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National Aeronautics and Space Administration

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

John C. Stennis Space Center Standard for Waiver and Alternate Standard Requests

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Responsible Office: NASA SSC Safety & Mission Assurance Directorate

SUBJECT: Waiver and Alternate Standard Requests

Document History Log

Revision	Date	Originator/Phone	Description
Basic	1/20/05	Don Beckmeyer/ ext. 8-3788	 Initial Release/Updated in new format - supersedes SSC STD 99-016 Rev. C-1, with the following changes: 1. Changes as needed to section titles; deleted reference to Project Manager throughout. 2. Included reference to SSC-517 being in the SSC Electronic Forms Index 3. Changes as needed for new document numbers; deleted "deviation," and "waiver" from title and throughout the document. 4. Purpose statement added to 1.0; created applicability section 2.0; 5. In 3.0, revised document names in accordance with the title of current versions, moved abbreviations to Appendix B, and renamed as Acronyms and Abbreviations. 6. Deleted nos. 1 (alternate standard), 2 (deviation) and 3 (waiver) from section 4.0 and moved variance definition to section 7.0, (newly created), Definitions. 7. Renumbering of sections includes former 5.0 Responsibility now renamed and renumbered to 4.0 Responsibilities. Added information regarding CEF, SMA Office and PTD and COD directors' responsibilities. 8. Former 6.0 section Processing Deviations, Waivers and Variances became section 6.1.3 regarding Proposed Action to Prevent Recurrence. 9. Deleted reference (in former section 6.1.4) to signature blocks from contractor, SMA, CCB Chairperson and either the NASA Project Manager or FRB Chairperson. 10. Deleted reference do CEF numbering of approved requests in former section 6.1.6. 11. Deleted reference for providing alternate standard requests, and steps 6.2.1 and 6.2.2 were deleted. 13. Appendix A was incorporated into this revision as part of section 5.0, 6.19, 6.20, 6.21 and 6.22 and incorporated signature requirements into part of section 5.0. 14. Deleted sections 6.18, 6.19, 6.20, 6.21 and 6.22 and incorporated signature requirements into part of section 5.0.

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Revision	Date	Originator/Phone	Description
Basic	1/6/05 (cont'd.)	Don Beckmeyer/ ext. 8-3788	 Added a flowchart (Appendix A in this document) to specify the process and added four specifications to clarify the flowchart. SSC Form 517 was removed from this revision, but an example (for reference only) was added. Added places for concurrence signatures from PTD and COD. (cover sheet) Included the MUA process in sections 5.0 and on the flowchart. Extensive revision to the flowchart to document more clearly the role(s) of the PTD CCB and the FRB; to specify the process when a variance is rejected; to add the CEF responsibilities of assigning a number for each variance, filing variances, and copying and distributing variances; and specified when the SSC Director's signature is required. Changed references to SSC documents from Stennis Procedure & Guideline (SPG) to Stennis Procedural Requirement (SPR), as appropriate. Changed references throughout to reflect current John C. Stennis Space Center Standards. Added specific reference to SSTD 8070-0006-CONFIG in section 5.1.5 and included same in section 3.0
A	1/22/10	Ralph Gonzalez/ 8-2101	 1.0, added "Alternate Standard". Corrected typographical and grammatical errors. Added reference SPLN-1200-0003, John C. Stennis Space Center Safety and Mission Assurance Technical Authority Implementation. 4.0g added The SMA Technical Authority is responsible for review of all variances and alternate standard requests in accordance with SPLN-1200-0003 prior to submittal to the CCB or to NASA Headquarters. 5.1.4 Extension revision. A new variance request is necessary for extensions of temporary variance. Appendix A-Flowchart added "Submit to SMA Technical Authority for review".
В	1-20-12	Ralph Gonzalez/ 8-2101	 4.0 (i): Added "pertaining to SMA requirements". Appendix A - Updated flow chart item relating to SMA TA adding "as applicable".

