Executive Summary

ES.1 Introduction

This Draft Programmatic Environmental Assessment (EA) has been prepared by the National Aeronautics and Space Administration (NASA). This Programmatic EA will assist in the decision-making process as required by the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [U.S.C.] 4321 et seq.), Council on Environmental Quality (CEQ) Regulations for implementing the provisions of NEPA (40 *Code of Federal Regulations* [CFR] Parts 1500 through 1508), NASA's policies and procedures at 14 CFR Subpart 1216.3, and Executive Order (EO) 12114, *Environmental Effects Abroad of Major federal Actions*.

This Programmatic EA provides information associated with the potential environmental impacts of the transition and retirement (T&R) of NASA's Space Shuttle Program (SSP). The T&R of the SSP would consist of the disposition of both real property (land, buildings and other structures and their associated built-in systems that cannot readily be moved without changing the essential character of the real property) and personal property (all assets not classified as real property owned by, leased to, or acquired by the government). Property disposition activities are the primary focus of this EA because this is the T&R activity with the greatest potential for environmental impacts. The Programmatic EA approach allows NASA to assess the overall T&R activities, although some specific options are not yet sufficiently developed to assess in detail.

This Executive Summary includes the background, purpose, and need for the Proposed Action; the No Action Alternative; the decisions to be made; the methodology of the EA; and a summary of the environmental impacts. Exhibit ES-1 (at the end of this section) summarizes the environmental impacts of implementing the Proposed Action by resource area.

ES.2 Background

When the United States (U.S.) began the space program in the late 1950s, missions were accomplished using expendable launch vehicles (ELVs). The Saturn vehicles provided the launch capabilities for the manned lunar exploration program (Apollo), and smaller vehicles such as Titan, Atlas, Delta, and Scout were used to launch a variety of automated spacecraft such as communications, weather, and science satellites.

EXHIBIT ES-1
Summary Comparison of Alternatives

Resource Area	Potential Impact of Proposed Action	Potential Impact of No Action Alternative
Kennedy Space Center		
Air Quality	minimal to no impact	minimal to no impact
Biological Resources	minimal impact	minimal impact
Cultural Resources	moderate impact	moderate impact
Hazardous/Toxic Materials and Waste	minimal impact	minimal impact
Health and Safety	minimal impact	minimal impact
Hydrology and Water Quality	minimal impact	minimal impact
Land Use	minimal impact	minimal impact
Noise	minimal impact	minimal impact
Site Infrastructure	minimal impact	minimal impact
Socioeconomics	minimal to no impact	minimal to no impact
Solid Waste	minimal impact	minimal impact
Traffic and Transportation	minimal impact	minimal impact
Johnson Space Center		
Air Quality	minimal to no impact	minimal to no impact
Biological Resources	no impact	no impact
Cultural Resources	moderate impact	moderate impact
Hazardous/Toxic Materials and Waste	minimal impact	minimal impact
Health and Safety	minimal impact	minimal impact
Hydrology and Water Quality	minimal impact	minimal impact
Land Use	minimal impact	minimal impact
Noise	minimal impact	minimal impact
Site Infrastructure	minimal impact	minimal impact
Socioeconomics	minimal to no impact	minimal to no impact
Solid Waste	minimal impact	minimal impact
Traffic and Transportation	minimal impact	minimal impact
Ellington Field		
Air Quality	minimal to no impact	minimal to no impact
Hazardous/Toxic Materials and Waste	minimal to no impact	minimal impact

EXHIBIT ES-1
Summary Comparison of Alternatives

Resource Area	Potential Impact of Proposed Action	Potential Impact of No Action Alternative
Health and Safety	minimal impact	minimal impact
Hydrology and Water Quality	minimal impact	minimal impact
Land Use	minimal impact	minimal impact
Noise	minimal impact	minimal impact
Site Infrastructure	minimal impact	minimal impact
Solid Waste	minimal impact	minimal impact
Traffic and Transportation	minimal impact	minimal impact
El Paso Forward Operating Location		
Air Quality	minimal to no impact	minimal to no impact
Hazardous/Toxic Materials and Waste	minimal to no impact	minimal impact
Health and Safety	minimal impact	minimal impact
Hydrology and Water Quality	minimal impact	minimal impact
Noise	minimal impact	minimal impact
Site Infrastructure	minimal impact	minimal impact
Solid Waste	minimal impact	minimal impact
Traffic and Transportation	minimal impact	minimal impact
Stennis Space Center		
Air Quality	minimal to no impact	minimal to no impact
Biological Resources	minimal impact	minimal impact
Cultural Resources	moderate impact	moderate impact
Hazardous/Toxic Materials and Waste	minimal impact	minimal impact
Health and Safety	minimal impact	minimal impact
Hydrology and Water Quality	minimal impact	minimal impact
Land Use	minimal impact	minimal impact
Noise	minimal impact	minimal impact
Site Infrastructure	minimal impact	minimal impact
Solid Waste	minimal impact	minimal impact
Traffic and Transportation	minimal impact	minimal impact

