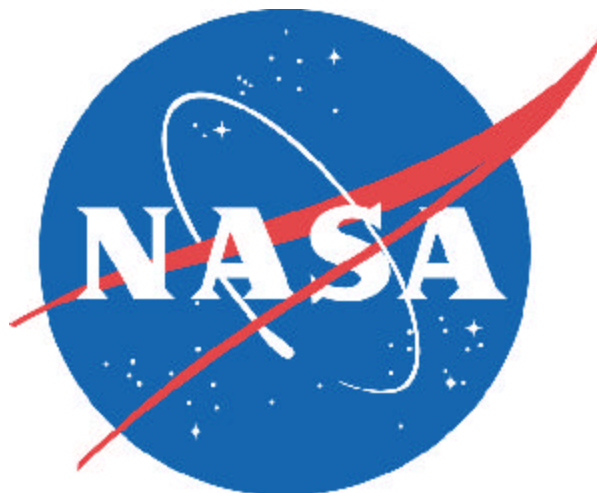


Responsible Office: NASA Headquarters Office of Space Science (OSS) [Code S]

Subject: Launch Preparation Activities



**NASA Headquarters
Office of Space Science (OSS)**

Office Work Instruction

Launch Preparation Activities

Approved by: (Original signed by Christopher J. Scolese) Date: (06/03/2003)
Christopher J. Scolese
Deputy Associate Administrator for Space Science

Responsible Office: NASA Headquarters Office of Space Science (OSS) [Code S]

Subject: Launch Preparation Activities**DOCUMENT HISTORY LOG**

STATUS (BASELINE/ REVISION/ CANCELED)	DOCUMENT REVISION	EFFECTIVE DATE	DESCRIPTION
Baseline		02/01/1999	<ul style="list-style-type: none"> Initial "baseline" version of the OWI.
Revision	A	05/12/1999	<ul style="list-style-type: none"> Incorporates modifications responsive to NCRs #289, #293, #296, #302, #311, #312, #315, #317, #318, and #321 from the NASA HQ ISO-9001:1994 Pre-Assessment audit.
Revision	B	06/03/2003	<ul style="list-style-type: none"> Incorporates OWI cover sheet as page 1 of 13. Incorporates impact of OSS reorganization (effective 07/01/2001). Incorporates reference document <u>SSE Management Handbook</u> into Section 4. Incorporates url's for referenced documents into Section 4. Incorporates process modifications identified by Process Owner into Section 5 and Section 6 (e.g., deletes Mission Success Criteria). Responds to comments received from OSS Code SN. Replaces all references to "HOWI..." with "HQOWI...". Revises "footer" to indicate new NODIS web site for all NASA HQ ISO 9001 documents.

Responsible Office: NASA Headquarters Office of Space Science (OSS) [Code S]

Subject: Launch Preparation Activities

1. PURPOSE

The purpose of this Office Work Instruction (OWI) is to define the process by which the Office of Space Science (OSS) develops program/project documents that are required prior to launch.

2. SCOPE AND APPLICABILITY

- 2.1 The following documentation is required prior to the launch of any given mission: (a) National Environmental Policy Act (NEPA) compliance documentation [i.e., an Environmental Assessment (EA) or Environmental Impact Statement (EIS)]; (b) Nuclear Safety Launch Approval (if sufficient nuclear material is carried on the spacecraft); (c) appropriate Contingency Plans; and (d) a Statement from the cognizant Center Director certifying readiness for launch. This OWI describes the process for generating and approving the first three documents and for approving the fourth document.

3. DEFINITIONS

- 3.1 AA. Associate Administrator for Space Science.
- 3.2 Code G. NASA Headquarters Office of the General Counsel.
- 3.3 Code JE. Environmental Management Division of the NASA Headquarters Office of Management Systems.
- 3.4 Code P. NASA Headquarters Office of Public Affairs.
- 3.5 Code Q. NASA Headquarters Office of Safety and Mission Assurance.
- 3.6 DAA. Deputy Associate Administrator for Space Science.
- 3.7 Environmental Assessment (EA). Minimum NEPA compliance document describing the mission.
- 3.8 Environmental Impact Statement (EIS). Documents missions that may have significant impact to the human environment or that may be controversial in the public mind.

