REVISION A

Prepare and Manage NASA SMA Requirements Documentation

Frederick D. Gregory
Associate Administrator for
Safety and Mission Assurance

April 14, 2000
Date

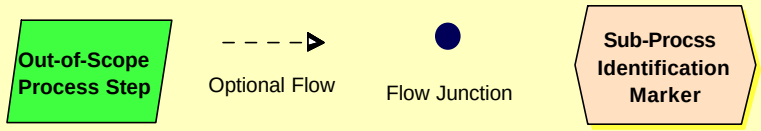
DOCUMENT HISTORY LOG

Status (Draft/ Baseline/ Revision/ Canceled)	Document Revision	Effective Date	Description
Baseline		January 13, 2000	
Revision	A	April 14, 2000	Modified Section 5 Flowchart outputs from steps 6.05, 6.07, & 6.10 and modified steps 6.12, and 6.16; Editorial corrections to steps 6.03, 6.04, 6.06, 6.07, 6.09, 6.10, and 6.12 – 6.17; Added second Quality Record to Section 7

HOWI Author: QS/Wil Harkins

OSMA Staff Member Responsible for this HOWI: QS/Jim Lloyd

OSMA Flowcharting Symbology Used which is in addition to the symbology defined in HCP 1400-1: Document and Data Control



Note: For All OSMA intermediate and final outputs: page numbers, the date, and document owner will be marked on the document.

1. Purpose

The purpose of this Office of Safety and Mission Assurance (OSMA) Headquarters Office Work Instruction (HOWI) is to document the process for the initiation and development of NASA Safety and Mission Assurance (SMA) policy and requirements documents. Documentation includes, but is not limited to: SMA Strategic Plan, NASA Policy Directives (NPD), NASA Procedures and Guidelines (NPG) or NASA Standards (NASA-STD) and other documents for which the OSMA is designated as the Office of Prime Responsibility (generally related to the safety, reliability, maintainability or quality assurance functional areas of interest). This HOWI also specifies the Quality Records associated with the process.

2. Scope and Applicability

This OSMA HOWI is applicable to the propagation of all policy and requirements documents by the OSMA organization except for OSMA HOWIs which are covered by HOWI 1410-Q001. Note: This process interfaces with a more global process owned by the Office of Management Systems and Facilities (Code J) as defined in NPD 1400.1.

3. Definitions

3.1. AA/SMA: Associate Administrator for Safety and Mission Assurance

3.2. Code QE: Enterprise Safety and Mission Assurance Division

3.3. Code QS: Safety and Risk Management Division

3.4. DD: Division Director

3.5. DL: Document Lead

3.6. DTM: Document Tree Manager

3.7. HATS: Headquarters Action Tracking System

3.8. NASA Policy Directive (NPD): NPD's are policy statements that describe the "what" that is required by NASA management for achieving NASA's vision and mission. (refer to NPG 1400.1)

3.9. NASA Procedures and Guidelines (NPG): NPG's provide the detailed instructions and guidelines for implementing the NASA policy; they are the "how to" instructions. (refer to NPG 1400.1)

3.10. NASA Standard (NASA-STD): A NASA-Standard is either: (1) Common and repeated use of NASA rules, conditions, guidelines or characteristics for products or related processes and production methods, and related management systems practices. (2) The definition of NASA terms, classification of components; delineation of procedures; specification of dimensions, materials, performance, designs, or operations; measurement of quality and quantity in describing materials, processes, products, systems, services, or practices; test methods and sampling procedures; or descriptions of fit and measurements of size or strength. (refer to NPD 8070.6 and Procedures/Guidelines for NASA Technical Standards as tailored from MIL-STD-962C).

3.11. NODIS: NASA On-Line Directives Information System

3.12. PM: Program Manager

3.13. SMA Documentation Tree: A graphical representation of how the OSMA has assembled and interrelated its documents using a visual graphical interface. The tree may be used to both understand the document set for which OSMA is responsible and can be used for a hyperlink to meta-data about the document, the document status, the document itself, and training that may also be available. The document tree is maintained by HOWI 1410-Q003 and is located at http://www.hq.nasa.gov/office/codeq/doctree/doctree.htm

3.14. SMA Strategic Plan: The SMA requirements document that sets the overall direction, goals, objectives and strategies for SMA within NASA.

