the NASA agreement and particularly to those parts of it that are different than the DOE agreement. We frankly see no reason why there should be any substantive differences.

1) NASA Agreement Needs to Parallel DOE agreement with regards Radiological Contamination

For some reason, the NASA proposed agreement requires cleanup to background, proper disposal, and DTSC oversight authority only for chemical contamination. For radioactive contamination that might be found, all that is said is that DTSC and NASA "will develop an appropriate sampling and disposal plan for those materials." We think this needs to be changed.

The NASA agreement should parallel the DOE one. Both chemicals and radioactive contamination should be cleaned up to background; both should be required to go to sites licensed for those kinds of wastes (e.g., licensed LLRW site for the radwaste), and DTSC authority should extend over both kinds of material. (See 1st bullet on p. 3 and 4th from bottom bullet on same page.) EPA radiological background should be used for both the DOE and NASA properties.

Response: DTSC will continue to work with NASA to address the possibility that radiological contaminants may be present outside of Area IV, and in NASA's Area II and portion of Area I, and ensure that the assessment of site conditions includes analysis for radiological contaminants.

Additionally, the confirmation protocol for NASA, which is still to be developed, should truly be identical in all substantive ways to the DOE protocol; in particular, it

should capture radioactive materials and the use of EPA for establishing radiological background.

Response: DTSC intends to develop a similar confirmation sampling protocol that will apply to NASA's Areas I and II.

NASA has been pushing in the last year to send radioactive wastes to facilities not licensed for LLRW. This should not be left dangling in this agreement; NASA should be bound just as DOE is to send to licensed LLRW sites.

Response: DTSC will continue to work with NASA to address the possibility that radiological contaminants may be present outside of Area IV, and in NASA's Area II and portion of Area I, and ensure that the assessment of site conditions includes analysis for radiological contaminants.

2) NASA's NEPA reference needs to be removed; environmental review is under state procedures

Additionally, the reference on p. 4 of the NASA agreement to NEPA is puzzling and should be removed. NASA has conducted all of its cleanup activities to date outside of NEPA. The work is being done under state authority, including state authority delegated under the Resource Conservation and Recovery Act. This statement looks like a loophole or delay tactic. The state will handle what environmental review is needed.

Response: DTSC is sensitive to the concerns about delays which may result from duplicative processes being administered to reach decisions. DTSC is not aware of any applicable NEPA requirements that would pertain to NASA. DTSC is coordinating with NASA to identify any applicable NEPA requirements, to the extent they exist.

[one minor note: on p. 3 of the NASA text it should be "landfilling" not "land filling"; it is used in the former fashion in the DOE agreement]

3) Confirmation Protocol Questions

On p. 2, under Sampling Methodology and Results Verification, does it need to make clear that compositing is also not appropriate for the characterization measurements, in addition to the confirmatory and backfill acceptance testing? Perhaps it is unnecessary because this document deals only with the latter, but perhaps it creates some ambiguity.

Response: DTSC believes the Confirmation Sampling Protocol is sufficiently clear that composite sampling is not an accepted sampling approach for confirmation sampling in this case.

4) Urgency to Execute the Agreements and Get on With Cleanup

The agreements should be immediately executed. There is no need, as a lower-level bureaucrat at DOE who has been resistant to the agreement suggested, to go through the comment process all over again. You've got our comments; deal with them; adjust the agreements as necessary-AND SIGN THEM. Finally get on with the cleanup.

These communities have waited far too long for cleanup. We commend DTSC, DOE, and NASA for having reached these agreements-in-principle; and for having picked a cleanup standard of background. Now, with no further delay, execute the agreements and commence the cleanup.

Response: DTSC desires to formalize these requirements quickly in final Administrative Orders on Consent. DTSC received overwhelming support from the affected community to in support of the Agreements in Principle and to wrap up negotiations and sign enforceable agreements quickly. Because there has already been a 30 day comment period and the Agreements in Principle have remained unchanged, DTSC does not believe that an additional comment period is needed for the public to verify that issues that they identified have been resolved. However, DTSC also received a handful of requests to review the final Administrative Orders on Consent before they are signed, and DOE has requested that an additional comment period be offered to the public on the final Administrative Orders on Consent. Because of these requests, DTSC will be providing an additional review period for the public to and to comment on any new issues raised by the final Administrative Orders on Consent.

DTSC recognizes that an additional review period delays finalizing the agreement and proceeding to implementation. As soon as the public review period has ended and any required adjustments to the documents made, DTSC will be working with DOE and NASA to sign the final Administrative Orders on Consent as soon as is practicable.

Felix Aguilar, MD, and 29 other signers
Physicians for Social Responsibility – Los Angeles

As physicians and health advocates, we strongly support the agreements in principle recently reached regarding with the California Department of Toxic Substances Control (DTSC) regarding the cleanup of Department of Energy's and NASA's portions of the Santa Susana Field Laboratory (SSFL). The cleanup agreement will meet the protective environmental and public health standards set by state law (SB 990). Thorough remediation of SSFL is important for the health and well-being of Southern Californians and the environment.

The agreements in principle adhere to the mission of Physicians for Social Responsibility-Los Angeles, which is to reduce threats to public health related to nuclear and environmental toxins. PSR-LA was founded in 1980 as a local affiliate of the national organization, Physicians for Social Responsibility, which was the American recipient of the Nobel Peace Prize awarded to IPPNW in 1985. We are the largest chapter in the nation and have played a leading role in national, state, and local education and policy efforts. Contaminants at SSFL pose a significant and serious threat to public health, and PSR-LA has been involved in efforts to clean up the site since the late 1980s when it joined with the Rocketdyne Cleanup Coalition, Committee to Bridge the Gap, and the Southern California Federation of Scientists to advocate for the cessation of nuclear work at SSFL and for the remediation of the polluted land and water at the lab.

Founded in the 1940s, SSFL was the site of extensive nuclear reactor work and rocket testing for decades, both of which have left a significant legacy of contamination. Ten reactors operated at the site, at least four of which suffered accidents. One of those accidents, in the summer of 1959 in a reactor without a containment structure, was a partial meltdown. The facility also housed a "hot lab" to which irradiated reactor fuel from around the country was shipped to be declad and examined and where radioactive fires occurred. Contamination with cesium-137, strontium-90, and tritium, among other radioactive materials is found at SSFL. The site also included a plutonium fuel fabrication facility. Plutonium is, of course, one of the most toxic materials on earth.

Additionally, tens of thousands of rocket tests were conducted at SSFL, resulting in significant chemical contamination. Hundreds of thousands of gallons of TCE, for example, were used to flush out rocket test engines and then allowed to percolate into the soil and groundwater. There is contamination also with perchlorate, dioxins, heavy metals, an array of volatile and semi-volatile organics, etc.

Open-air pits at SSFL were used to burn radioactive and chemically toxic materials, causing contamination of soil and groundwater. Barrels of these materials were shot at to ignite them.

Contamination on-site has been migrating offsite. Stormwater leaving the facility, for example, routinely violates permissible concentrations of pollutants; scores of violations have been cited by regulators.

In short, decades of questionable practices and a series of accidents have resulted in contamination of environmental media by materials that are carcinogenic, can result in genetic defects in offspring, and which produce other toxic effects. Public health considerations mandate that the site be effectively cleaned up. We applaud DOE, NASA, and DTSC for having reached these agreements in principle that would do precisely that.

The agreements in principle would require, with certain carefully crafted exceptions, the cleanup of the soil at the DOE and NASA portions of SSFL to background—to the concentrations there from nature and from atmospheric fallout. In essence, any radioactive or chemically hazardous materials that were added to the environment by DOE and NASA activities at SSFL which can be detected shall be cleaned up. We think this is prudent from a public health standpoint and support it.

USEPA would provide independent determinations of where soil is contaminated with radioactivity and then, after remediation, confirm that it has been cleaned up. This also seems very positive.

We have one suggestion as to the proposed NASA agreement. Whereas it parallels the DOE agreement in most regards, including cleaning up chemical contamination to background and the requirement that hazardous materials be disposed of in facilities licensed to receive it, it differs in one significant respect. The NASA draft agreement merely states as to potential radioactive contamination that if found, NASA and DTSC will confer as to how to clean it up and how to dispose of the contamination. Recognizing that one expects primarily chemical contamination on the NASA property, it still seems unwise to leave the matter of potential radioactive contamination unresolved. We understand, for example, that soil contaminated with cesium-137 was identified on the NASA property a year ago, and a controversy arose out of NASA's desire to dispose of the radioactive material at a disposal site not licensed for low-level radioactive waste. We think the NASA agreement in principle should be revised to require the same treatment for radioactive and chemical contamination, paralleling the DOE agreement: both types of contamination should be cleaned up to background, and both should be disposed of at sites licensed for that type of material. An alternative would be to amend the DOE agreement so that any radioactive material found on the NASA property would be cleaned up to background by DOE and DOE would arrange for disposal in a licensed site.

Response: DTSC will continue to work with NASA to address the possibility that radiological contaminants may be present outside of Area IV, and in NASA's Area II and portion of Area I, and ensure that the assessment of site conditions includes analysis for radiological contaminants.

With that one suggestion, we, as members of PSR-LA, enthusiastically support the agreements in principle, which will further our group's goals of protecting public health and the environment.

We commend your efforts in making these goals a reality, and urge the agreements be expeditiously executed in legally binding and enforceable form.

Response: DTSC desires to formalize these requirements quickly in final Administrative Orders on Consent. DTSC received overwhelming support from the affected community to in support of the Agreements in Principle and to wrap up negotiations and sign enforceable agreements quickly. Because there has already been a 30 day comment period and the Agreements in Principle have remained unchanged, DTSC does not believe that an additional comment period is needed for the public to verify that issues that they identified have been resolved. However, DTSC also received a handful of requests to review the final Administrative Orders on Consent before they are signed, and DOE has requested that an additional comment period be offered to the public on the final Administrative Orders on Consent. Because of these requests, DTSC will be providing an additional review period for the public to and to comment on any new issues raised by the final Administrative Orders on Consent.

DTSC recognizes that an additional review period delays finalizing the agreement and proceeding to implementation. As soon as the public review period has ended and any required adjustments to the documents made, DTSC will be working with DOE and NASA to sign the final Administrative Orders on Consent as soon as is practicable.

Chris Rowe 1
West Hills

I have so many questions regarding the "Agreements in Principle" et al. I have seen so many emails.

I have read the EIS documents that the DOE has prepared. I was up there for their Cultural and Biological Tour. We were there with biologists and archaeologists.

I even met the EPA biologist, one EPA archaeologist, and a Native American overseer when I was on the EPA Community site tour about two weeks ago. The biologist was surveying the site and setting things aside to be protected. The archaeologist was doing the same thing.

We have discussed NEPA with DOE and NASA in the past. We have seen biological surveys, cultural survey documents, and historical building documents. We are told that these agencies need to do these things for NEPA.

So as I have personally seen the Boeing Company set aside the endangered species when I was up at Outfall 8 with the Regional Board, and I saw how they spared one oak tree because of its girth, and because it was not badly damaged by the fire, I do not know why I am seeing emails that say that AREA IV and AREA II are expected to have pretty heavy cleanup, and that they expect to lose a lot of these oak trees and endangered species if we do not have SB 990.

I genuinely do not believe that the community understands these documents and how they differ from SB 990. I do not know what was said at the Workgroup. I only know what I have seen in emails this weekend.

Another issue that has come up is the amount of truck loads that will go up and down the hills. As you are on the bottom of Woolsey Canyon Road, you now enter West Hills. Depending upon the direction those trucks go on Valley Circle, you are either going south and continuing through West Hills to Woodland Hills, or north to West Hills, Lake View Manor, and Chatsworth.

What will the impact be on our community traffic related to trucks going up and down that hill? I mentioned this issue to my Board because it comes up in documents. Some people think I ask this question because of Boeing "not wanting to clean up the site". I am asking this question because we already have traffic problems on Valley Circle near Shomrei Torah where there is a Jewish High School.

Response: DOE and NASA will need to identify, assess and mitigate any environmental impacts that result in the course of carrying out their cleanup responsibilities. The draft Remedial Action Implementation Plan must include a detailed soils management and transportation plan, and the accompanying CEQA documents must identify environmental impacts attributable to the transportation of soils and mitigation measures that are being proposed to mitigate those environmental impacts.

I encourage you to go into these documents at length with us this Wednesday.

Chris Rowe 2

Dear Mr. Brausch,

Attached is my first Draft of my comments on the Agreements in Principle.
I would appreciate an extension on my time for at least a few days. I have two meetings tomorrow, and I have to represent my West Hills Neighborhood Council most of the day at our "Fall Fest" on Sunday. This is West Hills' big event of the year.
http://www.westhillsfallfest.com/ (http://www.westhillsfallfest.com/)

In general, my comments on the AIP are: "It's not ready for prime time". There are too many unknowns.

Response: DTSC believes there is sufficient available information to establish the approaches that will be necessary to proceed with the characterization and cleanup of the Santa Susana Field Laboratory. As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments, there is sufficient information available to know the cleanup standards as they are described in the Agreements in Principle and their basis on the application of risk based criteria and other cleanup procedures and policies.

In addition, the final Administrative Orders on Consent will require the preparation of a draft Remedial Action Implementation Plan. This Plan will identify the proposed cleanup actions, based on the results of the characterization studies. The Plan will also include detailed soils management plans, health and safety plans, transportation and disposal plans, and will be accompanied by CEQA documents that identify environmental impacts attributable to the cleanup activities and the mitigation measures that are being proposed to mitigate those environmental impacts.

The final Administrative Orders on Consent will establish the requirement that the draft Remedial Action Implementation Plan, along with all other workplans and reports, is to be shared with the community for public review and comment.

My greatest disagreement is with the State dictating what landfills should be used when there are State and Federal licensing standards for where toxic and radiological waste may go.

Response: The Agreements in Principle specify that contaminated soils may only be disposed at sites authorized and appropriately permitted to receive those wastes. For contaminated soils from this site and from any other cleanup site, DTSC must rely upon the proper operation and management of disposal facilities that are authorized to receive the wastes, and defers to those agencies with jurisdiction over those facilities to assess their safety and compliance.

This waste should not be based upon "local" Background.

Response: Existing regulations require that these soils be disposed in this manner.

My second biggest problem is that the California Department of Health is not available to my community to discuss health risks from the site.

Response: DTSC cannot speak for the Department of Public Health, but suggests that the commenter contact that agency directly to get their insights regarding health risks.

And finally, I want to say that while I know there are disagreements in the community, I feel that SB 990 creates a "rift" between sister agencies.

It is bad enough to have the State and the federal agencies in dispute. I am disappointed that work that is ordered by the Regional Board can be held up by DTSC.

Response: DTSC is not and has not held up work that is being conducted at the Santa Susana Field Laboratory that is being overseen by the Los Angeles Regional Water Quality Control Board. DTSC fully supports their efforts, and regularly coordinates with and participates in meetings regarding its efforts at the Santa Susana Field Laboratory. Any delays in work being conducted under the Interim Source Removal Area efforts are delays directly attributable to Boeing and NASA. DTSC has provided sufficient information to both entities that would allow them to proceed with the work that the Los Angeles Regional Water Quality Control Board has directed.

In my short time, I have seen the loss of many valuable and highly respected employees from many of the involved agencies. I shudder to think what will happen after our elections regarding this site. Is this why you are rushing to get the AOC signed - to beat the elections?

Response: The cleanup of the Santa Susana Field Laboratory (SSFL) in Ventura County, California has been a high priority for Governor Schwarzenegger for several years now. In 2007, he was instrumental in enacting SB 990, which requires the entire SSFL property to be cleaned up to stringent and protective standards. Because it has been three years since its passage, and staff from his regulatory agencies has spent countless hours negotiating with these responsible parties to secure their compliance with California's standards, it has become a priority to Governor Schwarzenegger that the requirements of SB 990 be realized during his administration.

I do not know how you can sign an AOC if Boeing has not made an "Agreement in Principle" as well. DTSC has not released one with Boeing - so that should be interesting to see what they say about this.

Response: DTSC would be pleased to discuss any and all of these issues further with Boeing as we look to resolve issues and reach agreement on the cleanup of the site as a whole.

Chris Rowe 3

To differentiate my letter and comments from legal documents, my comments will be in blue.

Earlier this year, the Department of Substances Control (DTSC) had community listening sessions. In those sessions, they asked at what time we felt the most empowered in our interactions with the State regarding the Santa Susana Field Lab (SSFL) cleanup. My first response was the time that you spent talking to me early in January 2008 regarding whether to keep the cleanup of the SSFL under the State DTSC or to go with the Federal Environmental Protection Agency Superfund National Priorities Listing.

When I became involved with this project about four years ago, I had heard how the Federal Environmental Protection Agency (EPA) had previously come to Santa Susana to determine if it qualified as a "Superfund" site. It was assessed based upon just radionuclides, and it failed to "score". Later, the EPA came again, and this time they looked at the site just for chemical contamination – and again – the site failed to "score".

The SSFL community was anxious to have this site listed as a Superfund site, so again, the EPA came to look at this site – this time they looked at chemical contamination, radiological contamination, endangered species, and other criteria. And this time, the site scored and qualified to be a Federal Superfund National Priorities listed site.

While this examination of the records (Preliminary Site Assessment) was occurring with the EPA, State Senator Kuehl was trying to pass another bill – State Bill SB 990. A

number of community members were carrying this in Sacramento because they believed that this would be the best cleanup scenario for the SSFL site.

I had not read SB 990 prior to when it was signed in October 2007. I was actively pursuing the National Priorities Listing (NPL) which I believed – based upon statements at the SSFL Workgroup meetings – that this is what the community wanted.
At the time that the Letter of Intent (LOI) was signed by The Boeing Company and the Governor – I was not even aware of that LOI.

When SB 990 was signed into law, Dan Hirsch of Committee to Bridge the Gap came to – I believe – the Workgroup meeting. He stated that Senator Kuehl had agreed to carry an amendment to SB 990 because that was the only way that she could get the Governor to sign SB 990 into law. He stated that she wanted us to put pressure on the Governor to relieve Senator Kuehl of her obligation to author an amendment to SB 990.

This is why I wrote a Letter to the Editor of the Daily News – which became an Op Ed piece. I had read the story on Senator Kuehl's website about how the Boeing Company had made campaign contributions (that site is no longer there). I wrote the Letter to the Editor (which became the Op Ed below), and that is how I ended up talking to you – when I called Sacramento to find out the Governor's decision - and to see whether my Op Ed piece was accurate.

http://www.thefreelibrary.com/GOVERNOR'S+FIELD+LAB+VOTE+CRUCIAL.-a0173177861

At the time that I wrote that article, and a subsequent one, called: "Complete Santa Susana Field Lab assessment still needed" – (see attached)

That was dated January 27, 2008, and it looks like what I was writing then about Santa Susana has not changed much on site since that time.

When I wrote those stories, I was new to the project, and I was completely influenced by the activist community. Today, I appreciate the efforts of many of the local activists. I especially appreciate the dedication of those who have been involved with this project for more than 20 years.

The local community members who are involved in the SSFL Workgroup know the history of all of the agency leaders that have been involved in this site for the past 20 years. In turn, I was at an EPA meeting about a week ago. At that meeting, Dan Hirsch made a statement: "For the benefit of the community members, I want you to understand why we are choosing this group to sample, and why we do not need to sample for this group. That is because if certain radionuclides are picked up in what is

now being called “the Default Suite”, then they will do further sampling based upon those results. This is not a direct quote, but this is how I interpreted what he said.

My point here is that Dan Hirsch is speaking at these meetings for “the community and as an educator to the community”. I found Dan to be good with numbers there, I found him to know about half lives, and to have a general understanding of some radionuclides.

On the other hand, I saw Dan Hirsch do a recent presentation on the 95% Confidence Intervals at DTSC. I did not feel that he was accurately portraying that formula, and I tried to make a correction. I know that I was also wrong in how I drew that example.

My point here is that at a technical meeting, it should not be the community who are explaining to other members of the community why certain samples are being done, or how to understand a formula and why it is used. These technical explanations should be explained by DTSC or their contractors, or by the EPA and their contractors.

I know I can make mistakes, and sometimes, I know when others make mistakes. But no one corrects us when we do make mistakes.

As I move further, I want to make a few more positive comments.

Again, back to the West Hills DTSC “listening session “– “when did you feel the most empowered in relation to the Santa Susana Field Lab site”?

I have to say, the second time I felt empowered was when Mr. Movassaghi came up to me at my car and talked to me at length after a Workgroup meeting. I was excited that he was on board, and I felt that he, like Secretary Adams, would be intimately engaged in the SSFL project.

The third time that I felt empowered was when I had my first meeting with Rick Brausch. I had never had a personal meeting with Norm Riley. This was again a positive indication that the West Hills Neighborhood Council was being listened to.

Then, most importantly, at the urging of Susan Callery, the “Chemical Background Studies” were started over again to be more inclusive of all of the community members who had been attending the DTSC “Round Table” for several years.

Now, I will start my comments on SB 990 and the “Agreements in Principle”, and the “DOE Confirmation Protocol”.

I have copied each of these documents below, and I will respond to each document line by line. As I went to find a copy of SB 990 to paste here that will allow me to copy and paste it – I could not find one (there is one attached).

So my first question becomes – when a bill is passed in the State Senate – is this all that the Senate sees of the bill?

http://www.senate.ca.gov/sfa/2007/_07_DL10.HTM#H3_10_8 "SB 990 (Kuehl-D) Santa Susana Field Laboratory: hazardous waste Authorizes the Department of Toxic Substances Control to compel a responsible party or parties to take or pay for appropriate removal or remediation action, as prescribed, necessary to protect public health and safety and the environment at the Santa Susana Field Laboratory site in Ventura County. The sale, lease, sublease, or other transfer of any land presently or formerly occupied by the Santa Susana Field Laboratory shall be prohibited unless the Director of Toxic Substances Control certifies that the land has undergone complete remediation."

Response: The web site the commenter is referring to includes a brief synopsis of the legislation from the specified session and year. The synopsis is typically taken from the Legislative Counsel digest in the bill, which is prepared by the Office of Legislative Counsel. When a bill is being considered, all aspects of the bill are available for review.

Then I found this:

ftp://www.leginfo.ca.gov/pub/senate-journal/sen-journal-0x-20071015-2677.PDF

"Governor's Office, State Capitol
October 14, 2007
To the Members of the California Senate:
I am signing SB 990 which would specify the basis of cleanup standards to be used at the Santa Susana Field Laboratory property in Ventura County, California. The cleanup of this property is needed to protect the health of residents in adjacent communities. The Boeing Company (Boeing) has signed, together with the California Environmental Protection Agency and the Resources Agency, a Letter of Intent (LOI) regarding the transfer of the property to the State, after extensive cleanup and at no cost to the State, for park, recreational or open-space use. The LOI outlines the elements of a legally binding land transfer agreement, to be developed and entered into by Boeing and the State, which would include the following key requirements:
1) Boeing would be required to clean up the Santa Susana Field Laboratory Property, prior to transfer to the State, to levels which would be acceptable for residential use and which would protect individuals living in the vicinity of the property; and

2) The property could not be used in the future for residential, agricultural, commercial, industrial or other uses, except for park, recreational or open-space uses. To make this transfer possible, the author has agreed to carry clean-up legislation in 2008 to allow the transfer to the State of the Santa Susana Field Laboratory property after property cleanup under the terms of a written agreement that makes the elements of the LOI legally binding.
Cordially,
ARNOLD SCHWARZENEGGER, Governor"

Based upon the above document by the Governor, I believe that we are in litigation with the Boeing Company because of the failure of the author(s) of SB 990 to meet their commitments to the Governor as stated in the above document.