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Subject: Launch Preparation Activities

3. DEFINITIONS *(concluded)*

- 3.9 Finding of No Significant Impact (FONSI). Documents the decision of the Associate Administrator for Space Science for a proposed action described in an Environmental Assessment.
- 3.10 Headquarters Mission Contingency Plan. Describes a specific course of action in the event of a mission failure.
- 3.11 Jet Propulsion Laboratory (JPL). NASA's only Federally Funded Research and Development Center (FFRDC).
- 3.12 KSC. Kennedy Space Center.
- 3.13 Launch Readiness Statement. A letter from the cognizant NASA Center Director responsible for the mission certifying that the spacecraft is ready for launch.
- 3.14 National Environmental Policy Act (NEPA). Public law that requires documentation of potential environmental effects and/or impacts of agency actions (e.g., the development, launch, and operation of a space-science mission).
- 3.15 Program Executive. In accordance with delegation authority from the Associate Administrator for Space Science, responsible for: (a) providing program policy, strategy, and standards that support OSS goals and standards; (b) determining program objectives, goals, and requirements; (c) approving principal program documents; (d) allocating funds to ensure successful implementation of the program; and (e) assessing program performance.
- 3.16 Program Manager. Responsible for establishing general technical and management guidelines for the program with emphasis upon the management processes to be followed, including implementation methods. These implementation methods include establishment of design, mission-assurance requirements, and assurance of sound management and engineering processes. Also responsible for monitoring program activities to assess technical progress.
- 3.17 Record of Decision (ROD). Documents the decision of the Associate Administrator for Space Science for a proposed action described in the Environmental Impact Statement.

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Subject: Launch Preparation Activities**4. REFERENCES**

- 4.1 NPD 8500.1 NASA Environmental Management
[\[http://nodis3.gsfc.nasa.gov/library/lib_docs.cfm?range=8___\]](http://nodis3.gsfc.nasa.gov/library/lib_docs.cfm?range=8___)
- 4.2 NPD 8621.1 NASA Mishap Reporting and Investigating Policy
[\[http://nodis3.gsfc.nasa.gov/library/lib_docs.cfm?range=8___\]](http://nodis3.gsfc.nasa.gov/library/lib_docs.cfm?range=8___)
- 4.3 NPG 1441.1 NASA Records Retention Schedules (NRRS)
[\[http://nodis3.gsfc.nasa.gov/library/lib_docs.cfm?range=1___\]](http://nodis3.gsfc.nasa.gov/library/lib_docs.cfm?range=1___)
- 4.4 NPG 7120.5 Program and Project Management Processes and Requirements
[\[http://nodis3.gsfc.nasa.gov/library/lib_docs.cfm?range=7___\]](http://nodis3.gsfc.nasa.gov/library/lib_docs.cfm?range=7___)
- 4.5 NPG 8580.1 Implementing The National Environmental Policy Act And Executive Order 12114
[\[http://nodis3.gsfc.nasa.gov/library/lib_docs.cfm?range=8___\]](http://nodis3.gsfc.nasa.gov/library/lib_docs.cfm?range=8___)
- 4.6 NPG 8621.1 NASA Procedures and Guidelines for Mishap Reporting, Investigating, and Recordkeeping
[\[http://nodis3.gsfc.nasa.gov/library/lib_docs.cfm?range=8___\]](http://nodis3.gsfc.nasa.gov/library/lib_docs.cfm?range=8___)
- 4.7 PD/NSC-25 Presidential Directive/National Security Council – Memorandum No. 25
- 4.8 SSE MH2002 Space Science Enterprise Management Handbook
[\[http://spacescience.nasa.gov/admin/pubs/handbook/OSSHandbook.pdf\]](http://spacescience.nasa.gov/admin/pubs/handbook/OSSHandbook.pdf)
- 4.9 14 CFR Subpart 1216.3 Procedures for Implementing the National Environmental Policy Act (NEPA)
- 4.10 40 CFR Parts 1500-1508 Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA
- 4.11 42 U.S.C 4321 et.seq. National Environmental Policy Act (NEPA) of 1969, as amended
- 4.12 Applicable Program Plan and/or Project Plan