EXHIBIT ES-1
Summary Comparison of Alternatives

Resource Area	Potential Impact of Proposed Action	Potential Impact of No Action Alternative
Michoud Assembly Facility		
Air Quality	minimal to no impact	minimal to no impact
Biological Resources	minimal impact	minimal impact
Cultural Resources	moderate impact	moderate impact
Hazardous/Toxic Materials and Waste	minimal impact	minimal impact
Health and Safety	minimal impact	minimal impact
Hydrology and Water Quality	minimal impact	minimal impact
Land Use	minimal impact	minimal impact
Noise	minimal impact	minimal impact
Site Infrastructure	minimal impact	minimal impact
Socioeconomics	minimal to no impact	minimal to no impact
Solid Waste	minimal impact	minimal impact
Traffic and Transportation	minimal impact	minimal impact
Marshall Space Flight Center		
Air Quality	minimal to no impact	minimal to no impact
Biological Resources	minimal impact	minimal impact
Cultural Resources	moderate impact	moderate impact
Hazardous/Toxic Materials and Waste	minimal impact	minimal impact
Health and Safety	minimal impact	minimal impact
Hydrology and Water Quality	minimal impact	minimal impact
Land Use	minimal impact	minimal impact
Noise	minimal impact	minimal impact
Site Infrastructure	minimal impact	minimal impact
Socioeconomics	minimal to no impact	minimal to no impact
Solid Waste	minimal impact	minimal impact
Traffic and Transportation	minimal impact	minimal impact
White Sands Test Facility		
Air Quality	minimal to no impact	minimal to no impact
Biological Resources	minimal impact	minimal impact
Cultural Resources	moderate impact	moderate impact

EXHIBIT ES-1
Summary Comparison of Alternatives

Resource Area	Potential Impact of Proposed Action	Potential Impact of No Action Alternative
Hazardous/Toxic Materials and Waste	minimal impact	minimal impact
Health and Safety	minimal impact	minimal impact
Hydrology and Water Quality	minimal impact	minimal impact
Land Use	minimal impact	minimal impact
Noise	minimal impact	minimal impact
Site Infrastructure	minimal impact	minimal impact
Socioeconomics	minimal to no impact	minimal to no impact
Solid Waste	minimal impact	minimal impact
Traffic and Transportation	minimal impact	minimal impact
Dryden Flight Research Center		
Air Quality	minimal to no impact	minimal to no impact
Cultural Resources	moderate impact	moderate impact
Hazardous/Toxic Materials and Waste	minimal impact	minimal impact
Health and Safety	minimal impact	minimal impact
Hydrology and Water Quality	minimal impact	minimal impact
Land Use	minimal impact	minimal impact
Noise	minimal impact	minimal impact
Site Infrastructure	minimal impact	minimal impact
Solid Waste	minimal impact	minimal impact
Traffic and Transportation	minimal impact	minimal impact
Palmdale		
Air Quality	minimal to no impact	minimal to no impact
Cultural Resources	moderate impact	moderate impact
Hazardous/Toxic Materials and Waste	minimal impact	minimal impact
Health and Safety	minimal impact	minimal impact
Noise	minimal impact	minimal impact
Site Infrastructure	minimal impact	minimal impact

EXHIBIT ES-1
Summary Comparison of Alternatives

Resource Area	Potential Impact of Proposed Action	Potential Impact of No Action Alternative
Solid Waste	minimal impact	minimal impact
Traffic and Transportation	minimal impact	minimal impact