On January 15, 2008, CAL EPA Secretary Adams sent out three documents to the community – one was a letter relieving Senator Kuehl from her responsibility to author the amendment to SB 990.

The second letter was stating that DTSC would retain the lead on the cleanup of Santa Susana, and that they would ask for a deferral for the listing of the site as a federal EPA's Superfund NPL site. The State asked the EPA to take the lead over the DOE cleanup and to involve the Nevada Radiological Division to assist with this site cleanup.

Finally, a Letter of Intent was "signed" with various entities. As I look at those entities today, I ask "who are these people". What do they know about the Santa Susana Field Lab. Only four of the people who signed that LOI are or have been residents of the local SSFL community. They are Christina Walsh, Marie Mason, Elizabeth Crawford, and Cindy Mays. (see the attached documents)

SB 990

Why don't I like SB 990? In retrospect, we were being told that no one would ever live on the Santa Susana site. (See the Governor's letter above)

"2) The property could not be used in the future for residential, agricultural, commercial, industrial or other uses, except for park, recreational or open-space uses."

However, that language is not in SB 990. My community was misled. When the State did not require Senator Kuehl to author the amendment to SB 990, they broke the Letter of Intent with the Boeing Company. Today, the Boeing Company is being forced to cleanup to a standard that requires 100% of your food and water to be gotten from that site.

"Requires cleanup standards for radioactive and chemical contaminants based on "rural residential" land use assumptions

• includes the pathways: ingestion of soil, dermal contact with soil, inhalation of dust, ingestion of fruits and vegetables, beef, milk, poultry, eggs, swine, and fish, assumed to be produced on the site."

SB 990 is ambiguous and subject to interpretation. SB 990 states: "the most famous accident occurred in July of 1959 , when the Sodium reactor Experiment (SRE) experienced a partial core meltdown releasing radioactive gases and particles into the atmosphere over a period of weeks. Recent studies have concluded that this accident may have caused hundreds of cancer cases in the Los Angeles Area."

The Department of Energy put on a 7 hour Expert Panel on the Sodium Reactor Experiment in August 2009. There were – to my knowledge – no DTSC employees at this very important event.

http://www.etec.energy.gov/History/Major-Operations/SRE-Workshop-2009.html

The conclusions of this event were (by Dr. Cochran of the NRDC):

http://www.etec.energy.gov/History/Major-Operations/Workshop-Materials-2009/Cochran%20SRE%20statement_29%20Aug09.pdf

"All parties agree that there was not sufficient noble gas radioactivity alone to cause significant public harm."

"We note in passing that the releases of all the noble gases from the damaged fuel are not likely to have caused significant harm to the public. The radiation doses were most likely too low".

"Consequently, I do not believe the leakage from the reactor into the reactor building (into the high bay area), and subsequently discharged by the building ventilation system, lead to significant off-site exposures."

Conclusion

Based on my limited review of the documents made available to me, my best estimate is that the amount of noble gas radioactivity released as a consequence of the SRE accident in July 1959 was too small to have posed by itself a significant risk to the health of the public. Significant harm to the public, if it occurred, would have been from the release of volatile fission products, i.e., iodine, cesium and strontium, or a combination

of noble gas and volatile fission products. I do not believe available information is adequate to resolve what fraction of these noble gas and volatile fission products remained in the fuel and what fraction were released to the environment.

With respect to assessing harm there are two issues of interest. First is the carcinogenic risk to the highest exposed individuals. Second is the cumulative risk to the larger population where the individual risks may have been small. I have not made any attempt to quantify the individual risk or the effects of the collective population exposure. It is likely that the risk to the maximally exposed individual was smaller than the risk of cancer from other causes, yet at the same time the collective exposure could have resulted in some cancers in the population."

The ongoing use of the terms "meltdown" and "partial meltdown" are used for only one reason in my opinion – to create alarm. These are non technical terms. While there was a "serious accident or incident of the SRE" – about the equivalent of a 3- 4 on a Richter type scale, the graphite moderator cans were not breached, and the containment did what it was designed to do.

Furthermore, SB 990 states: "the reactors located on the grounds of SSFL were considered experimental, and, therefore had no containment structures. Reactors and highly radioactive components were housed without the large concrete domes surrounding modern power reactors."

First of all, yes, the reactors were experimental. However the designs were configured for adequate protection of the workers. Documents on the ETEC website discuss each reactor building, what type of reactor or research was done there, whether there was a graphite moderator, how much shielding existed in each structure, and what type of cement was used in some cases.

The Sodium Reactor Experiment was a sodium cooled graphite moderated reactor. Sodium coolant was utilized as an alternative to a "pressurized water reactor". Only these pressurized reactors require the large containment domes of today. In fact, Dr. Cochran mentions in his paper: "The Three Mile Island Unit 2 (TMI-2), which experienced a partial core meltdown accident beginning March 28, 1979, was rated as 2,568 MWt. It power was 128 times larger than that of the SRE"

http://en.wikipedia.org/wiki/Three_Mile_Island

"The plant is best known for having been the site of the most significant accident in United States commercial nuclear energy, on March 28, 1979, when TMI-2 suffered a partial meltdown. The Three Mile Island Unit 1 is a pressurized water reactor designed by Babcock and Wilcox with a net generating capacity of 802 MWe"

So comparing the Sodium Reactor Experiment is like comparing the economy of California to some Third World Country?

In general, it is my opinion that SB 990 was an insult to all of the work of Norm Riley and any other CAL EPA or DTSC employees who worked on the 2007 Consent Agreement. It is my opinion that DTSC would have used the best science available and all applicable laws to create that 2007 Consent Agreement.

What I feel is that no matter what agency is involved on this project – DTSC, the LARWQCB, the EPA, DOE, NASA, or Boeing and their contractors, some members of the community are not willing to accept the arguments that are made of why to proceed in a certain manner. A term that is used by DTSC is that something must be scientifically defensible.

I do not believe that many people in the community understand that scientists have to constantly change their interpretations of the world around us based upon new information.

http://en.wikipedia.org/wiki/Scientific_method

"Scientific method refers to a body of techniques for investigating phenomena, acquiring new knowledge, or correcting and integrating previous knowledge. [1] To be termed scientific, a method of inquiry must be based on gathering observable, empirical and measurable evidence subject to specific principles of reasoning. [2] A scientific method consists of the collection of data through observation and experimentation, and the formulation and testing of hypotheses. [3] Although procedures vary from one field of inquiry to another, identifiable features distinguish scientific inquiry from other methods of obtaining knowledge. Scientific researchers propose hypotheses as explanations of phenomena, and design experimental studies to test these hypotheses. These steps must be repeatable, to predict future results. Theories that encompass wider domains of inquiry may bind many independently derived hypotheses together in a coherent, supportive structure. Theories, in turn, may help form new hypotheses or place groups of hypotheses into context.

Scientific inquiry is generally intended to be as objective as possible, to reduce biased interpretations of results. Another basic expectation is to document, archive and share all data and methodology so they are available for careful scrutiny by other scientists, giving them the opportunity to verify results by attempting to reproduce them. This practice, called *full disclosure*, also allows statistical measures of the reliability of these data to be established."

SB 990 has risk based criteria that is specific:

"In calculating the risk, the cumulative risk from radiological and chemical contaminants must be summed, and the land use assumption shall be either suburban residential or rural residential (agricultural), whichever produces the lower permissible residual concentration for each contamination. In the case of radioactive contamination, the department shall use as its risk range point of departure the concentrations in the Preliminary Remediation Goals issued by the Superfund Office of the United States Environmental Protection Agency in effect as of January 1, 2007."

Why was this law (SB 990) not examined and commented upon by CAL EPA and DTSC before its passage so that they could determine the feasibility of applying it?

Response: As with any legislation that is being considered by the Legislature, DTSC did examine and analyze SB 990 prior to its passage.

Why weren't the active SSFL community members being told about these discussions (below)?

Response: The public was informed about these discussions, and provided the results of those discussions for its comments, at the time when the details of the proposal were available.

February 2010
High level conversations
• Cal/EPA Secretary Adams, DOE Secretary Chu, NASA Administrator Bolden
• Desire to resolve differences and find path forward

These meetings were in February and you are just coming to us now and telling us about them? And the State wants us to agree to all of this in less than a month?

Response: DTSC is seeking the public's input and comments. DTSC retains its decision making authority and will be the State agency signing a final agreement.

How are we going to have time to read the legal documents and comment with all of our other "documents" and meetings in this time frame?

Response: DTSC believes that the level of detail in the Agreements in Principle could be understood within the 30 days that were provided, as well as through the two public meetings that were conducted.

Are you telling us that you are really "listening" to us with this time frame?

Response: Comment periods of 30 days are not uncommon; either with this project or other projects DTSC oversees. In addition, there have been two public meetings and other interactions (telephonically and electronically) with the commenter and others in the community.

September 2010 – October 2010
Public Process
• Explain new approach to public
• Hear public comments
• Identify any areas needing further clarity or adjustments
• October 2010
Finalize and sign actual agreements
EPA field sampling work to begin 10/14

NASA
State Reaches Agreements In Principle on SSFL Cleanup with DOE and NASA

SACRAMENTO, CA–Capping months of negotiations, the Department of Toxic Substances Control (DTSC), the federal Department of Energy (DOE) and NASA today announced a major breakthrough in the cleanup of the Santa Susana Field Lab (SSFL) site in Simi Valley. The agreements in principle reached by the three agencies regarding the cleanup of DOE's 290-acre and NASA's 451-acre portions of the facility will meet the strict environmental standards set by state law (SB 990).

SB 990 is risk based. These "Agreements in Principle" are not risk based.

Response: As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and National Environmental Policy Act (NEPA) and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," the Agreements in Principle are based on the application of risk based criteria and other cleanup procedures and policies.

DTSC believes that the clean up approach that is represented by the Agreements in Principle is one that is protective of human health and the environment and is fully consistent and compliant with state and federal clean up laws and regulations.

"This is a significant step forward in cleaning up the SSFL site to the highest environmental standard," said Linda Adams, Secretary of the California Environmental Protection Agency (Cal/EPA) who has been leading this effort. "I'm happy to see that

DOE and NASA have stepped up to the plate and will not only meet but exceed our standards, in addition to paying for the state's oversight costs."

Why was the community not being made aware of the discussions with Energy Secretary Chu and NASA Administrator Bolden?

Response: The public was informed about these discussions, and provided the results of those discussions for its comments, at the time when the details of the proposal were available.

SSFL is a former rocket engine test and nuclear research facility on more than 2,800 acres along the border of Los Angeles and Ventura counties. The Boeing Company, NASA and DOE operated facilities on portions of the property from 1949 to 2006, and are responsible for the cleanup overseen by DTSC.

The state has been in negotiations with all three responsible parties for several years. DOE once operated several nuclear reactors, associated fuel facilities and laboratories on what is known as "Area IV" of the SSFL facility. NASA conducted basic liquid-fuel rocket engine testing on its portion of the facility, commonly called "Area II" and part of "Area I"."We applaud DOE and NASA for their efforts. The agreements in principle are proof of their dedication to the environment and to the community surrounding the SSFL property," said Adams.

Why are there "Agreements in Principle" rather than updates of the Consent Agreements of last year?

Response: The Agreements in Principle were drafted after DOE, in February, made the proposal to DTSC to clean up Area IV to background levels. DOE's proposal was in response to DTSC's draft Consent Agreement that was shared with Boeing, DOE and NASA on November 3, 2009.

Why has the DTSC technical staff not been given a chance to review the "Agreements in Priniciple" and allow their comments to be integrated into the documents before the "Agreements in Principle" were circulated to the community?

Response: DTSC and U.S.EPA technical staff has been consulted, and their technical input and insights have been incorporated into the Agreements in Principle, as well as into the draft Administrative Orders on Consent.

These agreements in principle integrate the United States Environmental Protection Agency's just launched radiological survey work into the site investigation, using U.S. EPA's expertise and resources to identify areas of radiological contamination needing

cleanup. The timing of the agreements in principle allows for the state to maximize resources by using U.S. EPA's survey, accelerates the cleanup timeline and also avoids costly duplication of effort.

Do you expect these Agreements in Principle to be responded to and our comments incorporated into the legal documents before the EPA site sampling begins in about two weeks? Does that mean that these documents are already written by the attorneys, and they are just being withheld so that the State can say that they gave us time to submit comments?

Response: DTSC recognizes the challenges of the timing. As a result of and in recognition of the timing difficulties, DTSC made alternate arrangements with DOE and U.S.EPA to commence the split (co-located) sampling efforts described in the DOE Agreement in Principle.

Radiological wastes will be disposed at a permitted or DOE facility, while hazardous wastes will be taken to a permitted hazardous waste disposal facility.

How do you define radiological waste? The Background for Radiological Waste has not yet been determined for Santa Susana. The final results of the EPA sampling for Background will not be submitted publicly until Spring of 2011. Therefore, any samples taken from the SSFL site will all have to be considered "low level radiological waste" until "Radiological Background" is determined.

Response: The Agreements in Principle specify that contaminated soils may only be disposed at sites authorized and appropriately permitted to receive those wastes. Existing regulations require that these soils be disposed in this manner. The Agreements in Principle do not define or classify wastes (either radiological or chemical). The Agreements in Principle only identify how the identified contaminated soils are to be disposed. Laboratories that are receiving and analyzing samples from U.S.EPA will need to ensure that any wastes from the samples received are handled appropriately.

Signed into law in 2007, Senate Bill 990 required the entire SSFL property to be cleaned up to stringent and protective standards, and placed the cleanup of both chemical and radioactive contamination under the oversight of DTSC. In December 2008, Boeing sued DTSC over the enforceability of the bill, and like NASA, continues to clean up the property under an earlier agreement that is not to the stringent environmental standard called for in SB 990.

NASA is cleaning up its portion of the property – according to Norm Riley at the July 2009 SSFL Workgroup meeting – according to the existing 2007 Consent Agreement.

Response: All three responsible parties – Boeing, DOE and NASA – have been conducting investigation and cleanup activities under the terms and conditions of the 2007 Consent Agreement. While work has been and continues to progress under the terms and conditions of the 2007 Consent Order, the resolution of, and acceptance of, the cleanup standard required by State law is becoming more and more critical. Investigation and sampling efforts to date, and measurements made, are insufficiently sensitive to be able to achieve State law standards. The more work that is completed to these less sensitive standards, the more work will be required to be repeated at some later point. All of these insufficient measurements will comprise a data gap that is growing ever larger with each incomplete work product delivered.

Why would the State enter into a Consent Agreement – the 2007 Consent Agreement – that they did not feel was protective of the public health and safety and the environment?

Response: The 2007 Consent Agreement was negotiated and signed prior to the enactment of SB 990.

Despite the lawsuit, the state continues to negotiate with Boeing
"We are hopeful that negotiations with Boeing are as successful as they have been with DOE and NASA," Adams said. "The nearby communities and indeed all Californians deserve a cleanup that meets or exceeds our standards to protect human health and the environment."

As a resident of West Hills, I feel that the SB 990 has created a delay in the clean up of the SSFL site. SB 990 was signed into law three years ago. I believe if the contaminants of concern are as dangerous to the community as the law would imply, that DTSC should have been cleaning up the site under an "Imminent and Substantial Endangerment Order". However, I have only seen one order of that nature, and it was issued for the "Northern Drainage" by Norm Riley.

These agreements in principle must be finalized formally before they become effective. DTSC invites public review and comment until October 1, 2010. All comments should be addressed to:

ssfl@dtsc.ca.gov.

Please see my comments on the "Agreements in Principle" and the "DOE Confirmation Protocol" below.

Why am I only finding out about this letter to NASA Administrator Bolden today – the day before my comments are due?

Did Administrator Bolden reply to Secretary Adams?

http://www.dtsc-ssfl.com/files/lib_sb990/correspondence/64564_Letter_from_Linda_Adams-EPA_to_Charles_Bolden-NASA,_6-24-2010.pdf

JOINT SETTLEMENT FRAMEWORK
Agreement in Principle between
The National Aeronautics and Space Administration and the State of California
Regarding Cleanup of Areas I and II of the Santa Susana Field Laboratory Administered by NASA

SUMMARY: The end state after cleanup of Areas I and II of the site administered by NASA 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.

I believe that NASA cannot commit to cleaning up the soil to Background until;

1) A Chemical Background Study is performed by DTSC;
2) A Radiological Background Study is performed by the EPA;
3) A complete horizontal and vertical site assessment is performed of the NASA property based upon protocol that is yet to be established.

Response: DTSC does not believe delay is warranted or necessary. State law requirements in SB 990 were enacted over three years ago. There is sufficient information available to know that cleanup is required, and establishing an enforceable relationship through the Administrative Orders on Consent is necessary to achieving that goal.

Clean up chemical contaminants to local background concentrations
Possible exceptions (where unavoidable by other means):
The framework acknowledges that, where appropriate, NASA will engage in an Endangered Species Act (ESA) Section 7 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 NASA 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.

What other aspects of CEQA and NEPA are applicable to the NASA cleanup?

Response: At or near the same time that the draft Remedial Action Implementation Workplan is developed and shared with the community for public review and comment, CEQA documents will also be developed that present an assessment of environmental impacts and proposed mitigation options.

DTSC has not been made aware of any applicable NEPA requirements that would pertain to NASA. DTSC is coordinating with NASA to identify any applicable NEPA requirements, to the extent they exist.

What other federal and State laws is NASA subject to?

Response: Any cleanup action to be taken involves activities that may be subject to the jurisdiction of federal, state or local regulatory agencies. As cleanup plans are developed, NASA and DTSC will coordinate with those agencies, and ensure that any proposed cleanup activity is done in accordance with all federal, state and local requirements. The final Administrative Orders on Consent will establish that requirement, and all federal, state and local government agencies with jurisdiction will be consulted throughout the site characterization and cleanup process.

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.

What happens if the community feels that "local background is too high?" Is DTSC going to ask the EPA to do their "Background Studies again?

Will DTSC be "forced" to go to other sites that they do not consider to be scientifically defensible?

Response: The Agreements in Principle anticipate that the U.S.EPA and DTSC will be, through their respective Radiologic Background Study and Chemical Background

Study, using appropriate statistical methods that are to account for the natural variations that are to be expected to be found in background. These statistical approaches are intended to avoid or significantly reduce the possibility of concluding that observed concentrations that are within expected background concentrations ranges are erroneously identified as contamination. In the coming months, both U.S.EPA and DTSC will be proposing Statistical Evaluation Plans that contain the statistical approaches to be employed, and the use of the derived background values as cleanup values will be addressed in those plans. DTSC suggests that comments related to these background studies and calculations be directed toward those discussions.

Native American artifacts that are formally recognized as Cultural Resources.

Will an archaeologist and a Native American overseer be required for the NASA cleanup?

Response: DTSC anticipates that NASA will need to consult with archeological and Native American experts in characterizing and cleaning up its area of the site.

NASA has property on the Federal Historic Register. How is protecting these archaeological and cultural resources going to be impacted by the AIP?

Response: Native American artifacts that are formally recognized cultural resources are accounted for and included as possible exceptions to implementing the prescribed cleanup standard. Archeological and Native American experts will be consulted in characterizing and cleaning up the site.

Which scenario will protect the archaeological and cultural resources better – the AIP or SB 990?

Response: The AIP, and implementation of SB 990, are one in the same.

Please explain the 9 Balancing criteria? Will they be used with the AIP? Why or why not?

Response: The discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria."

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.

Is it possible that with cultural resources, historical resources, and biological resources and endangered species, that 5 % will not be adequate enough to protect the environment and still protect public health? Can these things be considered on a case by case scenario?

Response: The 5% refers to the proportion of the total amount of contaminated soil identified in the Remedial Action Implementation Plan.

The 5% cap on exceptions refers only to the exercise of the exception related to circumstances where DOE or NASA desire to claim that cleaning up to the specified standards is not technically achievable. The other exceptions listed (limits of detection, protection of endangered species, and preservation of Native American cultural resources) operate without limitation.

DTSC, in the course of overseeing and approving its chemical contaminant background study, will determine local background levels and chemical detection limits (using methods that are consistent with EPA guidance on determining local background concentration values). Upon completion of the DTSC led chemical background study, a "look-up" table of the chemical cleanup levels will be prepared, which will include both local background concentrations as well as detection limits for specific contaminants whose detection limits exceed local background concentrations.

Who is going to decide what labs to use and how to determine "minimum detection limits?

Response: The Agreements in Principle anticipate that the U.S.EPA and DTSC will be conducting and completing their respective Radiologic Background Study and Chemical Background Studies. DTSC suggests that comments related to these background studies and calculations be directed toward those discussions.

Has the State Budget been signed? Can the State enter into a contract with a lab and a contractor for the "Chemical Background Study"?

Response: The State Budget was passed on October 8, 2010. There is no restriction on executing contracts any longer.

Why has the "Chemical Background Study" taken so long, when DTSC began this process at the same time that the EPA began their "Radiological Background Study?"

Response: The differences between the timing of the Radiological Background Study and the Chemical Background Study are largely due to the difference between radiological and chemical contaminants that are expected in the environment, and design parameters that DTSC felt were important to address through its Chemical Background Study. DTSC agrees that both background studies – U.S.EPA's Radiologic Background Study and DTSC's Chemical Background Study – are absolutely essential to implementing the approaches contained in the Agreements in Principle and are being prioritized to be completed as soon as possible.

Why is NASA subject to SB 990?

Response: NASA is subject to SB 990 because of its operations, and the operations of its predecessors, at the Santa Susana Field Laboratory. SB 990 applies to the entirety of the Santa Susana Field Laboratory

How many truck loads of material will be removed from the NASA property?

Response: It is impossible to calculate the amount contaminated soils that could require removal at this time (although DTSC is aware that The Boeing Company has performed mathematical extrapolations based on a number of assumptions that may not be accurate – DTSC has not received a copy of any of Boeing's actual calculations nor a complete explanation of the assumptions it used in calculating its estimates). Based on comments from Boeing representatives, we know that they assumed that in situ treatment could not be used, that background values may have been based on averages rather that upper limits, and also assumed that soil vapor would cause the removal of soils. All of these inaccurate assumptions could greatly inflate any estimates of soil volumes.