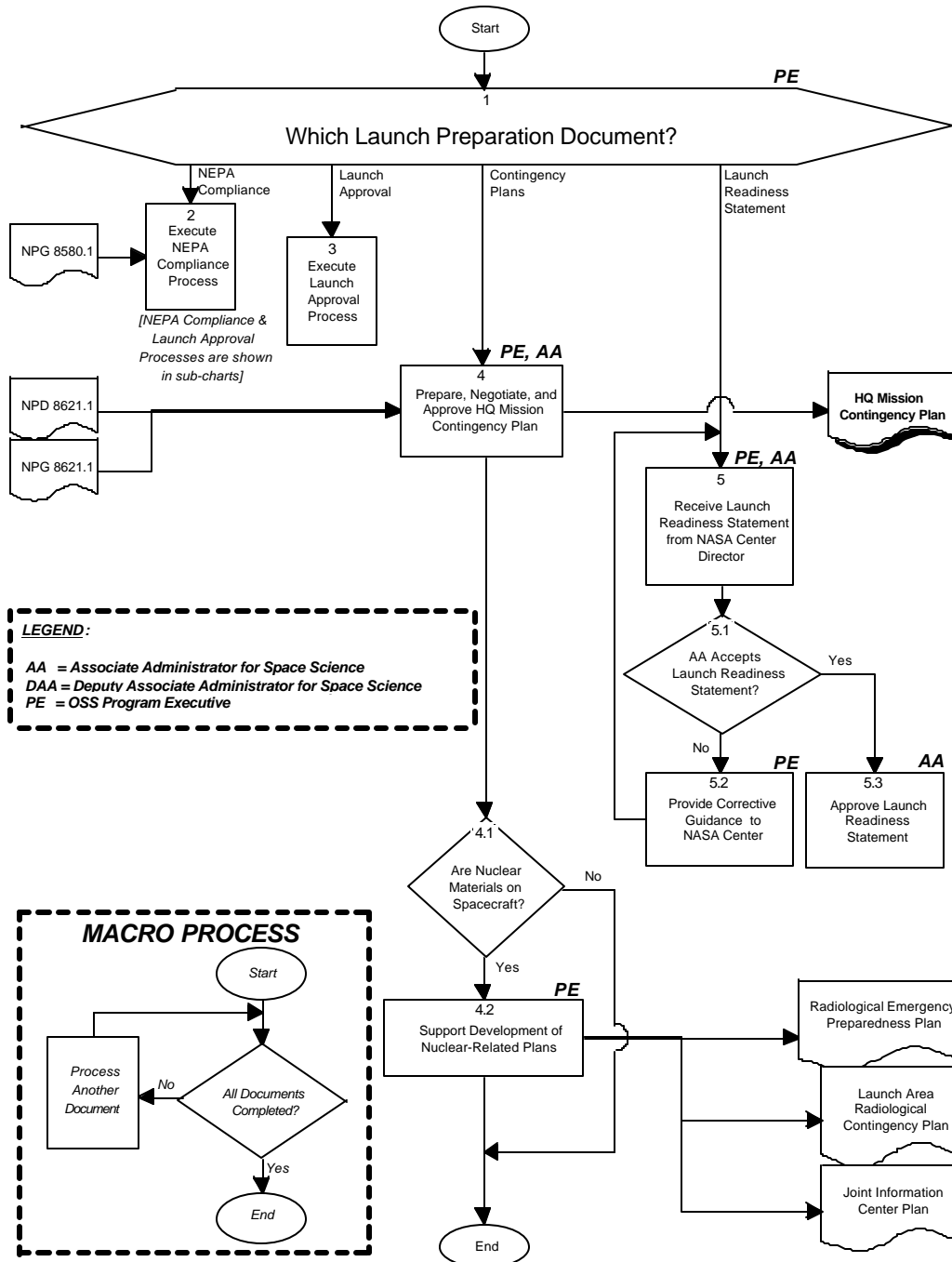
Responsible Office: NASA Headquarters Office of Space Science (OSS) [Code S]

Subject: Launch Preparation Activities

5. FLOWCHART

[NOTE #1: Process steps are numbered in accordance with their corresponding step numbers in Section 6.]