Notes:
No Impact–No impacts expected
Minimal–Impacts are not expected to be measurable, or are measurable but are too small to cause any change in the environment
Minor–Impacts that are measurable but are within the capacity of the affected system to absorb the change, or the impacts can be compensated for with little effort and few resources so that the impact is not substantial
Moderate–Impacts that are measurable but are within the capacity of the affected system to absorb the change, or the impacts can be compensated for with effort and resources so that the impact is not substantial
Major–Environmental impacts that, individually or cumulatively, could be substantial

Approved as a National program in 1972, the Shuttle is a unique design because, except for the External Tank (ET), all Shuttle components are reusable. The Shuttle's purpose is to deliver payloads into low Earth orbit and to dock with satellites and the International Space Station (ISS). However, the President and Congress have established new objectives and direction for the Nation's space exploration program. On January 14, 2004, President George W. Bush presented his Vision for U.S. Space Exploration to the nation. The fundamental goal of this vision is to advance U.S. scientific, security, and economic interests through a robust space exploration program. In support of this goal, the U.S. will do the following:

- Implement a sustained and affordable human and robotic program to explore the solar system and beyond.
- Extend the human presence across the solar system, starting with a human return to the moon by the year 2020, in preparation for human exploration of Mars and other destinations.
- Develop the innovative technologies, knowledge, and infrastructures to both explore and support decisions about the destinations for human exploration.
- Promote international and commercial participation in exploration to further U.S. scientific, security, and economic interests (NASA, 2004g).

Congress expressly endorsed the President's space exploration initiative and provided additional direction for the initiative in the NASA Authorization Act of 2005 (Public Law [P.L.] 109-155). Both Congress and the President have directed NASA to develop a "crew exploration vehicle" and associated systems to support the exploration initiative and provide U.S. human spaceflight capability after the retirement of the Shuttle. NASA is in the planning stages of T&R activities for the SSP that efficiently will address the reuse of critical skills, human capital, and property. NASA initiated and is in the early planning stages of the "Constellation

Program," which is intended to develop and operate the human space exploration systems necessary to implement the vision. NASA has evaluated the potential environmental impacts of its proposed Constellation Program and its various components in the *Final Constellation Programmatic Environmental Impact Statement* (Cx PEIS) (2007t).

ES.3 Purpose and Need for the Proposed Action

In announcing the Vision for Space Exploration, the President directed NASA to retire the Space Shuttle by 2010 (NASA, 2004g). Congress expressly endorsed the President's exploration initiative and provided additional direction for the initiative in the NASA Authorization Act of 2005, authorizing NASA to "…establish a program to develop a sustained human presence on the Moon, including a robust precursor program to promote exploration, science, commerce and U.S. preeminence in space, and as a stepping stone to future exploration of Mars and other destinations" (P.L. 109-155).

Under presidential direction, NASA will cease operations of its SSP at all locations, including those addressed in this EA: Kennedy Space Center (KSC), Johnson Space Center (JSC), Ellington Field (EF), El Paso Forward Operating Location (EPFOL), Stennis Space Center (SSC), Michoud Assembly Facility (MAF), Marshall Space Flight Center (MSFC), White Sands Test Facility (WSTF), Dryden Flight Research Center (DFRC), and Palmdale. The retirement of the program necessitates the disposition of all SSP assets.

DFRC is a tenant of Edwards Air Force Base (EAFB) in California. EPFOL is located on El Paso International Airport (EPIA), which is owned and operated by the City of El Paso, Texas, and NASA leases land from the City. Palmdale (also known as Air Force Plant 42 Site 1 [AFP 42]), located at EAFB, is owned by the U.S. Air Force (USAF), leased by NASA, and operated by Boeing Company. The White Sands Missile Range (WSMR) is a U.S. Department of Defense (DoD)-owned facility operated by the Department of the Army (DA) and is located at WSTF. All other facilities are owned and operated by NASA.

All NASA Centers and prime contractor facilities were considered for inclusion in this EA. The criteria used to screen out potential NASA Centers and prime contractor facilities were as follows:

- If SSP activities occur or occurred at the Center.
- If so, the scale and timeframe of the SSP operations that took or take place were considered.

- Centers with limited SSP operations or those that did conduct SSP operations at one time, but are no longer used for SSP support, were eliminated from this evaluation because there is minimal Shuttle-unique property to be disposed.
- Contractor-owned properties were not included because contractors are responsible for the disposition of their own properties. However, government-owned property at contractor sites is included in this EA.