It is regrettable that the actions of Boeing, DOE and NASA have resulted in contamination of the site to the extent that the volumes of soil requiring cleanup may be significant. It is also regrettable that the impacts of accomplishing the necessary cleanup may also be significant. Although there is no way to validate or verify the estimates being circulated (and very little benefit to doing so), they do serve as an indication of the magnitude of the environmental harm that Boeing, DOE, and NASA caused in the course of their operations, and as a preliminary indication as to the ancillary environmental impacts that Boeing, DOE, and NASA will need to mitigate in the course of carrying out their cleanup responsibilities.

Will the test stands be allowed to remain in place?

Response: There is no way to know, at this point in the investigation process, what the disposition of the rocket test stands will be. It is important to note that the test stands were where the large volumes of trichloroethylene were used and discharged to the ground.

Residual concentrations "not to exceed" local background concentrations i.e., if during site survey efforts or during confirmatory sampling the level of any constituent detected in a soil sample is above local background levels, step-outs will be taken to delineate the contamination and removed; soil above local background will not be averaged with other soil. This process should not be inconsistent with any guidance that EPA may issue pertaining to the practice of implementing a not to exceed background cleanup approach. Cleanup to background means removal of soils contaminated above local background levels. No "leave in place" alternatives will be considered.

Does this mean that the structures that qualify as eligible for the federal historic register such as the test stands must be removed?

Response: There is no way to know, at this point in the investigation process, what the disposition of the rocket test stands will be. It is important to note that the test stands were where the large volumes of trichloroethylene were used and discharged to the ground.

No on-site burial or land filling of contaminated soil will be considered.

Can the removal of these facilities cause more harm to the community because there will be more Contaminants of Concern that are airborne?

Response: The draft Remedial Action Implementation Plan must include detailed health and safety requirements. DTSC will ensure that the potential for airborne contaminants is adequately addressed in the draft plan. The public will also have an opportunity to verify that concerns such as this are addressed as they review the draft plan when it is released for public review and comment.

Is it possible that by cleaning up to local chemical background, you may expose more naturally occurring bedrock that could have high levels of naturally occurring radionuclides including uranium, thorium, radium, and radon?

Response: The response to any particular excavation will be specified in the Remedial Action Implementation Plan, and could involve either backfilling, regarding and countouring, or no action. Any proposal to backfill, regrade or re-contour excavation

areas after the removal of contaminated soils will be detailed in the Remedial Action Implementation Plan. The final Administrative Orders on Consent will establish that requirement, and all federal, state and local government agencies with jurisdiction will be consulted throughout the site characterization and cleanup process.

Backfill/replacement soils must not exceed local background levels

Where are you going to find replacement soils that do not exceed local background levels?

Response: The concept of "background" recognizes that there are levels of radiological and chemical constituents that exist in nature and from man-made sources (such as atmospheric fallout) that are not from this site. Soils from other locations, to the extent that they are not impacted from industrial activities, by definition should meet the background standard.

Onsite soils that do not exceed local background may be used as backfill/replacement soils.

Offsite soils that have been verified to not exceed local background levels may be used as backfill/replacement soils.

Backfill/replacement soils that are acceptable for use shall be verified by DTSC.

Disposal of contaminated soils:

Soils contaminated with chemical contaminants above local background.

Hazardous wastes to licensed Class 1 hazardous waste disposal facilities only.

Non-hazardous waste to licensed Class 2 or subtitle D compliant Class 3 disposal facilities only.

In addition to meeting the above disposal requirements, all soils must also meet the waste acceptance criteria for the receiving facility.

Does this mean that the ELV soils that contain Cesium can go to a landfill based upon the acceptance criteria for the receiving landfill?

Response: DTSC provided specific information to NASA regarding disposal of soils containing Cesium 137 from the Interim Source Removal Area excavations in correspondence dated September 22, 2010.

To the extent any radiological materials are determined to be present at this portion of the site, DTSC and NASA will develop an appropriate sampling and disposal plan for those materials.

How is DTSC going to define radiological materials when radionuclides are present locally and you cannot differentiate Cesium or other radionuclides from fallout from those used at Santa Susana?

Response: Differentiation between radiological contamination that is due to site activities from that which is present as background is the primary purpose of the Radiological Background Study.

Chemical investigation/data gaps.

DTSC, in the course of overseeing and approving the chemical contaminant investigation work, will determine where onsite levels exceed local background.

Development of risk assessments will not be required.

Why are risk assessments not required?

Response: As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and National Environmental Policy Act (NEPA) and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," the Agreements in Principle are based on the application of risk based criteria and other cleanup procedures and policies.

What about the risks to the employees doing the remediation?

Response: The draft Remedial Action Implementation Plan must include detailed health and safety requirements. DTSC will ensure that this type of restriction is included in the draft plan. The public will also have an opportunity to verify that concerns such as this are addressed as they review the draft plan when it is released for public review and comment.

Why is the Department of Health no longer involved with the Santa Susana Field Lab project?

Response: Please see the correspondence from the Department of Public Health to Boeing dated October 23, 2009 regarding its interpretation of its regulatory role at the Santa Susana Field Laboratory.

Why is no one telling the community what their risks of the site are to them today?

Response: Although at any site where a release of hazardous substances has occurred there is the potential for offsite migration and impacts to the surrounding community, DTSC is still investigating the Santa Susana Field Laboratory and has not, except in specific circumstances related to groundwater and other removal actions in adjacent properties, determined that there is exposure to any contaminants from the Santa Susana Field Laboratory. The investigation is still ongoing, and if any evidence is found that demonstrates that there is a risk to the surrounding community due to exposure, DTSC will take necessary and appropriate action.

If a risk assessment is not necessary, why are you cleaning up this site?

Response: As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and National Environmental Policy Act (NEPA) and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," the Agreements in Principle are based on the application of risk based criteria and other cleanup procedures and policies.

As identified by DTSC as part of the investigation of chemical contaminants, NASA will remediate the areal extent of any contiguous chemical contamination of soil that emanates from within Areas I and II administered by NASA, even to the extent that it migrates beyond the boundaries of Areas I and II administered by NASA within or without the SSFL boundaries.

How can NASA remediate any property that is not owned by the U.S. Government?

Response: NASA, as with any other party that is responsible for release of hazardous substances into the environment, is responsible for cleaning up the release, wherever it may have migrated. If contamination is found to have migrated from NASA's property, it will be responsible for securing the needed access from property owners to carry out its responsibilities.

Following completion of the characterization studies by DTSC, NASA will develop a remedial action implementation work plan that describes the cleanup activities in Areas

I and II administered by NASA. The remedial action implementation work plan will be subject to DTSC review and approval.

What happened to the RFI reports that NASA was involved with last year? Will those efforts need to be repeated?

Response: DTSC does not believe the RFI reports prepared for NASA will need to be repeated. They will, however, need to be augmented with additional information. Investigation and sampling efforts to date, and measurements made, are insufficiently sensitive to be able to achieve State law standards. The more work that is completed to these less sensitive standards, the more work will be required to be repeated at some later point. All of these insufficient measurements will comprise a data gap that is growing ever larger with each incomplete work product delivered.

Scheduled completion of soils cleanup remains as 2017.

With the rainy season looming, the Chemical Background Study delayed – how long – how can NASA and DTSC commit to having the soil cleanup done by 2010?

Response: DTSC assumes that the commenter meant to say 2017.

As to the projected cleanup completion date, the commenter is correct in its observation that accomplishing cleanup by that date is dependent upon actual soil volumes that will be detailed in the anticipated Remedial Action Implementation Plan. When characterization is complete, and that Plan is developed, schedules for implementation and completion will be presented.

This comment appears to be erroneously based on the premise that the outcome of the exercise of any available balancing criteria, in the context of the cleanup requirements for the site that are specified in State law (SB 990) as well as dictated by local land use decisions, would yield a result different than what is described in the Agreements in Principle. Please refer to the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments for the discussion of the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria."

DTSC believes that the Agreements in Principle, by condensing the oftentimes lengthy and contentious procedural requirements of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," presents the only practical way by which the goal of 2017 may

actually be met. Regrettably, the delays that have been presented by Boeing, DOE and NASA in negotiating revised agreements to implement State law standards has presented the most real challenge to achieving this date.

NASA's commitment to cleanup to local background applies to soils and not to groundwater at the site. Investigation and remediation of groundwater will be separately addressed, and provisions related to investigation and remediation of groundwater will be incorporated into a final agreement.

Why was groundwater not addressed in the "NASA Agreement in Principle"?

Response: The Agreements in Principle address soils contamination only. However, although the Agreements in Principle only address soils contamination, that does not relieve DOE or NASA of their continuing responsibility to address the contaminated groundwater. Groundwater, and the parties' obligations regarding groundwater contamination, will continue to be addressed through the 2007 agreement.

Has NASA considered any alternative treatments such as phytoremediation in conjunction with other potential remediation?

Response: The Agreements in Principle do not preclude the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment of soils to achieve the identified cleanup standards. Although it is impossible to know until the site is fully characterized whether any soils may be able to be addressed in this way, DTSC agrees that the use of these approaches has the potential to significantly reduce the amount of soil requiring excavation and offsite disposal. The final Administrative Orders on Consent make clear that the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment is allowed, and requires treatability studies to be done to assess their viability.

What has the Los Angeles Regional Water Quality Board ordered NASA to do regarding ENTS and BMPS?

Response: DTSC suggests the commenter pose the question to NASA or to the Los Angeles Regional Water Quality Board.

Characterization and cleanup for chemical contaminants of both soils and groundwater are subject to DTSC approval. Final agreement between NASA and California, and the cleanup obligations within that agreement, will be legally binding and enforceable and embodied in an administrative order on consent (AOC).

Has this AOC already been written?

Response: At the time the Agreements in Principle had been released for public comment, the Administrative Orders on Consent had not been drafted.

What efforts has NASA made to do Outreach to the communities within the 5 mile periphery to the site regarding this Agreement in Principle?

Response: DTSC suggests the commenter pose the question to NASA regarding any of its outreach efforts. DTSC's outreach efforts included public notice, posting, and hosting of public meetings.

Do most people realize that NASA inherited most of the contamination – the majority of the TCE – from the Air Force?

DTSC and NASA will develop a technical protocol for implementation of these principles and a protocol for resolving disputes that are similar to protocols agreed upon by DTSC and the U.S. Department of Energy with respect to Area IV. DTSC work to be fully funded by NASA.

DTSC work on NASA property will be fully funded by the American people.

DTSC will conduct a public participation process to receive public input regarding the agreement prior to its finalization. This process will include a formal comment period and may include public meetings or discussions.

Why does this state: "may include public meetings or discussions"? Won't the AOC's be as important as the Consent Order meetings of last year? Are you planning to bypass the community on discussions on the AOC?

Response: At the time of writing the Agreements in Principle, the details of the public process had not been developed.

DTSC desires to formalize these requirements quickly in final Administrative Orders on Consent. DTSC received overwhelming support from the affected community to in support of the Agreements in Principle and to wrap up negotiations and sign enforceable agreements quickly. Because there has already been a 30 day comment period and the Agreements in Principle have remained unchanged, DTSC does not believe that an additional comment period is needed for the public to verify that issues that they identified have been resolved. However, DTSC also received a handful of requests to review the final Administrative Orders on Consent before they are signed, and DOE has requested that an additional comment period be offered to the public on the final Administrative Orders on Consent. Because of these requests, DTSC

will be providing an additional review period for the public to and to comment on any new issues raised by the final Administrative Orders on Consent.

DTSC recognizes that an additional review period delays finalizing the agreement and proceeding to implementation. As soon as the public review period has ended and any required adjustments to the documents made, DTSC will be working with DOE and NASA to sign the final Administrative Orders on Consent as soon as is practicable.

DTSC will work with NASA to develop an approach for satisfying any applicable NEPA obligations. This agreement in principle concerns SSFL Areas I and II administered by NASA only and is between NASA and the State of California represented by the Department of Toxic Substances Control and the California Environmental Protection Agency. The framework is based upon the unique circumstances of Areas I and II administered by NASA, including the nature of the releases of chemical contamination that have occurred at Areas I and II administered by NASA. This framework does not establish precedent and shall not be used as precedent for any other agreement for any other area within the SSFL .

Will NASA be required to sign a "Confirmation Protocol" like that of the DOE?

Response: DTSC intends to develop a similar confirmation sampling protocol that will apply to NASA's Areas I and II.

Can NASA take their soil to a DOE facility for disposal?
Response: No, only DOE may take its own radioactive wastes to an authorized low level radioactive waste disposal facility at a DOE site. If NASA discovers radiological contaminants present in Area II and portion of Area I, it will need to dispose of Soils contaminated with radioactive contaminants above local background at a licensed low-level radioactive waste disposal site.

What is the cost difference for taking soil to a mixed waste facility versus a low level radiological waste facility?

Response: Irrespective of the cost differential in the waste disposal facilities in question, existing regulations require that these soils be disposed in this manner.

Will a low level radiological waste facility accept soil that is not considered low level radiological waste?

Response: Existing regulations require that these soils be disposed in this manner.

Has anyone considered the carbon footprint of the excavation and removal from the site of all of these contaminants of concern?

Response: It is impossible to calculate the amount contaminated soils that could require removal at this time (although DTSC is aware that The Boeing Company has performed mathematical extrapolations based on a number of assumptions that may not be accurate – DTSC has not received a copy of any of Boeing's actual calculations nor a complete explanation of the assumptions it used in calculating its estimates). Based on comments from Boeing representatives, we know that they assumed that in situ treatment could not be used, that background values may have been based on averages rather that upper limits, and also assumed that soil vapor would cause the removal of soils. All of these inaccurate assumptions could greatly inflate any estimates of soil volumes.

DTSC understands that to carry out the cleanup specified in the Agreements in Principle could result in significant removal of contaminated soils. It is regrettable that the actions of Boeing, DOE and NASA have resulted in contamination of the site to the extent that the volumes of soil requiring cleanup may be significant. It is also regrettable that the impacts of accomplishing the necessary cleanup may also be significant. The arguments being raised by Boeing apply equally to any amount of contaminated soils to be removed, so it is unclear what Boeing's intentions are in raising them, other than as an indication of the magnitude of the environmental harm that Boeing, DOE, and NASA caused in the course of their operations, and as a preliminary indication as to the ancillary environmental impacts that Boeing, DOE, and NASA will need to mitigate in the course of carrying out their cleanup responsibilities.

Has anyone at the State consulted any local agencies like the Southern California AQMD regarding the impact on public health of moving all of these trucks?
Response: DTSC recognizes that any cleanup action to be taken must be in accordance with all federal, state and local requirements. The final Administrative Orders on Consent will establish that requirement, and all federal, state and local government agencies with jurisdiction will be consulted throughout the site characterization and cleanup process.

DOE

Why can I not find a corresponding letter from Secretary Adams like to NASA Administrator Charles Bolden and a response from Energy Secretary Chu?

JOINT SETTLEMENT FRAMEWORK FINAL
Agreement in Principle between
The U.S. Department of Energy and the State of California

Regarding Cleanup of Area IV of the Santa Susana Field Laboratory

How can the DOE agree to anything with the State when Boeing owns all of the land?

Response: DTSC, DOE and NASA are incorporating provisions into the final Administrative Orders on Consent to ensure that access can be obtained from Boeing so that the work obligations, and DTSC oversight, can be carried out.

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.

Please see comments on Background on the NASA comments.

Clean up radioactive contaminants to local background concentrations.

Does this mean going into bedrock?

Response: No. The Agreements in Principle pertain only to soils that are found to contain radiological or chemical contaminants above background.

What is the health risk to the employees of removing the AREA IV structures?

Response: It is unclear what the commenter is asking. Demolition and cleanup work may pose risks to employees conducting those activities, and it is the responsibility of the owner, or their contractors, to take necessary precautions to limit or eliminate those risks.

Do all of the AREA IV structures that remain in place belong to the DOE?

Response: To DTSC's knowledge, some of the structures belong to DOE, and some to The Boeing Company.

If it is determined that structures were removed in AREA IV, and they were backfilled with their original soil, and these sites were excavated to 100 feet, will the State require that all of these previous sites (+/- 275 structures in AREA IV at one time), will DTSC require that all of these sites be completely re-excavated to 100 feet to meet local Background requirements?

Response: It is possible that the described scenario could occur. However, it is premature to anticipate such a scenario until the completion of radiological and chemical characterization of the site.

If the streets and the gravel register as hot because of the natural materials in them, will all of the streets and gravel on the site be required to be removed because they exceed local background?

Response: DTSC anticipates that this concern will be addressed by U.S.EPA in the completion of its Radiologic Background Study, its development of lookup tables, and in its Radiologic Characterization Survey. DTSC suggests this question be addressed to U.S.EPA.

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:

Please see comments regarding Endangered Species under the NASA AIP comments.

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.

Who has decided what lab to use for detection limits?

Response: Laboratory selection is part of the development of investigation plans that are either currently being implemented or are being developed.

What radionuclides are not detectable in the lab to SB 990 standards?

Response: DTSC anticipates that this question will be answered by U.S.EPA in the completion of its Radiologic Background Study, its development of lookup tables, and in its Radiologic Characterization Survey. DTSC suggests this question be addressed to U.S.EPA.

Native American artifacts that are formally recognized as Cultural Resources.

I have seen archaeologists and Native American overseers in AREA IV when the EPA was preparing to mow. How will the AIP account for this culturally rich site (Santa Susana and the Northern Buffer Zone)?

Response: DTSC anticipates this same relationship will be maintained.

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. Are there methods of nanotechnology and bioremediation that can be employed that would lessen the amount of soil to be removed at depths?

What depth does the EPA expect to excavate to?

Response: This question is impossible to answer until the results of the characterizations studies are completed.

Can other methods be employed to remediate both the radioactive contaminated soils and the chemically contaminated soils?

Response: The Agreements in Principle do not preclude the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment of soils to achieve the identified cleanup standards. Although it is impossible to know until the site is fully characterized whether any soils may be able to be addressed in this way, DTSC agrees that the use of these approaches has the potential to significantly reduce the amount of soil requiring excavation and offsite disposal. The final Administrative Orders on Consent make clear that the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment is allowed, and requires treatability studies to be done to assess their viability.

What are the requirements for sampling for tritium? What is the protocol that DTSC requires for tritiated water? What volume of tritium contaminated water is there on

site? Has it migrated off the SSFL site? Does the tritiated water at the SSFL site pose a health risk to my community?

Are there other radionuclides in the ground water at Santa Susana that pose a health risk to my community?

Response: Because these questions pertain to groundwater, they are not relevant to the Agreements in Principle. DTSC suggests the commenter raise these questions as groundwater investigation issues are presented to the community.

US EPA, in the course of conducting its radioactive contaminant background study, will determine local background levels and detection limits. Upon completion of the EPA led radiologic local background study, a "look-up" table of the radiologic cleanup levels will be prepared, which will include both local background concentrations as well as minimum detection limits for specific contaminants whose minimum detection limits exceed local background concentrations. 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.

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.

DTSC, in the course of overseeing and approving its chemical contaminant local background study, will determine local background levels and chemical detection limits (using methods that are consistent with EPA guidance on determining local background concentration values). Upon completion of the DTSC led chemical background study, a "look-up" table of the chemical cleanup levels will be prepared, which will include both local background concentrations as well as minimum detection limits for specific contaminants whose minimum detection limits exceed local background concentrations.

Residual concentrations "not to exceed" local background concentrations i.e., if during site survey efforts or during confirmatory sampling the level of any constituent detected in a soil sample is above local background levels, step-outs will be taken to delineate the contamination and removed; soil above local background will not be averaged with other soil. This process should not be inconsistent with any guidance that EPA may issue pertaining to the practice of implementing a not to exceed local background cleanup approach.

Cleanup to local background means removal of soils contaminated above local background levels No "leave in place" alternatives will be considered.

Would it be safer for the community to leave any of the below ground cement structures in place and place a cap on them?

Response: Any proposal to use institutional controls is impossible to accommodate and remain in compliance with cleanup requirements for the site that are specified in State law (SB 990) as well as dictated by local land use decisions.

What is the risk to the employees and the community of removing these structures?

Response: It is impossible to speculate at this time. Details of any proposed excavations and removals will be presented in the Response Action Implementation Workplan, which will be made available for public review and comment.

No on-site burial or landfilling of contaminated soil will be considered. Backfill/replacement soils must not exceed local background levels.

Please see comments on NASA AIP regarding replacement soils.

Onsite soils that do not exceed local background may be used as backfill/replacement soils.

Offsite soils that have been verified to not exceed local background levels may be used as backfill/replacement soils.

Backfill/replacement soils that are acceptable for use shall be verified as follows:
U.S. EPA for radioactive contaminants
DTSC for chemical contaminants

Disposal of contaminated soils:
Soils contaminated with radioactive contaminants above local background to licensed low-level radioactive waste (LLRW) disposal site or an authorized LLRW disposal facility at a DOE site.

Why would the DOE agree to take soil to a low level waste repository based upon local background soils rather than the federal criteria for how low level radiological waste is defined?

Response: Current regulations require that these soils be disposed in this manner.

Soils contaminated with chemical contaminants above local background:

Hazardous wastes to licensed Class 1 hazardous waste disposal facilities only.

Non-hazardous waste to licensed Class 2 or subtitle D compliant Class 3 disposal facilities only.

Mixed wastes (with radioactive and hazardous constituents) to go to a site licensed for mixed wastes or an authorized mixed waste disposal facility at a DOE site.

In addition to meeting the above disposal requirements, all soils must also meet the waste acceptance criteria for the receiving facility.

EPA to carry out the following:

U.S.EPA to provide split samples to DTSC for chemical contaminants as it samples for radioactive constituents during its Area IV and Northern Buffer Zone Survey work.

The EPA will provide co located samples not split samples. These samples will be adjacent as much as possible, but not extracted from the same hole.

U.S.EPA to conduct post cleanup confirmatory radiation assessment in areas where cleanup was performed to verify completion of cleanup.

Will the site be cleaned up from "dirty to clean"? In other words, will the structures in AREA IV be removed first, and then have the site sampled? If this is not done, then the removal of the DOE structures at a later point in time will potentially recontaminate all of the already remediated soil on the whole site, and it will require an additional round of confirmatory sampling.

Response: The final Administrative Order on Consent with DOE will contain provisions that address DOE's outstanding court ordered obligations and the need to coordinate those responsibilities with the implementation of the activities described in the Agreements in Principle. As the commenter suggests, it would be beneficial to remove the structures to allow access to the soils beneath.

U.S.EPA to verify that backfill/replacement soils do not exceed local background for radioactive constituents.

Radioactive contaminants investigation/data gaps.

U.S.EPA is responsible for the investigation of radioactive contamination. Investigation reports related to radioactive contaminants previously prepared for and submitted by DOE will not require revision – U.S.EPA's survey efforts will be sufficient for determining the nature and extent of radioactive contamination and areas requiring cleanup of radioactive materials within Area IV and Northern Buffer Zone.

U.S.EPA, in the course of conducting its radioactive contaminant survey, will determine where onsite levels exceed local background within Area IV and Northern Buffer Zone.

What about the Southern Buffer Zone and all pathways from AREA IV including drainages and holding ponds?

