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Space Administration

**John C. Stennis Space Center**  
Stennis Space Center, MS  
39529-6000

**SPR 8715.3 Basic**  
**November 2004**

**COMPLIANCE IS MANDATORY**

**John C. Stennis Space Center**  
**Hot Work Permit Program**

Stennis Procedural Requirements	SPR 8715.3	Basic
	<i>Number</i>	<i>Rev.</i>
	Effective Date: November 15, 2004	
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Page 1 of 10		
Responsible Office: Office of Safety and Mission Assurance		
<b>SUBJECT: Stennis Space Center (SSC) Hot Work Permit Program</b>		

## Document History Log

Status/Change/ Revision	Change Date	Originator/Phone	Description
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Stennis Procedural Requirements	SPR 8715.3	Basic
	<i>Number</i>	<i>Rev.</i>
	Effective Date: November 15, 2004	
	Expiration Date: November 15, 2009	
Page 2 of 10		
Responsible Office: Office of Safety and Mission Assurance		
<b>SUBJECT: Stennis Space Center (SSC) Hot Work Permit Program</b>		

### Table of Contents

PREFACE .....	3
P.1 PURPOSE .....	3
P.2 APPLICABILITY .....	3
P.3 AUTHORITY .....	3
P.4 REFERENCES .....	3
P.5 CANCELLATION.....	4
CHAPTER 1. PROGRAM REQUIREMENTS.....	5
CHAPTER 2. OPERATIONAL REQUIREMENTS .....	7
CHAPTER 3. REQUIREMENTS FOR PERMANENT AND SPECIFIC DURATION PERMITS – UNIQUE FACILITIES AND CONSTRUCTION SITES.....	8
Attachment 1: Sample Form SSC-68, Flame “Hot Work” Permit .....	10

Stennis Procedural Requirements	SPR 8715.3	Basic
	<i>Number</i>	<i>Rev.</i>
	Effective Date: November 15, 2004	
	Expiration Date: November 15, 2009	
Page 3 of 10		
Responsible Office: Office of Safety and Mission Assurance		
<b>SUBJECT: Stennis Space Center (SSC) Hot Work Permit Program</b>		

## PREFACE

### P.1 PURPOSE

This directive establishes the requirements for the Hot Work Permit Program at Stennis Space Center (SSC).

### P.2 APPLICABILITY

This SPR is applicable to all NASA and NASA contractor personnel. This SPR is also applicable to resident agencies and contractors performing work at SSC. Compliance with this procedure is required for all of the following operations or activities:

- Electric Arc Welding
- Oxy-Acetylene cutting/welding/heating operations
- Operation of electrical, pneumatic or mechanical tools in a Hazardous Classified area that are not intrinsically safe
- Soldering torches powered by flammable gases
- Open flame producing devices, or devices that produce hot sparks during operation
- Burning of woodlands and brush piles

### P.3 AUTHORITY

- a. 42 U.S.C. 2473 (c)(1), Section 203(c)(1) of *the National Aeronautics and Space Act of 1958, as amended.*
- b. NPD 8710.3, *NASA Safety and Health Program Policy.*

### P.4 REFERENCES

All references are assumed to be the latest version unless otherwise specified.

- a. NPR 8715.3, *NASA Safety Manual.*
- c. NASA-STD-8719.11 *Safety Standard for Fire Protection.*
- d. Code of Federal Regulations 29 CFR 1910.252, Subpart Q, *Welding, Cutting and Brazing, General Requirements.*
- e. Code of Federal Regulations 29 CFR 1910.253, Subpart Q, *Welding, Cutting and Brazing, Oxygen-fuel welding and cutting.*
- f. NFPA 51B, *Standard for Fire Prevention during Welding, Cutting, and other Hot Work.*
- g. NASA-STD-8719.12, *Safety Standard for Explosives, Propellants, and Pyrotechnics.*

Stennis Procedural Requirements	SPR 8715.3	Basic
	<i>Number</i>	<i>Rev.</i>
	Effective Date: November 15, 2004	
	Expiration Date: November 15, 2009	
Responsible Office: Office of Safety and Mission Assurance		
<b>SUBJECT: Stennis Space Center (SSC) Hot Work Permit Program</b>		