4. Reference Documents

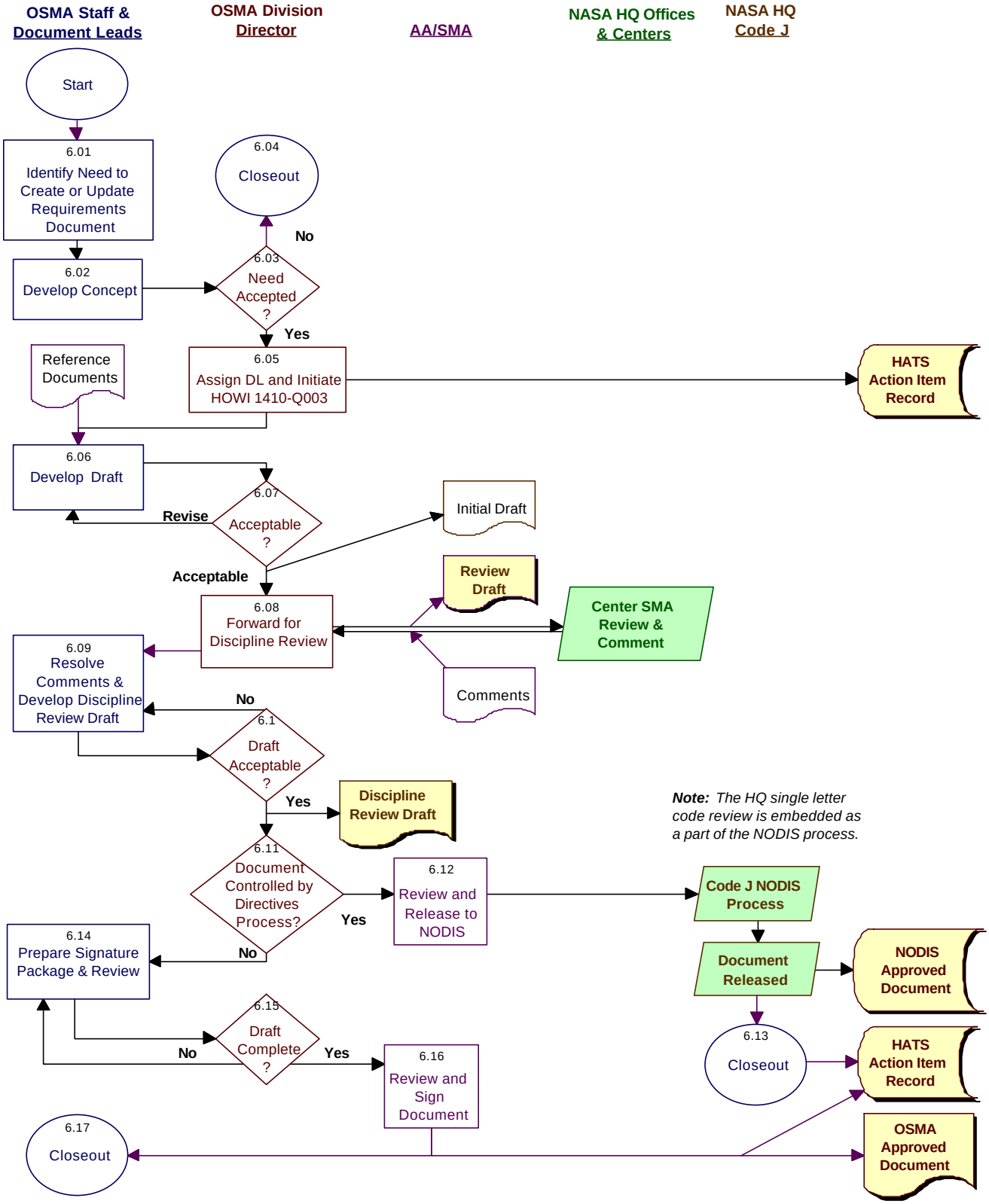
The documents listed in this section are used as reference materials for performing the processes covered by the Quality Management System (QMS). Since all NASA Headquarters Level 1 (QMS Manual) and level 2 (Headquarters Common Processes) documents are applicable to the QMS, they need not be listed in this section unless specifically referenced in this OSMA HOWI.