Response: The Southern Buffer Zone is not included in the DOE or NASA Agreements in Principle. To the extent that there is contiguous radiological or chemical contamination that emanates from within Area IV (for DOE) or Area II and portion of Area I (for NASA), even to the extent that it migrates beyond the site boundaries, DOE or NASA respectively will remediate that contamination, wherever it leads.

Chemical investigation/data gaps.

Where EPA is already taking samples for radiologic contaminants as part of its Area IV and Northern Buffer Zone survey work, DTSC will arrange for analysis of split samples (paid for by DOE).

Again, these are co located samples. Please explain how these co located samples will be used?

Response: The co located samples will be analyzed for chemical contaminants and provide data to characterize chemical contamination in Area IV and the Northern Buffer Zone.

Please explain how the EPA will get a sample if there is not enough soil where there is a designated sampling point.

Response: As was explained in the meetings that U.S.EPA, DOE and DTSC held with the public when these sampling efforts were presented, if insufficient soil volume exists for all needed samples at a particular sampling point, the sampling team will move to proximate locations until they can collect sufficient soil.

In addition to the split samples from U.S.EPA, in areas where DTSC determines that additional likely chemical contamination is expected, DOE, upon DTSC request, will provide additional information that is existing or readily available for purposes of assisting DTSC in focusing additional investigation efforts, and will conduct additional investigation, under DTSC direction and oversight, consistent with local background/detection limit data quality objectives and measurement sensitivity. In carrying out additional chemical investigation, DOE will not be required to revise investigation reports related to chemical contaminants previously prepared for and submitted by DOE.

DTSC, in the course of overseeing and approving the chemical contaminant investigation work, will determine where onsite levels exceed local background.
Development of risk assessments will not be required.

Please explain to me why risk assessment will not be required since the media tends to focus on all of the radiation at this site, and all of the people that believe that they are getting cancer from the radiation on this site.

Response: As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and National Environmental Policy Act (NEPA) and California Environmental Policy Act (CEQA) processes and the exercise

of the "balancing criteria," the Agreements in Principle are based on the application of risk based criteria and other cleanup procedures and policies.

As identified by EPA in its rad survey and by DTSC as part of the investigation of chemical contaminants, DOE will remediate the areal extent of any contiguous radiologic or chemical contamination of soil that emanates from within Area IV even to the extent that it migrates beyond the boundaries of Area IV or the Northern Buffer Zone, within or without the SSFL boundaries.

Following completion of the characterization studies by EPA and DTSC, DOE will develop a remedial action implementation work plan that describes the Area IV and Northern Buffer Zone cleanup activities. The remedial action implementation work plan will be subject to DTSC review and approval.

Scheduled completion of soils cleanup remains as 2017

DOE's commitment to cleanup to local background applies to soils and not to groundwater at the site. Investigation and remediation of groundwater will be separately addressed, and provisions related to investigation and remediation of groundwater will be incorporated into a final agreement.

What radionuclides are in the water in AREA IV and the Northern Buffer zone? Are they naturally occurring?

Where is the tritium?

Response: Because these questions pertain to groundwater, they are not relevant to the Agreements in Principle. DTSC suggests the commenter pose these questions as groundwater investigation issues are presented to the community.

Characterization and cleanup (for both chemicals and radiologic contaminants) of both soils and groundwater are subject to DTSC approval.

Final agreement between DOE and California, and the cleanup obligations within that agreement, will be legally binding and enforceable.

DTSC work to be fully funded by DOE.

All DOE work is funded by the United States tax payers.

DTSC will conduct a public participation process to receive public input regarding the agreement prior to its finalization. This process will include a formal comment period and may include public meetings or discussions.

See comment on public meetings on NASA AIP.

This framework concerns SSFL Area IV and Northern Buffer Zone only and is between the Department of Energy and the State of California represented by the Department of Toxic Substances Control and the California Environmental Protection Agency. The framework is based upon the unique circumstances of Area IV and Northern Buffer Zone, including the nature of the releases of hazardous and radioactive contamination that have occurred at Area IV and Northern Buffer Zone. This framework does not establish precedent and shall not be used as precedent for any other agreement for any other area within the SSFL.

Brad Sherman
Representative, 27th Congressional District

In support of the AIPs.

"I strongly urge the California Department of Toxic Substances Control and other agencies involved in the cleanup efforts to protect the integrity of archaeological sites and ecologically sensitive areas, particularly within the undeveloped zones as part of the final cleanup plan.

Response: Native American artifacts that are formally recognized as cultural resources are accounted for and included as possible exceptions to implementing the prescribed cleanup standard.

In addition, at or near the time that the draft Remedial Action Implementation Workplan is developed and shared with the community for public review and comment, CEQA documents will also be developed that present an assessment of environmental impacts and proposed mitigation options.

Dan Silver
Executive Director
Endangered Habitats League

The Endangered Habitats League (EHL) supports the proposed agreement between the California Department of Toxic Substances Control and the U.S. Department of Energy (DOE) and a parallel agreement between DTSC and the National Aeronautics and Space Administration (NASA) for the cleanup of their portions of the Santa Susana Field Laboratory (SSFL). For your reference, EHL is Southern California's only regional conservation group.

As you know, SSFL is contaminated with chemical and radioactive materials from decades of nuclear reactor and rocket testing. Tens of thousands of rocket tests added significant contamination. The affected community has worked for years to get the Responsible Parties (RPs) to agree to clean up the contamination, facing significant resistance. In 2007, the legislature passed and the Governor signed SB 990, which mandated strict cleanup. Implementation of SB 990, however, has been slowed by disagreements between DTSC, DOE, and NASA.

These new agreements between the federal and state agencies for cleanup to background levels of contaminants, with specified exceptions (e.g., for endangered species considerations and Native American artifacts), will resolve this long controversy, promptly carry out SB 990, and provide protection for the people living nearby as well as restoring the environment of this damaged site.

The affected community and environment have long awaited effective action on cleanup; these Agreements are to be commended as a breakthrough.

Thus, we support the proposed agreement and urge that it be promptly signed and implemented.

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Warren Stone

The following comments are submitted by me personally, although I have been asked to be the representative Santa Susana Mountain Park Association.

Chatsworth is an area that values its varied and frequent cultural resources, from native/archaeological sites, movies, rocket history, to geological formations such as the sloped sandstone boulders characteristic of the westerly mountains, aptly called the Chatsworth formation.

The AIP's are poorly drafted in that most controlling language is not defined, and therefore the documents do not provide the public or indeed the governmental agencies in charge of the cleanup) with a meaningful or understandable document that sets forth the program to be followed for the cleanup.

Response: DTSC agrees that the terms and provisions of the Agreements in Principle must be embodied in final Administrative Orders on Consent that specify implementation details to accomplish what they describe and to be enforceable. It is DTSC's intention to resolve remaining issues and reach agreement as quickly as possible so that the activities described in the Agreements in Principle can be implemented.

Additionally, statistical data and sampling results are not provided so an understanding of the actual amount and burdens created by this cleanup program cannot be reasonably understood or inferred from this document.

Response: The final Administrative Orders on Consent will establish the requirement for DOE and NASA to develop draft Remedial Action Implementation Workplans that calculates contaminated soil volumes and presents the specific remediation plans to address the contaminated soils that have been identified as a result of the radiological and chemical characterization efforts. This plan, along with all other workplans and reports, will be shared with the community for public review and comment.

The draft Remedial Action Implementation Plan must include a detailed soils management and transportation plan, a health and safety plan, and the accompanying CEQA documents must identify environmental impacts attributable to the transportation of soils and mitigation measures that are being proposed to mitigate those environmental impacts.

This is a fundamental violation of the principles outlined by CEQA and other California environmental rules designed to provide the public awareness, and ability to consider burdens of any given standard of cleanup that is pursued. These principles are clearly illustrated by the specific comments below, and these comments should be considered

as you review and consider the specific comments. It would seem that the way you are going about this is getting the cart before the horse, do the study then do the plan.

The comment period should be extended until a reasonable amount of information and definitions are included in a revised document, which is circulated and made available for public review and comment. To do otherwise leave the DTSC, and indeed this entire process, open for criticism and further delay as legal channels may be pursued to enforce compliance with basic public information as required under various state statutes.

Response: DTSC desires to formalize these requirements quickly in final Administrative Orders on Consent. DTSC received overwhelming support from the affected community to in support of the Agreements in Principle and to wrap up negotiations and sign enforceable agreements quickly. Because there has already been a 30 day comment period and the Agreements in Principle have remained unchanged, DTSC does not believe that an additional comment period is needed for the public to verify that issues that they identified have been resolved. However, DTSC also received a handful of requests to review the final Administrative Orders on Consent before they are signed, and DOE has requested that an additional comment period be offered to the public on the final Administrative Orders on Consent. Because of these requests, DTSC will be providing an additional review period for the public to and to comment on any new issues raised by the final Administrative Orders on Consent.

DTSC recognizes that an additional review period delays finalizing the agreement and proceeding to implementation. As soon as the public review period has ended and any required adjustments to the documents made, DTSC will be working with DOE and NASA to sign the final Administrative Orders on Consent as soon as is practicable.

Both AlPs appear to be related to a document distributed with them called "Confirmation Protocol "Not to Exceed" Background Cleanup Standard for Soils". The relationship of this document to the AlPs is not stated in the AlPs.

Response: The Confirmation Protocol "Not to Exceed" Background Cleanup Standard for Soils was developed by DTSC, DOE and U.S.EPA to carry out the provisions of the DOE Agreement in Principle and reflects an approach accepted by technical field staff of all three agencies.

The objective paragraph indicates in the first sentence, that local background concentrations of radiological and chemical contaminants are not to be exceeded. Unfortunately, local background area and sampling protocol for initial samples are not stated.

If an area such as the DOE site, which is expected to be heavily contaminated, is cleaned up to local background areas present on that (DOE) site, the ultimate cleanup requirement under this document may be well under the residential type clean up standards set by California as per SB 990. If the local background tests are based on areas from Santa Susana Mountains to Malibu Creek, and they exclude the often-contaminated SSFL area, a greatly different standard will be developed; in this case the cleanup standard may be so high that the corollary damage to bring the DOE site to that exact level may not be practical. A proper definition of what comprises the local background is necessary for an understanding of all the results of the documents.

Will background samples from drainages be used to set standards for drainages in the AIP? Or will generic average results from all samples in all types of samples merely be aggregated. This would also affect how the results are set. More information on the drainage sampling protocols should be provided as the site is draining to all surrounding property due to its topography.

Response: The Agreements in Principle anticipate that the U.S.EPA and DTSC will be, through their respective Radiologic Background Study and Chemical Background Study, using appropriate statistical methods that are to account for the natural variations that are to be expected to be found in background. These statistical approaches are intended to avoid or significantly reduce the possibility of concluding that observed concentrations that are within expected background concentrations ranges are erroneously identified as contamination. In the coming months, both U.S.EPA and DTSC will be proposing Statistical Evaluation Plans that contain the statistical approaches to be employed, and the use of the derived background values as cleanup values will be addressed in those plans. DTSC suggests that comments related to these background calculations be directed toward those discussions.

Backfill Soils
It is very confusing how a document that relates to DOE or NASA (perhaps 700 acres together) provides a requirement for them to backfill using soils from the SSFL at large, approximately 2100 additional acres, which is not a party to these agreements. Because of significant natural resources and archaeological resources in the Southern Buffer Zone, this area should be excluded from backfill. Additionally, this area provides a true buffer to surrounding properties and excavation removes that beneficial effect of the Southern Buffer Zone.

Response: The Confirmation Sampling Protocol included a discussion of the possible onsite sources of backfill soils for excavations, but does not create an authorization or approval to use any particular onsite location for this purpose. As with the entirety of the anticipated cleanup activities, excavation for borrowing soils will be subject to all applicable federal, state and local requirements and must receive necessary permits

to proceed. DTSC anticipates that these federal, state and local requirements will provide the necessary checks and balances to assess the legality and appropriateness of any proposal for the use of soils borrowed from any location, including sites that may be within the Santa Susana Field Laboratory.

AlPs
This discussion follows the NASA document but applies equally to both documents as the majority of the language is similar. Unfortunately paragraphs in these documents are not numbered so they are difficult to describe. On page 1, relating to Endangered Species, resource specialists with California should also be consulted. State listed rare plants, such as the Santa Susana Tarplant, a state-listed rare species, which commonly occurs in the sandstone rock formations on the site, should be indicated as a protected plant. (This plant only exists in the local area and is known to occur in the SSFL area). Offsite mitigation plans may be needed, and should be acknowledged.

Response: Although the Agreements in Principle only reference federally endangered species as a possible exception to carrying our the described cleanup, DTSC recognizes the role and authority of the State Department of Fish and Game and intends to coordinate closely with the State Department of Fish and Game throughout the site characterization and cleanup process.

As to Native American artifacts, this paragraph should be moved to the same location as the Endangered Species, and therefore not be part of DTSC oversight and approval. The OTSC was not able to provide a definition of a "formally recognized Cultural Resource", or state if there were one or 100 sites on the property. This needs defined, it appears likely even the astounding Burro Flats pictograph may not qualify under this undefined standard. Additionally, any time soils are removed, additional sites are found in areas known to be used by native Americans, such as clearly occurred at this area. Alternative language for this provision may be something like -Native American sites or artifacts, identified as significant by qualified on-site archaeologist or tribal monitors, or that have been identified through prior studies.

Response: Native American artifacts that are formally recognized as cultural resources are accounted for and included as possible exceptions to implementing the prescribed cleanup standard. DTSC anticipates that DOE and NASA will need to consult with archeological and Native American experts in characterizing and cleaning up its portion of the site.

Bottom of page one. other unforeseen circumstances. cleanup not technologically feasible. limited to 5% of the site.

This comment points out the lack of acknowledgement of "balancing" criteria in the document, which must be applied after considering CEQA. When all the consequences of the cleanup to a certain level is considered, cleanup to that level may not be practical. Poor remediation practices, such as presently can be seen at nearby Sage Ranch, provide a much higher runoffs due to removed and unreplaced soils and lack of vegetation. All these balancing issues need to be acknowledged in the document itself instead of merely acknowledged to be factors in discussion with DTSC management. Additionally these balancing issues must be part of the design of the cleanup program as they will affect the appropriate amount of removal and refilling.

Page 3 -Development of risk assessments will not be required. Why?

Response: Please see the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments for the discussion of the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes, the exercise of the "balancing criteria," and the application of and compliance with SB 990.

Page 4 -Public comment -should include meetings and should be extended to provide for local groups to provide input on the project. This is a much larger project, with much more impact to the community and it makes no sense to have a approximately 20 days to review and a week after the public meeting for local groups to make decisions on this project.

Response: DTSC desires to formalize these requirements quickly in final Administrative Orders on Consent. DTSC received overwhelming support from the affected community to in support of the Agreements in Principle and to wrap up negotiations and sign enforceable agreements quickly. Because there has already been a 30 day comment period and the Agreements in Principle have remained unchanged, DTSC does not believe that an additional comment period is needed for the public to verify that issues that they identified have been resolved. However, DTSC also received a handful of requests to review the final Administrative Orders on Consent before they are signed, and DOE has requested that an additional comment period be offered to the public on the final Administrative Orders on Consent. Because of these requests, DTSC will be providing an additional review period for the public to and to comment on any new issues raised by the final Administrative Orders on Consent.

DTSC recognizes that an additional review period delays finalizing the agreement and proceeding to implementation. As soon as the public review period has ended and

any required adjustments to the documents made, DTSC will be working with DOE and NASA to sign the final Administrative Orders on Consent as soon as is practicable.

Brian Sujata

The Department of Toxic Substances Control has requested public comment on three documents relating to the cleanup of the Santa Susana Field Laboratory (SSFL). My comments submitted here relate to the subject line materials issued by the Department of Toxic Substances Control (Department) on September 3, 2010.

Summary
The Joint Settlement Framework Agreement in Principal documents do not provide sufficient information or elaboration to allow meaningful consideration. The Department must withdraw the documents from consideration until such time as they fully describe the impacts and implications of the policies on the environment and the surrounding community.

Response: DTSC does not believe delay is warranted or necessary. State law requirements in SB 990 were enacted over three years ago. There is sufficient information available to know that cleanup is required, and establishing an enforceable relationship through the Administrative Orders on Consent is necessary to achieving that goal.

Overall Environmental Restoration of SSFL.
The Santa Susana Field Laboratory has been undergoing cleanup (technically termed a 'corrective action') under the Federal Resource Conservation and Recovery Act since 1989. The SSFL corrective action program has been segmented into two portions: surface investigation unit and the site wide groundwater units. The RCRA corrective action framework has been successfully implemented at many sites throughout California and the United States. The AIP documents, however, appear to replace the RCRA corrective action-driven cleanup with an arbitrary process which has not been successfully implemented in California or the United States. Worse, the AIP policy applies only to the surface units owned by NASA and the DOE, thus leaving the Boeing -owned surface units and the SSFL-wide groundwater cleanup under the auspices of the remaining RCRA corrective action program.

The AIP approach to cleanup at SSFL obfuscates the on-going cleanup of SSFL. The Department has been overseeing the investigation phase of this RCRA Corrective Action for some sixteen years, (an extraordinary long period of time) and now desires to attempt a novel process for only a portion of the remaining cleanup. Implementation of the AIP will cause widespread confusion due to its unprecedented process. Moreover, the AIPs have not been evaluated for conformance to the minimum requirements of the RCRA corrective action process. From the public's perspective, the RCRA corrective action process is familiar but admittedly slow and the Department should be looking for

improvements there. The DTSC must not undertake changes which will make the completion of site cleanup more costly and difficult in the name of change.

The Department must use policies and practices which have been successfully implemented at other California cleanup sites. The Department must not use broad policies crafted specifically for SSFL. The Department must determine how the implementation of the AIP's will impact other elements of the SSFL corrective action program and make that information available to the public for consideration. The Department must adopt cleanup policies that apply to the entire SSFL site, not segmented portions and communicate to the public why the chosen approach is the best option for the entire SSFL.

Response: All three responsible parties – Boeing, DOE and NASA – have been conducting investigation and cleanup activities under the terms and conditions of the 2007 Consent Agreement. While work has been and continues to progress under the terms and conditions of the 2007 Consent Order, the resolution of, and acceptance of, the cleanup standard required by State law is becoming more and more critical. Investigation and sampling efforts to date, and measurements made, are insufficiently sensitive to be able to achieve State law standards. The more work that is completed to these less sensitive standards, the more work will be required to be repeated at some later point. All of these insufficient measurements will comprise a data gap that is growing ever larger with each incomplete work product delivered.

Area IV Corrective Action.
The Department of Energy (and its predecessor agencies) sponsored some, but not all of the activities historically undertaken in SSFL Area IV. Accordingly, the DOE has assumed responsibility for some, but not all of the cleanup units within Area IV. The AIP summary notes the "… end state of the whole of Area IV and the Northern Buffer Zone after cleanup will be background." This statement appears to commit the DOE to assume the entire liability for the remaining Area IV cleanup. If true, this is a significant development with implications that was not called to the attention to the members of the community.

• The Department should clarify the scope of the Area IV cleanup and explain how the cleanup of Area IV will progress solely under the responsibility of the DOE.

Response: The commenter points out a very clear representation of the DOE Agreement in Principle: DOE agreeing to clean up the entirety of Area IV and the Northern Buffer Zone to the specified cleanup standards. DTSC does not believe clarification is necessary, although the specific terms and responsibilities of DOE will be made clear in its Administrative Order on Consent.

CEQA

The California Environmental Quality Act is a statute that requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. The AlP documents propose significant project changes, some of which will result in impacts to the surrounding community that have not been considered nor mitigated by the Department. For instance, the AlP states that all soil having contaminant concentrations exceeding background will be excavated and trucked to disposal sites hundreds of miles away. Given the considerable physical size of the DOE and NASA commitments and the extremely low threshold for soil removal, hundreds if not thousands of additional trucks will be traveling through the community. Then the process gets repeated in reverse when clean soil is returned to the site. The Department did not evaluate and disclose the risk associated with the increased traffic (as opposed to the no action alternative) or even determined how much soil will be removed and replaced if the AlPs are implemented. The public must have the opportunity to consider all of the risks which may affect their decision making and here the AlP falls short.

Response: As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," the Agreements in Principle are based on the application of risk based criteria and other cleanup procedures and policies.

DTSC believes that the clean up approach that is represented by the Agreements in Principle is one that is protective of human health and the environment and is fully consistent and compliant with state and federal clean up laws and regulations, including SB 990.

The Department must estimate the quantity of soil that may be removed and replaced if the AlPs are implemented. The Department must determine and disclose the additional risk of additional truck traffic from removing contaminated soil to background and returning clean soil to the site before deciding to implement the AlPs.

Response: It is impossible to calculate the amount contaminated soils that could require removal at this time. The final Administrative Orders on Consent will establish the requirement for DOE and NASA to develop draft Remedial Action Implementation Plans that calculates contaminated soil volumes and presents the specific remediation plans to address the contaminated soils that have been identified as a result of the radiological and chemical characterization efforts. This plan, along with all other workplans and reports, will be shared with the community for public review and comment.

No matter what amount of contaminated soils are eventually calculated, DOE and NASA will need to identify, assess and mitigate any environmental impacts that result in the course of carrying out their cleanup responsibilities. The draft Remedial Action Implementation Plan must include a detailed soils management and transportation plan, and the accompanying CEQA documents must identify environmental impacts attributable to the transportation of soils and mitigation measures that are being proposed to mitigate those environmental impacts.

The CEQA provides individuals with the opportunity to participate effectively in all steps of the project review process including the identification of potential environmental impacts. The existing SSFL RCRA Corrective Action program incorporates public participation. The public has been regularly involved by the Department and an Environmental Impact Report is expected to be completed before the cleanup phase of SSFL Corrective Action is started. How does the AIP integrate CEQA? We don't know.

Response: The section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria" as they pertain to the Superfund laws and CEQA.

At or near the same time that the draft Remedial Action Implementation Workplan is developed and shared with the community for public review and comment, CEQA documents will also be developed that present an assessment of environmental impacts and proposed mitigation options.

The AIPs appears to change the existing public participation program. The AIPs promises only 'a' formal comment period and weakly commits to a public participation which ' ... may include public meetings or discussions.'

Further, the presentation materials used by Mr. Brausch during the recent SSFL workgroup meeting reveal the Department has already made up their mind regarding the AIP. The October calendar shown on slide seven reads: 'Finalize and sign actual agreements' and the speaker noted how important it was to approve the AIP in time for the October sampling. The two statements signaled to the community the Departments' predisposition towards the AIP. I can only conclude the comment period has become mere formality in the eyes of the Department. The roll-back of the Department's public participation practices is troubling given the vast extent of changes the unprecedented AIP will bring.

Response: DTSC recognizes the challenges of the timing. As a result of and in recognition of the timing difficulties, since that presentation DTSC made alternate arrangements with DOE and U.S.EPA to commence the split (co-located) sampling efforts described in the DOE Agreement in Principle prior to entering an Administrative Order on Consent.