**P.5 CANCELLATION**

None

*Signature on file*

T.Q. Donaldson V, RDML USN (Ret)  
Director

Attachments

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Stennis Procedural Requirements	SPR 8715.3	Basic
	<i>Number</i>	<i>Rev.</i>
	Effective Date: November 15, 2004	
	Expiration Date: November 15, 2009	
Page 5 of 10		
Responsible Office: Office of Safety and Mission Assurance		
<b>SUBJECT: Stennis Space Center (SSC) Hot Work Permit Program</b>		

## **CHAPTER 1. PROGRAM REQUIREMENTS**

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1.1 NASA Office of Safety and Mission Assurance shall appoint a Hot Work Permit Program Manager in writing.

1.2 Organizations requesting approval of facilities or construction sites for Hot Work without daily permits shall make formal requests in writing to the Hot Work Program Manager.

1.3 Organizations requesting authorization to issue Hot Work Permits shall make formal requests in writing to the Hot Work Program Manager.

Note: The authorization process for the Hot Work Permit Program is illustrated Figure 1.

1.4 The Hot Work Permit Program Manager shall maintain records of all identified locations allowed to perform Hot Work without requiring a permit.

1.5 The Hot Work Program Manager shall maintain records of all organizations authorized to issue Hot Work Permits.

1.6 Authorizations to issue permits will be for no longer than four years.

1.7 All organizations responsible for issuing SSC Hot Work Permits shall create written organizational level procedures that ensure compliance with the requirements of this document

1.8 The Hot Work Program Manager shall review all organizational procedures prior to implementation.

1.9 All organizations responsible for issuing SSC Hot Work Permits shall maintain a list of Permit Authorizing Individuals (PAI).

1.10 The Facility Operations Support Contractor (FOOSC) shall train all Permit Authorizing Individuals.

1.11 Hot Work Permits shall only be issued using the SSC-68 Form. Part 1 of the SSC-68 shall be retained as a Quality Record by the issuing organization for a minimum of one year or until audited.

1.12 All organizations authorized to issue Hot Work Permits will track each permit issued using a unique identification numbering system identified in the Letter of Authorization from the Hot Work Program Manager.

Stennis Procedural Requirements	SPR 8715.3	Basic
	<i>Number</i>	<i>Rev.</i>
	Effective Date: November 15, 2004	
	Expiration Date: November 15, 2009	
Page 6 of 10		
Responsible Office: Office of Safety and Mission Assurance		
<b>SUBJECT: Stennis Space Center (SSC) Hot Work Permit Program</b>		

1.13 All organizations authorized to issue Hot Work Permits shall audit their program annually. All audit reports shall be maintained for a minimum of three years or until audited.

