



**ARMSTRONG FLIGHT
PROCEDURAL
REQUIREMENTS (AFPR)**

**Directive:
Effective Date:
Expiration Date:**

**AFPR-7123.2-001B-1
December 9, 2020
December 9, 2025**

Compliance is mandatory.

SUBJECT: Waivers and Deviations to Technical Requirements and Standards

RESPONSIBLE OFFICE: Office of the Center Director
Office of the Chief Engineer

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PREFACE

P.1 Purpose

a. The safe and successful conduct of a flight project is heavily reliant on the identification, establishment, and management of technical requirements. These technical requirements encompass safety requirements, technical process requirements, workmanship standards, engineering standards, etc., all of which are in place to provide risk mitigation based on lessons learned and best practices. However, many of the flight projects performed at Armstrong Flight Research Center (AFRC) (henceforth referred to as “the Center”) have unique objectives or systems that require a deviation or a waiver to a technical requirement. Waivers or deviations to any requirement require approval by the proper authority.

b. This directive establishes the Center approval authority for waivers and deviations to technical requirements and standards established at different organizational levels.

P.2 Applicability

This directive applies to all programs and projects for which the Center has technical success and/or safety responsibility. It applies to all Center employees and other NASA employees, such as those who are visiting, detailed, or assigned to the Center on a temporary basis. Its language applies to contractors, grant recipients, or parties to agreements only to the extent specified or referenced in the appropriate contracts, grants, or agreements.

P.3 Authority

- a. NPD 1000.0, Governance and Strategic Management Handbook
- b. NPD 1000.3, The NASA Organization
- c. NPR 7120.5, NASA Space Flight Program and Project Management Requirements

P.4 Applicable Documents and Forms

Memorandum, “Delegation of Authority for Granting Relief from Office of the Chief Engineer (OCE) Requirements,” dated December 6, 2016.

P.5 Measurement/Verification

Copies of waivers and deviations generated per this directive will be submitted to the Center’s Chief Engineer for verification that the approval was granted in accordance with this directive.

P.6 Cancellation

AFPR-7123.2-001, A-3, approved August 12, 2020.

/s/

Bradford A. Neal
Center Chief Engineer

December 9, 2020

DISTRIBUTION: This document may be distributed to the public.

Chapter 1: Waiver and Deviation Approval

1.1 Project Performance Requirements

Performance requirements established to define mission success criteria are owned and managed by the project. Changes, deviations or waivers to these requirements shall be documented and approved by the project in accordance with the project's Project Plan, Configuration Management Plan, or other appropriate control plans.

1.2 Organizational Requirements Affecting Only That Organization Documented in Organizational Procedures

Waivers and deviations to process or technical requirements identified in organizational processes or procedures will be approved in accordance with the waiver provisions identified in that process or procedure.

1.3 Center Requirements Affecting Multiple Organizations Documented in Policy Directives, Processes or Procedures

1.3.1 Waivers and deviations to Center defined requirements shall be recorded on form AFRC 10117f, Request for Deviation or Waiver.

1.3.2 Waivers and deviations to Center defined requirements shall be approved by:

- a. The requesting project in accordance with the project's Configuration Management Plan, and
- b. The appropriate project level technical authority(ies) (Project Chief Engineer, Operations Engineer, or Safety and Mission Assurance representative), and
- c. The Branch Chief of the engineering or technical branch responsible for the requirement, and
- d. The Chief responsible for that Branch, and
- e. The Center Chief Engineer.

1.3.3 If a waiver or deviation to Center defined requirements affects safety, then the form AFRC 10117f shall also be approved by:

- a. The Branch Chief of the safety branch responsible for the affected safety area
- b. The Director of Safety and Mission Assurance

1.4 Agency Requirements Documented in NASA Policy Directives (NPD) and NASA Procedural Requirements (NPR)

Waivers and deviations to Agency defined requirements shall be approved within the Center by the same parties identified in the section 1.3 for Centerwide procedures. The Center Chief Engineer will then determine the need for higher level approval in accordance with NASA policy and practice.

Chapter 2: Records and Reporting

2.1 Records (Generated per this Directive)

The following records shall be documented and/or maintained:

- a. All form AFRC 10117f for waivers and deviations.
- b. Project Managers/Organizations master versions of all waivers and deviations applicable to their project or organization.
- c. HQ Approval/Disapproval Memo (if required).

2.2 Reporting

All waivers and deviations generated per this directive shall be reported:

- a. As a copy provided to the Center Chief Engineer from the project team.
- b. At each project Tech Brief.