The complete list of NASA Centers and prime contractor facilities considered for this EA is provided in Section 1.2. It was determined that the Sonny Carter Training Facility (SCTF), Ames Research Center, Glenn Research Center, Goddard Space Flight Center, Jet Propulsion Laboratory, Langley Research Center, and Wallops Flight Facility would not be included in this EA because their respective operations support multiple NASA programs and there is minimal Shuttle-unique property to be disposed. However, a few Centers have property that is eligible for listing under the National Register of Historic Places (NRHP) and will be disposed in accordance with applicable laws and regulations.

Santa Susana Field Laboratory (SSFL) is not included in the EA because SSP activities and property usage have been minimal for many years. The infrastructure in place has supported numerous NASA program activities. NASA environmental compliance and restoration activities are ongoing at SSFL and are being conducted by NASA Infrastructure and Administration Office. Consequently, the disposition of assets at SSFL will be addressed outside of the SSP T&R activities. NASA is currently assessing the future needs for SSFL. If NASA decides to excess the property at SSFL, the U.S. General Services Administration (GSA) would be responsible for disposal activities and would prepare the required NEPA documentation.

The prime contractor facilities that were considered for inclusion in this EA included ATK (Promontory, Utah), Boeing (Huntington Beach, California), Lockheed Martin (at MAF), Pratt Whitney Rocketdyne (West Palm Beach, Florida; and Canoga Park, California), and United Space Alliance (USA) (primarily KSC and JSC locations). These facilities were not included (except for MAF's NASA operations) because they are responsible for the disposition of their own properties. However, government-owned property at contractor sites is included in this EA as described in Section 1.2.

The purpose of the proposed action is the disposition of Shuttle assets, including real and personal property, in a manner that fully realizes any remaining value of those assets and that is compliant with applicable federal, state, and local laws and regulations.

ES.4 Proposed Action

Under presidential direction, NASA will cease operations of its SSP in 2010. A number of assets will be dispositioned during the T&R activities. SSP property disposition activities may extend several years beyond 2010.

NASA proposes to implement a centralized process, consisting of a coordinated series of actions, for the disposition of the SSP real and personal property. SSP real and personal property would be evaluated in accordance with NASA Procedural Requirements (NPR) 8800.15, "Real Estate Management Program Implementation Manual," and NPR 4300.1, "NASA Personal Property Disposal Procedural Requirements," to select the best option for disposition.

ES.4.1 Real Property

When the SSP disposes of real property, the responsible NASA Center will evaluate whether the property can be used by another NASA program (reutilization), or it may mothball or destroy the property. If NASA decides to convey the property to another federal, state, local, or private individual, NASA relinquishes the property to the U.S. General Services Administration (GSA). The GSA will convey the property according to federal laws and regulations. The property disposition options that will be evaluated for real property are as follows:

- **Reutilization:** The first option for disposal of government property is reutilization by another NASA program. Property is screened for reutilization by NASA's ongoing programs and for transfer and use by future programs.
- **Utilization:** If the property is not required by other NASA programs, it is made available to other federal agencies. The receiving federal agency would be responsible for the applicable NEPA analysis and documentation resulting from the use of the property.
- **Mothball**: Under this option, NASA would mothball particular SSP real property in place. Under this scenario, NASA would maintain these properties at some low level of support in the event that a Center or new program could use them in the future.
- **Destruction**: Under this option, the property would be demolished or otherwise removed from NASA property to an appropriate location, such as a landfill or hazardous waste treatment, storage, or disposal facility (TSDF).
- **Release to GSA**: If the property is no longer needed by NASA, it may be relinquished to the GSA for conveyance to other federal, state, local, or private individuals.

NASA real property is evaluated for historical significance per the National Historic Preservation Act (NHPA) to assess eligibility for listing on the NRHP. NASA's Historic Preservation Working Group (HPWG) drafted a set of standard criteria for the evaluation of SSP-related properties at all NASA Centers. If the evaluation

recommends that the property meets the criteria for historical significance under the NHPA, it is submitted to the State Historical Preservation Officer (SHPO) for comment and concurrence of historical significance. For those properties determined eligible for listing on the NRHP, the undertakings involving the expenditure of federal funds will be submitted to the SHPO for review per the requirements of the NHPA.