DTSC desires to formalize these requirements quickly in final Administrative Orders on Consent. DTSC received overwhelming support from the affected community to in support of the Agreements in Principle and to wrap up negotiations and sign enforceable agreements quickly. Because there has already been a 30 day comment period and the Agreements in Principle have remained unchanged, DTSC does not believe that an additional comment period is needed for the public to verify that issues that they identified have been resolved. However, DTSC also received a handful of requests to review the final Administrative Orders on Consent before they are signed, and DOE has requested that an additional comment period be offered to the public on the final Administrative Orders on Consent. Because of these requests, DTSC will be providing an additional review period for the public to and to comment on any new issues raised by the final Administrative Orders on Consent.

The Department must present detail into how the AlPs will replace (or augment) the RCRA Corrective Action program at SSFL. The Department must maintain its public participation program and consider all comments and suggestions from the public before making a decision.

Response: The final Administrative Orders on Consent will establish the requirement that the draft Remedial Action Implementation Workplans, along with all other workplans and reports, are to be shared with the community for public review and comment.

Remediation Soil Management
The AlP's require soils to be removed if any detected constituent within a soil sample is above a numerical background threshold. This plan differs from the traditional approach of performing a risk assessment to balance the benefits of the cleanup against the harm or risk to the environment or community. The arbitrary clean up limit may cause more damage to the SSFL aesthetics and biota than leaving the materials in place.

• *The Department should use the nine criteria to determine the extent of soil removal rather than the arbitrary "look up table' thresholds proposed in the AlP's.*

Response: The section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments describes the relationship between the Agreements in Principle and the operation of the federal and State

Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria" as they pertain to the Superfund laws and CEQA.

Confirmation Protocol

The Confirmation Protocol 'Not to exceed' Background Clean up Standard for Soils document provides mostly general policy statements with the occasional odd detail. The public would benefit from additional details and elaboration of the generalities; however, in some instances the content is curiously granular. (The 'look up table comparison' discussion contains detailed prescriptive requirements relating to the use of an analytical result level which requires the use of a specific EPA interpretation applied elsewhere to drinking water samples (65 FR 76727).) The Department did not explain the instances of minute detail as it occurs within the AlP document so reviewers cannot fully participate in the decision making process.

Response: The use of "not to exceed" cleanup standards is a standard practice and has been used by U.S.EPA in a number of circumstances. The confirmation sampling protocol that was made available for public comment was developed by DTSC, DOE and U.S.EPA, and reflects an approach accepted by all three agencies and which will be implemented by U.S.EPA.

The Department (and members of the public) would benefit if the Department gave additional thought and explanation of the practical nature of using a background figure having a specific number (referred to as 'the number') rather than a numerical range. Given the different geologic parent materials at SSFL, the background concentrations should be expected to have some amount of variation yet the DTSC does not provide information as to how the single value will be determined from many sample results.

• *The Department must detail the feasibility of using a single number as a background threshold at a site spanning hundreds of acres in size.*

Response: The Agreements in Principle anticipate that the U.S.EPA and DTSC will be, through their respective Radiologic Background Study and Chemical Background Study, using appropriate statistical methods that are to account for the natural variations that are to be expected to be found in background. These statistical approaches are intended to avoid or significantly reduce the possibility of concluding that observed concentrations that are within expected background concentrations ranges are erroneously identified as contamination. In the coming months, both U.S.EPA and DTSC will be proposing Statistical Evaluation Plans that contain the statistical approaches to be employed, and the use of the derived background values

as cleanup values will be addressed in those plans. DTSC suggests that comments related to these background calculations be directed toward those discussions.

Thank you for the opportunity to comment on the Agreements in Principal documents.

Bridget Tatevossian
Concerned Citizen

I am a concerned resident of the Los Angeles County who has recently been informed about the complications with the Santa Susana Field Laboratory site. I am thrilled to have found out that the Department of Toxic Substances Control (DTSC), the federal Department of Energy (DOE) and NASA have all agreed to take the appropriate measures to cleanup this site. Although, I cannot believe how long it has taken for this agreement to arise, but better late than never. After reading the agreements presented by each agency, I really appreciate DOE's policy stating, "No “leave in place” alternatives will be considered, no on-site burial or landfilling of contaminated soil will be considered." This reassured me that this matter of hazardous waste is truly being taken seriously, and I feel I can trust these organizations. However, I do feel that it is the responsibility of DTSC, DOE, and NASA to get The Boeing Company to be in agreement with cleaning up this hazardous site as well. Boeing should not be concerned with suing the state over the enforceability of SB 900, they should be thinking about all of the people who are in danger because of this site. These people did not ask for harm to come to them or their families and Boeing needs to accept responsibility as well. Please strongly convince Boeing to be a part of this agreement so that no species or family has to worry about the dangerous waste coming from this site!

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Barbara Tejada
President, Ventura County Archaeological Society
President, Antelope Valley Archaeological Society

As an individual with interest in the remediation work currently being negotiated for the Santa Susana Field Laboratory (SSFL) in the Simi Hills, Ventura County, I would like to offer the following comments on the newly announced Agreements in Principle (AIPs) between the Department of Toxic Substances Control (DTSC), the U.S. Department of Energy (DOE) and the National Aeronautics and Space Administration (NASA):

These AIPs promise cleanup to "background levels" on the portions of the SSFL under the jurisdiction of DOE and NASA. This distinction appears to go above and beyond the requirements of SB 990, which requires the clean-up of the SSFL to "suburban residential or rural residential (agricultural)" levels.

Response: For purposes of implementing a cleanup of the Santa Susana Field Laboratory, DTSC must implement the provisions of SB 990, which mandates that the anticipated land use in establishing cleanup standards be assumed to be rural residential or suburban residential, whichever is more protective.

DTSC believes that the clean up approach that is represented by the Agreements in Principle is one that is protective of human health and the environment and is fully consistent and compliant with state and federal clean up laws and regulations, including SB 990.

Although an admirable gesture, the agreements toward background level clean-up can only be considered as a move to temporarily placate a few outspoken community activists. On a piece of land that has endured over 60 years of testing and development, much of which occurred well before the enactment of state and federal environmental protection laws, the idea that clean-up to a background level is even technically feasible is preposterous.

At a minimum, it seems that these proposed AIPs are premature as long as the U.S. Environmental Protection Agency (EPA) is still conducting studies to determine what exactly are the area background levels, and compare these to the actual SSFL contamination levels. Further, I would be interested in seeing the comparison of background levels to the suburban or rural residential standards called for under SB 990. Could this be a difference of 1.0 ppm or 100.0 ppm for a particular contaminant? And what would this difference mean for on-the-ground clean-up efforts -removal of the first foot of soil, or removal of all soil?

Response: The relationship between background levels and the cleanup requirements of SB 990 is presented in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments.

Or still, as the SSFL is primarily situated upon the very porous Chatsworth Formation sandstone, how much bedrock would need to be blasted away to reach "background level?"

Response: The Agreements in Principle pertain only to contaminated soils at the site. They do not contemplate, nor do they require, the removal or "blasting away" of bedrock.

This indeed is the crux of my concern -that too much unnecessary clean-up not only costs more money, as Boeing is likely concerned with, but that it would turn a beautiful ecosystem into a wasteland of exposed bedrock, in return for a reduction of a handful of contaminants by a couple of parts per million or less that may or may not have any scientifically-based benefits. Until we have the EPA's "Look-Up Table" in hand, and understand the mechanics of how those levels can be achieved on the ground, how can any agreement be made that states "under no circumstances shall exceptions for unforeseen circumstances be proposed in excess of five percent of the total soil cleanup volume" without ending in disappointment? Such agreements may quiet the loudest voices for now, but what happens when the EPA's study is complete and it is determined that background level is not technically feasible? How much louder will those voices be in the ears of the local and regional government representatives then?

I am not saying that I'm not concerned about environmental contamination; in fact I try to purchase organic foods and products as much as possible to reduce such contaminants from my household. However, as a professional archaeologist, I am also highly concerned with the protection of resources within the environment. The SSFL is also home to a diverse array of plant and animal species, some considered endangered, as well as important examples of archaeological resources that continue to hold meaning for descendant Native American communities today. I am greatly concerned about how much of these resources must be stripped away to achieve a clean-up to the stringent "background levels" stipulated in the AIPs, and I am even more concerned that such "resource stripping" would occur purely for political purposes, and not take into account good science.

Indeed, by leaving the "acceptance and exercise of any...exceptions...subject to DTSC's oversight and approval," it seems as though the AIPs completely sidestep any state or federal laws that provide for the protection of natural and cultural resources.

The proper way of proceeding with clean-up according to the National Environmental

Policy Act (NEPA) and the California Environmental Quality Act (CEQA) is to present a project proposal, document the existing conditions, and then analyze the impacts to those conditions from any number of project alternatives. By agreeing to one of those project alternatives now (i.e. clean-up to background level) prior to the completion of the EPA's characterization studies, it would appear as if the DTSC, DOE and NASA are not only putting the cart before the horse but are completely disregarding the procedures set forth in state and federal environmental law.

Response: As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," the Agreements in Principle are based on the application of risk based criteria and other cleanup procedures and policies.

DTSC believes that the clean up approach that is represented by the Agreements in Principle is one that is protective of human health and the environment and is fully consistent and compliant with state and federal clean up laws and regulations, including SB 990.

I would also like to point out that the exception for "Native American artifacts that are formally recognized as Cultural Resources" is not consistent with CEQA or the National Preservation Act (NHP A) as well. Not only are individual prehistoric artifacts considered to be cultural resources, but also historic artifacts over 50 years old, features, structures, districts and traditional cultural places. A National Register of Historic Places-listed Native American rock-art site exists within NASA's portion of the SSFL, however by the way the AlPs are written, it would appear that the rock art itself would not be included as an exception to background cleanup since it is a site or feature, not simply "artifacts." I suggest that this be written to better reflect legal guidelines, and simply be listed as historic properties (with specific meaning under Section 106 of the NHPA) and historical resources (with specific meaning under CEQA).

Response: DTSC recognizes that any cleanup action to be taken must be in accordance with all federal, state and local requirements. The final Administrative Orders on Consent will establish that requirement, and all federal, state and local government agencies with jurisdiction will be consulted throughout the site characterization and cleanup process.

In addition, DTSC anticipates that DOE and NASA will need to consult with archeological and Native American experts in identifying cultural resources as they characterize and clean up their portions of the site.

In closing, I greatly appreciate the opportunity to comment on the proposed AIPs for cleanup of the SSFL. I would like to see this facility restored as much as practicable, but caution that additional factors should be considered. I urge the DTSC to not forget good science in the face of difficult politics. I look forward to seeing this project through to its completion in a legally defensible way with an eye toward environmental stewardship.

Teena Tekata

The following comments are submitted by me personally, although I have been asked to be the representative for the Chatsworth Neighborhood Council and I will be sharing these thoughts with them in the near future.

Chatsworth is an area that values its varied and frequent cultural resources, from native/archaeological sites, movies, rocket history, to geological formations such as the sloped sandstone boulders characteristic of the westerly mountains that include the Santa Susana Field Laboratory ("SSFL"), aptly called the Chatsworth formation.

The AIP's are poorly drafted in that most controlling language is not defined, and therefore the documents do not provide the public (or indeed the governmental agencies in charge of the cleanup) with a meaningful or understandable document that sets forth the program to be followed for the cleanup.

Response: DTSC agrees that the terms and provisions of the Agreements in Principle must be embodied in final Administrative Orders on Consent that specify implementation details to accomplish what they describe and to be enforceable. It is DTSC's intention to resolve remaining issues and reach agreement as quickly as possible so that the activities described in the Agreements in Principle can be implemented.

Additionally, statistical data and sampling results are not provided so an understanding of the actual amount and burdens created by this cleanup program cannot be reasonably understood or inferred from this document.

Response: The final Administrative Orders on Consent will establish the requirement for DOE and NASA to develop draft Remedial Action Implementation Workplans that calculates contaminated soil volumes and presents the specific remediation plans to address the contaminated soils that have been identified as a result of the radiological and chemical characterization efforts. This plan, along with all other workplans and reports, will be shared with the community for public review and comment.

The draft Remedial Action Implementation Plan must include a detailed soils management and transportation plan, a health and safety plan, and the accompanying CEQA documents must identify environmental impacts attributable to the transportation of soils and mitigation measures that are being proposed to mitigate those environmental impacts.

This is a fundamental violation of the principles outlined by CEQA and other California environmental rules designed to provide the public awareness, and ability to consider

burdens of any given standard of cleanup that is pursued. These principles are clearly illustrated by the specific comments below, and these comments should be considered as you review and consider the specific comments.
The comment period should be extended until a reasonable amount of information and definitions are included in a revised document, which is circulated and made available for public review and comment. To do otherwise leaves the DTSC, and indeed this entire process, open for criticism and further delay because no meaningful public participation process can be performed based on the lack of information in these documents.

DTSC desires to formalize these requirements quickly in final Administrative Orders on Consent. DTSC received overwhelming support from the affected community to in support of the Agreements in Principle and to wrap up negotiations and sign enforceable agreements quickly. Because there has already been a 30 day comment period and the Agreements in Principle have remained unchanged, DTSC does not believe that an additional comment period is needed for the public to verify that issues that they identified have been resolved. However, DTSC also received a handful of requests to review the final Administrative Orders on Consent before they are signed, and DOE has requested that an additional comment period be offered to the public on the final Administrative Orders on Consent. Because of these requests, DTSC will be providing an additional review period for the public to and to comment on any new issues raised by the final Administrative Orders on Consent.

DTSC recognizes that an additional review period delays finalizing the agreement and proceeding to implementation. As soon as the public review period has ended and any required adjustments to the documents made, DTSC will be working with DOE and NASA to sign the final Administrative Orders on Consent as soon as is practicable.

Both AIPs appear to be related to a document distributed with them called "Confirmation Protocol "Not to Exceed" Background Cleanup Standard for Soils" ("Background Cleanup"). relationship of the Background Cleanup document to the AIPs is not stated in the AIPs, but should be if it is intended to set forth the controlling standards.

Response: The Confirmation Protocol "Not to Exceed" Background Cleanup Standard for Soils was developed by DTSC, DOE and U.S.EPA to carry out the provisions of the DOE Agreement in Principle and reflects an approach accepted by technical field staff of all three agencies.

The objective paragraph of the Background Cleanup indicates in the first sentence, that local background concentrations of radiological and chemical contaminants are not to be exceeded. Unfortunately, local background area, and sampling protocol for initial samples is not defined.

If an area such as the DOE site, which is expected to be heavily contaminated, is cleaned up to local background areas present on that (DOE) site, the ultimate cleanup requirement under this document may be well under the residential type clean up standards set by California as per SB 990. If the local background tests are based on outlying areas, say from the Santa Susana Mountains to Malibu Creek, and they exclude the often-contaminated SSFL area, a greatly different standard will be developed; in this case the cleanup standard may be so high that the corollary damage to bring the DOE site to that exact level may not be practical. A proper definition of what comprises the local background is necessary for an understanding of all the results of the documents.

Response: The Agreements in Principle anticipate that the U.S.EPA and DTSC will be, through their respective Radiologic Background Study and Chemical Background Study, using appropriate statistical methods that are to account for the natural variations that are to be expected to be found in background. These statistical approaches are intended to avoid or significantly reduce the possibility of concluding that observed concentrations that are within expected background concentrations ranges are erroneously identified as contamination. In the coming months, both U.S.EPA and DTSC will be proposing Statistical Evaluation Plans that contain the statistical approaches to be employed, and the use of the derived background values as cleanup values will be addressed in those plans. DTSC suggests that comments related to these background calculations be directed toward those discussions.

After the background contamination level is defined, the existing contamination of the DOE and NASA sites should be disclosed in the AIP so the impacts of the cleanup can be recognized. This will provide information so the public knows if residential cleanup standards will be met as required by SB 990 or if they are exceeded. If the SB 990 cleanup standards are exceeded, further mitigations may be appropriate under CEQA and other environmental standards that set forth balancing criteria that ultimately provides relief if the damage caused by excessive cleanup exceeds the benefit of the cleanup.

Response: Please see the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments for the discussion of the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes, the exercise of the "balancing criteria," and the application of and compliance with SB 990.

Will background samples from drainages be used to set standards for drainages in the AIP? Or will generic average results from all types of samples merely be aggregated. This would also affect how the cleanup standards are set. More information on the drainage

sampling protocols should be provided as the site is draining to all surrounding property due to its topography. How will sandstone boulders on the site be handled if they test as contaminated?

Response: DTSC suggests that comments related to these background calculations be directed toward those discussions.

How will the deferred water remediation program interact with this program, will some work be done again as the water remediation program, now excluded, is developed?

Response: The Agreements in Principle address soils contamination only. However, although the Agreements in Principle only address soils contamination, that does not relieve DOE or NASA of their continuing responsibility to address the contaminated groundwater. Groundwater, and the parties' obligations regarding groundwater contamination, will continue to be addressed through the 2007 agreement.

Backfill Soils – it is very confusing how a document that relates to DOE or NASA (perhaps 700 acres together) provides a requirement for them to backfill using soils from the SSFL at large, approximately 2100 additional acres, which is not a party to these agreements. Because of significant natural resources and archaeological resources in the Southern Buffer Zone, this area should be excluded from backfill. Additionally, this area provides a true buffer to surrounding properties and excavation removes that beneficial effect of the Southern Buffer Zone to surrounding properties.

Response: The Confirmation Sampling Protocol included a discussion of the possible onsite sources of backfill soils for excavations, but does not create an authorization or approval to use any particular onsite location for this purpose. As with the entirety of the anticipated cleanup activities, excavation for borrowing soils will be subject to all applicable federal, state and local requirements and must receive necessary permits to proceed. DTSC anticipates that these federal, state and local requirements will provide the necessary checks and balances to assess the legality and appropriateness of any proposal for the use of soils borrowed from any location, including sites that may be within the Santa Susana Field Laboratory.

AIPs

This discussion follows the NASA document but applies equally to both documents as the majority of the language is similar. Unfortunately paragraphs in these documents are not numbered so they are difficult to describe. On page 1, relating to Endangered Species, resource specialists with California should also be consulted. State listed rare or endangered plants should also be protected under the document. For example the Santa Susana Tarplant, a statelisted rare species, commonly occurs in the sandstone rock

formations on the site, and should be indicated as a protected plant. (This plant only exists in the local area and is known to occur in the SSFL area). Offsite mitigation plans may be needed, and should be acknowledged.

Response: Although the Agreements in Principle only reference federally endangered species as a possible exception to carrying our the described cleanup, DTSC recognizes the role and authority of the State Department of Fish and Game and intends to coordinate closely with the State Department of Fish and Game throughout the site characterization and cleanup process.

As to Native American artifacts, this paragraph should be moved to the same location as the Endangered Species, and therefore not be part of DTSC oversight and approval. The DTSC was not able to provide a definition of a "formally recognized Cultural Resource", or state if there were one or 100 such locations on the property. This needs defined, it appears likely even the astounding Burro Flats pictograph may not qualify under this undefined standard. Additionally, any time soils are removed, additional sites are found in areas known to be used by native Americans, such as clearly occurred at this area. Alternative language for this provision may be something like – Native American sites or artifacts, identified as significant by qualified on-site archaeologist or tribal monitors, or archaeological sites that have been identified through prior studies.

Response: Native American artifacts and other formally recognized cultural resources are accounted for and included as possible exceptions to implementing the prescribed cleanup standard. DTSC anticipates that DOE and NASA will need to consult with archeological and Native American experts in characterizing and cleaning up its portion of the site.

Bottom of page one, other unforeseen circumstances, cleanup not technologically feasible, limited to 5% of the site.

This comment points out the lack of acknowledgement of "balancing" criteria in the document, which must be applied after considering CEQA. When all the consequences of the cleanup to a certain level is considered, cleanup to that level may not be practical. Poor remediation practices, such as presently can be seen at nearby Sage Ranch, provide a much higher runoffs due to removed and unreplaced soils and lack of vegetation. All these balancing issues need to be acknowledged in the document itself instead of merely acknowledged to be factors in discussion with DTSC management. Additionally these balancing issues must be part of the design of the cleanup program as they will affect the appropriate amount of removal and refilling.

Page 3 – Development of risk assessments will not be required. Why?

Response: Please see the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments for the discussion of the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes, the exercise of the "balancing criteria," and the application of and compliance with SB 990.

Page 4 - Public comment – should include meetings and should be extended to provide for local groups to provide input on the project. This is a much larger project, with much more impact to the community and it makes no sense to have an approximately 20 day period to review and a week after the public meeting for local groups to make decisions on this project that has been under review for years and years.

Response: DTSC desires to formalize these requirements quickly in final Administrative Orders on Consent. DTSC received overwhelming support from the affected community to in support of the Agreements in Principle and to wrap up negotiations and sign enforceable agreements quickly. Because there has already been a 30 day comment period and the Agreements in Principle have remained unchanged, DTSC does not believe that an additional comment period is needed for the public to verify that issues that they identified have been resolved. However, DTSC also received a handful of requests to review the final Administrative Orders on Consent before they are signed, and DOE has requested that an additional comment period be offered to the public on the final Administrative Orders on Consent. Because of these requests, DTSC will be providing an additional review period for the public to and to comment on any new issues raised by the final Administrative Orders on Consent.

DTSC recognizes that an additional review period delays finalizing the agreement and proceeding to implementation. As soon as the public review period has ended and any required adjustments to the documents made, DTSC will be working with DOE and NASA to sign the final Administrative Orders on Consent as soon as is practicable.

Alec Uzemeck

I am in agreement with the purpose and goals of the AIP's however I think that there are a number of areas that need revision before proceeding to the final agreements.

The AIP's set out the purpose and goals of the agreement but they are worrisome in the level of procedure that they contain. They spell out processes and restrictions that will either stall the cleanup in discussion and resistance or will require soil removal and replacement far beyond what may be necessary.

I think that the procedures should be developed in separate documents developed by our scientists and engineers with existing guidelines from the EPA. For example, the Look Up Table to be developed from the background samples should be replaced by the EPA guidelines for efforts on developing statistical limits that would guide the cleanup. Additionally the cleanup should allow risk / reward evaluations on close calls so that the environment is not torn up for relatively small reductions in the risk factors.

Response: DTSC agrees that the terms and provisions of the Agreements in Principle must be embodied in final Administrative Orders on Consent that specify implementation details to accomplish what they describe and to be enforceable. It is DTSC's intention to resolve remaining issues and reach agreement as quickly as possible so that the activities described in the Agreements in Principle can be implemented.

I recommend that the specifics for the background values and tables, the cleanup levels and methods for confirmation against specific lab numbers should all be deleted and replaced by reference that these things will be developed by the EPA under their existing guidelines. Otherwise the AIP's as they are do not sufficiently address the statistical issues and consequences and pose concerns for myself and a number of folks that have discussed the AIP's.

