State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region
3883 Ruffin Road
San Diego, CA 92123
(858) 467-4201
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

October 4, 2013

Mr. Allen Elliot
Santa Susana Field Laboratory Project Director
NASA MSFC AS01, Building 4494
Huntsville, Alabama 35812
msfc-ssfl-eis@mail.nasa.gov

Subject: Draft Environmental Impact Statement for Proposed Demolition and Environmental Cleanup Activities at Santa Susana Field Laboratory, Ventura County, California

Dear Mr. Elliot:

The California Department of Fish and Wildlife (Department) appreciates this opportunity to provide comments on the above-referenced Draft Environmental Impact Statement (DEIS). The DEIS was prepared by the National Aeronautics and Space Administration (NASA) to evaluate potential environmental impacts from its Proposed Action to conduct demolition activities and remediation of contaminated groundwater and soil located on the NASA-administered property at Santa Susana Field Laboratory (SSFL).

The SSFL is located on the top of the Simi Hills and covers approximately 2850 acres. The DEIS addresses only the NASA-administered portion of the SSFL, including all of Area II (409.5 acres) and Area I (41.7 acres). The remaining acreage at the SSFL is currently owned by the Boeing Company (Boeing) and will also be subject to cleanup and remediation, to be addressed in collaboration with the Department of Energy (DOE).

State Environmental Review:

The California Department of Toxics Substance Control (DTSC) is preparing a separate Environmental Impact Report (EIR) under the California Environmental Quality Act (CEQA) (DEIR pg. 1-7). This state-led environmental review will be documented in a Programmatic EIR. DTSC will analyze the potential environmental effects of environmental cleanup activities occurring on SSFL-wide by NASA, Boeing, and DOE. The DTSC EIR is likely to be prepared following publication of NASA's EIS. DTSC will also prepare project-specific EIRs that evaluate the localized remedial activities (DEIS Section 1.3).

Overview of the Proposed Action:

The Proposed Action entails three primary components: 1) demolition of existing structures; 2) soil cleanup to background levels; and 3) groundwater cleanup. Existing buildings and infrastructure would be dismantled and contaminated subsoil removed. Soil remediation is anticipated to occur on a minimum of 105 surface acres, or about 23% of the NASA lands. Contaminated soil would be excavated to a minimum depth of 2 feet (in some places up to 20 feet) and disposed of at off-site locations Roughly 43 acres are covered with buildings, roads or parking lots, and 62 acres are open space supporting wildlife habitat. On open space, all

existing biological resources would be removed to allow for soil treatment and disposal. Between 320,000 and 500,000 cubic yards of soil would be transported off site. Fill would be imported from on-site borrow sites and off-site locations to replace about 1/3 of the soil and subsoil removed during remediation. Additional direct impacts to about 1/3 of the on-site project area could occur from ground water cleanup technologies that would alter surface and subsurface hydrology and may include dewatering. Adverse impacts to off-site downslope habitats could occur. The duration of groundwater treatment technologies may extend across years, decades, or centuries.

Habitats and Sensitive Species:

The SSFL project area occupies hilly terrain and is located in the Cretaceous Chatsworth Formation, supporting marine sedimentary rock including sandstone, shale and conglomerate. Generally, developed facilities and roads proposed for demolition are located in localized valleys between ridges of sandstone rock outcrop. Soil contamination areas are typically located in the valleys and associated stream channels. Groundwater contamination affects broad expanses of habitat including rock outcrops and extending off site. Ephemeral and intermittent drainages are present in the valley areas and carry runoff to adjacent downslope areas; this area is the headwaters of Bell and Dayton Creeks.

The project vicinity supports essential habitat for the state-listed rare plant species, Santa Susana tarplant (*Deinandra minthornii*), a perennial sub-shrub and geographic endemic typically found on sandstone rock outcrops and soils derived from sandstone. The predominant natural plant communities include Venturan coastal sage scrub (64 acres), chaparral (172 acres), coast live oak woodland (13 acres) and coast live oak riparian forest (9 acres) (DEIS Table 3.4-1). Sensitive wildlife species observed in the project area include the state- and federally-endangered least Bell's vireo (*Vireo bellii pusillus*); coast horned lizard (*Phrynosoma coronatum*), two-striped garter snake (*Thamnophis hammondii*) and loggerhead shrike (*Lanius ludovicianus*) (all California Species of Special Concern (CSSC). A ringtail (*Bassariscus astutus*), a California Fully Protected Species, was observed just outside the NASA boundary of Area II. The project vicinity is an important habitat linkage area providing connectivity between the Santa Susana Mountains to the north, the Simi Hills, and Santa Monica Mountains to the south (DEIS page 3-23).

Trustee Authority:

The fish and wildlife resources of the state of California are held in trust for the people of the state by the Department (Fish and Game Code Section 711.7(a)). The Department provides these comments as state trustee agency with jurisdiction over the conservation, protection and management of fish, wildlife, native plants, and habitat necessary for biologically viable populations of those species (Fish and Game Code Section 1802).

The Department is also California's designated natural resource trustee and representative authorized to act on behalf of the public as a trustee for natural resources pursuant to section 107(f)(2)(B) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The Department will have a continuing interest in coordinating any natural resource issues as a result of proposed remedial activities at SSFL. The Department will consider the biological and natural resources at the site, the proposed remedial activities,

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contaminants of concern and any potential resource impacts in identifying California's relevant and appropriate resource protection laws and regulations for the SSFL.

Specific Concerns and Recommendations

The following are the Department's specific concerns regarding impacts to biological resources and recommendations for additional avoidance and mitigation measures.

Evaluation Criteria for Analyzing Environmental Effects:

Table ES-1 identifies various impact evaluation criteria. Short term impacts are defined as limited to the immediate demolition and remediation period. The Department is concerned with this definition being applied to the groundwater remediation period, as the remediation activities themselves could extend across a timeframe of years, decades, or centuries (Table 2.2-8). The Department considers impacts extending beyond five years to be long term.

Evaluation criteria are defined as local where impacts are confined to within the boundaries of the NASA properties, and regional when they extend beyond those boundaries. The Department notes that impacts from ground water remediation treatments are frequently described in the DEIS as local and our review suggests impacts should be defined as regional because downslope and off site areas could be affected by altered hydrology.