ES.4.2 Personal Property

Shuttle-related personal property includes hundreds of thousands of items ranging from common parts to complex tooling and flight hardware. The disposition of common parts has no potential for significant impacts to the environment. Consequently, disposition of personal properties such as complex tooling and flight hardware that may have the potential to adversely affect the environment are analyzed in this Programmatic EA. When personal property is no longer required by the SSP, it is disposed according to NASA's established procedures for disposal. The disposal procedure progresses through a series of options, as described below:

- **Reutilization:** The first option for disposal of government property is reutilization by another NASA program. Property is screened for reutilization by NASA's ongoing programs and for use by future programs.
- **Storage:** Under this option, NASA would relocate particular SSP personal property to appropriate storage locations (such as laydown yards or warehouses). At these locations, the property would be maintained at some minimum level of support in the event that a Center or new program could use it in the future. These locations would have an appropriate level of security provided by the location's owner, which would be NASA or some other federal agency. The storage locations could be located onsite or offsite, or be newly constructed areas or buildings. Because it is not currently known whether any new storage areas would be constructed to store SSP property, the information necessary to analyze the potential environmental impacts for constructing such areas does not exist at this time. Therefore, environmental analyses for the construction of new structures for storage of SSP property are deferred until the construction becomes less speculative, and the information necessary for analyses becomes available. Any additional NEPA analyses will be conducted by the responsible Center.
- **Utilization:** If the property is not required by other NASA programs, it is made available to other federal agencies. The receiving federal agency would be responsible for the applicable NEPA analysis and documentation resulting from the use of the property.
- **Donation:** If the property is not required by another federal agency, it is eligible for donation. Under this option, federal excess property can be provided to the state for screening and then to other eligible applicants, including nonprofit educational and public health activities, nonprofit and public programs (such as

museums) for the elderly, educational activities of special interest, public airports, or the homeless.

- **Sales:** Under this option, providing that efforts to reutilize and/or donate have been exhausted, NASA would dispose of the property by means of a competitive bid process such as an auction, sealed bid, or retail sales, in accordance with the guidelines.
- **Destruction:** Under this option, the property would be demolished or otherwise removed from NASA property to an appropriate location, such as a landfill or hazardous waste TSDF.

The evaluation criteria to assess the potential historical significance of personal property and preservation requirements are being developed by NASA. Once completed, these requirements will be applied to SSP personal property to determine what is historically significant.

ES.4.3 Proposed Action Schedule

The SSP is scheduled for retirement in 2010. Under the Proposed Action, once an asset is determined to no longer be needed by the SSP, it would become slated for disposition. Disposition could occur for some assets before SSP retirement in 2010. However, many assets will be needed until the final SSP mission is completed. Furthermore, the evaluation of the potential usefulness of some assets for other NASA programs may not be possible until those programs reach a certain level of maturity. Therefore, so that NASA may best use its SSP assets, final disposition of SSP assets under the Proposed Action may extend several years beyond 2010.

ES.5 No Action Alternative

Under the No Action alternative, NASA would not implement the proposed comprehensive and coordinated effort to disposition SSP property under a structured and centralized SSP process. The disposition of SSP property instead would occur on a Center-by-Center and item-by-item basis in the normal course of NASA's ongoing facility and program management.

ES.6 Decision to be Made

The primary decision to be made by NASA, supported in part by the information contained in this EA, is the manner of disposition of the Shuttle assets.

ES.7 Summary of Environmental Impacts

Twelve environmental areas were evaluated to provide a context for understanding the potential effects of the Proposed Action and a basis for assessing the significance of the potential impacts. These areas include air quality; biological resources;

cultural resources; hazardous and toxic materials and waste; health and safety; hydrology and water quality; land use; noise; site infrastructure; socioeconomics; solid waste; and transportation. Lists of the activities necessary to accomplish the Proposed Action and No Action Alternative were developed. Those activities that have the potential to affect the environment were identified and analyzed to evaluate their potential impacts.