Response: The Agreements in Principle anticipate that the U.S.EPA and DTSC will be, through their respective Radiologic Background Study and Chemical Background Study, using appropriate statistical methods that are to account for the natural variations that are to be expected to be found in background. These statistical approaches are intended to avoid or significantly reduce the possibility of concluding that observed concentrations that are within expected background concentrations ranges are erroneously identified as contamination. In the coming months, both U.S.EPA and DTSC will be proposing Statistical Evaluation Plans that contain the statistical approaches to be employed, and the use of the derived background values as cleanup values will be addressed in those plans. DTSC suggests that comments related to these background calculations be directed toward those discussions.

The AIP's can work if the procedures are broken out and can work as top level direction and agreement with details to follow.

Christina Walsh

Following are my comments in both broad perspective, as well as the ability to effectively implement the clean-up path forward. I appreciate the opportunity to participate in the process of protecting our local environment as it relates to the Santa Susana Field Laboratory, including the very complex scientific regulatory policy challenges.

First the key differences between what was first proposed and what we have today: Norm's proposal spoke of the presumptive remedy approach. While we agree that the proposal of a landfill is inappropriate, there are many proven technologies for in-place treatment, sequestering, containment, and advanced attenuation of contaminants through phytotechnologies, biotreatment, as well as, soil vapor extraction and other treatment technologies that exist today and have EPA guidance and data to support these methods.

Alternative in-place treatment methodologies should be considered wherever feasible as these methods don't come with the same negative impacts to the local environment, local endangered habitats, and surrounding communities.

Response: The Agreements in Principle do not preclude the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment of soils to achieve the identified cleanup standards. Although it is impossible to know until the site is fully characterized whether any soils may be able to be addressed in this way, DTSC agrees that the use of these approaches has the potential to significantly reduce the amount of soil requiring excavation and offsite disposal. The final Administrative Orders on Consent make clear that the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment is allowed, and requires treatability studies to be done to assess their viability.

Everyone wants to be safe. Can we have it both ways?

I think we can, but we have to be willing to think outside the box, using thoughtful decision processes. That is what CEQA is for, and you cannot possibly follow it as the AIPs are currently written.

Make no mistake, this solution CAN work with key revisions:
1. An important feature of the AIP as written that I did not properly understand before, and that is the fact that no balancing criteria can be applied. This is unacceptable and a 5% adjustment cap for endangered species does not adequately protect the natural and cultural resources, not to mention the historic resources of the site as it tells our nations story of energy and space and how these technologies began. Instead of a black-eye,

this site should represent that history with the honor it deserves, right along side the the environmental and health costs also associated with these technologies.

Response: The 5% refers to the proportion of the total amount of contaminated soil identified in the Remedial Action Implementation Plan.

The 5% cap on exceptions refers only to the exercise of the exception related to circumstances where DOE or NASA desire to claim that cleaning up to the specified standards is not technically achievable. The other exceptions listed (limits of detection, protection of endangered species, and preservation of Native American cultural resources) operate without limitation.

2. If we are to skip the risk assessment step in the process, there are advantages in both time and cost, but must be balanced using scientific criteria. For COCs with limited risk based on the land-use scenario, must have a mechanism to counter balance those environmental impacts. Similarly, with higher risk-associated contaminants, remaining balancing criteria to make balanced, protective and long range decisions so we don't destroy what we are trying to save. We need possibly secondary look-up tables that are risk-derived, to be applied to the process to the remedy selection process.

3. The single "bright line" approach is inappropriate where no balancing criteria can be applied. Instead, a range should be developed for each each contaminant, based on "sensitivity zone" (meaning different factors of background to be applied based on fate of transport, and other potential migration-pathway concerns that bring the particular contaminant to a different "weighted" of concern and need for cleanup, as well as protection of local habitat and endangered animal and plant species.

Response: Please see the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments for the discussion of the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes, the exercise of the "balancing criteria," and the application of and compliance with SB 990.

By adding a phyto-technology layer to the remedy decision tree, costs can be cut way down, as well as soil removal volumes which translate to a burden to someone else.

Response: The Agreements in Principle do not preclude the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment of soils to achieve the identified cleanup standards. Although it is impossible to know until the site is fully characterized whether any soils may be able to be addressed in this way, DTSC agrees that the use of these approaches has the potential to

significantly reduce the amount of soil requiring excavation and offsite disposal. The final Administrative Orders on Consent make clear that the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment is allowed, and requires treatability studies to be done to assess their viability.

4. By focusing on sustainable green technologies wherever feasible, dust goes down, truck exhaust, and mileage impacts also go way down. By focusing on the realities of groundwater contamination which is not part of this order despite it being one of the primary drivers of the cleanup, we can approach some of these decision points through long-range planning like planting stands of willow trees to help support and sustain groundwater treatment and containment. "wear the water out" through repeated treatment through irrigation and filtration using both phyto and other technologies to render harmful contaminants unharmful. In situ treatment must be a part of the equation to limit the filling of thousands of unnecessary trucks.

Response: The Agreements in Principle do not preclude the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment of soils to achieve the identified cleanup standards. Although it is impossible to know until the site is fully characterized whether any soils may be able to be addressed in this way, DTSC agrees that the use of these approaches has the potential to significantly reduce the amount of soil requiring excavation and offsite disposal. The final Administrative Orders on Consent make clear that the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment is allowed, and requires treatability studies to be done to assess their viability.

5. Waste Classification through this AOC process is wholly inappropriate. LLRW is not appropriate for all waste above the designated bright-line number. Soil segregation, classification, and disposal site decisions should be made based on current EPA guidance and regulatory ranges based on facility limitations. Local background has no basis for soil classification in other states.

Response: Existing regulations require that these soils be disposed in this manner. The Agreements in Principle do not define or classify wastes (either radiological or chemical). The Agreements in Principle only identify how the identified contaminated soils are to be disposed.

6. For constituents not found in nature, extended background analysis of a larger list may be necessary. Also, I believe reporting limits should be used, not detection limits that are not necessarily defined consistently.

Response: The U.S.EPA Radiologic Background Study and the DTSC Chemical Background Study will provide background values for all radionuclides and potentially

harmful chemicals expected to be found locally. As presented in the Agreements in Principle, "Look-up Tables" will be developed by both U.S.EPA and DTSC which are to contain the cleanup standards for radiological and chemical contaminants. These lookup tables will be used for the cleanup decisions at the site.

The use of the term "detection limit" in the Agreements in Principle was intended as a generic term, because of the differences in the way radiological and chemical constituents are measured in laboratories. The term will be more explicitly defined in the final Administrative Orders on Consent.

7. The development of background as well as the cleanup remedy decisions will require statistical averaging for proper population comparison, and therefore think this concept is being misused here, to reflect a rigid "compliant" stance, but is a necessary part of developing these standards fairly, appropriately, and responsibly.

Response: DTSC has confirmed, through its discussions with U.S.EPA, that the use of "not to exceed" cleanup standards is a standard practice and has been used by U.S.EPA in a number of circumstance. The confirmation sampling protocol that was made available for public comment as well was developed by DTSC, DOE and U.S.EPA, and reflects an approach accepted by all three agencies.

8. The FSDF (former sodium burn pit) was an area cleaned up 10 years ago down to bedrock, new "clean" soil brought in, and now, 10 years later the clean soil is recontaminated from the continued groundwater contamination below. This alone, demonstrates the need to look at alternative solutions and combined solutions since soil removal alone is clearly NOT the answer.

Please consider a combined solution putting protection, using balanced decision-making processes up front, with balancing criteria and alternative in-place phyto technology solutions that help cut cost, protect the existing environment, as well as minimizing the negative impacts of thousands more truckloads. Also let's not forget that time is part of the equation that leads to harms way, and by containing and dealing with seep and other migration pathways with the best science has to offer, not just haul it to make it someone else's problem.

Response: The Agreements in Principle do not preclude the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment of soils to achieve the identified cleanup standards. Although it is impossible to know until the site is fully characterized whether any soils may be able to be addressed in this way, DTSC agrees that the use of these approaches has the potential to significantly reduce the amount of soil requiring excavation and offsite disposal. The final Administrative Orders on Consent make clear that the use of onsite

bioremediation, soil vapor extraction, in situ remedies or other onsite treatment is allowed, and requires treatability studies to be done to assess their viability.

Following is a brief effort to provide context to my position on these issues:
For background purposes, I have been involved for approximately 10 years with the investigation and cleanup on an extremely detailed level. I have personally taken over 20,000 photographs of the site, both from the ground and the air, and have covered most of the site on foot as well. When I first began my ground-truthing of the site, it was not what we see today. Thanks to efforts of good people at DTSC and the Regional Board, as well as the dedication of individuals responsible for the cleanup within the responsible parties.

There is an entirely new level of oversight, which in my view changed with Norm Riley and his willingness to come and look at a dump in the neighboring creek we found, which later resulted in 11,000 cubic yards of soil removal down the northern drainage, and shortly following, he issued an ISEO and then the 2007 Consent Order signed by all parties and began a true path forward that went from decades of stalemate, inaction, to real progress. But then, as often happens, the political pressures to enact that same change, or paradigm-shift, wind up countering in a way where science gets left behind. A good friend once said, "this place is going to get cleaned up to a political standard." After seeing the political circus of the past few weeks, all clammering to get on the "winning train" complete with the photo-ops at the gate indicative of more of the same bad politics that led to the dismissal of Mr. Riley and the falling apart of 10 months of good-faith negotiations and the subsequent litigation where we continue to make lawyers rich instead of putting that money into the scientific effort needed to achieve these difficult challenges.

I remember hearing about the discussions surrounding this proposal more than a year ago, when Norm first brought the idea forward about the presumptive remedy approach and skipping years and millions and getting a better, smarter cleanup as well. Everyone liked it, even Dan at the time. Soon there was a counter, and the rumbling of more bad politics, and the idea was dead, along with a career, maybe more. And what are we left with?

Now, thanks to Secretary Chu and others who saw the wisdom in finally finding a path forward, that idea was revived, but with some key differences that need to be addressed in order to make it the solution we all want it to be.

Thank you for considering my comments in the decision and final document development process. During our cag webex discussions we have had extremely valuable discussion and debate over these issues, and hope these considerations can be made, as there are so many who care so much about the future of the site as it impacts

us, the people below. I live at the two mile mark and have lived In West Hills for over 30 years growing up on a horse riding up Dayton Canyon. I founded cleanuprocketdyne.org in early 2001 and co-founded an environmental advocacy museum dedicated to the proper clean up of the site in 2008.

Since founding a community advisory group despite DTSCs denial of our valid petition has resulted in building our own and very productive process designed around inclusive discussion and debate using webex online technology bringing people at distance, together In so many ways beyond physical proximity. Participation from regulators and community people as well as the responsible parties has been key to a greater common understanding and is necessary in developing a sound, enforceable administrative order on consent that can be implemented in a way that makes sense. It is my hope that DTSC and the other regulatory bodies as well as the responsible parties will continue to come together to exchange ideas in a real "roll up our sleeves and collaborate" approach

Abraham Weitzberg
Woodland Hills

Subject: Comments on the JOINT SETTLEMENT FRAMEWORK Final Agreement in Principle between The U.S. Department of Energy and the State of California Regarding Cleanup of Area IV of the Santa Susana Field Laboratory

This memorandum presents my comments on the subject document. These comments apply equally to the Final Agreement in Principle between NASA and the State of California. While my comments specifically address the remediation of radioactive contaminants, they also apply to a large degree to the remediation of chemical contaminants. Because many of the possible contaminants can exist at SSFL from sources other than SSFL site activities, differentiating those contaminants from background is much more challenging than for contaminants where there are no natural or environmental background sources.

While the proposed approach of cleanup to background appears to be straightforward and simple, the document as presented is overly simplistic, too prescriptive without providing technical justification, and avoids discussing the essential implementing details needed to assess the adequacy of the proposed cleanup approach. It appears to be a political document rather than one developed with an understanding of the practical technical issues that will have to be addressed in order to have a successful site cleanup. If Assemblymember Brownley's press release is correct, the agreement is the direct result of top-down pressure on DOE and NASA, rather than bottoms-up evolution from those with the required technical expertise to accomplish the cleanup.

The following sections present the areas where I believe substantial discussion and change will be needed before the proposed Joint Settlement Framework should be accepted by the responsible parties, the State of California, or the affected stakeholders.

Determination of Background and Levels of Contaminants Requiring Remediation

The basis of this agreement is that "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)." This simple statement presupposes that "Local Background" is an unambiguous quantity that can be readily quantified and agreed to by all parties concerned. Unfortunately this is not the case, and there are numerous issues that must be resolved to even come close to this objective.

EPA addresses this question to some degree in a number of their documents. For example, in a report by Anita Singh, there is an Appendix D which states:

"APPENDIX D. DEVELOPMENT OF BACKGROUND CONCENTRATION LIMITS FOR SOIL This appendix describes the statistical methodology used to develop background concentration limits (BCLs) for soil. ProUCL software (USEPA, 2007b) was selected to perform the statistical analysis because it includes methods for analyzing background data, including the Chebyshev method for upper prediction limits (UPLs), as discussed below. In addition, the current version of ProUCL includes methods for analyzing censored data such as the Kaplan-Meier (KM)method. ProUCL was developed for the U.S. Environmental Protection Agency (USEPA) and is widely used by environmental professionals to calculate exposure point concentrations for use in risk assessment."

Therefore, to even start down this path there must be agreement that the remediation targets are BCLs and UCLs, which are substantially above what is commonly thought of as "background levels" by local activists and possibly some government agencies as well. Further complicating the definition of "local background levels" is the distinct possibility that there will be several statistically different groups of background data for the same radionuclide, determined by factors such as different geological formation, weathering and drainage characteristics, or soil composition. To combine such groups would certainly result in causing the higher concentration areas to be considered above background, even though they were all natural.

The possible significance of this issue can be seen in the conclusions of a 1994 paper, "INVESTIGATIONS OF NATURAL VARIATIONS OF CESIUM^{137} CONCENTRATIONS IN RESIDENTIAL SOILS.

- *The analysis indicates that fallout deposition data do not adequately predict the variability in local background concentrations for ^{137}Cs in soil. Surface samples from undisturbed soil produce the greatest variability and can differ by several orders of magnitude. Surface sample geometric mean concentrations are in the range from 0.3 to 3 pCi/g [10 to 110 Bq/kg] with the range of the 95th percentile concentrations extending to about 20 pCi/g [700 Bq/kg].*
- *Areas that collect rain water have significantly higher concentrations of ^{137}Cs in soil than open areas. The geometric mean concentrations in drainage areas are typically 3 times that of non-drainage areas.*
- *The lognormal distribution is generally more representative of environmental concentrations of ^{137}Cs than the normal distribution."*

The last bullet is of note because most of the commonly used statistical methods, including the above EPA paper, rely primarily on assumptions of single populations and normal distributions. If lognormal or other distributions are present, more sophisticated statistics would be required to determine "local background levels."

Finally, there is the proposed use of look-up tables to determine decontamination requirements without any use of risk assessments. Note that the customary basis for making cleanup decisions in the US has been and still is risk assessment. There has been no justification presented why arbitrary fixed limits would be preferred to accomplish the desired cleanup in a real project where each remediation activity comes with its own risk to remediation workers, neighbors, and the public along the routes of soil transport, as well as negative impacts on the areas being remediated. The issue can be easily illustrated by looking at contaminant concentrations that are only slightly above the look-up table values. Knowing that risks near background are already very low, in the 10^{-5} and 10^{-6} range, how much additional risk abatement would be achieved for concentrations that were only 0.1% above the table values, or 1%, or even 10%. One would think that any rational process would not willingly incur the far greater risks of removing and replacing those soils, just to achieve negligible risk reduction. Additionally, the costs and schedule impacts of removal and transport are the same whether the contaminants are at high concentration or just above background. Remediation with negligible benefit only delays completion of the project.

Response: The Agreements in Principle anticipate that the U.S.EPA and DTSC will be, through their respective Radiologic Background Study and Chemical Background Study, using appropriate statistical methods that are to account for the natural variations that are to be expected to be found in background. These statistical approaches are intended to avoid or significantly reduce the possibility of concluding that observed concentrations that are within expected background concentrations ranges are erroneously identified as contamination. In the coming months, both U.S.EPA and DTSC will be proposing Statistical Evaluation Plans that contain the statistical approaches to be employed, and the use of the derived background values as cleanup values will be addressed in those plans. DTSC suggests that comments related to these background calculations be directed toward those discussions.

Exceptions

The 'possible exceptions' portion of the Final Agreement in Principle is extremely unrealistic, with the exception of the Endangered Species Act (ESA). The listed exceptions are very few and there is no discussion of the meaning of 'where unavoidable by other means.' I would expect that there could be a number of situations that would preclude achieving the desired remediation without excessive cost or damage to the site, and for which any reasonable person would agree that the risk reduction benefit would not warrant the cleanup to background. This is nowhere addressed or permitted in the sense of a 'force majeure' exception, such as is acknowledged for the ESA exceptions.

Response: DTSC understands that the costs associated with all of the required characterization and cleanup activities at the Santa Susana Field Laboratory will be

significant. It is regrettable that the actions of Boeing, DOE and NASA have resulted in contamination of the site to the extent that the volumes of soil requiring cleanup may be significant. It is also regrettable that the impacts and costs of accomplishing the necessary cleanup may also be significant.

Consideration is acknowledged for "Other unforeseen circumstances but only to the extent that the cleanup cannot be achieved through technologically feasible measures." However, the a priori limitation to less than "five percent of the total soil cleanup volume" cannot be justified on any basis. It presupposes the knowledge of the limitations of technologically feasible measures for yet-to-be-determined remediation activities, as well as the total volume of the after-the-fact total soil cleanup volume. Exceptions must be allowed during the cleanup, so that it can proceed. What would happen if the five percent allowance was used and another technologically infeasible situation arose? A more flexible process is needed. Why not 6, or 7 or 10%, or more, if justified on a risk reduction basis and technical feasibility?

An exception is noted when "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." Detection limits have more uncertainty than background limits because they are single estimated values and do not have the statistical distribution that would be observed for actual radionuclides in the various natural environments. It is illogical to mandate clean up to detection limits, whether or not they pose a significant health risk. Just because one can measure to parts per trillion does not mean that there is a health risk at that level. Also as detection limits get better even more cleanup would be required, irrespective of risk reduction.

There are other situations that can be envisioned that could warrant an exception. For example, consider the case where there is only one radionuclide above the specified cleanup threshold, with all of the others well below cleanup levels or entirely absent. As some have suggested, the proposed cleanup should be based on a single constituent being over limit, independent of any risk considerations. In the above case, the replacement soil need only be below cleanup limits and, in fact, can have more total radioactivity and hence more risk than the soil being removed. Based on total radionuclide content and its risk, one can envision many scenarios for which there would be essentially no risk reduction if this soil was replaced by soil at background. Why do the work and damage the environment for no benefit? A more reasonable plan is needed that would accommodate such marginal situations.

Response: The 5% refers to the proportion of the total amount of contaminated soil identified in the Remedial Action Implementation Plan.

The 5% cap on exceptions refers only to the exercise of the exception related to circumstances where DOE or NASA desire to claim that cleaning up to the specified standards is not technically achievable. The other exceptions listed (limits of detection, protection of endangered species, and preservation of Native American cultural resources) operate without limitation.

Consideration of Alternatives and Use of Risk Assessment

The stated requirements of "No 'leave in place' alternatives will be considered" and "No on-site burial or landfilling of contaminated soil will be considered" are too restrictive and do not allow technically preferable alternatives to be considered on an as-needed basis. In addition to the examples cited above, because of variability in local background some soil above background in one area could be below background in another. Why could it not be used for fill in the second area if it meets the same criteria as off-site soil? What about risk and what if soil is only 1% above background? Or 2%, etc. Where is common sense and balance of risk, benefit and cost?

Response: The Agreements in Principle do not preclude the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment of soils to achieve the identified cleanup standards. Although it is impossible to know until the site is fully characterized whether any soils may be able to be addressed in this way, DTSC agrees that the use of these approaches has the potential to significantly reduce the amount of soil requiring excavation and offsite disposal. The final Administrative Orders on Consent make clear that the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment is allowed, and requires treatability studies to be done to assess their viability.

The draft agreement also states "Development of risk assessments will not be required." This policy is contrary to all prior cleanup practice and substitutes arbitrary political pre-judgment for any rational decisionmaking process that would involve risk, benefit, and cost tradeoffs. As a taxpayer and a member of the affected public, this irrational position should not be permitted. If there is no risk-reduction benefit, why should unnecessary remediation be performed? It makes no sense.

Response: As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," the Agreements in Principle are based on the application of risk based criteria and other cleanup procedures and policies.

In 2007 a lawsuit against DOE was won by the NRDC, CBG, and the City of Los Angeles. The judgment stated that DOE was in violation of NEPA and required DOE to prepare an Environmental Impact Statement (EIS). A key element of an EIS is risk assessment. If it was important enough to force DOE to stop remediation and do an EIS and risk assessment in 2007, why is a risk assessment no longer necessary in 2010? Once the data is assembled the risk assessment is very straight forward and provides a rational basis upon which to make cleanup decisions. It considers risk to the environment, risk to workers, and risk to the public from remediation activities, as well as the risk-reduction benefits to be achieved from remediation? Risk assessment is the only way in which objectives decisions can be made for those cases at the margin. Where contaminants are significantly above background there is no question about the need for remediation. However, at the margin, there must be a rational process to decide when remediation does more harm than good, and allow the no-action alternative to be chosen. This process must be incorporated in any consent agreement.

Response: As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and National Environmental Policy Act (NEPA) and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," the Agreements in Principle are based on the application of risk based criteria and other cleanup procedures and policies.

DTSC believes that the clean up approach that is represented by the Agreements in Principle is one that is protective of human health and the environment and is fully consistent and compliant with state and federal clean up laws and regulations, including SB 990.

Cost and Schedule

The present draft framework does not address the potential cost of the remediation mandated by the agreement. As a taxpayer, I do not want to pay for remediation activities that have only negligible risk reduction benefits. Neither do I want to see SSFL substantially disfigured by non-beneficial remediation activities. I also believe it is wasteful and counterproductive to expect any RP to agree to those portions of an agreement that can lead to large future unquantifiable costs, without commensurate risk reduction benefits.

Response: For purposes of implementing a cleanup of the Santa Susana Field Laboratory, DTSC must implement the provisions of SB 990, which mandates that the anticipated land use in establishing cleanup standards be assumed to be rural residential or suburban residential, whichever is more protective.

DTSC understands that the costs associated with all of the required characterization and cleanup activities at the Santa Susana Field Laboratory will be significant. It is regrettable that the actions of Boeing, DOE and NASA have resulted in contamination of the site to the extent that the volumes of soil requiring cleanup may be significant. It is also regrettable that the impacts and costs of accomplishing the necessary cleanup may also be significant.

