

**ENVIRONMENTAL ASSESSMENT  
FOR BUILDING 1100 ADDITION**

**JOHN C. STENNIS SPACE CENTER  
HANCOCK COUNTY, MISSISSIPPI**

Lead Agency: NASA, John C. Stennis Space Center

Proposed Action: To build an addition to the south side of the NASA Administrative Building

For Further Information: Ronald G. Magee, Environmental Officer  
NASA Code RA00, Building 1100  
John C. Stennis Space Center  
Stennis Space Center, Mississippi 39529-6000  
(228) 688-7384

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Abstract: NASA is planning to build an addition onto the existing administration building at Stennis Space Center. The addition will be approximately 67,000 square feet of office space for NASA and U.S. Navy employees. No alternatives were considered except for the No Action Alternative since this is an extension of a construction project for expansion of Building 1100.

## Executive Summary

NASA is planning to build a three story addition onto the south end of the Administration Building 1100. This addition will be a mirror image of the addition built in 1993 on the north end of the building. The addition will be approximately 67,000 square feet to be used as office space for NASA and U.S. Navy personnel. This office space is needed for some new employees and others to be relocated from other buildings at Stennis Space Center. The environmental impacts are expected to be minimal including fugitive air emissions, intermittent noise, and waste generated from construction.

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## 1.0 Purpose and Need

The National Aeronautics and Space Administration (NASA) is planning to construct an addition onto the south end of Building 1100, the Administration Building at Stennis Space Center. This addition will be a mirror image of the addition on the north end of the building. The additional office space will be used by NASA and the U.S. Navy for approximately 200 employees needed for expanding programs at SSC. This addition will be used almost exclusively for administrative personnel of existing activities, therefore no new operations will occur in this building.

An environmental assessment of the proposed project has been conducted to comply with the requirement of the National Environmental Policy Act (NEPA) and NASA's Procedures and Guidelines for Implementing the National Environmental Policy Act and Executive Order 12114.

## 2.0 Description of Proposed Action and Alternatives

NASA proposes to construct a three story addition onto the existing Administrative Building 1100. This addition will have office space for approximately 200 employees. The expansion of Building 1100 began with an addition on the north end of the building that was completed in 1993. Since this is an extension of a project originally proposed several years ago, another location or modification to the design has not been considered as an alternative. The only alternative considered is the "No Action Alternative". The "No Action Alternative" would prevent NASA and the U.S. Navy from acquiring additional office space and perpetuate crowded conditions in other buildings.

Inclusion of the "No Action Alternative" is prescribed by the Council on Environmental Quality guidelines implementing the National Environmental Policy Act (NEPA). The "No Action Alternative" provides the benchmark against which the proposed actions are evaluated.

## 3.0 Existing Environment and Environmental Consequences of Alternatives

There will be little impact on the existing environment at SSC. The following sections describe any possible impacts that may occur during construction or as a result of the construction. The most notable impacts will be short term fugitive air emissions, short term intermittent noise from construction, and waste generated from construction.

### 3.1 Air Quality

Short term fugitive air emissions may result from construction activities. No action will result in no air emissions.

### 3.2 Noise

Noise from construction activities will have a short term intermittent impact. The "No Action Alternative" will result in no additional noise.

### 3.3 Water Quality

Construction wastewater discharges will consist of sanitary wastewater and storm water runoff from the area. The new addition will be connected to the existing sanitary sewer system for Building 1100 which leads to Outfall 001 under National Pollutant Discharge Elimination System (NPDES) Permit #MS0021610. No change in present operating conditions is anticipated, therefore there will be no additional load to the system. An NPDES permit for storm water will not be required as land disturbance will not be greater than 2 acres during construction. The "No Action Alternative" results in no additional wastewater.

### 3.4 Groundwater Resources

Water for potable and industrial use at SSC is supplied through six large capacity wells on site. No additional groundwater wells or deep subsurface disturbance is planned for this project. No impact to groundwater resources is expected.

### 3.5 Wetlands and Flood Plains

The SSC facility straddles the watersheds of two rivers: the East Pearl River on the western Fee Area boundary and the Jourdan River on the eastern Fee Area boundary. Some tributaries at the facility flow west to Harper Bayou and eventually drain into the East Pearl River. Other tributaries flow east into Catahoula Creek, with some intermittent streams flowing south into Devil's Swamp. Catahoula Creek and Devil's Swamp both eventually drain into the Jourdan River. The Pearl River empties into Lake Borgne, while the Jourdan River drains into the Bay of St. Louis. Both Lake Borgne and the Bay of St. Louis discharge into the Mississippi Sound.

As a result of the wetlands hydrology found at and around SSC and the presence of hydric soils and hydrophytic vegetation, a large portion of both the Fee Area and Buffer Zone are considered jurisdictional wetlands by the U.S. Army Corps of Engineers. The addition to Building 1100 is not in a functional wetlands area and will not encroach on jurisdictional wetlands. Construction will occur in an already cleared, filled, and high pedestrian traffic area.

The floodplain at SSC, according to the Flood Insurance rate Map for Hancock County, Mississippi, includes a 100-year floodplain along the East Pearl River at the western edge of the Fee

Area, and a 100-year floodplain along the Wolf Branch and along the Lion Branch of Catahoula Creek in the northeast portion of the Fee Area. The line for the 500-year floodplain extends a little further into the site along the same boundaries. The majority of SSC is classified as Zone "C" meaning an area of minimal flooding. The Building 1100 addition will not be located in the 100-year or 500-year floodplain.

### 3.6 Biotic Resources

Pine forest communities account for the majority of the vegetation in the uncleared portions of SSC and the surrounding Buffer Zone. Bottomland hardwood communities occur in low, poorly drained soils, which may have standing water. Vegetation and wildlife species that occur at SSC are identified in the SSC Environmental Resources Document (NASA/SSC, 1992).