This subsection summarizes the conclusions of the analyses made for each of the environmental areas based on the application of the described methodology. Only those activities for which a potential environmental concern was determined at each location are described. Exhibit ES-1 summarizes this information. The impacts were evaluated as follows:

- No Impact–No impacts expected
- Minimal–Impacts are not expected to be measurable, or are measurable but are too small to cause any change in the environment
- Minor–Impacts are measurable but are within the capacity of the affected system to absorb the change, or the impacts can be compensated for with little effort and few resources so that the impact is not substantial
- Moderate–Impacts are measurable but are within the capacity of the affected system to absorb the change, or the impacts can be compensated for with effort and resources so that the impact is not substantial
- Major–Environmental impacts that, individually or cumulatively, could be substantial

ES.7.1 National Perspective on Socioeconomic Impacts

This Programmatic EA evaluates NASA's decision about how to disposition the SSP's real and personal property assets; therefore, the socioeconomic impact analysis addresses only the impacts of NASA's discretionary actions regarding disposition of the SSP's real and personal property. It does not address the broader socioeconomic impacts of the President's decision to discontinue the SSP, because the Presidential decision to discontinue the SSP has already been made and is not subject to NEPA analysis..

Nevertheless, to provide context for this EA's limited socioeconomic analysis, the EA provides information about the current and projected socioeconomic influence of the SSP and other NASA programs.

The President's Fiscal Year (FY) 2008 budget request for NASA shows a steadily increasing investment in exploration systems and space operations (the portion of the budget that covers the SSP, ISS, Constellation Programs, and other ongoing activities) over the budget period of FY 2006 through FY 2012. As the SSP transitions and retires, the Constellation Program will increase the pace of development and testing of the nation's new space vehicles, leading to an initial

operating capability by 2015. Even with the new programs, there will be an approximate 4-year gap between the termination of the SSP and the operation of the new vehicles, during which employment and expenditures would be affected.

NASA will continue to invest in other space operations at existing Centers and will distribute the new work across NASA's existing Centers, aligning the work to be performed with the capabilities of the individual NASA Centers. New NASA programs and projects will help fill the void left by the SSP T&R activities; however, localities that host NASA Centers that are heavily involved in the SSP would experience adverse socioeconomic impacts.

The disposition of SPP assets would have little to no discernible effects on socioeconomics, in comparison to the potentially considerable, although temporary, changes in employment (especially at Centers such as KSC, JSC, and MAF) that could result from the Presidential decision to close down the SSP. As recognized in the Final Cx PEIS (NASA, 2007t), a detailed analysis of changes in employment and expenditures at each Center is precluded by the fact that the Constellation Program is at an early stage of development and would be subject to adjustments and changes as requirements become better defined.

NASA recognizes that a skilled NASA and contractor work force is an essential ingredient to successful implementation of the Constellation Program and that there will be challenges for retaining skilled personnel. NASA is examining a variety of personnel initiatives to effect a smooth transition to Constellation operations and is committed to preserving the critical and unique capabilities provided by each NASA Center.

ES.7.2 No Action Alternative

Under the No Action Alternative, NASA would not implement the proposed comprehensive and coordinated effort to disposition SSP property under a structured and centralized SSP process. Instead, the disposition of SSP property would occur on a Center-by-Center and item-by-item basis in the normal course of NASA’s ongoing facility and program management.

Consequently, the environmental impact would be expected to be similar to that of the Proposed Action Alternative, which is described below. However, if a centralized process were not used to disposition assets (i.e., proposed action), the property disposal process could become overwhelmed with the volume of property to disposition. The volume of property to be processed could result in schedule and cost impacts if a structured disposal process were not implemented. Also, artifacts may not be properly identified and made available to museums for display. In addition, the amount of solid and hazardous waste that would require disposal could exceed landfill and less than 90-day hazardous waste storage yard capacities at some Centers.

ES.7.3 Proposed Action Alternative

ES.7.3.1 Kennedy Space Center

The specific disposition methods selected for SSP real and personal property are likely to have minimal to no or minimal discernible effects on air quality; biological resources; hazardous and toxic materials and waste; health and safety; hydrology and water quality; land use; noise; site infrastructure; socioeconomics; solid waste; and transportation. Moderate impacts to cultural resources could occur if the disposition of real property would require the demolition of an NRHP-listed or eligible building. This would be true even assuming the required consultation with the SHPO.