4.1. NPD 1400.1: *NASA Directives System Procedures and Guidelines*

4.2. NPD 8070.6: *Technical Standards*

4.3. Procedure/Guidelines for NASA Technical Standards as Tailored from MIL-STD-962C, dated 25 March 1998

5. Flowchart


OSMA Staff & Document Leads
OSMA Division Director
AA/SMA
NASA HQ Offices & Centers
NASA HQ Code J
Start
6.01 Identify Need to Create or Update Requirements Document
6.02 Develop Concept
6.03 Need Accepted ?
No
6.04 Closeout
Yes
6.05 Assign DL and Initiate HOWI 1410-Q003
HATS Action Item Record
Reference Documents
6.06 Develop Draft
6.07 Acceptable ?
Revise
Initial Draft
Acceptable
6.08 Forward for Discipline Review
Review Draft
Center SMA Review & Comment
Comments
6.09 Resolve Comments & Develop Discipline Review Draft
No
6.1 Draft Acceptable ?
Yes
Discipline Review Draft
Note: The HQ single letter code review is embedded as a part of the NODIS process.
6.11 Document Controlled by Directives Process?
Yes
6.12 Review and Release to NODIS
Code J NODIS Process
Document Released
NODIS Approved Document
6.14 Prepare Signature Package & Review
No
6.15 Draft Complete ?
No
Yes
6.16 Review and Sign Document
6.13 Closeout
HATS Action Item Record
6.17 Closeout
OSMA Approved Document

6. Procedure

6.01 OSMA Staff Member Identify Need to Create or Update Requirements Document:

The need to develop a new or update a current SMA policy or requirements document may be identified through a number of means. Means of identifying a need include, but are not limited to: the identification of a gap in the requirements tree for OSMA, direction from the senior management, changes in regulations or laws of an external authority, the identified need by customers needing guidance, a deficiency identified by evaluation of request for variance (refer to HOWI 8700-Q004), functional reviews or process verifications.

6.02 OSMA Staff Member Develop Concept:

The OSMA staff member identifies and details the documentation deficiency, establishes a plan for requirements document development and briefs the associated Division Director and/or other management.

6.03 DD Need Accepted?

The OSMA Division Director (DD) (Code QE or Code QS) with responsibility for the document area (NOTE: see OSMA website for OSMA Divisional Responsibilities) reviews the concept developed in the previous step for the change and decides whether the proposal is a necessary item for work, based on professional expertise with NPD 8700.1 requirements and responsibilities. If the proposed change is not needed, the project ceases.

6.04 DD Closeout:

If the proposed change is not needed, the process is terminated.

6.05 DD with the DTM Assign DL and Initiate HOWI 1410-Q003:

If the DD concurs with the need for a change, a staff member is assigned to be responsible for the requirements document development as the Document Lead (DL) of the change. This may or may not be the same staff member that identified the deficiency.

The Documentation Tree Manager (DTM) initiates HOWI 1410-Q003 to add the new/revised document to the SMA Requirements tree. An interim document number is assigned by the DTM. The DTM also ensures that a HATS Action Item is generated to track the progress of the document development in accordance with HOWI 1450-Q027.

6.06 DL Develop Draft:

The development of a draft document begins in accordance with references in Section 4. When the DL has completed the draft, the draft is reviewed for readiness and completeness with the cognizant DD. The DD and the DL determine who should review the draft during the discipline review. Other reviewers may be added internal and external to NASA based on the subject and interfaces affected.

6.07 DD Acceptable?

The DD decides whether the document is mature enough to send out for discipline review or return for additional work, based on the DD's professional expertise and knowledge of SMA policies.

6.08 DD Forward for Discipline Review:

The initial draft document is forwarded to designated reviewers from step 6.06. Additionally, the SMA Document Tree is updated to reflect the current status of the DRAFT per HOWI 1410-Q003.