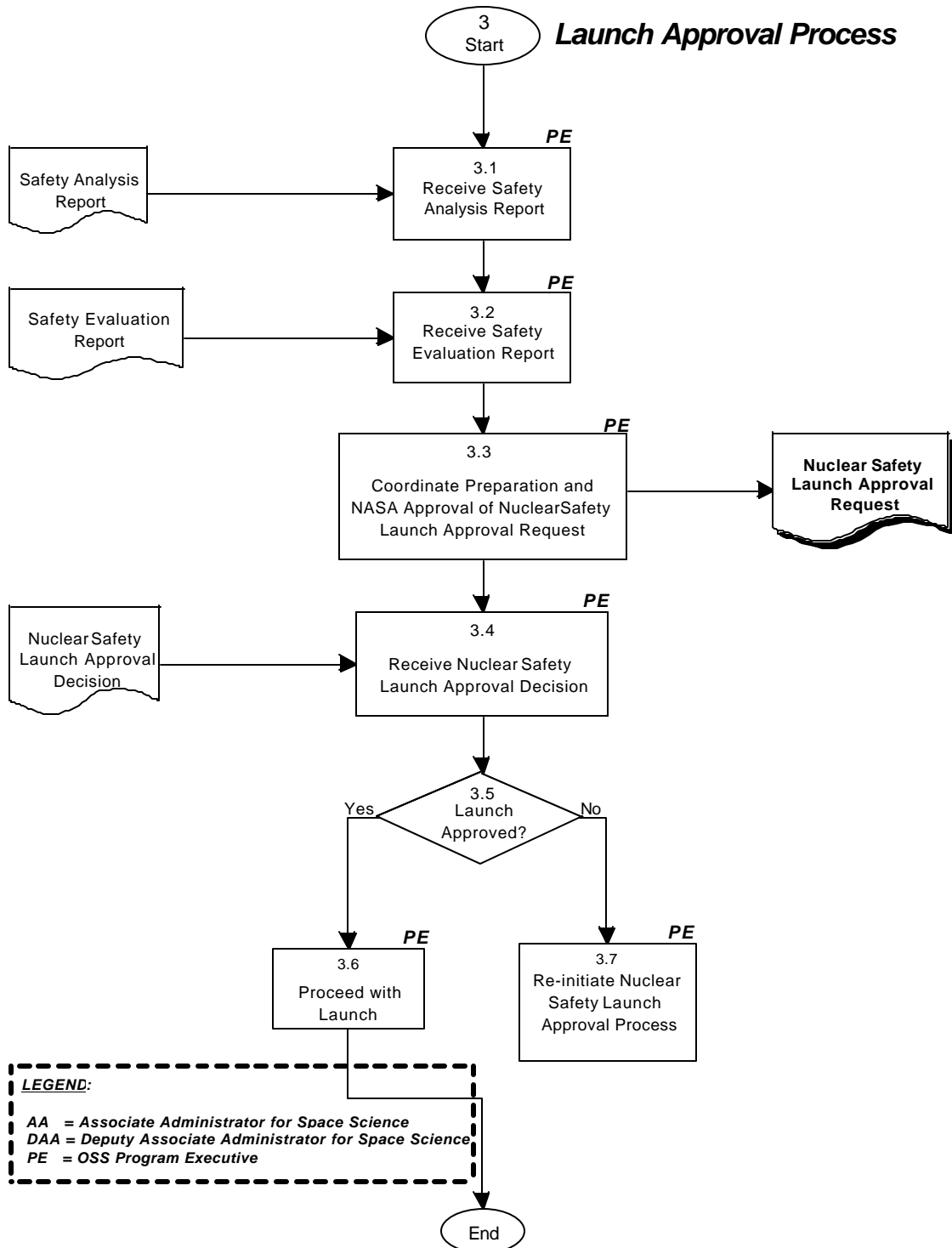
[NOTE #2: "Quality records" are identified via bold-text titles and shadowing of the border of their symbols.]