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C	2-6-13	Ralph Gonzalez/ 8-2101	 2.0: Added criteria for SSC Center Director, NASA SMA Chief and NASA Chief Engineer approvals. 3.0: Additional reference docs listed. 4.0: Added subsections for areas of responsibility; Updated responsibilities for Requestor, SMA and E&TD/Center Operations; Added requirement to ensure coordination with OSMA Chief and with NASA Chief Engineer. 5.0: Added requirement to ensure coordination with SMA TA Board; Improved flow of variance process to ensure adherence with document requirements; Added Section 5.2 for Agency Level variances; Added Table in Section 5.5 listing signature requirements. 7.0: Clarified definition for Alternate Standard Request. Appendices: Broke up Appendix A into two separate flowcharts, Appendix A and Appendix B, for CCB and FRB. Variance Form 517 updated to allow more space for information and signatures. Added signatures for OSMA Chief and NASA Chief Engineer.
D	2/6/2018	Christina Zeringue 8-3169	Updated references. Administrative and format changes throughout document.
Е	4/12/23	Christina Zeringue 8-3169	Five-year review. Document updated in its entirety.
F	4/19/24	Christina Zeringue 8-3169	Document updated in its entirety to reflect waiver process flow within DDMS.

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SUBJECT: Waiver and Alternate Standard Requests

1.0 PURPOSE

The National Aeronautics and Space Administration (NASA) will comply with applicable requirements, specifications, and/or policy documents. In circumstances where a particular requirement or specification cannot be complied with, a request for relief (waiver or alternate standard request) shall be considered. This John C. Stennis Space Center (SSC) standard (SSTD) establishes the requirements and practices for the preparation and submittal of waiver and alternate standard requests.

2.0 APPLICABILITY

The waiver request shall be prepared and submitted when the need exists to depart from a particular requirement, specification, and/or policy document as specified in projects, contracts, agreements, and/or NASA Procedural Requirements, Standards, Manuals, and/or Handbooks.

The requestor shall prepare a waiver in DDMS and at a minimum, have the waiver approved by his/her Supervisor/Manager, the SSC Director of Safety & Mission Assurance (SMA), and the Engineering and Test Directorate (E&TD) and Center Operations Directorate (COD) Facilities Configuration Control Board (CCB) chairpersons. In certain instances, the approval of the SSC Center Director and/or the NASA Agency-level Chief of SMA or the NASA Agency-level Chief Engineer will be required.

3.0 REFERENCED DOCUMENTS

Referenced documents are assumed to be the latest revision unless otherwise specified.

29 CFR Part 1960, Basic Program Elements for Federal Employees (OSHA)

NPR 7120.11, NASA Health and Medical Technical Authority (HMTA) Implementation

NPR 8715.1, NASA Safety and Health Programs

SCWI-8710-0001, SSC System Safety and Health

SOI-8040-0001-FACENG, SSC Organization Instruction Construction Configuration

Management

SOI-8080-0015, SSC Configuration Control of Technical Systems

SOI-8080-0016, SSC Material and Process Control for Propulsion Test Facilities and Systems

SPLN-1200-0002, SSC Engineering Technical Authority Implementation Plan

SPLN-1200-0003, SSC Safety and Mission Assurance Technical Authority Implementation Plan

SPR 1150.1, SSC Establishment of Charters – Boards/Councils/Committees

SPR 1440.1, Records Management Program Requirements

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SPR 8715.1, SSC Safety and Health Procedural Requirements

SSTD 8070-0006-CONFIG, Component Servicing Processes and Documentation

SSTD-8070-0091-FLUIDS, SSC Requirements for Materials Used in LOX/GOX Service

4.0 **RESPONSIBILITIES**

- a. The waiver number will be generated by the Design and Data Management System (DDMS).
- b. DDMS is the repository for all waiver requests that have been either approved or disapproved.
- c. Supporting documentation will be attached or linked to the waiver as needed.

4.1 Requestor

- 4.1.1 The requestor is responsible for preparing and processing the waiver request and submitting the waiver for initial review by his/her Supervisor/Manager before submitting to the remaining approvers.
- 4.1.2 The requestor shall generate a waiver request as soon as the need has been identified.
- 4.1.3 The requestor shall ensure that risk mitigation actions/plans defined/described in the waiver request are implemented as soon as practical, and that proper monitoring methods are employed, per NPR 8715.1.

4.2 Configuration Management Office (CMO)

- 4.2.1 The Configuration Management Office (CMO) will complete the initial review of the waiver package to ensure it is accompanied by adequate rationale and will coordinate any discrepancies, questions, or additions with the requestor.
- 4.2.2 The CMO will coordinate with the Chief Safety Officer, Chief Engineer, and Facilities CCB Chair to ensure proper review and approval routing is selected for the waiver.