The draft framework states "Scheduled completion of soils cleanup remains as 2017. " There is no basis for anyone to agree to such a schedule, particularly since there is no precedent for the kind of remediation that is specified by the draft. How can any schedule be agreed to before the background and site studies are completed and an estimate is made of the required remediation? This is nonsense and should be removed from the document, or left as a TBD.

Response: As to the projected cleanup completion date, the commenter is correct in the observation that accomplishing cleanup by that date is dependent upon actual soil volumes that will be detailed in the anticipated Remedial Action Implementation Plan. When characterization is complete, and that Plan is developed, schedules for implementation and completion will be presented.

This comment appears to be erroneously based on the premise that the outcome of the exercise of any available balancing criteria, in the context of the cleanup requirements for the site that are specified in State law (SB 990) as well as dictated by local land use decisions, would yield a result different than what is described in the Agreements in Principle. Please refer to the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments for the discussion of the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria."

In addition, the commenter presents an argument that the scope of the cleanup as described in the Agreements in Principle would extend the implementation of the cleanup beyond what may have otherwise been the case. DTSC disagrees, and believes that the Agreements in Principle, by condensing the oftentimes lengthy and contentious procedural requirements of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," presents the only practical way by which the goal of 2017 may actually be met. Regrettably, the delays that have been presented by Boeing, DOE and NASA in negotiating revised agreements to implement State law standards has presented the most real challenge to achieving this date.

Other Issues

The draft framework states for Disposal of Contaminated Soils, "Soils contaminated with radioactive contaminants above local background to licensed low-level radioactive waste (LLRW) disposal site or an authorized LLRW disposal facility at a DOE site." Such a requirement arbitrarily defines any soil above local background as LLRW, whether it meets the Federal requirement for burial in a licensed disposal site or not. This disposal requirement is beyond the mandate of DTSC and should be removed. Much of the soil that is likely to be removed will be only slightly above SSFL local background and well within the radioactive content range of uncontaminated soils throughout the United States. How can such soil be mandated to go to a LLRW site, which may be in short supply and entail unnecessary cost?

Response: Existing regulations require that these soils be disposed in this manner. The Agreements in Principle do not define or classify wastes (either radiological or chemical). The Agreements in Principle only identify how the identified contaminated soils are to be disposed.

An example of the folly of this requirement can be seen from the recent furor over NASA's planned removal of some soil containing ^{137}Cs. It was called LLRW by the activists and caused letters to be written by our elected officials to the DOE Secretary. The fact is that if it was not for the chemical contamination the soil would otherwise have been considered as clean fill and not as LLRW.

Response: Existing regulations require that the referenced soils be disposed in the prescribed manner.

Conclusions

The concept of a cleanup to background approach represents an attractive top-level guiding principle. However, as written, the current draft framework does not contain sufficient details to translate the top-level concept into a workable cleanup. Additionally, the draft framework contains unneeded and counterproductive requirements that will further hinder reaching a binding consent agreement followed by a timely and satisfactory cleanup that can be supported by all parties. If the issues I have identified above are addressed, then I believe the framework would prove workable. Perhaps the most important modification is accepting the reliance on risk assessment to enable key decisions to be made at the margin, throughout the cleanup planning and

implementation. Political influence needs to be replaced by a more visible and quantifiable process that is based on science and accepted methodology.

Subject: Addendum 1-- Comments on the JOINT SETTLEMENT FRAMEWORK Final Agreement in Principle between The U.S. Department of Energy and the State of California Regarding Cleanup of Area IV of the Santa Susana Field Laboratory

After rereading my original comments date September 8, 2010, I decided that there were two that may not have been clearly presented.

Accepting risk assessment as the basis for making remediation decisions at the margin, throughout the cleanup planning and implementation.

The draft Final Agreement in Principle identifies a look-up table as the means of determining levels of contaminants that must be remediated. It is reasonable to expect that there will be many cases for which the contaminants will be only slightly above the look-up table values and for with the incremental health risk is negligible. For these cases an alternative to leave the contaminants in place because of the greater risk to the cleanup workers and public and damage to the site would outweigh the negligible remediation benefits. Risk assessment is the accepted method for making these decisions and it must be incorporated in the process.

Response: As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and National Environmental Policy Act (NEPA) and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," the Agreements in Principle are based on the application of risk based criteria and other cleanup procedures and policies.

DTSC believes that the clean up approach that is represented by the Agreements in Principle is one that is protective of human health and the environment and is fully consistent and compliant with state and federal clean up laws and regulations, including SB 990.

Visible processes for responding to comments on the draft Final Agreement in Principle, developing the Consent Orders, and making decisions during the planning and conduct of the cleanup.

To be credible these processes must be fully visible to the public and not subject to political influence. No member of the public should be given special consideration in this regard.

Response: The final Administrative Orders on Consent will establish the requirement that the draft Remedial Action Implementation Workplan, along with all other workplans and reports, is to be shared with the community for public review and comment.

These comments apply to both the DOE and NASA Joint Settlement Frameworks.

Subject: Addendum 3 *– COMMENT RESOLUTION AND REVISION TO AIPs*

After reflection on the draft documents, and the presentations and comments made at the workgroup meeting last week, the mechanism for discussion and resolution of comments and modification of the draft documents is of critical importance if the "cleanup to background" approach is to be eventually implemented. It is not clear from the documents who actually authored them, and what the author's intent was in the problem areas that I have identified. It was stated that the DTSC technical staff did not have input and that they were reviewing the documents for the first time. I strongly doubt that DOE or NASA would have written the documents as presented. I believe it is necessary for the individuals who originally came up with the detailed requirements to come forward and explain their reasoning as to how the requirements would be implemented in a practical cleanup, and meet the objectives of the cleanup. It is only by such dialog that reasonable compromises can be identified and included into legal consent agreements. The present documents have too many problems to be addressed simply by a few word changes.

Response: DTSC agrees that the terms and provisions of the Agreements in Principle must be embodied in final Administrative Orders on Consent that specify implementation details to accomplish what they describe and to be enforceable. It is DTSC's intention to resolve remaining issues and reach agreement as quickly as possible so that the activities described in the Agreements in Principle can be implemented.

Mary Wiesbrock, Chair, Save Open Space

SUMMARY
Add to scope of agreement:

1) Testing for Rads should include all four areas of SSFL as rads have been found everywhere because of the nature of releases of hazardous and radioactive contamination that occurred. These hazardous activities include the nuclear accidents and standard operational waste disposal practices: burning, burying, bleeding of hot lab canisters, emptying into drainages, and spraying into leach fields; and

Response: DTSC will continue to work with NASA to address the possibility that radiological contaminants may be present outside of Area IV, and in NASA's Area II and portion of Area I, and ensure that the assessment of site conditions includes analysis for radiological contaminants.

2) Testing for Rads and chemicals should include testing the sediment in all off site drainages which have historically received runoff contaminated by SSFL wastes.

Response: DTSC acknowledges that DOE's and NASA's obligations under the Agreements in Principle do not extend to radiologic or chemical contamination that does not demonstrate a contiguous relationship to the contamination on site. A link between a site and noncontiguous contaminants that may have been disseminated by wind is much more difficult to establish. Effects due to this type of mechanism have not been demonstrated for the Santa Susana Field Laboratory, but they have not been ruled out either.

THANKS TO NORMAN RILEY
This Agreement in Principle is based on a new and innovative approach. This clean up concept to clean up to background was first broached by Norman Riley in July of 2009. (Source: Clarissa Marsh's stories, Simi Valley Acorn). We wish to thank Norman Riley for this concept which will result in a proper clean up by 2017 after years of delays.

"LEAVE IN PLACE"
After the characterization process, the remedial action implementation work plan should outline where "Leave In Place" is warranted. What actions will be taken when substances are found that are "near background", and/or if background itself is "above standards?" It is unknown now whether allowing only 5% of the total soil cleanup to be left in place is too restrictive.

Response: The 5% refers to the proportion of the total amount of contaminated soil identified in the Remedial Action Implementation Plan.

The 5% cap on exceptions refers only to the exercise of the exception related to circumstances where DOE or NASA desire to claim that cleaning up to the specified standards is not technically achievable. The other exceptions listed (limits of detection, protection of endangered species, and preservation of Native American cultural resources) operate without limitation.

Bio-remediation and phyto-remediation and any other proven future technology could be used. Where can these technologies best achieve the goal of cleanup while balancing the environmental impacts? After the characterization process, it can be determined where exceptions to trucking need to be considered utilizing balancing criteria.

Response: The Agreements in Principle do not preclude the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment of soils to achieve the identified cleanup standards. Although it is impossible to know until the site is fully characterized whether any soils may be able to be addressed in this way, DTSC agrees that the use of these approaches has the potential to significantly reduce the amount of soil requiring excavation and offsite disposal. The final Administrative Orders on Consent make clear that the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment is allowed, and requires treatability studies to be done to assess their viability.

After characterization, CEQA/NEPA should be utilized to analyze the amount of soil which requires removal and how many truck trips will be needed. This new cleanup must follow these environmental laws which will serve to identify and mitigate the environmental impacts of all the truck trips. This in turn will help protect the welfare and health and safety of the west valley residents from adverse environmental impacts from the additional traffic and its related impacts.

Response: At or near the same time that the draft Remedial Action Implementation Workplan is developed and shared with the community for public review and comment, CEQA documents will also be developed that present an assessment of environmental impacts and proposed mitigation options.

"Leave in Place" should be considered when federally/state endangered species are present like the Astragalus brauntonii because of significant impacts on a delicate population of plants which might be wiped out from this earth. There is prudent alternative technology which would allow "Leave In Place" instead of wiping out any federally/state endangered species. In the case of the delicate Astragalus it requires a specific lime type soil habitat to grow well.

Response: Although the Agreements in Principle only reference federally endangered species as a possible exception to carrying our the described cleanup, DTSC recognizes the role and authority of the State Department of Fish and Game and intends to coordinate closely with the State Department of Fish and Game throughout the site characterization and cleanup process.

DTSC will consult and communicate with habitat and ecosystem experts to ensure that restoration plans are appropriately developed and give those efforts the maximum opportunity for success.

The entire SSFL is part of a wildlife movement corridor for the Santa Monica Mountains National Recreation Area. There could be areas in Area IV impossible to clean up to background which can be made available to wildlife and made off limits to hikers.

Response: For purposes of implementing a cleanup of the Santa Susana Field Laboratory, DTSC must implement the provisions of SB 990, which mandates that the anticipated land use in establishing cleanup standards be assumed to be rural residential or suburban residential, whichever is more protective. Any proposal to use institutional controls, however, is impossible to accommodate and remain in compliance with cleanup requirements for the site that are specified in State law (SB 990) as well as dictated by local land use decisions.

DTSC will consult and communicate with habitat and ecosystem experts to ensure that restoration plans are appropriately developed and give those efforts the maximum opportunity for success.

SCOPE
The DOE/NASA soil surveys need to include all of Runkle, Bell Canyon buffer area, and all drainages leaving SSFL. These areas were potentially contaminated from runoff from the burn pits in the early days, aerial dispersion from the burns, and contaminated runoff.

It is inadequate and a danger for public health and welfare for the federal radiological scope and NASA's chemicals to just include SSFL areas and buffers. It is no longer a contiguous pattern of contamination after some 40 years of activities which includes combustion dispersal. The activities which have caused the pollution have stopped at the top of the hill. The sediment in the drainages (Runkle, Meier, Dayton, Las Virgenes, and Bell) below the SSFL hill needs to be sampled throughout these water courses.

Response: DTSC acknowledges that DOE's and NASA's obligations under the Agreements in Principle do not extend to radiologic or chemical contamination that does not demonstrate a contiguous relationship to the contamination on site. A link

between a site and noncontiguous contaminants that may have been disseminated by wind is much more difficult to establish. Effects due to this type of mechanism have not been demonstrated for the Santa Susana Field Laboratory, but they have not been ruled out either.

The Agreements should include Boeing who owns the majority of the SSFL site.

DTSC would be pleased to discuss any and all of these issues further with Boeing as we look to resolve issues and reach agreement on the cleanup of the site as a whole.

GROUNDWATER
Both soil and groundwater studies should be coordinated and done at the same time.

Response: The Agreements in Principle address soils contamination only. However, although the Agreements in Principle only address soils contamination, that does not relieve DOE or NASA of their continuing responsibility to address the contaminated groundwater. Groundwater, and the parties' obligations regarding groundwater contamination will continue to be addressed through the 2007 agreement.

Jackie Young

I have several concerns about the Agreements in Principle:

1. There is no mention of SB990 which I think should be included. If we are cleaning up to residential standards, what keeps development of the land from happening?

Response: DTSC must implement the provisions of SB 990 for any cleanup of the Santa Susana Field Laboratory. Carrying out the cleanup specified in the Agreements in Principle is consistent with SB 990 and with local land use decisions.

Neither the Agreements in Principle nor any final Administrative Order on Consent can affect or influence decisions by the owners of the property regarding its planned future use. Those decisions will be a function of discussions between the property owners, the local government(s) that govern land use, and the community.

2. If these two government agencies can agree to sidestep State standards, what happens to the Boeing lawsuit? Doesn't this agreement prejudice the outcome?

Response: As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and National Environmental Policy Act (NEPA) and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," the Agreements in Principle are based on the application of risk based criteria and other cleanup procedures and policies.

DTSC believes that the clean up approach that is represented by the Agreements in Principle is one that is protective of human health and the environment and is fully consistent and compliant with state and federal clean up laws and regulations, including SB 990.

I would have preferred a release that included SB990 and/or Boeing.

DTSC would be pleased to discuss any and all of these issues further with Boeing as we look to resolve issues and reach agreement on the cleanup of the site as a whole.

3. The press releases sound like all is agreed. Why are they released without a comment from the WHNC? Why did DTSC agree to something that seems to ignore SB990?

Response: DTSC believes that the clean up approach that is represented by the Agreements in Principle is fully consistent and compliant with state and federal clean up laws and regulations, including SB 990.

4. The public needs more information on the trucks being sent down the hill.

Response: No matter what amount of contaminated soils are eventually calculated, DOE and NASA will need to identify, assess and mitigate any environmental impacts that result in the course of carrying out their cleanup responsibilities. The draft Remedial Action Implementation Plan must include a detailed soils management and transportation plan, and the accompanying CEQA documents must identify environmental impacts attributable to the transportation of soils and mitigation measures that are being proposed to mitigate those environmental impacts.

Anthony Zepeda
Concerned Citizen

I am a resident of the San Fernando Valley. I grew up in Woodland Hills, approximately three miles from the Santa Susana Field Laboratory ("SSFL") during the 1980s and 1990s. I distinctly recall my bedroom window shaking both night and day while NASA conducted rocket testing at SSFL.

Approximately ten years ago, I began attending the SSFL Workgroup meetings which take place every quarter at the Simi Valley Cultural Arts Center. During the early part of the decade, there was wide-spread disagreement amongst Workgroup members. DTSC staff, community members, and activists, debated the significance of scientific reports, cleanup policies, and a host of other cleanup-related issues. If my memory is correct, for quite some time DOE even refused to attend the meetings. Without a doubt, it appeared the community and its government had reached an impasse with regard to cleanup.

During the last two years, as the community became more involved with the SSFL cleanup issue, DTSC, DOE, NASA, and community leaders, began to engage in more constructive negotiations. As trust was built, so too was a real hope that a meaningful cleanup could be achieved. At long last, it appears that a thorough cleanup is within the community's grasp. Please accept my strenuous support for both the AIP with DOE and the AIP with NASA. It is my sincere hope that the Agreements are ratified by the interested parties so that they become legally binding documents.

These agreements are important to the community, as they constitute an acknowledgment by government that a problem exists at SSFL. More importantly, they are a blueprint for how to proceed with cleanup at SSFL.

Please move forward with the AIPs so that they become legally binding. The ratification of these agreements would be a significant victory for the community. I especially want to thank DTSC and CAL-EPA Secretary Linda Adams. Ms. Adams has shown great courage, both politically and personally, a fact that is not lost on members of the community who have carefully monitored the SSFL issue over the years. We owe Ms. Adams a debt of gratitude for her dedication to the health and safety of our community.

Response: DTSC appreciates the expressions of support for the Agreements in Principle and for the Administrative Orders on Consent that are to follow. No changes are required based on these supportive comments.

Comments and Questions on the Agreements in Principle from The Boeing Company

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

General Comments

The Boeing Company has reviewed the nonbinding Agreements in Principle (AIPs) announced by the State of California, setting out a proposed framework between the State, the Department of Energy (DOE), and the National Aeronautics and Space Administration (NASA) to address the cleanup of portions of the Santa Susana Field Laboratory. As the owner of a large portion of the site, Boeing is committed to actions which satisfy dual goals of cleaning up the site as necessary to protect public health and maximizing preservation of the fragile ecosystem, consistent with anticipated future use for open space parkland.

While we continue to support the goal of a comprehensive negotiated settlement between all of the parties to accelerate the cleanup process, we have a number of questions regarding the concepts set out in the AIPs. We will submit more detailed technical comments separately, but I wanted to focus on a few specific concerns in this letter, most of which we have previously raised with you and your staff.

Response: Neither of the Agreements in Principle with DOE and NASA relate to Boeing's obligations or responsibilities regarding the contamination for which it is responsible in Areas I and III at the Santa Susana Field Laboratory. DTSC would be pleased to discuss any and all of these issues further with Boeing as we look to resolve issues and reach agreement on the cleanup of the site as a whole. While DTSC looks forward to those discussions with the hope of reaching agreement, because Boeing broadly distributed its comments and questions throughout the community, DTSC has opted to respond to Boeing's comments and questions in the interest of helping the community understand the Agreements in Principle better, and to dispel any confusion that Boeing may have caused in the dissemination of its comments and questions.

We are concerned that the AIPs do not follow the normal processes applied under California and federal laws (e.g. CERCLA, NEPA, CEQA) and the Federal Endangered Species Act to balance the impacts of the proposed excavation to background with preserving the unique ecosystem of the site and mitigating adverse impacts on the human and ecological community.

Response: DTSC understands that the Agreements in Principle do not present to their readers how they follow "normal" processes in specifying the cleanup requirements found in them. Please see the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments for the discussion of the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria."

A 5% cap on any exceptions to excavation is a wholly arbitrary means of mitigating the impact of such a stringent cleanup on biological and cultural resources, neighboring families, and the surrounding community.

Response: DTSC believes the commenter is misinterpreting the Agreements in Principle. The 5% cap on exceptions refers only to the exercise of the exception related to circumstances where DOE or NASA desire to claim that cleaning up to the specified standards is not technically achievable. The other exceptions listed (limits of detection, protection of endangered species, and preservation of Native American cultural resources) operate without limitation.

Our calculations indicate that the background cleanup concept outlined in this framework could require the excavation of approximately three times more soil than would be required to meet residential standards applied at other sites in California, and four times more soil than would be required if the property were cleaned up based on its anticipated future use as "open space" recreational land.

Response: For purposes of implementing a cleanup of the Santa Susana Field Laboratory, DTSC must implement the provisions of SB 990, which mandates that the anticipated land use in establishing cleanup standards be assumed to be rural residential or suburban residential, whichever is more protective. Even absent SB 990, 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.

Extrapolating a cleanup to background approach over the entire site indicates that the volume of excavated soil would exceed 1.6 million cubic yards, which equates to 100,000 dump truck loads. A cleanup of 1.6 million cubic yards of soil would require extensive trucking, generating nearly 250,000,000 pounds of carbon dioxide, and consuming more than 10,000,000 gallons of fuel. Trucking will be necessary in any event, but

minimization of greenhouse gas emissions and air pollution must be a priority. The excavation of this much soil could result in significant ecosystem damage not only to the former NASA and DOE operational areas but also to surrounding undeveloped areas, as well as to areas containing fragile ecological and cultural resources. Excavation to this magnitude could "moonscape vast portions of the site," as indicated by Norm Riley, the previous DTSC SSFL Project Director.

Response: It is impossible to calculate the amount contaminated soils that could require removal at this time (although DTSC is aware that The Boeing Company has performed mathematical extrapolations based on a number of assumptions that may not be accurate – DTSC has not received a copy of any of Boeing's actual calculations nor a complete explanation of the assumptions it used in calculating its estimates). Based on comments from Boeing representatives, we know that they assumed that in situ treatment could not be used, that background values may have been based on averages rather that upper limits, and also assumed that soil vapor would cause the removal of soils. All of these inaccurate assumptions could greatly inflate any estimates of soil volumes.

DTSC understands that to carry out the cleanup specified in the Agreements in Principle could result in significant removal of contaminated soils. It is regrettable that the actions of Boeing, DOE and NASA have resulted in contamination of the site to the extent that the volumes of soil requiring cleanup may be significant. It is also regrettable that the impacts of accomplishing the necessary cleanup may also be significant. The arguments being raised by Boeing apply equally to any amount of contaminated soils to be removed, so it is unclear what Boeing's intentions are in raising them, other than as an indication of the magnitude of the environmental harm that Boeing, DOE, and NASA caused in the course of their operations, and as a preliminary indication as to the ancillary environmental impacts that Boeing, DOE, and NASA will need to mitigate in the course of carrying out their cleanup responsibilities.

We understand that you have promised the site can be restored to its original state. But our preliminary investigations have indicated it will be difficult to find imported soil that meets the "background" standard.

Response: DTSC sees no basis for this statement. The concept of "background" recognizes that there are levels of radiological and chemical constituents that exist in nature and from man-made sources (such as atmospheric fallout) that are not from this site. Soils from other locations, to the extent that they are not impacted from industrial activities, by definition should meet the background standard.

The use of onsite soil for backfill and restoration of excavated areas will result in further ecosystem disturbance and damage to the site. Moreover, rare plants and animals live

and thrive in this area and both state and federal laws recognize that avoidance of ecosystem destruction is the first priority because man's attempts to "restore" nature often fail.

Response: The Confirmation Sampling Protocol included a discussion of the possible onsite sources of backfill soils for excavations, but does not create an authorization or approval to use any particular onsite location for this purpose. As with the entirety of the anticipated cleanup activities, excavation for borrowing soils will be subject to all applicable federal, state and local requirements and must receive necessary permits to proceed. DTSC anticipates that these federal, state and local requirements will provide the necessary checks and balances to assess the legality and appropriateness of any proposal for the use of soils borrowed from any location, including sites that may be within the Santa Susana Field Laboratory.

The targeted cleanup completion date will be delayed for years by the increased number of dump truck loads alone, as compared to a cleanup that utilized standard balancing criteria that are applied to other sites under California and federal law.

Response: This comment appears to be erroneously based on the premise that the outcome of the exercise of any available balancing criteria, in the context of the cleanup requirements for the site that are specified in State law (SB 990) as well as dictated by local land use decisions, would yield a result different than what is described in the Agreements in Principle. Please refer to the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments for the discussion of the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria."

In addition, the commenter presents an argument that the scope of the cleanup as described in the Agreements in Principle would extend the implementation of the cleanup beyond what may have otherwise been the case. DTSC disagrees, and believes that the Agreements in Principle, by condensing the oftentimes lengthy and contentious procedural requirements of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," presents the only practical way by which the goal of 2017 may actually be met. Regrettably, the delays that have been presented by Boeing, DOE and NASA in negotiating revised agreements to implement State law standards has presented the most real challenge to achieving this date.