Appendix A, Definitions

Deviation: A documented authorization releasing a program or project from meeting a requirement before the requirement is put under configuration control at the level the requirement will be implemented.

Multiple Organizations: For the purpose of this document, multiple organizations is defined as two or more organizations (branches/offices) from different Center directorates.

Waiver: A documented authorization releasing a program or project from meeting a requirement after the requirement is put under configuration control at the level the requirement will be implemented.

Appendix B, Requirement Verification Matrix

PARAGRAPH	REQUIREMENT	COMPLIANT	NON-COMPLIANT
1.1	Changes, deviations or waivers to these requirements shall be documented and approved by the project in accordance with the project's Project Plan, Configuration Management Plan, or other appropriate control plans.	<input type="checkbox"/>	<input type="checkbox"/>
1.3.1	Waivers and deviations to Center defined requirements shall be recorded on form AFRC 10117f, Request for Deviation or Waiver.	<input type="checkbox"/>	<input type="checkbox"/>
1.3.2 a	Waivers and deviations to Center defined requirements shall be approved by: a. The requesting project in accordance with the project's Configuration Management Plan, and	<input type="checkbox"/>	<input type="checkbox"/>
1.3.2 b	Waivers and deviations to Center defined requirements shall be approved by: b. The appropriate project level technical authority(ies) (Project Chief Engineer, Operations Engineer, or Safety and Mission Assurance representative), and	<input type="checkbox"/>	<input type="checkbox"/>
1.3.2 c	Waivers and deviations to Center defined requirements shall be approved by: c. The Branch Chief of the engineering or technical branch responsible for the requirement, and	<input type="checkbox"/>	<input type="checkbox"/>
1.3.2 d	Waivers and deviations to Center defined requirements shall be approved by d. The Chief responsible for that Branch, and	<input type="checkbox"/>	<input type="checkbox"/>
1.3.2 e	Waivers and deviations to Center defined requirements shall be approved by: e. The Center Chief Engineer.	<input type="checkbox"/>	<input type="checkbox"/>
1.3.3 a	If a waiver or deviation to Center defined requirements affects safety, then the form AFRC 10117f shall also be approved by:	<input type="checkbox"/>	<input type="checkbox"/>

	a. The Branch Chief of the safety branch responsible for the affected safety area		
1.3.3 b	If a waiver or deviation to Center defined requirements affects safety, then the form AFRC 10117f shall also be approved by: b. The Director of Safety and Mission Assurance	<input type="checkbox"/>	<input type="checkbox"/>
1.4	Waivers and deviations to Agency defined requirements shall be approved within the Center by the same parties identified in the section 1.3 for Centerwide procedures.	<input type="checkbox"/>	<input type="checkbox"/>
2.1 a	The following records shall be documented and/or maintained: a All form AFRC 10117f for waivers and deviations.	<input type="checkbox"/>	<input type="checkbox"/>
2.1 b	The following records shall be documented and/or maintained: b Project Managers/Organizations master versions of all waivers and deviations applicable to their project or organization.	<input type="checkbox"/>	<input type="checkbox"/>
2.1 c	The following records shall be documented and/or maintained: c HQ Approval/Disapproval Memo (if required).	<input type="checkbox"/>	<input type="checkbox"/>
2.2 a	All waivers and deviations generated per this directive shall be reported: a. As a copy provided to the Center Chief Engineer from the project team.	<input type="checkbox"/>	<input type="checkbox"/>
2.2 b	All waivers and deviations generated per this directive shall be reported: b. At each project Tech Brief.	<input type="checkbox"/>	<input type="checkbox"/>

Change Log

Baseline, 08-18-09

Revision A, 01-27-15

- Updated authority documents
- Added section 1.3.2
- Updated document to reflect name change from Dryden to Armstrong
- Updated form name from DFRC 117-1f to AFRC 10117f

Admin Change A-1, 09-14-17

- DPD-7123.2-001 renumbered in accordance with Center instruction

Note: Year on date of signature is an error. The year should be 2015 as indicated when Document Coordination Summary prepared.

Admin Change A-2, 02-01-20

- Admin change to extend expiration date

Admin Change A-3, 08-12-20

- Admin change to extend expiration date

Revision B, 12-09-20

- Updated Section P.4 to address Audit #382-10-19 Observation 1
- Updated section 1.2 to remove references to specific AFRC document types
- Added minor clarifications in sections 2.1 and 2.2

Admin Change B-1, 10-19-23

- Admin change to define "Multiple Organizations"