ES.7.3.2 Johnson Space Center

The specific disposition methods selected for SSP real and personal property are likely to have no discernible effects on biological resources and minimal to no or minimal discernible effects on air quality; hazardous and toxic materials and waste; health and safety; hydrology and water quality; land use; noise; site infrastructure; socioeconomics; solid waste; and transportation. Moderate impacts to cultural resources could occur if the disposition of real or personal property would require the demolition of an NRHP-listed or eligible building. This would be true even assuming the required consultation with the SHPO.

ES.7.3.3 Ellington Field

The specific disposition methods selected for SSP real and personal property are likely to have minimal to no or minimal discernible effects on air quality; hazardous and toxic materials and waste; health and safety; hydrology and water quality; land use; noise; site infrastructure; solid waste; and transportation.

ES.7.3.4 El Paso Forward Operating Location

The specific disposition methods selected for SSP real and personal property are likely to have minimal to no or minimal discernible effects on air quality; hazardous and toxic materials and waste; health and safety; hydrology and water quality; noise; site infrastructure; solid waste; and transportation.

ES.7.3.5 Stennis Space Center

The specific disposition methods selected for SSP real and personal property are likely to have minimal to no or minimal discernible effects on air quality; biological resources; hazardous and toxic materials and waste; health and safety; hydrology and water quality; land use; noise; site infrastructure; solid waste; and transportation. Moderate impacts to cultural resources could occur if the disposition of real or personal property would require the demolition of an NRHP-listed or eligible building. This would be true even assuming the required consultation with the SHPO.

ES.7.3.6 Michoud Assembly Facility

The specific disposition methods selected for SSP real and personal property are likely to have minimal to no or minimal discernible effects on air quality; biological resources; hazardous and toxic materials and waste; health and safety; hydrology and water quality; land use; noise; site infrastructure; socioeconomics; solid waste; and transportation. Moderate impacts to cultural resources could occur if the disposition of real or personal property would require the demolition of an NRHP-listed or eligible building. This would be true even assuming the required consultation with the SHPO.

ES.7.3.7 Marshall Space Flight Center

The specific disposition methods selected for SSP real and personal property are likely to have minimal to no or minimal discernible effects on air quality; biological resources; hazardous and toxic materials and waste; health and safety; hydrology and water quality; land use; noise; site infrastructure; socioeconomics; solid waste; and transportation. Moderate impacts to cultural resources could occur if the disposition of real or personal property would require the demolition of an NRHP-listed or eligible building. This would be true even assuming the required consultation with the SHPO.

ES.7.3.8 White Sands Test Facility

The specific disposition methods selected for SSP real and personal property are likely to have minimal to no or minimal discernible effects on air quality; biological resources; hazardous and toxic materials and waste; health and safety; hydrology and water quality; land use; noise; site infrastructure; socioeconomics; solid waste; and transportation. Moderate impacts to cultural resources could occur if the disposition of real or personal property would require the demolition of an NRHP-listed or eligible building. This would be true even assuming the required consultation with the SHPO.

ES.7.3.9 Dryden Flight Research Center

The specific disposition methods selected for SSP real and personal property are likely to have minimal to no or minimal discernible effects on air quality; hazardous and toxic materials and waste; health and safety; hydrology and water quality; land use; noise; site infrastructure; solid waste; and traffic and transportation. Moderate impacts to cultural resources could occur if the disposition of real or personal property would require the demolition of an NRHP-listed or eligible building. This would be true even assuming the required consultation with the SHPO.

ES.7.3.10 Palmdale

The specific disposition methods selected for SSP real and personal property are likely to have minimal to no or minimal discernible effects on air quality; hazardous and toxic materials and waste; health and safety; noise; site infrastructure; solid

waste; and transportation. Moderate impacts to cultural resources could occur if the disposition of real or personal property would require the demolition of an NRHP-listed or eligible building. This would be true even assuming the required consultation with the SHPO.

ES.8 Public and Agency Involvement

The Notice of Availability of the Programmatic EA was announced in the *Federal Register* (FR) on 25 or 26 February 2008. Comments on the Programmatic EA were solicited through notices of availability published in newspapers in Alabama, California, Florida, Louisiana, Mississippi, New Mexico, Texas, and Washington, D.C., as well as in the FR. Public comments were encouraged by offering a variety of means by which to submit comments, including written comments sent through the postal system, electronic mail, and facsimile.