Groundwater cleanup technologies:

The groundwater cleanup component of the Proposed Action will involve testing various technologies before they are employed across the groundwater treatment area. There is little description or quantitative information regarding the direct and indirect impacts to biological resources from implementing these technologies. The Department estimates that approximately 1/3 of the NASA lands could be physically impacted by groundwater treatment technologies (Fig 2.2-4). Associated alterations in hydrology, including potential dewatering, could directly and indirectly affect additional habitat areas. Adverse impacts are likely to occur to on site and downstream/downslope habitats reliant upon surface, subsurface and groundwater from the project area.

The DEIS states that additional habitat areas would be subject to topsoil removal for groundwater remediation in areas outside the soil cleanup footprint (DEIS 4-41). The Department was unable to find specific information regarding the extent and location of these additional soil removal areas, and impacts do not appear to be addressed.

Wells would be installed under various technologies and could extend 50 - 900 feet below the ground surface. The Pump and Treat technology is described as requiring the installation of "additional wells". The Department requests more information be provided regarding the number of new wells that are anticipated, well locations, and the impacts to biological resources from installation, operation and, maintenance. The DEIS also describes that 13,000 feet of above-ground pipeline would be added under Pump and Treat. The amount of pipeline necessary to implement other treatment technologies is not described.

Three additional technologies would involve installation of a network of wells described as being spaced 10 - 20 feet apart with interconnecting pipes (DEIS Sec. 2.2.3.2). There is little

information regarding how much physical habitat would be disturbed to install and maintain these wells and pipelines, or how they would be installed on steep rock outcrops and habitat areas. The Department anticipates additional adverse effects to occur from removal of wells and pipelines; impacts from removal are not identified.

The DEIS describes clearing vegetation to create pathways for well and borehole installation and pipeline configuration (DEIS pg. 2-31) under the In Situ Chemical Oxidation description, but it would appear that all the technologies that use wells, bore holes and pipes have potential to result in extensive clearing of vegetation in habitat areas, which could lead to mortality or displacement of wildlife in the Department's opinion. The DEIS analysis concludes that impacts to wildlife are minor and short term in areas subject to ground water remediation, in part because the "wells would be located far apart". At a spacing of 10 - 20 feet apart, the entire treated area would likely be adversely affected by habitat removal, ground disturbance and equipment. It is possible that the In Situ Chemical Oxidation technique may result in fewer impacts to biological resources and may better protect local soil moisture and hydrology, but the DEIS does not provide detailed analysis to evaluate whether or not certain technologies may pose fewer risks to on-site and off-site biological resources and habitat function. Effects on biological resources from the potential use of chemical oxidation, heat, and vacuum extraction are largely not described. The Department recommends that technologies be evaluated for their impacts to physical habitat features, biological resources and watershed function, and those with fewer adverse impacts on the environment should be employed. The Department would appreciate the opportunity to review and provide input to this evaluation.

Alteration in existing hydrology and potential dewatering for groundwater remediation will affect downslope streams and nearby springs, seeps, stands of phreatophytes and other vegetated habitats along channels. Areas of impacted ground water extend beyond the NASA boundaries of Area I and Area II (Fig 2.2-4). Surface water is currently being treated at various wells and is being released into existing outfalls depicted on Figure 3.6-1, and this is guided by the Ground Water Interim Measures Work Plan (GWIM) (DEIS 2-27).

The Department is concerned that surface water is being collected for treatment from specific local subwatersheds, but is released at outfalls located in a different subwatershed. Residents of Bell Canyon have raised this concern with the Department. We recommend that the GWIM be modified such that current and future pumping activities include new outfall locations which better maintain surface and subsurface hydrology for on-site and downslope biological resources. The DEIS does not seem to address impacts to biological resources from constructing additional outfalls and associated pipe systems necessary to reach those outfalls. Biological resource assessments for areas that could be impacted outside the NASA property do not appear to have been conducted.

The Department is concerned that seeps and springs may support unique biological resources and that adverse effects to these biological resources have not been addressed, while some seeps and springs have already been dewatered (DEIS 4-79). Impacts to water associated with seeps and springs are described as negligible and local, but should be described as moderate and regional.

The DEIS states that wells would not be located in wetlands and consequently, there would be no impact to wetlands from groundwater cleanup (DEIS 4-42). Alterations in site hydrology associated with groundwater remediation are likely to affect wetlands on site and downstream

and these impacts are not addressed in the DEIS. The wetland definition used in the DEIS does not identify springs and seeps as wetlands (DEIS 3-34), and is focused on areas of federal jurisdiction under the Clean Water Act.

Wetlands in the state of California are addressed in various Fish and Game Commission policies, and the state definition of wetlands relies upon the United States Fish and Wildlife Service wetland definition and classification system (Cowardin, et al. 1979). Springs and seeps constitute wetlands under state policy, and changes in water availability to these areas could potentially result in significant, regional and long term impacts to biological resources.

There is potential for springs and seeps to be recharged following soil excavation and disposal, via local infiltration associated with the creation of a series of shallow ponds that would replace ephemeral and intermittent stream reaches in specific locations (DEIS 4-77). The groundwater treatment component overlaps with these locations in several areas, which suggests that infiltration may be hampered by long term dewatering activities. Additional planning and study, with input from the Department, would appear necessary to precisely determine how to recharge specific springs and seeps, including those downslope and off site.

Soil Remediation Impacts:

Figure 2.2-2 shows the estimated boundaries of areas that would be subject to soil remediation, habitat removal, and subsequent excavation. This figure also depicts access and staging areas. There are numerous areas depicted on this figure where isolated areas are shown and are not located by existing dirt or paved roadways. The DEIS states that NASA would develop temporary access roadways (pg. 2-13) in those situations. The Department is concerned that direct and indirect impacts to habitat and wildlife from "temporary" roadways are not included in the impact analysis. Single or repeated passes of heavy equipment traversing such areas is likely to cause long term impacts along access routes, additional habitat removal, introduce weeds, alter runoff patterns, compact soils, and cause direct mortality to wildlife.

The DEIS describes that additional on-site borrow sites would be excavated to provide some fill material for remediation areas (DEIS 2-19; 4-77). The Department could not locate any further information regarding proposals for on-site borrow pits. Impacts to biological resources associated with this component of the project should be specifically addressed in the DEIS. .

Soils BMP-1 (associated with landslides) seems to be the only measure describing that following soil excavation, backfilled areas would be "sloped and if necessary compacted". We assume this likely applies to all areas that might receive backfill. The DEIS should identify the characteristics of the finished slopes, how they would be configured, and the degree of compaction proposed. Compaction rates need to be designed to ensure that native vegetation including shrubs and trees can successfully root into the new material.