The proposed construction area location is in an area of developed land covered by pavement or mowed grass. The site is heavily used by pedestrians. No additional impact on biotic resources is expected.

### 3.7 Threatened and Endangered Species

There are a significant number of threatened, endangered, and ranked species with ranges overlapping the SSC Fee Area and Buffer Zone. Listed and State-ranked species that potentially occur in the project area are identified in the SSC Environmental Resources Document (NASA/SSC, 1992). Proposed construction will not affect any threatened and endangered species or critical habitat that may exist in the SSC Fee Area since this construction will occur in an already developed area.

### 3.8 Archaeological Resources

Historically, the land at SSC has been severely disturbed by timber harvesting and the associated naval stores industry during the late nineteenth and early twentieth centuries. More recently, the land was disturbed by the construction of the SSC facility during the 1960's, making it unlikely that undisturbed archaeological sites would be found. In the Fee Area, only the townsite of Gainesville may require future archaeological considerations if land disturbing activities are proposed for the Fee Area. This project is not located near the Gainesville townsite and is on previously disturbed land. There should be no archaeological impact resulting from this project.

### 3.9 Cultural and Historical Resources

Three test stands at SSC have been designated as National Historic Landmarks and appear on the

National Register of Historic Places. These test stands and associated control centers have been so designated because of their importance in the testing of Saturn rockets, and the importance of the Saturn rocket in landing men on the moon. This project will not alter the historical attributes of the test stands.

### 3.10 Transportation

Interstates 10 and 59 (I-10 and I-59), U.S. Highway 90, and Mississippi 607 serve the SSC area. Direct access to and through SSC from I-10 and I-59 is provided by Mississippi Highway 607. Highway 607 also connects with U.S. Highway 90 approximately 9 miles (13.5 km) southeast of SSC. The increase in the number of employees utilizing the building addition will not affect transportation.

### 3.11 Waste Generation and Treatment

The solid waste generated during construction will be recycled or placed in the on site Class A landfill. Some construction waste, rubble, and vegetation will be disposed in of in the on site Class II rubbish site. Hazardous or other unacceptable wastes are shipped off-site to certified facilities for treatment or disposal. The "No Action Alternative" will produce no construction wastes.

### 3.12 Socioeconomics

The building addition will accommodate up to 200 employees. Some of these employees may be new hires, but many will be relocated from other buildings. At the present time total employment at SSC is 3,775. There will be no socioeconomic impact.

### 3.13 Public and Employee Health and Safety

SSC adheres to Occupational, Health, and Safety Administration (OSHA) standards for protection of employees on site. Procedures are in place to monitor and protect employees as necessary during construction.

### 3.14 Pollution Prevention and Environmental Justice

In accordance with Executive Order (EO) 12856, "Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements, SSC (NASA/SSC, 1995) has written a pollution prevention strategy into their Pollution Prevention Plan. This plan encourages elimination or reduction of the use and purchase of toxic chemicals, energy efficiency, solid waste reduction and recycling, water conservation, and hazardous waste and oil spill prevention. In order to meet the goals of the Pollution Prevention Plan, SSC has initiated projects affecting both the physical infrastructure and the program/project operations.

In accordance with EO 12898, SSC's Environmental Justice Implementation Plan reflects agency policy established in "Environmental Justice Strategy", March 1995. Any adverse effects of



programs at SSC on low income or minority populations will be identified and, if necessary, remedies will be provided through implementation of these plans. The SSC Buffer Zone surrounding the Fee Area makes any environmental justice concerns for this project insignificant.

#### 4.0 Agencies and Individuals Consulted

No agencies or individuals have been consulted for this environmental assessment. Information on environmental concerns from agencies and individuals on SSC activities have been addressed in previous environmental assessments and environmental impact statements. No new impacts have been identified for the Building 1100 addition that require such consultations.

#### 5.0 List of Preparers

Ronald G. Magee	NASA, SSC - Environmental Officer	Environmental Concerns
Jenette Gordon	NASA, SSC - Environmental Specialist	Environmental Concerns
Andrew Clarke	NASA, SSC - Engineer	Construction Management
Carolyn Kennedy	Johnson Controls World Services, SSC	Environmental Effects

## 6.0 References

Federal Emergency Management Agency, Flood Insurance Rate Map, Hancock County, Revised Map, September, 1987.

Federal Interagency Committee for Wetlands Delineation. 1989. Federal Manual for Identifying and Delineating Jurisdictional Wetlands, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and U.S. Department of Agriculture Soil Conservation Service, Washington, D.C., Cooperative Technical Publication.

Keiser, E.D. and P.K. Lago. 1991. Survey of the Amphibians, Reptiles, Birds, and Mammals on the 3,000 acre Stennis Space Center, ASRM Site Final Report, University of Mississippi, University, Mississippi.

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NASA/Stennis Space Center. 1997. Environmental Assessment for the Aerospace: Reusable Launch Vehicle Program, John C. Stennis Space Center.

NASA/Stennis Space Center. 1995. Historic Preservation Plan, John C. Stennis Space Center.

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Smith, W., P. Nichols Jr., and L. Walton. 1978. Soil Survey of Hancock County, Mississippi, United States Department of Agriculture, Soil Conservation Service.

Wooten, J.W. 1990. A Fall Botanical Survey of a portion of the National Aeronautics and Space Administration Installation Stennis Space Center Mississippi, John C. Stennis Space Center.

7.0 Distribution List

Maury Oceanographic Library, Building 1003, Stennis Space Center, MS

Hancock County Library, Highway 90, Bay St. Louis, MS

Margaret Reed Crosby Library, Picayune, MS

St. Tammany Parish Library, Slidell, LA