4.3 Safety and Mission Assurance (SMA)

- 4.3.1 The SMA Directorate is responsible for reviewing the status of all active waivers and alternate standard requests on an annual basis. SMA will also examine waivers for any significant trends which may lead to better corrective action.
- 4.3.2 The SMA Director is responsible for reviewing and approving all waivers.

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- 4.3.3 The SMA Technical Authority (TA) is responsible for review of all waivers and alternate standard requests pertaining to SMA requirements in accordance with SPLN-1200-0003 prior to submittal to the CCB or to NASA Headquarters (HQ).
- 4.3.4 Required Center Institutional Safety Discipline Leads are:
 - a. Authority Having Jurisdiction (AHJ) for Fire Protection and Life Safety,
 - b. Range Safety Manager (RSM),
 - c. Explosives Safety Officer (ESO),
 - d. Fall Protection Program Administrator (FPPA),
 - e. Safety Manager,
 - f. Lifting Devices and Equipment Manager (LDEM), and
 - g. Pressure Systems Manager (PSM).

4.4 E&TD Directorate / Center Operations Directorate

- 4.4.1 The Engineering Technical Authority (ETA) via the E&TD CCB is responsible for review of all waivers and alternate standard requests pertaining to SSC Technical Standards or Agency Office of Chief Engineer (OCE) requirements in accordance with SPLN-1200-0002.
- 4.4.2 The E&TD Director and/or COD Director is/are responsible for approving all waivers affecting work or systems under their areas of responsibility that are written against an Agency-level requirement or against any SSC requirement that is derived from an Agency-level requirement.

5.0 PREPARATION AND SUBMITTAL OF WAIVER REQUESTS AND ALTERNATE STANDARD REQUESTS

5.1 Processing Waiver Requests

- 5.1.1 Waiver requests for Safety Requirements, Quality Requirements, Technical Standards, Operating Instructions, or Administrative Policy issues shall be submitted in DDMS per instructions listed in Section 5.5 and processed per the requirements of Appendix A and Section 5.0.
- 5.1.2 If the waiver request is to be written against an SMA requirement, it shall be reviewed by the SMA Technical Authority Board prior to SMA Director's approval in DDMS. The E&TD CCB support staff will notify the SMA TA Board Executive Secretary to schedule and complete this review in accordance with SPLN-1200-0003.
- 5.1.3 Waiver requests shall be submitted to the appropriate CCB Chairperson for review and approval:

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- a. <u>NASA E&TD CCB</u>:
 - 1. Waiver requests must be routed to the E&TD CCB if they affect the configuration of the Test Stand and Test Stand Support systems, facilities, and documentation utilized in rocket propulsion testing at SSC as noted in the "Applicability" section of SOI-8080-0015.
 - 2. All waivers that affect an SSC Technical Standard or an Agency OCE requirement shall also be routed to the CCB in accordance with SOI-8080-0015.
 - 3. In certain cases, after CCB approval of a waiver, the Facilities CCB Representative on the E&TD CCB may require the waiver be routed to the Facilities CCB for review.
- b. <u>NASA Facilities CCB</u>: Waiver requests must be routed to the appropriate Facilities CCB if they fall outside the jurisdiction of the E&TD CCB. This would include any waiver request that does not affect any area of interests described above.
- 5.1.4 The reviewer(s) must provide (in writing) the rationale for the rejection of the waiver request and suggestions (if any) as to how the waiver might be modified to attain approval.
- 5.1.5 If an extension is required for a temporary waiver, a revision of that waiver must be generated and approved as indicated in Section 5.1. Changing the date is not considered an administrative change to the original document.
- 5.1.6 If an urgent situation arises in which the accumulation of time delay would result in increased risk, the NASA SMA Director, with concurrence from a CCB Chairperson, may verbally grant a request which shall be followed by submission of the waiver in DDMS before the close of business the following scheduled workday. Even if granted on the telephone or by e-mail, the request should be immediately documented.
- 5.1.7 Waiver requests that are associated with Material Usage Agreements (MUAs) shall be processed per this SSTD. The MUA process is addressed in SSTD-8070-0006-CONFIG, SSTD-8070-0091-FLUIDS, and SOI-8080-0016.

5.2 Processing Waiver Requests for Agency Requirements

- 5.2.1 In addition to the approvals listed in Section 5.1, the E&TD Director and/or COD Director will approve all waivers under their area of responsibility written against an Agency-level requirement or against any SSC requirement that is derived from an Agency-level requirement.
- 5.2.2 For waivers against Agency-level requirements, the Center Director may delegate their approval authority to the Deputy Director, Associate Director, or SMA Director.