The DEIS should further describe if acreage impacts include those required to create finished slopes at locations where excavations and backfill abut natural topography. If, as described, backfill volume is about one-third of the volume that would be removed, it is not clear how finished slopes would meet up with natural topography in areas with shortfalls of backfill (Table 2.4-1). It seems likely that adjacent acreage would be affected to achieve finished slope requirements beyond the boundary of excavation areas, and those impacts have not been identified.

Vegetation Communities

On-site plant communities were mapped in fall 2010 using a Holland 1986-based plant community classification (Appendix D). This mapping does not meet current standards for incorporating floristic based classifications that better describe local, regional and state-wide botanical diversity. The second edition of the Manual of California Vegetation should be utilized for the purposes of describing on-site vegetation at the alliance level (Sawyer et al. 2008). Additionally, the project area lies within the Santa Monica Mountains National Recreation Area, and vegetation in this general area has been addressed at a more specific local and regional level (Keeler-Wolf and Evens, 2006). It should be noted that this evaluation did not include field sampling of vegetation stands supporting Santa Susana tarplant.

Sensitivity rankings used in the DEIS are from the California Natural Diversity Data Base (CNDDB) and represent state-wide and global ranks that do not factor in local or regional rarity. The DEIS states that only 9% of the habitats on site are of high conservation priority (i.e. sensitive, Venturan coastal sage scrub and southern willow scrub). The majority of the acreage to be impacted is described in the DEIS as predominantly chaparral (a general term that does not describe a plant community), coast live oak woodland and riparian forest, and Venturan coastal sage scrub. The primary mitigation proposed for loss of or damage to these communities is seeding with commercially obtained seed on a subset of the remediated ground where backfill topsoil is available (Biology BMP-1). The amount of habitat area that would not be revegetated and therefore could be permanently damaged is undescribed.

The unique local and regional character and sensitivity of key on-site habitats and species were missed in the general nature of the vegetation analysis. Since sandstone rock outcrops are inherently valuable to plant and wildlife species and represent a specialized niche, vegetation types associated with sandstone outcrops are locally and regionally unique and therefore are considered sensitive by the South Coast Region of the Department. For example, two sensitive vegetation communities were identified on adjacent Boeing properties and are described below:

<u>Steep Dipslope Grassland</u>- this unique vegetation type was identified by SAIC (2009) during assessments of adjoining land in Area IV and the northern buffer. Stands are dominated by outcrops and varying depths of thin soil overlaying rock, creating conditions for dominance by bushy spike moss (*Selaginella bigelovii*) and a suite of associated species including native wildflowers and local, endemic geophytes (*Calochortus* sp); typically this habitat is on north facing slopes. This same habitat would be classified floristically as *Selaginella bigelovii* herbaceous alliance, and is state-ranked S3, which the Department considers to be locally and regionally rare (Sawyer et al. 2008). The DEIS should identify that this sensitive habitat type could be present on site and would be adversely affected by soil and groundwater remediation and impacts are potentially significant and long term. Areas supporting this unique habitat type should be identified on maps and marked in the field, and stands of bushy spike moss alliance should be protected from direct and indirect impacts.

<u>Sandstone Outcrops Northern Mixed Chaparral</u>- this vegetation type was identified by SAIC (2009) and represents the bulk of the habitats associated with the large sandstone outcrops in Area IV. This same habitat type is likely present on the NASA lands. SAIC identifies that this habitat on site typically supports the state-listed rare endemic *Deinandra minthornii* (Santa Susan tarplant). The combination of sandstone outcrops with diverse chaparral that also supports a rare local endemic suggests that this is likely a unique local and regional plant

association. The DEIS should identify that this is a sensitive habitat type that could be adversely affected by soil and groundwater remediation and impacts are potentially significant and long term.

Additional on-site habitat types reported in the DEIS are considered sensitive by the Department because of their high value for wildlife, proximity to stream channels, and continued declines in the local and regional area. Southern coast live oak riparian forest is considered regionally sensitive by the Department, and typically, these areas lie within the Department's streambed jurisdiction as they represent riparian resources. Coast live oak woodland is also reported from the area, and is also declining in the regional area. Vegetation affiliated with springs and seeps does not appear to be described in the DEIS. On-site and off-site woodlands, forests, riparian areas, springs and seeps are considered sensitive by the Department. The DEIS does not identify these habitats as sensitive and there are no proposals to ensure these specific habitats are replaced or restored. Impacts to oak woodlands and forests are potentially significant, regional and long term, especially given the time frame necessary for replacement oaks to mature sufficiently to provide shade, forage, acorns, cavities and crevice habitats.

The DEIS analysis of impacts to vegetation communities and sensitive plant associations relative to groundwater remediation activity seems to be limited in scope and analysis. The DEIS should describe the physical impact area necessary to access and install a system of wells and pipes and to maintain it over a protracted timeframe. Impacts are briefly identified as: 1) dewatering to remove subsurface moisture affecting vegetation; 2) vegetation could be physically disturbed; and 3) weeds could increase or spread. Adverse effects to habitats downslope from changes in soil moisture due to remediation activities are not addressed.

The DEIS indirectly describe how the function of stream channels would be altered by proposed soil and groundwater remediation activities. The DEIS concludes that impacts to topography from soil removal are negligible and short term, despite proposals to only backfill about 1/3 of the volume removed. Alteration of natural topography affects habitat development and function. Where stream courses are altered by excavation, how would stream flow and sedimentation processes be affected? If stream courses are replaced by instream "shallow ponds", will these reaches continue to transmit natural sediment loads to downstream areas? Where substantial soil volumes are removed and not replaced, how will this affect ground water recharge within local watersheds and downslope areas?

The DEIS concludes that impacts to native vegetation from soil excavation are significant and long term, after mitigation. Impacts to "high priority conservation areas" (ie. southern willow scrub and Venturan coasts sage scrub) are also considered significant and long term, but with mitigation, the DEIS concludes impacts are moderate. Biology Mitigation Measure-1 addresses this impact and indicates soil might be removed using pick axes, shovels, or vacuum trucks in sensitive habitats. Such methods would still result in disturbance to sensitive habitat areas and are unlikely to meaningfully reduce impacts. It may be feasible and beneficial to reduce impacts to adjoining woody vegetation such as trees and shrubs, located at the edges of excavation areas, by using such methods and immediately protecting exposed roots to prevent desiccation.

Sensitive Species Analysis

For the purposes of the DEIS analysis, sensitive species were defined as: a) plants or animals that are either listed by the United States Fish and Wildlife Service (USFWS) or by the state of

California (DEIS pg. 3-23) as threatened or endangered; b) federal candidates; c) California Species of Special Concern (CSSC); d) California Fully Protected Species; or e) state listed rare plants.