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Subject: Launch Preparation Activities

5. FLOWCHART (concluded)



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Subject: Launch Preparation Activities**6. PROCEDURE**

<u>STEP #</u>	<u>AGENTS</u>	<u>DESCRIPTION</u>
1	Program Executive	The order of document preparation is based on the legal requirements and program/project complexity. In general, NEPA compliance commences as early as possible in the Formulation subprocess (as defined in NPG 7120.5), with a target for completion in the Critical Design Review timeframe. If sufficient nuclear material is anticipated (as determined early in the NEPA process), the Nuclear Safety Launch Approval process also commences. The Contingency Plans are usually finalized approximately three months prior to launch. The Launch Readiness Statement is usually received just prior to launch. The Program Executive determines if there are mission-unique requirements that necessitate the preparation of additional pre-launch NASA Headquarters documents.
2		Execute the NEPA Compliance Process in accordance with NPG 8580.1.
2.1	Program Executive DAA	The OSS Program Executive convenes a meeting to determine if sufficient nuclear material is present or if the mission has the potential for public controversy (e.g., a sample return). Participation in this meeting includes the Program Executive, the Deputy Associate Administrator for Space Science, a Code G representative, and a Code JE representative.
2.2	Program Executive	The OSS Program Executive assigns the preparation of the Environmental Assessment (EA) to the cognizant Program Manager or Project Manager.
2.3	Program Executive	For a mission at the Jet Propulsion Laboratory (JPL), the OSS Program Executive coordinates review and approval of the Environmental Assessment with participating agencies and ensures its publication. (For a mission at a NASA Center, the Program Manager or Project Manager coordinates review and approval of the Environmental Assessment with participating agencies and ensures its publication.)

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Subject: Launch Preparation Activities**6. PROCEDURE** *(continued)*

<u>STEP #</u>	<u>AGENTS</u>	<u>DESCRIPTION</u>
2.4	Program Executive	For a mission at JPL, the OSS Program Executive coordinates a meeting to determine if there is a Finding of No Significant Impact (FONSI). (For a mission at a NASA Center, the Program Manager or Project Manager coordinates this meeting.) If the EA shows a significant environmental impact or public controversy, the EIS process must be completed (see Step #2.6).
2.5	Program Executive AA	For a mission at JPL, the OSS Program Executive prepares the FONSI that is approved by the Associate Administrator for Space Science. After approval, all FONSI's are published in the Federal Register. (For a mission at a NASA Center, the Program Manager or Project Manager prepares the FONSI that is approved by the Center Director.)
2.6	Program Executive	The Program Executive is responsible for the preparation of the Draft Environmental Impact Statement (EIS) in accordance with applicable regulations and law. A Notice of Intent is published in the Federal Register prior to preparing the Draft EIS. When the Draft EIS is complete, a Notice of Availability is published in the Federal Register, and the Draft EIS is mailed to all participating agencies and interested public parties.
2.7	Program Executive	The OSS Program Executive incorporates NASA and public comments (as well as any updated mission information) into the Final EIS, publishes a Notice of Availability in the Federal Register, and mails the Final EIS to all participating agencies and interested public parties.
2.8	Program Executive AA	The OSS Program Executive prepares the Record of Decision that is approved by the Associate Administrator for Space Science.

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Subject: Launch Preparation Activities**6. PROCEDURE** *(continued)*

<u>STEP #</u>	<u>AGENTS</u>	<u>DESCRIPTION</u>
3		Execute the Launch Approval Process.
3.1	Program Executive	The OSS Program Executive receives the Safety Analysis Report (SAR) that is submitted by the Program or Project at the cognizant NASA Center, nominally 12 months prior to launch.
3.2	Program Executive	The ad hoc Interagency Nuclear Safety Review Panel (INSRP) receives and reviews the SAR. The INSRP prepares a Safety Evaluation Report (SER) that is delivered to the Program Executive, nominally 4 to 6 months prior to launch.
3.3	Program Executive	The OSS Program Executive uses SAR and SER information to prepare and coordinate the Nuclear Safety Launch Approval Request with the participating agencies and the cognizant NASA Headquarters Associate Administrators and Assistant Administrators. The Request is signed by the NASA Administrator for submittal to the Executive Office of the President.
3.4	Program Executive	The Executive Office of the President renders a Nuclear Safety Launch Approval Request decision and notifies NASA in writing (usually a few days prior to the launch).
3.5		If the Nuclear Safety Launch Approval Request is approved by the Executive Office of the President, proceed to Step #3.6. If the Nuclear Safety Launch Approval Request is not approved, proceed to Step #3.7.
3.6	Program Executive	Having obtained Nuclear Safety Launch Approval, the OSS Program Executive completes OSS launch-preparation activities.
3.7	Program Executive	If the Nuclear Safety Launch Approval Request is denied, the Nuclear Safety Launch Approval process must be re-initiated. Therefore, return to Step #3.1 to resolve issues identified by the Executive Office of the President.