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The Center Director shall not delegate authority below Deputy Director or Associate Director if there is more than a minor increase in risk to personnel injury or a significant risk to property as determined in the Risk Assessment Code Matrix in SCWI-8710-0001.

- 5.2.3 Approval of the NASA Agency-level Chief of SMA shall be obtained for waivers against Agency-level SMA requirements as defined in NPR 8715.1. The Chief of SMA delegates approving authority to the Center Director or designee, except in cases where there is an entire or substantial deviation from an Office of Safety and Mission Assurance (OSMA) standard, coordination between other centers is required, or the public not located near the Center is impacted.
- 5.2.4 Approval of the NASA Chief Engineer shall be obtained for all waivers against Agency-level OCE requirements unless formally delegated to the Center Director per OCE guidance. An informational copy of the approved waiver shall be forwarded promptly to the NASA Chief Engineer.
- 5.2.5 Approval of the NASA Chief Health and Medical Officer shall be obtained for all waivers against Agency-level Office of the Chief Health and Medical Officer (OCHMO) requirements as defined in NPR 7120.11.

5.3 Processing Alternate Standard Requests - Relief of Federal/State/Tribal Regulations

The SSC NASA waiver process does not apply to Federal/State regulations or to Tribal laws, codes, standards, directives, and orders. Any waiver to those requirements must be submitted for approval to the appropriate Agency by the Designated Agency Safety and Health Official (DASHO). SSC NASA SMA is responsible for submission of this request to NASA SMA HQ for approval. See NPR 8715.1 for more information.

5.4 Personnel Safety

If the waiver affects personnel safety, it will be accompanied by comments from any affected employees (or their representatives).

5.5 Instructions for Completing Waiver

5.5.1 Waivers will be initiated from the appropriate DDMS Product folder for the affected systems, project, or area. A waiver may be submitted as a permanent change to be incorporated into the next document revision, or a temporary waiver only effective for a limited time. A temporary waiver will also be marked with the anticipated expiration date when the waiver will no longer be needed. If the waiver is being submitted "after the fact," explain in the description field the initial date from which the waiver is believed to have first occurred.

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- 5.5.2 Approval routing for a waiver request will be configured based on the specific nature of the waiver, in accordance with guidance from this standard, applicable NPRs, and the requirement, specification, or policy that is being waived. When there is conflicting guidance, the requirement owner will be the final authority for determining required approvals.
- 5.5.3 Approval requirements for a waiver request are as follows:

Title	Requirement for Approval		
Requestor	Mandatory		
Requestor's Supervisor/Manager	Mandatory		
Customer	Required if the waiver request affects customer-supplied hardware, software, or test performance in any way (applicable to E&TD).		
SSC Institutional Safety Discipline Lead	If applicable, the appropriate Institutional Safety Authorities and Institutional Safety Discipline Leads shall review and provide a recommendation to approve or disapprove, with appropriate comments, for the Approving Authority to consider when making a final decision to approve or disapprove the request for relief. (See Section 4.3.4 for Discipline Leads.)		
SSC SMA Director	Mandatory		
SSC E&TD CCB Chair	Mandatory for E&TD CCB action		
SSC COD Facilities Review Board (FRB) Chair	Mandatory for COD FRB action		
SSC E&TD Director	Applicable for waivers under their area of responsibility against Agency-level requirements or any requirement derived from an Agency-level requirement.		
SSC COD Director	Applicable for waivers under their area of responsibility against Agency-level requirements or any requirement derived from an Agency-level requirement.		
SSC Center Director or Designee	When required for waiver against Agency-level requirements or any requirement derived from an Agency-level requirement per NPR 8715.1.		
NASA Agency-level Chief Medical Officer	As applicable.		
NASA Agency-level Chief of SMA	Applicable for waiver against Agency-level SMA requirements per NPR 8715.1.		
NASA Agency-level Chief Engineer	Applicable for waiver against Agency-level OCE requirements (unless formally delegated to Center-level authority).		

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6.0 RECORDS AND FORMS

Records and forms identified in this SSTD shall be maintained in accordance with applicable requirements of SPR 1440.1 and stored in DDMS. For Quality Records, refer to the SSC Master Records Index.