The designated NASA HQ Offices and Centers staff the initial draft document through their respective organization(s) and provide comments back to the DL.

6.09 DL Resolve Comments and Develop the Discipline Review Draft:

Reviews each comment and propose resolution. The revised draft is reviewed with the DD for a decision to proceed with further processing.

The DL prepares a disposition matrix that includes all of the comments received on the document and their disposition within the revised draft of the document. The DL provides a copy of this matrix to all reviewers.

The DL files a copy of the Discipline Review Draft with comment review material as a Quality Record.

6.10 DD Draft Acceptable?

The DD decides whether to send for further processing (and filed as a Quality Record) or return for additional work. The review is based on the professional expertise and knowledge of the DD and compliance with NPD 8700.1.

6.11 DD Document is Controlled by the Directives Process?

The DD reviews the draft to determine if the document is defined as a directive (reference 4.1) and requires additional processing through the NASA On-line Directives Information System (NODIS) process or if it can be processed directly for signature.

6.12 AA/SMA Review and Release Document to NODIS:

The AA/SMA review the draft and signs a cover memo to release the document into the NODIS process in accordance with NODIS operating procedures and NPD 1400.1.

HQ Office of Management Systems (Code J) coordinates formal staffing of the document in accordance with NODIS procedures and record keeping requirements. HQ Code J releases and posts the signed directive to NODIS with a final document number after approval.

6.13 DD Closeout:

The SMA Documentation Tree is updated to reflect the signed document and the HATS action item is closed out per HOWI 1410-Q003 and per HOWI 1450-Q027, respectively.

6.14 PM Prepare Signature Package and Review:

The DL prepares the document package for AA/SMA signature. The signature package includes the original document, matrix of review comments and disposition, supporting documentation and the draft change. A final document number is assigned by the DTM based on reference 4.1 guidance.

6.15 DD Draft Complete?

Reviews the staffing package for readiness and completeness and decides whether to send for signature or return for rework so that all issues may be resolved.

6.16 AA/SMA Review and Sign Document:

The AA/SMA reviews the draft and signs the document.

6.17 PM Closeout:

The DL ensures that the signed document is posted to the SMA Document Tree (and document meta-data updated) per HOWI 1410-Q003.

Any open HATS Action Item is closed to reflect the signed status of the document. In the case of a NASA-STD the DTM informs the curator of the NASA Standards homepage of the release of the new or updated document. The Approved Document with its signature is filed as a Quality record.

7. Quality Records

Record ID	Owner	Location	Media Electronic /hardcopy	Schedule Number & Item Number	Retention & Disposition
HATS Action Item Record	HATS Admin	W/in HATS	Electronic	Schedule: 1 Item: 78.C	Keep as long as item has reference value then destroy
Review Draft	DL	DL Files	Hardcopy	Schedule: 1 Item: 72.D	Keep until new document is approved and all review issues are resolved then destroy
Discipline Review Draft	DL	DL Files	Hardcopy	Schedule: 1 Item: 72.D	Keep until new document is approved and all review issues are resolved then destroy
NODIS Approved Document **Not an OSMA Quality Record**	Code JM	NODIS	Electronic	Per NPD 1400.1	Per NPD 1400.1

Record ID	Owner	Location	Media Electronic /hardcopy	Schedule Number & Item Number	Retention & Disposition
OSMA Approved Document (** Document is not in NODIS **)	OSMA DTM	Code QS	Hardcopy	Schedule: 1 Item 72.A	Retire to FRC 1 year after being obsolete or superceded then NARA when 20 years old

Appendix A: Supplemental Optional Information on Documentation Retention:

- For NASA Directives: Copy of the initial staffing package and disposition matrix in both electronic and hard copy. Copy of the signature-ready master document provided to Code J for release in electronic copy (hardcopy may also be retained.)
- For SMA Strategic Plan: A Master hard copy of the Plan with original signature, electronic copy of the master document and hard copy and/or electronic copy of the disposition matrix.
- For NASA-STDs: Master NASA-STD – hard copy with original signature, electronic copy of the master document and hard copy and/or electronic copy of disposition matrix.