The DEIS does not address local, regional, and state wide rare plants which the Department tracks through the CNDDB. Special status vascular plants on Rare Plant Lists 1 and 2 generally are considered to meet the definition of threatened or endangered species and should be addressed in the DEIS. The DEIS does not address the potential for impacts to rare non-vascular plants which are also tracked in CNDDB.

The DEIS should address locally rare plant and animal species that have been identified in Ventura County and are currently listed as Locally Important Species.
These lists have been developed in consultation with local experts and represent local and regionally rare species that are not represented on state-wide or national lists. Species on these lists are considered to generally meet the definition of threatened, endangered, or rare, as defined in the California Environmental Quality Act (CEQA) Section 15380. The lists are updated annually through a documented process of consulting with local experts. The current lists can be found at this link: http://www.ventura.org/rma/planning/ conservation/locally-important-species.html

Sensitive Plant Species

Santa Susana tarplant

The general project area at the SSFL supports habitat essential for the continued persistence of Santa Susana tarplant, a state-listed rare plant species, and its native insect pollinators. The project site is in the center of this species' limited geographic range where the majority of the tarplant populations occur on the local Chatsworth Formation (sandstone). The DEIS indicates the species was observed in numerous locations on NASA properties and is distributed throughout Ventura and Los Angeles counties (DEIS 3-23). The DEIS should be modified to indicate this species is a highly restricted endemic and occurs only in localized areas in the Santa Monica Mountains and Simi Hills (CNDDB, 2013; Baldwin et al. 2012). The Chatsworth Formation in and around the SSFL area is the core habitat for this species.

The DEIS provides no quantitative evaluation of the numbers of individuals or acreage extent of occupied habitat for Santa Susana tarplant that would be directly or indirectly affected by remediation activities. Individual tarplants were mapped in the field with a global positioning satellite unit, but the DEIS does not overlay impact areas with this information (Figure 3.4.3). The amount of habitat occupied by Santa Susana tarplant that would be unaffected by direct and indirect impacts from the Proposed Action should be identified in the DEIS. The Department is therefore unable to fully evaluate the environmental consequences of the proposed action.

Potential adverse impacts to tarplant include direct loss of individuals and seed bank in areas subject to soil and groundwater remediation. Habitat for native insect pollinators and alternative pollen and nectar sources (i.e. other plant species they visit) would be eliminated in areas subject to soil remediation, and degraded in adjoining habitat areas and in groundwater remediation areas. A variety of adverse indirect effects are also likely to occur. Areas currently supporting soil conditions suitable for tarplant could be replaced with backfill from off-site

sources which could be unsuitable for subsequent re-establishment, leading to the permanent long term loss of suitable occupied tarplant habitat. Additional permanent loss of occupied tarplant habitat could occur at locations where top soil is not replaced or where reseeding is not successful at re-establishing native plant communities. .

Occupied habitat adjacent to remediated areas could experience a variety of adverse indirect effects, including: a) weed invasion associated with increased habitat fragmentation; and b) altered local hydrology, which could change sheet flow, runoff and infiltration patterns which sustain individual plants.

As shown in Figure 2.2-4, extensive areas would potentially be affected by groundwater remediation. Should wells be installed at 10-20 foot intervals as described, it is foreseeable that most of the acreage would be cleared of vegetation, driven on by heavy equipment and this would lead to significant long term adverse impacts to Santa Susana tarplant and most other plant and animal species who reside here.

Groundwater remediation technologies will also capture and remove subsurface water potentially leading to desiccation of surrounding habitat areas across a long time frame. The DEIS states that impacts to vegetation from changes in ground water availability would be minor, as plants around the SSFL are adapted to drought and repeated fires. In the Department's opinion, impacts of long term dewatering are likely to adversely affect most species of plants occupying the treatment zones. Even in summer months or during droughts, specific species of plants have their own unique soil moisture requirements that must be met or they will die. Santa Susana tarplants also utilize subsurface moisture for their survival and therefore, groundwater remediation could potentially reduce soil moisture below a level where they can survive dry periods and droughts; tarplant vigor, biomass, and reproductive output could be adversely affected.

It should be noted that native insect pollinators are essential components of Santa Susana tarplant habitat, and service a broad array of on-site and nearby off-site native plant species. Many native insect pollinators are various types of ground nesting solitary bees and flies. These insects have their own requirements for nesting, and often, areas with specific soil texture and soil moisture are relied upon for successful production of larvae. Dewatering and soil excavation could adversely affect such species.

The currently proposed mitigation for impacts to Santa Susana tarplant proposed in the DEIS is to avoid tarplants where practical and to train workers to identify and avoid it to the extent possible (Biology Mitigation Measure-2). No other mitigation is proposed.

The DEIS concludes that, with implementation of Biology Mitigation Measure-1, impacts to Santa Susana tarplant are minor, negative, local, and short term. The Department does not agree with this conclusion. Impacts to tarplant would be moderate to significant, negative, regional, and long term in our opinion. Impacts to tarplants are likely long term in areas where soil and groundwater remediation would: a) remove soils derived from Chatsworth Formation; b) where the proposed reseeding does not successfully restore native natural communities; and c) where topsoil is not replaced and no revegetation occurs. Impacts from groundwater remediation would also be long term at locations where the technology may operate for years to centuries (Table 2.2-8). We agree with the statement on page 4-43, indicating it can take years

for native species (ie. plants) to re-establish in disturbed areas and for that reason, impacts to tarplant should be described as long term.

The Department recommends additional mitigation measures and impact avoidance be incorporated into the final DEIS to more specifically address adverse impacts to Santa Susana tarplant.

A dedicated biological monitor should be present during grubbing and vegetation clearing in order to identify tarplants to be avoided in all areas where demolition, soil removal or groundwater treatments occur and including adjoining access and staging areas. A biological monitor should identify travel routes for drilling equipment and access which avoid tarplants and other sensitive plant resources. This information shall be mapped using geographic information systems. Acreage impacts and a tally of individuals affected should be provided.

Santa Susana tarplant growth and vigor should be monitored during groundwater remediation activities in representative areas to determine whether groundwater treatments are causing adverse effects.

A Santa Susana tarplant restoration plan should be prepared for Department review and approval and this plan should detail how tarplant habitat would be restored to conditions suitable for re-occupation by tarplants and other appropriate on-site local native species. Tarplant seed should be successfully re-introduced into localized restored habitats areas.