7.0 **DEFINITIONS**

- Alternate Standard Request A written authorization to depart from Federal/State regulations, or to Tribal laws, codes, standards, directives, and orders. Any departure from those requirements must be submitted for approval to the appropriate Agency by the DASHO in accordance with NPR 8715.1.
- **Configuration Management Office (CMO)** The office responsible for coordinating the integration and implementation of the configuration management (CM) function into SSC programs/facilities. Responsible for maintaining applicable records and documentation as defined in SOI-8080-0015 and SSTD-8070-0001-CONFIG. CM supports the lifecycle of critical propulsion and facility systems for management and control, requirements management, change management process, validation, configuration, implementation, and documentation at SSC.
- Waiver A specific authorization to depart from a specified SSC Requirement, NPR Requirement, Specification, and/or Policy document. The requestor will designate if this waiver is temporary, in which a time limit will be granted; or permanent, in which case the next document revision will incorporate the waiver.

8.0 ACRONYMS AND ABBREVIATIONS

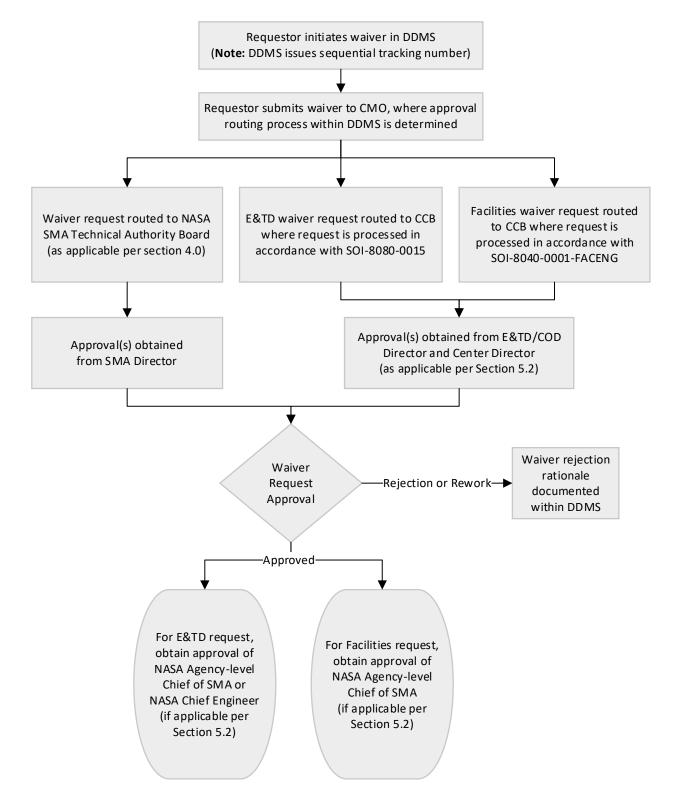
- AHJ Authority Having Jurisdiction
- CCB Configuration Control Board
- **CFR** Code of Federal Regulations
- CM Configuration Management
- CMO Configuration Management Office
- COD Center Operations Directorate
- DASHO Designated Agency Safety and Health Official
- DDMS Design and Data Management System
- ESO Explosives Safety Officer
- ETA Engineering Technical Authority
- ETD Engineering and Test Directorate
- FPPA Fall Protection Program Administrator
- FRB Facilities Review Board
- GOX Gaseous Oxygen

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HMTA Health and	Medical Technical Authority		
HQ Headquarter	Headquarters		
LDEM Lifting Devi	ces and Equipment Manager		
LOX Liquid Oxyg	gen		
MUA Material Us	age Agreement		
NASA National Ae	National Aeronautics and Space Administration		
NPR NASA Proc	NASA Procedural Requirement		
OCE Office of Cl	Office of Chief Engineer		
OCHMO Office of the	Office of the Chief Health and Medical Officer		
OSHA Occupationa	Occupational Safety and Health Administration		
OSMA Office of Sa	Office of Safety and Mission Assurance		
PSM Pressure Sys	Pressure Systems Manager		
RSM Range Safet	Range Safety Manager		
SOI Stennis Org	Stennis Organizational Instruction		
SMA Safety and I	Safety and Mission Assurance Directorate		
SPLN Stennis Plan	Stennis Plan		
SPR Stennis Prod	Stennis Procedural Requirement		
	Stennis Space Center		
SSC Stennis Spa	ce Center		
1	ce Center nnis Space Center Standard		

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APPENDIX A: E&TD AND FACILITIES CCB – WAIVER PROCESS FLOW



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