1.14 The NASA SMA Office shall audit all organizations authorized to issue Hot Work Permits at least every two years.

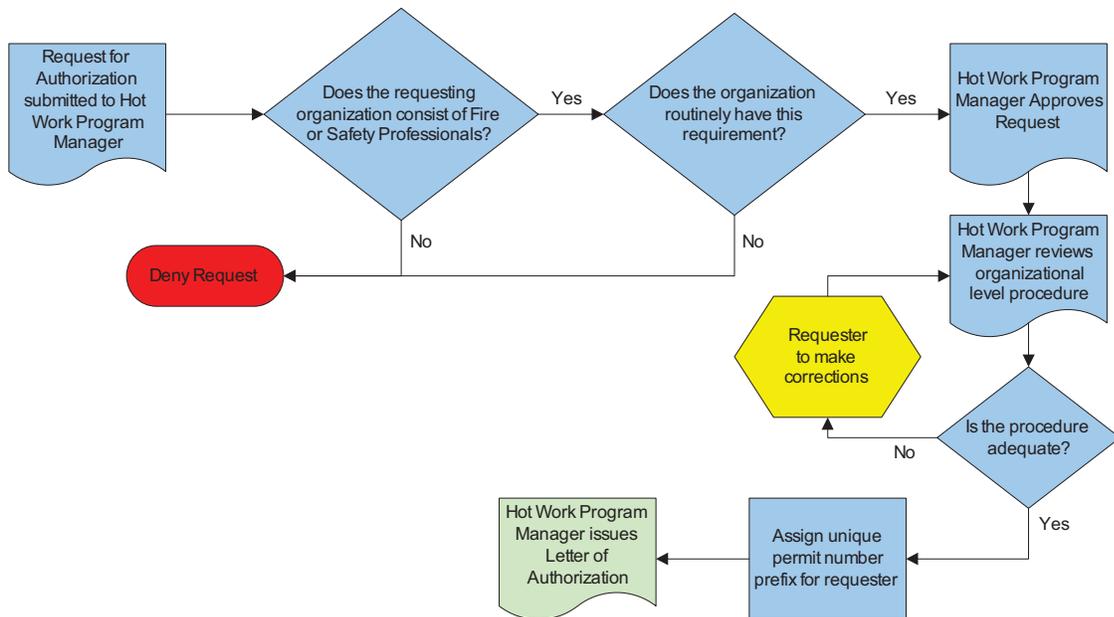


Figure 1 - Hot Work Permit Program Authorization Process

Stennis Procedural Requirements	SPR 8715.3	Basic
	<i>Number</i>	<i>Rev.</i>
	Effective Date: November 15, 2004	
	Expiration Date: November 15, 2009	
Page 7 of 10		
Responsible Office: Office of Safety and Mission Assurance		
<b>SUBJECT: Stennis Space Center (SSC) Hot Work Permit Program</b>		

## **CHAPTER 2. OPERATIONAL REQUIREMENTS**

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- 2.1 Only individuals with current certifications shall issue Hot Work Permits.
- 2.2 PAI training shall include written testing.
- 2.3 Hot Work Permits shall be issued for a specific location.
- 2.4 Hot Work Permits shall be issued for a specific time period.
- 2.5 Facility Managers or designees shall approve Hot Work for their assigned areas.
- 2.6 The Fire Department shall be notified for Hot Work if the following conditions apply:
- Hot Work in a Confined Space
  - Burning of brush piles or woodlands
  - Hot Work in an occupied building (except facilities permitted per this instruction)
  - Any condition exists which the PAI determines may need additional attention by the Fire Department
- 2.7 Atmospheric monitoring shall be performed for all permits issued in a “Hazardous Area” where flammable vapors may be present.
- 2.8 Hot Work Permits and Safe Atmospheric Verification forms (when required) shall be displayed at the work site for the time periods issued.
- 2.9 At the end of each work shift, or upon completion of the job, Hot Work Permits and Safe Atmospheric Verification forms (when required) shall be attached to the Process Plan or Work Authorizing Document that initiated the work and shall become part of the permanent record.
- 2.10 All work instructions and plans shall include the requirements provided in the documents referenced in section P.4 of this document.

Stennis Procedural Requirements	SPR 8715.3	Basic
	<i>Number</i>	<i>Rev.</i>
	Effective Date: November 15, 2004	
	Expiration Date: November 15, 2009	
Page 8 of 10		
Responsible Office: Office of Safety and Mission Assurance		
<b>SUBJECT: Stennis Space Center (SSC) Hot Work Permit Program</b>		

### **CHAPTER 3. REQUIREMENTS FOR PERMANENT AND SPECIFIC DURATION PERMITS – UNIQUE FACILITIES AND CONSTRUCTION SITES**

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Permanent permits for Hot Work will be allowed for certain facilities and construction sites in accordance with the following criteria. The basic process for requesting approval of facilities or construction sites for Hot Work without daily permits is illustrated in Figure 2 below.

#### 3.1 Unique Facilities

3.1.1 The facility must be uniquely suited for Hot Work

3.1.2 The facility shall have a written Safety Plan that addresses the hazards in the area associated with Hot Work

3.1.3 The facility must be constructed and maintained in such a manner that Hot Work does not diminish the safety of the facility.