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Subject: Launch Preparation Activities**6. PROCEDURE** *(concluded)*

<u>STEP #</u>	<u>AGENTS</u>	<u>DESCRIPTION</u>
4	Program Executive AA	The OSS Program Executive prepares the HQ Mission Contingency Plan in accordance with NPD 8621.1 and NPG 8621.1, negotiates concurrences with the cognizant NASA Headquarters Associate Administrators and Assistant Administrators, and obtains approval from the Associate Administrator for Space Science.
4.1		If nuclear materials will be incorporated into the spacecraft, proceed to Step #4.2. If not, end the process.
4.2	Program Executive	The OSS Program Executive supports development of the following plans and includes a reference and summary in the HQ Mission Contingency Plan prepared in Step #4: <ul style="list-style-type: none"> (a) Radiological Emergency Preparedness Plan (prepared by Code Q); (b) Launch Area Radiological Contingency Plan (prepared at the launch site); and (c) Joint Information Center Plan (prepared by Code P).
5	Program Executive AA	The OSS Program Executive and the Associate Administrator for Space Science receive the Launch Readiness Statement from the cognizant NASA Center Director, usually within 1 month prior to launch.
5.1	AA	The Associate Administrator for Space Science determines whether the Launch Readiness Statement is acceptable. If it is not acceptable, proceed to Step #5.2. If it is acceptable, proceed to Step #5.3.
5.2	Program Executive	If the Launch Readiness Statement is unacceptable, the OSS Program Executive prepares and coordinates corrective guidance to the cognizant NASA Center at Step #5.
5.3	AA	If the Launch Readiness Statement is acceptable, the Associate Administrator for Space Science (or designee) provides approval during readiness reviews at the launch site.

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Subject: Launch Preparation Activities**7. QUALITY RECORDS**

RECORD IDENTIFICATION	OWNER	LOCATION	MEDIA: ELECTRONIC OR HARDCOPY	NPG 1441.1 SCHEDULE NUMBER AND ITEM NUMBER	RETENTION/ DISPOSITION
Environmental Assessment	Cognizant Division Secretary	Cognizant OSS Division files	Hardcopy	Schedule 8, Item 43H	Destroy when 5 years old.
Draft Environmental Impact Statement	Cognizant Division Secretary	Cognizant OSS Division files	Hardcopy	Schedule 8, Item 43H	Destroy when 5 years old.
Finding of No Significant Impact	Cognizant Division Secretary	Cognizant OSS Division files	Hardcopy	Schedule 8, Item 43H	Destroy when 5 years old.
Final Environmental Impact Statement	Cognizant Division Secretary	Cognizant OSS Division files	Hardcopy	Schedule 8, Item 43H	Destroy when 5 years old.
Record of Decision	Cognizant Division Secretary	Cognizant OSS Division files	Hardcopy	Schedule 8, Item 43H	Destroy when 5 years old.
Nuclear Safety Launch Approval Request	Cognizant Division Secretary	Cognizant OSS Division files	Hardcopy	Schedule 7, Item 5D1	* Permanent * Retire to FRC 1 year after completion, cancellation, or termination of related project. Transfer to NARA 10 years after subject action or when 25 years old, whichever is sooner.
Headquarters Mission Contingency Plan	Cognizant Division Secretary	Cognizant OSS Division files	Hardcopy	Schedule 7, Item 5D1	* Permanent * Retire to FRC 1 year after completion, cancellation, or termination of related project. Transfer to NARA 10 years after subject action or when 25 years old, whichever is sooner.

[NOTE #1: These "quality records" are identified in Section 5 ("Flowchart") of this OWI via bold-text titles and shadowing of the border of their symbols.]

[NOTE #2: In accordance with NPG 1441.1 NASA Records Retention Schedules, "... installations' office of primary responsibility will maintain one official record copy ...; reference copies may be maintained for related work". Therefore, the "Retention" and "Disposition" aspects of quality records apply only to the one official record copy of each quality record.]