To summarize, the potential impact to site resources and the community as well as increased greenhouse gas emissions must be considered under CEQA, NEPA, and other environmental laws to determine if suitable alternatives would mitigate these impacts

while still providing for a safe and protective cleanup. We believe a protective cleanup can be achieved that also protects the biological, cultural and historic resources of the site and minimize disruption to the surrounding community.

We respectfully request that DTSC consider the following suggestions to achieve a protective and well balanced cleanup:

Use a risk-based approach to limit excavation quantities. For instance, the background cleanup could be applied to near surface soils while alternative risk based criteria or institutional controls are applied to deeper soils. Risk-based approaches are the standard used in many similar sites in accordance with state and federal guidance (e.g. McClellan Air Force Base near Sacramento, and LEHR near Davis, etc.)

Apply risk-based criteria and institutional controls as needed to limit impacts in the undeveloped portions of the site and/or culturally or ecologically sensitive areas.

Response: As described in the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments which describes the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," the Agreements in Principle are based on the application of risk based criteria. Boeing's proposal to use institutional controls, however, is impossible to accommodate and remain in compliance with cleanup requirements for the site that are specified in State law (SB 990) as well as dictated by local land use decisions.

Allow onsite bioremediation, soil vapor extraction and other in situ remedies consistent with sustainable environmental practices, as applied at other remediation sites.

Response: The Agreements in Principle do not preclude the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment of soils to achieve the identified cleanup standards. Although it is impossible to know until the site is fully characterized whether any soils may be able to be addressed in this way, DTSC agrees that the use of these approaches has the potential to significantly reduce the amount of soil requiring excavation and offsite disposal. The final Administrative Orders on Consent make clear that the use of onsite bioremediation, soil vapor extraction, in situ remedies or other onsite treatment is allowed, and requires treatability studies to be done to assess their viability.

Follow standard processes to protect California and federal listed endangered and threatened species and habitat, with appropriate avoidance measures to limit disruption

to ecosystems while still providing for a protective cleanup, as applied at other remediation sites.

Response: Please see the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments for the discussion of the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria."

Use concentrations incremental to background when evaluating areas for cleanup and importing backfill soil, as applied at other remediation sites.

Response: The Agreements in Principle anticipate that the U.S.EPA and DTSC will be, through their respective Radiologic Background Study and Chemical Background Study, using appropriate statistical methods that are to account for the natural variations that are to be expected to be found in background. These statistical approaches are intended to avoid or significantly reduce the possibility of concluding that observed concentrations that are within expected background concentrations ranges are erroneously identified as contamination. In the coming months, both U.S.EPA and DTSC will be proposing Statistical Evaluation Plans that contain the statistical approaches to be employed, and the use of the derived background values as cleanup values will be addressed in those plans. DTSC suggests that comments related to these background calculations be directed toward those discussions.

Use statistically-based sampling protocols to demonstrate that cleanup has been achieved, as applied at other remediation sites.

Response: DTSC has confirmed, through its discussions with U.S.EPA, that the use of "not to exceed" cleanup standards is a standard practice and has been used by U.S.EPA in a number of circumstance. The confirmation sampling protocol that was made available for public comment as well was developed by DTSC, DOE and U.S.EPA, and reflects an approach accepted by all three agencies.

Solicit input from all stakeholders into potential impacts of the cleanup process on resources; e.g. California SHPO, Native Americans, State and National Parks in addition to other local community groups, as allowed at other remediation sites.

Response: DTSC recognizes that any cleanup action to be taken must be in accordance with all federal, state and local requirements. The final Administrative Orders on Consent will establish that requirement, and all federal, state and local government agencies with jurisdiction will be consulted throughout the site characterization and cleanup process. In addition, *all* plans and reports that will be developed in the

implementation of final Administrative Orders on Consent will be made available for public review and comment.

Establish a soil volume quantity that would trigger the implementation of specific actions to mitigate further excavation, reduce truck traffic and air pollution, as allowed at other remediation sites. Instead of a 5% cap on any exceptions to excavation, establish a goal of 5% and use the standard State and Federal evaluation process (e.g. CEQA and NEPA) to limit further excavation and mitigate impacts.

Response: While the commenter is critical of and previously argued the arbitrary nature of a 5% cap on the use of a specified exception to the required cleanup standard, in this instance they are proposing the establishment and use of their own arbitrary cap, and to use it to limit the amount of cleanup to be conducted. There is no precedent, and as best as DTSC can determine, no basis for such an approach. To establish such a cap would require that DTSC, the future users of the site and the community surrounding the site accept contamination remaining at the site. This proposal would be in direct conflict with cleanup requirements for the site that are specified in State law (SB 990) as well as dictated by local land use decisions.

Boeing will provide technical questions and comments in a separate submittal for your consideration. We look forward to your responses, which will enable members of the community to understand the clean up objectives and allow us to evaluate unintended environmental consequences of the AIP cleanup concepts. Upon receipt of your responses, we respectfully request an opportunity to meet with you to discuss a clean up approach that is protective of human health and the environment and consistent with established state and federal clean up regulations.

Response: DTSC would be pleased to discuss any and all of these issues further with Boeing as we look to resolve issues and reach agreement on the cleanup of the site as a whole.

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

Technical Comments

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

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

We are committed to clean up Santa Susana in an expeditious manner that protects human health and the environment, while minimizing impact to neighboring families and communities. To that end, we eagerly await your responses to our comments and questions and look forward to continued discussions with you. Please contact me at (818) 466-8161 to discuss our comments.

Response: Neither of the Agreements in Principle with DOE and NASA relate to Boeing's obligations or responsibilities regarding the contamination for which it is responsible in Areas I and III at the Santa Susana Field Laboratory. DTSC would be pleased to discuss any and all of these issues further with Boeing as we look to resolve issues and reach agreement on the cleanup of the site as a whole. While DTSC looks forward to those discussions with the hope of reaching agreement, because Boeing broadly distributed its comments and questions throughout the community, DTSC has opted to respond to Boeing's comments and questions in the interest of helping the community understand the Agreements in Principle better, and to dispel any confusion that Boeing may have caused in the dissemination of its comments and questions.

Grouping 1: Technical

1. The AIPs state that the resulting cleanup is to be as close to local background as practicable and provides a maximum 5% volume exclusion for unforeseen circumstances that prevent the cleanup from being achieved due to technical infeasibility (which presumably includes impacts on ecological resources, cultural resources, or endangered species and habitats not falling under the AIPs' "possible exception" under the federal

Endangered Species Act). What is the State's basis for the maximum value of 5% for unforeseen circumstances?

Response: The commenter is misinterpreting the Agreements in Principle. The 5% cap on exceptions refers only to the exercise of the exception related to circumstances where DOE or NASA desire to claim that cleaning up to the specified standards is not technically achievable. The basis and purpose for the 5% is the desire to practically limit the use of the exception for "other unforeseen circumstances but only to the extent that the cleanup cannot be achieved through technologically feasible measures." Because the concept of technical feasibility is broad and largely undefined, there was significant concern that its use (and overuse) could negate the affect of the cleanup.

The other exceptions listed (limits of detection, protection of endangered species, and preservation of Native American cultural resources) operate without limitation.

2. The confirmation sampling protocol specifies that "sample averaging" cannot be used as it is at every other California and federal cleanup site, and that each and every sample with concentrations or activity above "Look-up Table" values have to be excavated and removed. This requirement is in direct conflict with USEP A and DTSC guidance that underpin the basis of risk assessments and clean-up verification sampling that use statistics to characterize and evaluate variability. What is the basis for applying this standard in these AIPs? Will this standard also apply to the federally-owned, NASA administered Areas I and II?

Response: DTSC has confirmed, through its discussions with U.S.EPA, that the use of "not to exceed" cleanup standards is a standard U.S.EPA practice that has been used by U.S.EPA in a number of circumstance. The confirmation sampling protocol that was made available for public comment as well was developed by DTSC, DOE and U.S.EPA, and reflects an approach accepted by all three.

DTSC intends to develop a similar confirmation sampling protocol that will apply to the federally-owned, NASA administered Areas I and II.

3. The confirmation sampling protocol specifies that for each source area that requires excavation, analytical test methods during confirmation sampling shall include all contaminants within the analytical suite associated with the contaminants of concern identified for that source area. The protocol also states that for radionuclides, the analytical suites shall be the same as those used by USEPA in its Area IV and Northern Undeveloped Area Radiological Study. Has the State considered the potential implications of this requirement associated with commingling of sources? What

definition will the State apply to "source area"? How would this concept apply to down-slope and drainage locations?

Response: The concept of "source area" as used in the Confirmation Sampling Protocol, refers to areas that have been required to be cleaned up as a result of contaminants with observed concentrations above the specified cleanup levels.

Grouping 2: Implementation

1. The AIPs specify that the sole remedy for chemical and radiological contamination is excavation and off-site disposal. Has the State estimated the volume of soil (both on- and off-site) that would require excavation, a fundamental step in identifying and evaluating a range of remedial alternatives? Our comparison of available sample data to expected "Look-up Table" values for potential "background" levels indicates that, under the concept proposed in the AIPs, more than 1.6 million cubic yards of soil would likely need to be excavated across SSFL.

Response: It is impossible to calculate the amount contaminated soils that could require removal at this time (although DTSC is aware that The Boeing Company has performed mathematical extrapolations based on a number of assumptions that may not be accurate – DTSC has not received a copy of any of Boeing's actual calculations nor a complete explanation of the assumptions it used in calculating its estimates). Based on comments from Boeing representatives, we know that they assumed that in situ or other on site treatment could not be used, that background values may have been based on averages rather that upper limits, and also assumed that soil vapor would cause the removal of soils. All of these inaccurate assumptions could greatly inflate any estimates of soil volumes.

2. The AIPs specify a completion date of 2017. How has the State determined the ability to meet that deadline? The 2017 date was originally established for a risk based cleanup to residential standards under the RCRA Corrective Action program in the 2007 Administrative Order on Consent. That 2017 date presumed remedies would be chosen using the typical evaluation of appropriate remedial alternatives, not excavation and off-site disposal of all impacted soils as the sole remedy, so that the amount of soil to be excavated and disposed of off-site would be far less than what we estimate the AIP's proposed "background" cleanup would require. Based on our recent experience in excavating and removing for disposal 10,000 cubic yards of soils to carry out the Interim Source Removal Action projects (ISRAs), it would take more than 11 years to truck from the site the more than 1.6 million cubic yards of soil required by implementing the AIPs site wide. Our estimates also indicate that the soil excavation and off-site disposal work would require approximately 100,000 large dump trucks (55-foot semitrailers) to

transport this volume of soil, and generate nearly 250,000,000 pounds of carbon dioxide and require more than 10,000,000 gallons of fuel. This would mean 35 trucks per day, 5 days per week, 50 weeks per year.

Response: As to the projected cleanup completion date, Boeing is correct in its observation that accomplishing cleanup by that date is dependent upon actual soil volumes that will be detailed in the anticipated Remedial Action Implementation Plan. When characterization is complete, and that Plan is developed, schedules for implementation and completion will be presented.

The commenter presents an argument that the scope of the cleanup as described in the Agreements in Principle would extend the implementation of the cleanup beyond what may have otherwise been the case. DTSC disagrees, and believes that the Agreements in Principle, by condensing the oftentimes lengthy and contentious procedural requirements of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria," presents the only practical way by which the goal of 2017 may actually be met. Regrettably, the delays that have been presented by Boeing, DOE and NASA in negotiating revised agreements to implement State law standards has presented the most real challenge to achieving this date.

3. The AIPs do not specify that soil excavations require backfilling, only that backfill must meet "background" specifications. Will the State require excavations to be backfilled? Will the State require that grading permits be obtained from Ventura County for both federally- and Boeing-owned land?

Response: The response to any particular excavation will be specified in the Remedial Action Implementation Plan, and could involve either backfilling, regarding and countouring, or no action. Any proposal to backfill, regrade or re-contour excavation areas after the removal of contaminated soils will be detailed in the Remedial Action Implementation Plan. The final Administrative Orders on Consent will establish that requirement, and all federal, state and local government agencies with jurisdiction will be consulted throughout the site characterization and cleanup process.

4. We believe it is likely that any source of imported fill will exceed the expected background Look-up Table values for at least one chemical or radionuclide. How does the State plan on determining what import backfill source will be acceptable if such an exceedance occurs? Will the State limit the distance from which import fill can be obtained? Having to obtain backfill soils from great distances would drastically increase the environmental impact of the clean up (e.g., truck traffic, greenhouse gas emissions, etc.).

Response: As quoted from the Confirmation Sampling Protocol:

> **"Backfill/replacement soils will be verified as acceptable for use pursuant to a sample and analysis plan prepared and implemented by USEPA, testing for chemical and radiological constituents and using analytical methodologies proposed by USEPA and consistent with this protocol. For any constituent for which there is no Look-up Table value, USEPA shall propose and DTSC shall approve the acceptable level for that constituent. DOE shall identify the potential backfill source locations and USEPA shall test each potential backfill source location in accordance with its plan."**

DTSC has not contemplated restrictions on the distance from which backfill may be imported, but DOE and NASA, in implementing their respective cleanup obligations, will need to assess, and potentially mitigate, any environmental impacts that are anticipated from any aspect of the cleanup action.

5. How does the State plan on evaluating and communicating the potential impacts to natural and cultural resources of the soil excavation and off-site disposal to the surrounding community?

Response: At or near the same time that the draft Remedial Action Implementation Plan is developed and shared with the community for public review and comment, CEQA documents will also be developed that present the assessment of environmental impacts and proposed mitigation options.

6. The AlPs specify the development of a remedial action implementation work plan. Does the State plan on submitting these work plans for public review?

Response: The final Administrative Orders on Consent will establish the requirement that the draft Remedial Action Implementation Plan, along with all other workplans and reports, is to be shared with the community for public review and comment.

7. Cleanup of bedrock is not mentioned or specified in the AlPs. What does the State plan on doing should Look-up Table values be exceeded in the deepest soil samples at the bedrock interface? Does the State plan on sampling and excavating the bedrock?

Response: As stated in the Agreements in Principle, they pertain only to the soils at the site. Any contamination that exists in the bedrock and fractured bedrock is to be addressed separately, and the final Administrative Orders on Consent will make this obligation clear.

8. Has the State considered that vapors contained in bedrock in certain areas of the site will migrate into backfilled soils by diffusion and will re-contaminate imported fill to concentrations above Look-up Table values? For example, see Draft Group 8 RCRA Facility Investigation Report (2007) evaluation of the Former Sodium Disposal Facility (SWMU 7.3).

Response: Yes, DTSC has considered the possibility "that vapors contained in bedrock in certain areas of the site will migrate into backfilled soils by diffusion and will re-contaminate imported fill," and the final Administrative Orders on Consent will specify that the provisions of the Agreements in Principle apply to the contaminants that are present in the soil, not those that may migrate there through the transport of soil vapors from contaminated groundwater. These issues will be required to be addressed separately, and will be significant due to the extent of the contamination of groundwater from the volatile organic compound, trichloroethylene.

Grouping 3: Administrative and Regulatory

1. The AIPs significantly deviate from established California and federal cleanup processes applied throughout the State and the rest of the country, as follows:

- *Section 25359.20 (c) of the California Health and Safety Code (i.e., SB 990) states "A response action taken or approved pursuant to this chapter for the Santa Susana Field Laboratory site shall be based upon, and be no less stringent than, the provisions of Section 25356.1.5."*

- *25356.1.5 (a) states "Any response action taken or approved pursuant to this chapter shall be based upon, and no less stringent than ..... : The requirements established under federal regulation pursuant to Subpart E of the National Oil and Hazardous Substances Pollution Contingency Plan (40 C.F.R. 300.400 et seq.), as amended."*

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

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

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

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

D. *... using institutional controls such as water use and deed restrictions to supplement engineering controls as appropriate for short- and longterm management to prevent or limit exposure to hazardous substances, pollutants, or contaminants. Institutional controls may be used during the conduct of the remedial investigation/feasibility study*

E. *(RIIFS) and implementation of the remedial action and, where necessary, as a component of the completed remedy. The use of institutional controls shall not substitute for active response measures (e.g., treatment and/or containment of source material) as the sole remedy unless such active measures are determined not to be*

F. *practicable, based on the balancing of trade-offs among alternatives that is conducted during the selection of remedy.*

G. *(E) .. . using innovative technology when such technology offers the potential for comparable or superior treatment performance or implementability, fewer or lesser adverse impacts than other available approaches, or lower costs for similar levels of performance than demonstrated technologies.*

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

Response: DTSC believes that the clean up approach that is represented by the Agreements in Principle is one that is protective of human health and the

environment and is fully consistent and compliant with state and federal clean up laws and regulations. Please see the discussion in the section titled "Cleanup Process – Relationship with SB 990 and the Agreements in Principle" in this Response to Comments for the discussion of the relationship between the Agreements in Principle and the operation of the federal and State Superfund and California Environmental Policy Act (CEQA) processes and the exercise of the "balancing criteria."

2. The AIPs do not reference any analysis or compliance with the California Environmental Quality Act (Public Resources Code 21000-21117) and the CEQA guidelines. How does the State plan to evaluate the impacts of the specified remedy in the AIPs on natural and cultural resources in order to comply with CEQA, particularly when there is an arbitrary 5% limit on any exceptions based on unforeseen circumstances and ecological impacts?

Response: At or near the same time that the draft Remedial Action Implementation Plan is developed and shared with the community for public review and comment, CEQA documents will also be developed that present the assessment of environmental impacts and proposed mitigation options.

DTSC believes the commenter is misinterpreting the Agreements in Principle. The 5% cap on exceptions refers only to the exercise of the exception related to circumstances where DOE or NASA desire to claim that cleaning up to the specified standards is not technically achievable. The other exceptions listed (limits of detection, protection of endangered species, and preservation of Native American cultural resources) operate without limitation.

3. The AIPs include a limited "possible exception" under the federal Endangered Species Act. Does the State believe there are circumstances where a federally protected endangered species or its habitat may be disrupted in order for excavation to proceed? Does the State believe that it does not have to protect California listed- or endangered-species, or comply with Ventura County oak tree ordinances during site clean-up? If so, what is the basis for believing these requirements do not apply?

Response: Although the Agreements in Principle only reference federally endangered species as a possible exception to carrying our the described cleanup, DTSC recognizes the role and authority of the State Department of Fish and Game and intends to coordinate closely with the State Department of Fish and Game throughout the site characterization and cleanup process.

DTSC recognizes that any cleanup action to be taken must be in accordance with all federal, state and local requirements. The final Administrative Orders on Consent will establish that requirement, and all federal, state and local government agencies with

jurisdiction will be consulted throughout the site characterization and cleanup process.

4. Will the California Department of Fish and Game also be consulted for streambed alteration permits during cleanup described in the AIPs? What role would they play and could their involvement limit the extent of the cleanup described in the AIP?

Response: DTSC recognizes the role and authority of the State Department of Fish and Game and intends to coordinate closely with the State Department of Fish and Game throughout the site characterization and cleanup process. The final Administrative Orders on Consent will establish that requirement, and all federal, state and local government agencies with jurisdiction will be consulted throughout the site characterization and cleanup process.

5. Will the Army Corps of Engineers also be consulted for permits for site cleanup in drainages? What role would they play and could their involvement limit the extent of the cleanup described in the AIP?

Response: To the extent that the Army Corps of Engineers administers requirements that would apply to the site characterization and cleanup activities, DTSC will coordinate closely with the Army Corps of Engineers throughout the site characterization and cleanup process. The final Administrative Orders on Consent will establish that requirement, and all federal, state and local government agencies with jurisdiction will be consulted throughout the site characterization and cleanup process.

6. The remedy specified in the AIP requiring soil "removal" for all chemical contamination is inconsistent with existing federal or state "presumptive remedy" guidance on site cleanups. Boeing encourages DTSC to consider US EPA and/or DTSC presumptive remedies, which are consistent with state and federal law, have broad acceptance and utilization at California and other sites, and are based on years of documented effectiveness, rather than pre-determining an excavation remedy.

Response: Any presumptive remedy must be fully consistent and compliant with state and federal clean up laws and regulations. While there are a number of examples of other types of presumptive remedies, none other than those identified in the Agreements in Principle are consistent and compliant with state and federal clean up laws and regulations for this site.

7. The AIPs state that their framework is based upon the unique circumstances of Areas I and II (federal property administered by NASA), Area IV (federally leased property), and the Northern Buffer Zone, including the nature of contaminant releases

that have occurred. In fact, extensive data exist that indicate SSFL contaminant impacts are similar to and fall within the range of other sites in California and throughout the US that do not appear to be subject to these types of requirements. Therefore, why do the AIPs omit normal regulatory steps, such as a risk-based approach to develop cleanup goals, alternative evaluations for the types of clean up, and application of the NCP balancing criteria prior to remedy selection?

Response: DTSC believes that the clean up approach that is represented by the Agreements in Principle is one that is protective of human health and the environment and is fully consistent and compliant with state and federal clean up laws and regulations.

8. How does the federal court order requiring DOE to complete an EIS regarding the cleanup of Area IV, and the requirement that NASA either comply with CERCLA or carry out an EIS under NEP A for the federally-owned lands in Areas I & II, affect the AIP between DOE and the State, including adherence to the 2017 schedule?

Response: The final Administrative Order on Consent will contain provisions that address DOE's outstanding court ordered obligations and the need to coordinate those responsibilities with the implementation of the activities described in the Agreements in Principle. DTSC is unaware of any outstanding court ordered obligations that apply to NASA.

9. There are both federal executive orders (13423 and 13514) and federal and State guidelines and policy regarding sustainable remediation. Boeing encourages the State to evaluate the proposed soil excavation and off-site disposal remedy for consistency with these orders, policies and guidance.

Response: DTSC believes that the clean up approach that is represented by the Agreements in Principle is one that is protective of human health and the environment and is fully consistent and compliant with state and federal clean up laws and regulations.

10. The AIP between DOE and the State specifies that soils containing any radioactive contaminant at concentrations above background must be disposed of at a licensed low-level radioactive waste (LLRW) disposal site or an authorized LLRW disposal site at a DOE facility. Does the State intend to engage in formal notice and comment rule-making to alter existing regulatory provisions that would allow legal disposal of these soils at other disposal sites?

Response: Existing regulations require that these soils be disposed in this manner. DTSC is unaware of any requirement to engage in rulemaking activities that would be

necessary to allow for legal disposal of these soils. DTSC and DOE negotiated this obligation on DOE's management of soils from the site.

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

Response: DTSC is currently negotiating Administrative Orders on Consent with both DOE and NASA. DTSC insisted that any final agreement be binding and enforceable by the State on the federal parties. While there are a number of types of legal agreements that could accomplish this, the federal agencies desired to use an Administrative Order on Consent, which will contain provisions that allow DTSC to enforce them if necessary.