3.1.4 All fire detection and fire alarm systems must be operational.

3.1.5 Permits will be issued for a maximum of twenty-four months.

3.1.6 A written plan must be created and maintained by the organization responsible for the safety of the facility that documents inspections and ensures compliance with the requirements of the authorization letter for operating the facility without a daily permit.

#### 3.2 Construction Sites

3.2.1 Construction sites will be allowed to proceed only under certain conditions without requiring daily Hot Work Permits. These conditions will vary depending on location and will be addressed on a case by case basis.

3.2.2 Construction projects seeking to exercise this option must contact the Hot Work Program Manager and request the authorization in writing.

3.2.3 Construction sites will be granted permission to operate without requiring a daily permit provided specific conditions are met, unique to the construction project, location and other conditions as applicable.

Stennis Procedural Requirements	SPR 8715.3	Basic
	<i>Number</i>	<i>Rev.</i>
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**Process for requesting approval of facilities or construction sites for Hot Work without daily permits**

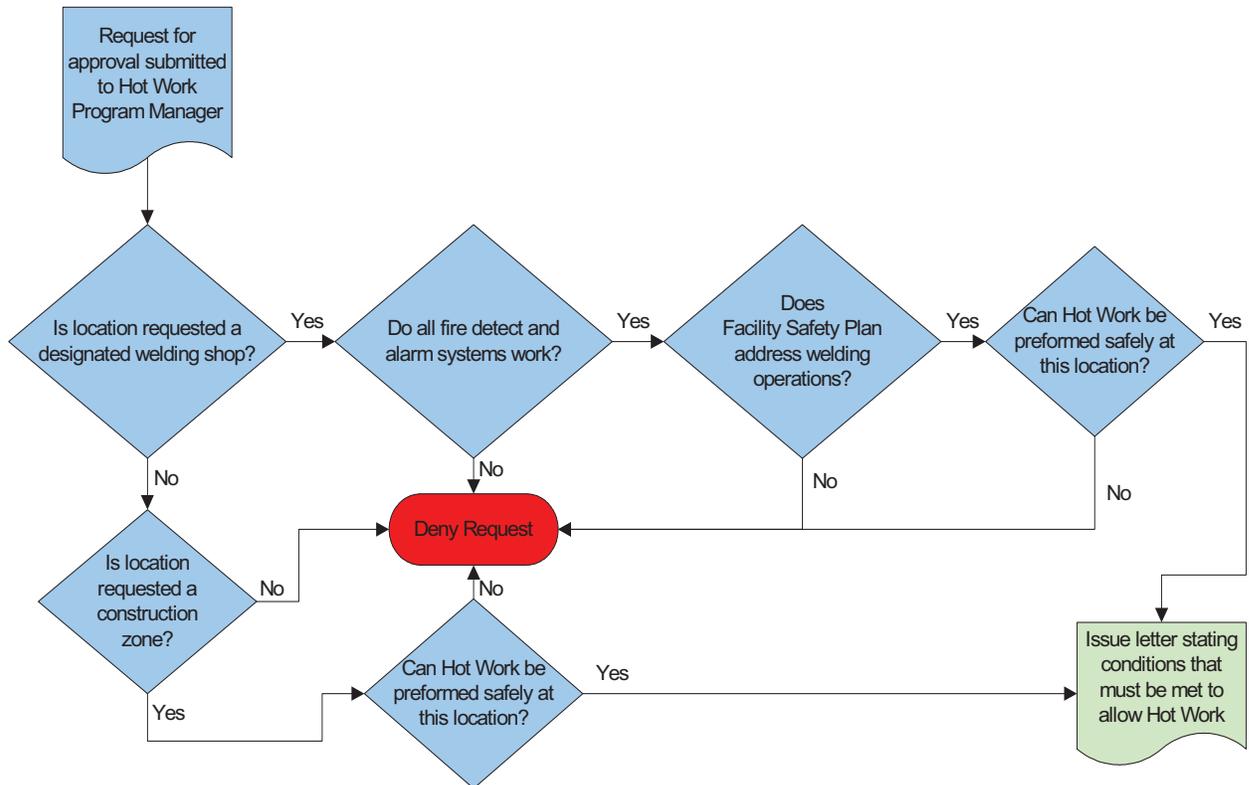


Figure 2 - Process for Permanent Hot Work Permit – Unique Facilities and Construction Sites