Enhancement of existing Santa Susana tarplant habitat in locations outside the soil remediation footprint through effective weed management could be considered as an additional mitigation measure to address impacts stemming from loss of occupied habitat during the remediation and revegetation period which are not addressed in the DEIS.

<u>Braunton's milkvetch</u>

The DEIS identifies the presence of the federally endangered Braunton's milkvetch (*Astragalus brauntonii*) and its federally designated Critical Habitat, to the west at SSFL Area IV on Boeing property. No Braunton's milkvetch were observed during field surveys of the NASA properties conducted in 2011. The DEIS states that potentially suitable soil conditions exist on portions of Area II and Area I for Braunton's milkvetch, however the DEIS concludes that there would be no impacts.

In spring of 2010, a hill just outside the boundaries of the Critical Habitat unit in Area IV was subjected to vegetation trimming for the purposes of conducting gamma testing by the EPA. Braunton's milkvetch was not detected there during project surveys but following vegetation trimming, the disturbance stimulated a population to emerge from dormant seed bank. The Department observed this habitat area in July 2013. Braunton's milkvech experienced intense direct herbivory on flower stalks by mule deer and most plants observed in 2013 had been topped, producing little or no seed as a result. In this localized area, cutting back shrub vegetation created browse conditions which were exploited by the local mule deer population, and this created negative impacts for Braunton's milkvetch reproductive output.

The Department is therefore concerned with the potential that Braunton's milkvetch may in fact occupy suitable soils in Areas II and Area I. The suitability of habitats in this area combined with

the response of Braunton's milkvetch dormant seedbank to disturbances in nearby areas at SSFL suggests that the DEIS should in fact recognize the potential for adverse impacts to potentially occupied habitat. Loss of soil seed bank and/or individuals producing flowers and fruits would be a significant adverse and long term impact.

Other State Rare Plant Species

The DEIS does not evaluate the environmental consequences of the Proposed Action on local, regional, and state tracked rare plant species.

A state rare plant species was identified in the 2011 spring surveys conducted on NASA lands. Slender mariposa lily (*Calochortus clavatus gracilis*) is state ranked S-2, and a California Native Plant Society (CNPS) list 1B-2 (threatened). Another regionally rare lily, *Calochortus plummerae*, was also observed. The DEIS does not address impacts to these species. The Department observed a previously undetected population of *Calochortus fimbriatus* (state ranked S-3 and CNPS list 1B) in mowed habitat in Area IV in July 2013. Downslope of Area II in Bell Canyon, a population of tiger lilies has been verified (*Lilium humboldtii* ssp. *oscellatum*) (CDFW files). These types of rare geophytes have narrow habitat preferences and are vulnerable to changes in soil moisture and herbivory pressure when they are exposed by removal of adjoining vegetation.

The Department is concerned that the imperiled shrub, Malibu baccharis (*Baccharis malibuensis*) may be present on NASA lands. This native shrub is extremely rare (state-ranked S-1 very threatened) and exists at a handful of locations with very few individuals (CNDDB, 2013). Vegetation mapping and surveys conducted by SAIC in 2009 for DOE in Area IV did not identify Malibu baccharis, but it was subsequently detected in 2010 during vegetation trimming by consultants with Envicom Corporation. Malibu baccharis was reported as co-dominant with chamise, suggesting it was common in the habitat where it had been overlooked, and these shrubs were apparently mowed for gamma testing (HydroGeologic and Envicom, 2011). Given that the species was not identified during field assessments on adjacent lands, there is potential for it to have been overlooked on NASA lands. The Department therefore requests that additional focused surveys be conducted to ensure that all Malibu baccharis are detected. Should it be found on site, it is imperative that a comprehensive seed collection be undertaken for both long term conservation and restoration purposes and a conservation strategy be developed, in consultation with the Department, to address adverse impacts.

Revegetation in Soil Remediation Areas

The DEIS describes that following soil remediation, seeding with commercially obtained native seed would occur on some portion of the impacted area that receives topsoil (Biology BMP-1). Seeding with propagules obtained from on-site populations of native trees, shrubs, and herbs is not proposed.

Department staff previously reviewed a seed mix proposed by Boeing for a nearby on-site demolition project and we raised a number of concerns regarding the proposed mix which we reiterate here. Commercially available native plant seed often is from limited, non-local sources that are potentially poorly adapted to local conditions and do not capture local genetic diversity. Few plant species on Boeing's palette with commercially available seed were sourced from within 30 miles of the SSFL area. Some species included in the Boeing palette were not known

to occur in the project area and other important species in the project area were not included in the seed mix. Additionally, annual non-native grasses and forbs were included in the seed mix and could reduce establishment of shrubs and trees.

The Department recommends commercially-sourced seed be limited to: a) sources from within 30 miles of the SSFL; b) from within the coastal Los Angeles basin; or c) from sources from Chatsworth formation-derived soils. Local on-site propagules should be collected and utilized to augment commercially-sourced seed. Seed should also be collected from obligate seeding species which require wildfire conditions to stimulate seed germination. Seeds should be cleaned, labeled and properly stored until needed and we encourage on-site seed collection be initiated early in the process to maximize the diversity and volume of material for future use.

On-site propagules should also be obtained for important tree species such as coast live oak (*Quercus agrifolia*), sycamore (*Platanus racemosa*), and California black walnut (*Juglans californica*). An on-site nursery could be established to produce and maintain material for subsequent outplanting. There may be challenges re-establishing vegetation due to the presence of herbivores such as mule deer, which are attracted to young plants and favored browse species. It may be necessary to use temporary fencing or caging to allow for favored browse species to re-establish, including oaks.

Biology BMP-1 discussion suggests that seeding would only occur at locations where topsoil is available. What is the source of top soil? If it is from off-site sources, it would likely contain weed and non-local plant propagules. Additional information is needed to evaluate the environmental consequences of using this material. If the topsoil contains weeds or a lot of annual grasses, re-establishment of native species could be impaired. It might be possible to control weeds on imported topsoil and then introduce new seed thereafter.

What is the expected outcome for future vegetation and soil protection where topsoil is not available and no seeding would occur? The DEIS does not identify what proportion of the excavated areas would be left in this condition. At such locations, impacts are potentially long term and permanent. The Department recommends that soil amendments be evaluated for use in locations where topsoil is unavailable. Certain native species may perform better than others and test outplantings could be used to determine appropriate palettes for such locations.

The Department recommends that local palettes be developed for each plant community to be removed by soil remediation or other forms of disturbance. Slope and aspect as well as local reference sites can be used to inform recommendations for revegetation for specific treatment areas. A site-specific revegetation plan is necessary in order to develop effective strategies to replace habitats impacted by soil remediation and ground water cleanup.

