



George C. Marshall Space Flight Center  
Marshall Space Flight Center, Alabama 35812

FPD-OI-FD40.4  
April 2004

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# ORGANIZATIONAL INSTRUCTION

## Flight Projects Directorate Ground Systems Department FD40

# Flight Certification For Ground Systems

## Revision C

### APPROVAL

<u>NAME</u>	<u>TITLE</u>	<u>ORG</u>	<u>DATE</u>
<i>Original Signed by</i>	Manager, Ground Systems Department	FD40	April 30, 2004

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Ann R. McNair

CHECK THE MASTER LIST—  
VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

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### DOCUMENT HISTORY LOG

<b>Status (Baseline/ Revision/ Canceled)</b>	<b>Document Revision</b>	<b>Effective Date</b>	<b>Description</b>
Baseline		9/14/99	Baseline version
Revision	Rev. A	3/14/01	Document reformatted to Flight Projects Directorate standard template.
Revision	Rev. B	10/1/02	4.0, 8.0, and 11.0 were updated to reflect current information.
Revision	Rev. C	4/30/04	Updated to reflect changes from the Utilization and Mission Services (UMS) contract to the Huntsville Operations Support Center (HOSC) contract and to reflect current procedure.

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## 1. GENERAL INFORMATION

### 1.1 Scope

The Certification of Flight Readiness (CoFR) procedures defined are applicable to the Ground Systems Department (GSD) civil service and on-site contractor personnel that support payload operations at the Huntsville Operations Support Center (HOSC), including operations, engineering, development, testing, and administrative support activities. This flow represents the overall process structure. Detailed procedures governing the development of the CoFR inputs are the responsibility of the individual implementing elements.

### 1.2 Purpose

This procedure defines the processes used by the FD40 Organization in supporting the Marshall Space Flight Center's Flight Projects Directorate (FPD) Certification of Flight Readiness activities as required by the International Space Station (ISS) Payloads Office for ISS Flight 5A.1 and subsequent flights.

### 1.3 Applicability

This instruction is applicable to the civil service and on-site contractor personnel of the Ground Systems Department of the Flight Projects Directorate.

## 2. APPLICABLE DOCUMENTS

Revision levels of documents are not shown. The latest revision will be used unless otherwise required by contractual requirements or other regulations. In this case the letter revision of the document will be given.

SSP 52054	ISS Program Payloads Certification of Flight Readiness Implementation Plan, Generic
SSP 58318	MSFC Payload Operations Certification of Flight Readiness Implementation Plan, Generic

## 3. ACRONYMS and DEFINITIONS

### 3.1 Acronyms

CoFR	Certification of Flight Readiness
FPD/FD	Flight Projects Directorate
GSD	Ground Systems Department
HOSC	Huntsville Operations Support Center
HW	Hardware

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ISS International Space Station

LPA Launch Package Assessment

POD Payload Operations Director

SW Software

### 3.2 Definitions

**Launch Package Assessment (LPA)** This assessment is to provide input to managers locally and at the program level for insight into the latter certification of flight readiness, which results in CoFR. The LPA is an ISS Program-level assessment that provides input into the readiness status of the launch package for integration with the flight vehicle (Shuttle, Progress, Soyuz, etc.) as well as its readiness for future on-orbit operations. This review applies to the launch package/cargo element(s) including any payloads and logistics items, and other flight equipment, facilities, and personnel. This review has a HW/SW design emphasis. LPA defines the open work and the exceptions for the flight. The timeframe is L-13 weeks to FD30 who provides it to ISS Payloads Office at L-12 weeks for all Shuttle flights. However, for Soyuz and Progress flights this process has been shortened to L-9 weeks to FD30 who in turn provides it to ISS Payloads Office at L-8 weeks.

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**Certification of Flight Readiness (CoFR)** This review provides readiness status to program level personnel certifying flight readiness of the HOSC facility and system, and is the official CoFR input. Any open work and the exceptions for the flight are notes along with an official letter from FD40 stating the facility's readiness status as well as backup material which could include the open work tracking log and remote operation's status. The CoFR input occurs at L-7 weeks and L-6 weeks for Shuttle as well as Progress and Soyuz.

## 4. INSTRUCTIONS

### 4.1 LPA

The Ground Systems Department (GSD) organizations that participate in LPA will submit their status information to FD30 at L-13 weeks so they can be integrated and submitted to the ISS Payloads Office at L-12 weeks for approval. Items to be included in the LPA are open items left to be closed prior to flight and any known flight exceptions.

RESPONSIBLE PARTIES: Ground Systems Operations Group Lead

### 4.2 CoFR

The GSD organization that participate in CoFR will submit their endorsements at L-7 weeks to FD30 so they can be integrated and submitted to the ISS Payloads Office at L-6 weeks. Items to include will be the updated information from LPA along with the checklist and any tracking log of open information. This is fronted by an official CoFR letter from the GSD stating systems readiness which is submitted to the Payload Operations Director (POD) in FD30.

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RESPONSIBLE PARTIES: Mission Systems Operations Group Lead

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### **4.3 Contractor Readiness Submittal**

The HOSC contract Program Manager provides certification of HOSC flight readiness to the Mission Systems Operations Group Lead for all HOSC Systems including Operations and Maintenance readiness, Systems and Software readiness for support to a particular ISS Flight as well as remote interface statuses. These areas include exception forms with a work plan for resolution and identification of open work and completion dates and summary work plans.

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RESPONSIBLE PARTIES: HOSC contract Program Manager

## **5. NOTES**

None

## **6. SAFETY PRECAUTIONS AND WARNING NOTES**

None

## **7. APPENDICES, DATA, REPORTS, AND FORMS**

None

## **8. QUALITY RECORDS**

The table below lists the Quality Records for this Organizational Instructional.

<b>Name</b>	<b>Description of Record</b>	<b>Authority</b>	<b>Retention</b>	<b>Notes</b>
Certification of Flight Readiness	Submitted by FD43 Group Lead	SSP 58318	Keep for 3 years, then destroy when the program terminates, or when no longer needed, whichever is sooner after 3 years	Storage is in a file cabinet in MSFC Building 4663, A179
HOSC Readiness Review	Submitted by HOSC contract Program Manager	SSP 58318	Keep for 3 years, then destroy when the program terminates, or when no longer needed, whichever is sooner after 3 years	Storage is in a file cabinet in MSFC Building 4663, A179

## **9. TOOLS, EQUIPMENT, AND MATERIALS**

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None

**10. PERSONNEL TRAINING AND CERTIFICATION**

None

**11. FLOW DIAGRAM**

Figure 1 graphically depicts the procedure stated in Section 4. of this document.

**FIGURE 1:** Flight Certification for Ground Systems Process