**Attachment 1: Sample Form SSC-68, Flame "Hot Work" Permit**

	National Aeronautics and Space Administration <b>John C. Stennis</b>	<h2 style="margin: 0;">Flame "Hot Work" Permit</h2> <p style="margin: 0;"><i>(Implemented by SPG 8715.1)</i></p> No. _____
Date and Time Issued		Expiration <i>(Date and Time)</i>
Issued To <i>(Company)</i>		Exact Location Permit is issue for:
Work Authorization Document No. or Contract Number		
<b>Type of Operation <i>(Flame Producing)</i></b>		
<input type="checkbox"/> Spark-producing Grinders/Tools	<input type="checkbox"/> Welding	<input type="checkbox"/> Oxy-fuel Cutting
<input type="checkbox"/> Brazing	<input type="checkbox"/> Fuel-fired Heaters	<input type="checkbox"/> Soldering
<input type="checkbox"/> Other Open Flame-producing Devices <i>(Explain)</i>	<input type="checkbox"/> Internal Combustion Engine Used Within a "Hazardous <i>(Classified)</i> " Area"	
Type of Operation <input type="checkbox"/> <b><i>(Non-Flame Producing)</i></b> but Occurring within a "Hazardous <i>(Classified)</i> " Area" and Requiring Safe Atmospheric Verification <i>(Explain Below)</i>		
<b>— ATTENTION —</b>		
Before approving any cutting, welding, grinding, brazing, soldering, open flames, or other type of hot work, the responsible Permit Authorizing Individual (PAI) for the area shall inspect the proposed work area and identify the precautions taken. Any special instructions required will be addressed on the back of this form.		
<b>Yes No N/A — Site Preparation —</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Is installed sprinkler system in service? If no, Fire Department must be notified and sign permit <input type="checkbox"/> <input type="checkbox"/> Is a safe atmospheric check required? If yes, complete Safety Engineer to record %LEL section and sign permit.	<b>— Safe Atmospheric Verification —</b> <b>Percent (%) LEL</b> Instrument Reading: _____ %LEL Time Area Was Checked: _____ AM/PM <b>Frequency Required</b> <input type="checkbox"/> Initial <input type="checkbox"/> Continuous <input type="checkbox"/> Hourly	
<b>— Precautions Within 35 ft of Work —</b>		
Fire extinguishers available: <input type="checkbox"/> Multipurpose <input type="checkbox"/> Water <input type="checkbox"/> CO <sub>2</sub> <input type="checkbox"/> Dry Chemical  Known location of nearest phone: _____ <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Floors cleaned of combustibles and combustible materials removed. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Combustible materials wet down or covered with fire resistant shields. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Wall and floor openings, cracks, holes, etc. covered. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Cable trays and/or nonmetallic wire covered with fire-resistant shields. HVAC ducts/chutes covered with fire-resistant shields. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Combustible materials removed or covered on other side of walls, ceilings, roof, or partitions to prevent heat transfer via conduction or radiation.		
<b>— Work on Enclosed Equipment —</b>		
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Enclosed equipment cleaned of all combustibles, flammables. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Containers purged of flammable/combustible liquids, vapors, or gases. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> No pressure in piping/storage of vessels. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Piping/pressure vessels purged with inert gas and verified		
Printed last name of individual assigned fire watch: <i>(Fire watch provided during and for 30 minutes after work)</i>		
Safety Eng. printed name and signature (if required)		Fire Department printed name and signature (if required)
Facility Manager or Construction Engineer printed name and signature <i>(I permit this work to be performed in the location noted.)</i>		
Printed name, signature, date and organization of Permit Authorizing Individual issuing Permit <i>(I verify all proper precautions have been taken and the area is ready for Hot Work.)</i>		
<b>In Case of Fire—Call 911</b> or <b>Use Your radio to Notify SSC Security Dispatch by Depressing the Emergency Alarm on Top of the Radio</b>		

SSC-68 (05/2004) Previous Versions shall Not be Used.