Biology BMP-1 includes a restoration goal of 50 percent native cover three years after disturbance in areas subject to seeding (DEIS 4-43). This standard would allow as much as 50 percent of the seeded area to be dominated by non-native weeds. Native cover is not defined (i.e. relative cover, foliar cover or absolute cover). Three years is generally not considered an adequate amount of time to restore native shrub communities such as coastal scrub and chaparral. It will be necessary to effectively control weeds prior to seeding with natives, which would extend the restoration period. Five to seven years seems more appropriate, and survival through at least one year of drought is necessary to demonstrate the re-established vegetation is resilient. The Department recommends that cover standards be developed for each plant

community target, and that cover values be established for each layer, i.e. herb, shrub, and/or tree layers. Woodland and forest habitats should include a longer revegetation period spanning at least ten years to ensure re-establishment has occurred and new individuals will survive periods of drought.

The discussion at Biology BMP-1 indicates it could take years for native species to re-establish in disturbed areas, but the DEIS concludes that after implementation of this BMP, impacts would be short term (i.e. over once remediation is complete). This conclusion is not supported by the information provided.

Erosion BMPs

Biology BMP-2 describes various soil stabilization measures that could be used in conjunction with reseeding or in locations where topsoil is unavailable. Some erosion control products such as erosion mats, straw waddles and others, contain non-biodegradable mesh which can entrap and kill wildlife. To avoid adverse impacts to wildlife, the Department requests that this measure be modified to ensure that such products are specifically prohibited. Most erosion control products are designed for temporary, short term use and it is not clear how such products would be effective at preventing long term erosion in locations where revegetation does not occur or is unsuccessful.

The Department also requests that no gabions be installed along or within stream channels, as the wire and mesh associated with these structures are also hazardous to wildlife and can break down and become a nuisance. For the purposes of stabilizing soils along stream channels, we recommend that only natural rock be used. Boulders, rocks and cobble associated with on-site stream channels should be retained or stockpiled for reuse following remediation, to the degree that this is feasible. Limbs, trunks, and woody debris could be retained onside and distributed to protect soil and increase habitat availability. Brush piles could also provide additional soil protection and cover for wildlife and could be placed in revegetation areas. Chipped native biomass free of weeds could be used to protect exposed soil surfaces, but should not be placed in stream channels or in locations where a native herb layer needs to be established.

Weed Management

The proposed action has potential to introduce new weeds to the SSFL site from off-site locations and for on-site weeds in ruderal locations to expand into areas disturbed by soil and groundwater remediation. Imported backfill and topsoil will also contain weed seeds and non-local plant propagules. On-site weeds in ruderal areas will pose an ongoing threat to efforts to revegetate nearby disturbed areas, and could reduce re-establishment of shrub and tree-dominated communities, exacerbating long term erosion.

Biology Mitigation Measure-3 indicates NASA would implement a weed management plan to eradicate noxious and invasive species. This measure should be modified to also address prevention of new weed invasions and spread of existing on-site weeds. The Department recommends that protocols be established to ensure that all vehicles and equipment that would operate in habitat areas are cleaned of soil and weed seeds prior to arriving at the SSFL site. Personnel and hand equipment/tools should also be checked and cleaned before accessing the area. On-site biological monitors should inspect equipment and personnel.

Equipment and personnel staging in disturbed areas on site may also convey weeds into currently weed free areas, so measures to prevent this from occurring are recommended. The California Invasive Plant Council has useful protocols for addressing weed invasion for land managers (http://www.cal-ipc.org/ip/prevention/landmanagers.php).

The Department would appreciate the opportunity to review and provide input to the weed management plan proposed under Biology Mitigation Measure-3.

Wildlife Assessments and Protection Measures

Wildlife surveys conducted for the DEIS are based upon a fall 2009 field survey (DEIS pgs. 33-23) documented in Appendix D. This fall evaluation states that wildlife surveys were opportunistic. Systematic active searches for specific non-federally listed wildlife species were not conducted (Appendix D pg. 3-2). During field surveys conducted in spring 2011, additional opportunistic wildlife species surveys were conducted concurrently with special status plant surveys (Appendix E pg. E-28) and are described as not systematic. Under these scenarios, on-site sensitive wildlife species could easily be missed or their extent underestimated, based upon the timing, weather, survey limitations and level of effort.

DEIS Table 3.4-3 lists the results of these field assessments and sightings are plotted in Figure 3.4-4. Four sensitive wildlife species were confirmed on site and include a single August sighting of the state and federally endangered least Bell's vireo; species of special concern: coast horned lizard, loggerhead shrike, and two-striped garter snake. A ringtail (California Fully Protected Species) was sighted just off site in rock outcrop habitat near a spring but is described as not present in the ROI (region of influence, Table 3.4-3). Boeing has documented additional sensitive wildlife species on adjoining properties and in the Department's opinion, these species have a high likelihood of occurring on NASA lands and/or downslope off site. Documented observations of species which could be adversely affected by the proposed project includes the California Fully Protected Species: white-tailed kite (*Elanus leucurus*) and golden eagle (*Aquila chrysaetos*); California Species of Special Concern: silvery legless lizard (*Anniella pulchra pulchra*), coast range newt (*Taricha torosa torosa*), western spadefoot (*Spea hammondii*), yellow warbler (*Setophaga petechial*), and San Diego desert woodrat (*Neotoma lepida intermedia*); and the CDFW Watch List coastal western whiptail (*Cnemidophorus tigris multiscutatus*), San Bernardino ringneck snake (*Diadophis punctatus modestus*), Cooper's hawk (*Accipiter cooperii*), Southern California rufous-crowned sparrow (*Aimophila ruficeps*) (Boeing, 2013). Given the opportunistic nature of the wildlife surveys in support of the DEIS for NASA lands, the DEIS should more fully evaluate the potential for adverse impacts based upon habitat suitability.

The extensive sandstone rock outcrops support a variety of crevices, ledges and cavities which serve as unique physical feature exploited by both sensitive and non-sensitive wildlife species. Golden eagles were documented nesting just off site to the north in spring 2011 (HydroGeoLogic and Envicom, 2011). A variety of species nest or roost within sandstone outcrops including white-throated swift (*Aeronautes saxatalis*), barn owl (*Tyto alba*), cliff swallow (*Petrochelidon pyrrhonota*), barn swallows (*Hirundo rustica*), canyon wren (*Catherpes mexicanus*), raven (*Corvus corax*), turkey vulture (*Cathartes aura*), golden eagle, honey bees (*Apis mellifera*), San Diego desert woodrat and various bats species (SAIC, 2009).

The wildlife that use these rock outcrop special habitat features are highly specialized and are often dependent upon them for reproduction, foraging, or predator avoidance. The stability and persistence of these features encourage the repeated use of specific areas as breeding habitat. Small mammals such as San Diego desert woodrat and native mice are found in this general habitat type. Rock shelters also provide very important roosts for bats. These features are important to a variety of reptile species as well and provide thermally favorable refuges, cover, and hibernacula. Snakes are particularly dependent on rock outcroppings for winter dens. Often, snakes are intimately tied to their hibernacula, returning to the same den their whole lives. The destruction of a den site often results in the reduction or elimination of local snake populations.

Coast live oak woodlands and chaparral habitats are also very high value wildlife habitat. The fall biological survey report for nearby Area IV and the northern buffer identifies the importance of coast live oak woodlands and chaparral to local and regional wildlife (SAIC, 2009).

Ringtail Impact Avoidance:

Ringtail sightings are extremely rare, and this California Fully Protected Species is likely occupying rock crevices in sandstone outcrops, foraging in nearby habitats and typically is not far from a water source. Ringtail should be described as potentially present on NASA lands at low density in areas with lower levels of human activity. Remediation of soil pockets in isolated habitat areas could adversely affect ringtail individuals or expose den sites. Depending upon the methods selected, ground water remediation wells or bore holes could puncture crevices and ringtail or their young could be directly killed or their dens damaged. Young could be abandoned, leading to direct mortality. Additional dewatering of seeps and springs could also compromise ringtail's ability to survive in the general area.

To avoid direct mortality to ringtail, the Department recommends that rock outcrop habitats and other locations slated for soil remediation or ground water remediation be evaluated by a knowledgeable biologist in order to locate all potentially ringtail-suitable caves, and crevices and this effort should include searches for hibernacula, and bat roosting and colony sites. Once located, these areas should be mapped and appropriate avoidance buffers should be established in consultation with the Department in order to prevent the location from being adversely affected by human activity and/or damaged by ground water boring, wells, or travel and access routes.

Impacts to Birds:

The impact analysis for project impacts to birds underestimates the severity of impacts from soil and groundwater remediation. The DEIS addresses only migratory birds and impacts are described as short term for the soil remediation component, while impacts to the native vegetation communities which support nesting and foraging bird populations are described as long term (DEIS pg 4-35). The DEIS states that it could take years for native vegetation to re-establish in disturbed areas and the species composition would likely be different, which suggests that impacts to wildlife including birds who rely upon native vegetation communities would likely extend over years as well, and therefore, this appears to be a long term impact.

Impacts to birds and other wildlife from the groundwater remediation component are also considered short term (DEIS 4-42), and described only as a minor disruption to wildlife. The

DEIS states that ground water treatments would involve additional wells that "would be located far apart"; thereby limiting disturbance during installation (DEIS 4-43). This description conflicts with the description of various ground water treatment technologies which would involve wells or bore holes installed 10-20 feet apart and operating for years, decades, or centuries. It is likely that installation and maintenance activities including the interconnected systems of pipes and electricity could cause further disruption of vegetation and associated wildlife.

Furthermore, the DEIS should acknowledge that Biology Mitigation Measure-4 does not address the permanent loss of nesting and foraging habitats for bird species should habitats no longer be suitable following remediation activities. The Department recommends that NASA undertake a more intensive effort to restore on-site habitats following remediation. The Department is available to work with NASA to develop goals and objectives for a more effective restoration effort.

Bird Species Avoidance Measures:

Fish and Game Code Section 3503 prohibits the take of birds and their nests regardless of their status under the Migratory Bird Treaty Act (MTBA). Fish and Game Code Sections 3503.5 and 3513 provide additional protection for raptors and other migratory nongame birds listed under the MBTA. Biology Mitigation Measure-4 addresses only migratory birds and indicates mitigation could include scheduling activities outside the nesting season, relocation, or compensatory mitigation. The Department recommends that work occur outside the active bird nesting season, as relocation or compensatory mitigation could still result in take of birds or their nests.

Proposed project activities (including, but not limited to, staging and disturbances to native and nonnative vegetation, structures, and substrates) should occur outside of the avian breeding season which generally runs from March 1- August 31 (as early as January 1 for some raptors) to avoid take of birds or their eggs. Take means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill (Fish and Game Code Section 86), and includes take of eggs and/or young resulting from disturbances which cause abandonment of active nests. Depending on the avian species present, a qualified biologist may determine that a change in the breeding season dates is warranted.

If avoidance of the avian breeding season is not feasible, the Department recommends that, beginning thirty days prior to the initiation of project activities, a qualified biologist with experience in conducting breeding bird surveys conduct weekly bird surveys to detect protected native birds occurring in suitable nesting habitat that is to be disturbed and (as access to adjacent areas allows) any other such habitat within 300 feet of the disturbance area (within 500 feet for raptors). Surveys for active nests should also take place at any man- made structures that may be demolished on the project site. The surveys should continue on a weekly basis with the last survey being conducted no more than 3 days prior to the initiation of project activities. If a protected native bird is found, the project proponent should delay all project activities within 300 feet of on- and off-site suitable nesting habitat (within 500 feet for suitable raptor nesting habitat) until August 31. Alternatively, the qualified biologist could continue the surveys in order to locate any nests. If an active nest is located, project activities within 300 feet of the nest (within 500 feet for raptor nests) or as determined by a qualified biological monitor, must be postponed until the nest is vacated and juveniles have fledged and there is no evidence of a second attempt at nesting. Flagging, stakes, and/or construction fencing should be used to demarcate the inside boundary of the buffer of 300 feet (or 500 feet) between the project

activities and the nest. Project personnel, including all contractors working on site, should be instructed on the sensitivity of the area. NASA should provide the Department and USFWS the results of the recommended protective measures described above to document compliance with applicable State and Federal laws pertaining to the protection of native birds.

If the biological monitor determines that a narrower buffer between the project activities and observed active nests is warranted, he/she should submit a written explanation as to why (e.g., species-specific information; ambient conditions and birds' habituation to them; and the terrain, vegetation, and birds' lines of sight between the project activities and the nest and foraging areas) to NASA, the USFWS and the Department. Based on the submitted information, the wildlife agencies should determine whether a narrower buffer is appropriate for the purposes of avoiding take.

The biological monitor should be present on site during all grubbing and clearing of vegetation to ensure that these activities remain within the project footprint and that the flagging/stakes/fencing is being maintained, and to minimize the likelihood that active nests are abandoned or fail due to direct or indirect project activities. The biological monitor should send weekly monitoring reports to NASA, USFWS and the Department during the grubbing, and clearing of vegetation, and should notify the wildlife agencies immediately if project activities damage active avian nests.

Impacts to Bats:

The DEIS does not discuss measures to reduce mortality of bat species likely to reside on the project site. The project may result in injury or death to bats including special status bats which reside in the natural rock outcrops, in riparian areas, within trees slated for removal, or man-made structures that would be demolished on the project site. The Department recommends the following additional avoidance and minimization measures be incorporated into the project work plans and mitigation measures--

1. To avoid direct loss of bats in the rock outcrop habitats slated for soil or ground water remediation, a qualified bat specialist should identify all potential locations that may serve as maternity roosts or colonies, these areas should be mapped and avoidance buffers should be established in consultation with the Department.

2. To avoid the direct loss of bats that could result from removal of trees and/or structures that may provide maternity roost habitat (e.g., in cavities or under loose bark), the following steps would be taken:

   a) Tree removal should be scheduled between October 1 and February 28, outside of the maternity roosting season.

   b) If trees and/or structures must be removed during the maternity season (March 1 to September 30), a qualified bat specialist should conduct a pre-construction survey to identify those trees and/or structures proposed for disturbance that could provide hibernacula or nursery or colony roosting habitat for bats.

c) Each tree and/or structure identified as potentially supporting an active maternity roost should be closely inspected by the bat specialist a maximum of 7 days prior to tree disturbance to more precisely determine the presence or absence of roosting bats.

d) If bats are not detected, but the bat specialist determines that roosting bats may be present at any time of year, it is preferable to push any tree down using heavy machinery rather than felling it with a chainsaw. In order to ensure the optimum warning for any roosting bats that may still be present, the tree should be pushed lightly two to three times, with a pause of approximately 30 seconds between each nudge to allow bats to become active. The tree should then be pushed to the ground slowly and should remain in place until it is inspected by a bat specialist. Trees that are known to be bat roosts should not be cut up or mulched immediately. A period of at least 24 hours, and preferably 48 hours, should elapse prior to such operations to allow bats to escape. Bats should be allowed to escape prior to demolition of buildings. This may be accomplished by placing one way exclusionary devices into areas where bats are entering a building that allow bats to exit but not enter the building.

e) Maternity season lasts from March 1 to September 30. Trees and/or structures determined to be maternity roosts should be left in place until the end of the maternity season.

f) The bat specialist should document all demolition monitoring activities, and prepare a summary report upon completion of tree disturbance activities.

3. Should maternity roosts or bat colony sites be located in the project area, consultation with the Department is recommended to determine appropriate methods for avoidance and habitat replacement.

Wildlife Movement and Corridors

The proposed project will result in a substantial increase in traffic on local roads leading to and from the SSFL site. Heavy truck traffic will primarily use Woolsey Canyon Road and Valley Circle Boulevard. Local vehicles may utilize Box Canyon Road. Truck trips to remove contaminated soil are estimated at 26,441 and trips to bring in backfill from off site are estimated at 8,814 extending across a period of about two years (Table 2.4-1).

The truck and access routes traverse areas identified as a local and regional wildlife movement corridor (DEIS 3.4-2), and also go through local open space areas and natural preserves (Figure 4.5-2). The DEIS does not identify impacts to wildlife from roadkill associated with the increased traffic traversing off site and on site areas. Roadkill could be reduced by: a) including time restrictions that limit truck travel to full daylight hours only, thereby avoiding dawn and dusk when movement activity is high; and b) limiting speeds to 25 mph or less.

Wildlife Monitors

The proposed project will result in clearing natural habitat that supports many species of indigenous wildlife. To avoid direct mortality, the Department recommends biological monitors be on site prior to and during ground disturbance activities to relocate special status species and other wildlife species of low mobility that will be killed or injured by grubbing and ongoing

remediation activities. Wildlife should be relocated to adjacent appropriate habitat out of harm's way. Should state listed threatened or endangered species be encountered, incidental take authorization from the Department may be required.

The DEIR should acknowledge that capture and relocation of on-site common and special status species does not constitute effective mitigation for the purposes of offsetting project related impacts stemming from habitat loss.

Alternatives Analysis

The DEIS evaluates two alternatives: 1) No Action; and 2) the Proposed Project to clean up to background levels. This level means that clean up targets would be the most conservative, and would result in the greatest impact to soil and habitat (removal of up to 500,000 cubic yards of soil on approximately 105 surface acres). Alternatives 1 through 3 were eliminated from further consideration because they would not meet the previously agreed upon clean up levels (to background) described in the 2010 Administrative Order on Consent for Remedial Action (AOC) (DTSC 2010).

The Department notes that under Alternative 3, soil would be cleaned up to a level which is safe for recreational use of the project area (Table 2.4-1), which is a potential end use for the NASA properties as well as the adjoining Boeing properties. Alternative 3 would result in far fewer acres of impacts to habitat (6 acres) and cubic yards of soil removal (58,000) compared with the Proposed Project, and therefore this alternative would have far fewer substantial long term adverse impacts to biological resources and requires less backfill and restoration. Groundwater cleanup levels do not vary across the range of alternatives (Table 2.4-1), but there is potential for different treatment options to vary in terms of their impacts to biological resources.

This concludes the Department's comments. We recognize the tremendous environmental challenge and complexity associated with addressing past contamination of this biologically sensitive area. The Department looks forward to continuing to work with NASA and DTSC to address these issues. Should you have any questions, please contact Ms. Mary Meyer, Senior Environmental Scientist (Specialist) at (805) 640-8019.

Sincerely,

Edmund Pert
Regional Manager
South Coast Region

ec: Betty Courtney, CDFW, Santa Clarita
Ali Aghili, CDFW, Los Alamitos
Mary Meyer, CDFW, Ojai
Jeff Humble, CDFW, Ventura
Brock Warmuth, CDFW, Camarillo
Dan Blankenship, CDFW, Santa Clarita
Wendy Johnson, CDFW, Office of General Counsel, Sacramento

Jeff Phillips, USFWS, jeff_phillips@fws.gov
Paul Costa, The Boeing Company, paul.j.costa@boeing.com
Mark Malinowski, Dept. of Toxic Substance Control, Mark.Malinowski@dtsc.ca.gov
Cassandra Owens, LARWQCB,Cassandra.Owens@waterboards.ca.gov

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