

NASA Expendable Launch Vehicle  
Payload Safety Agency Team  
Implementation Plan

APPROVAL

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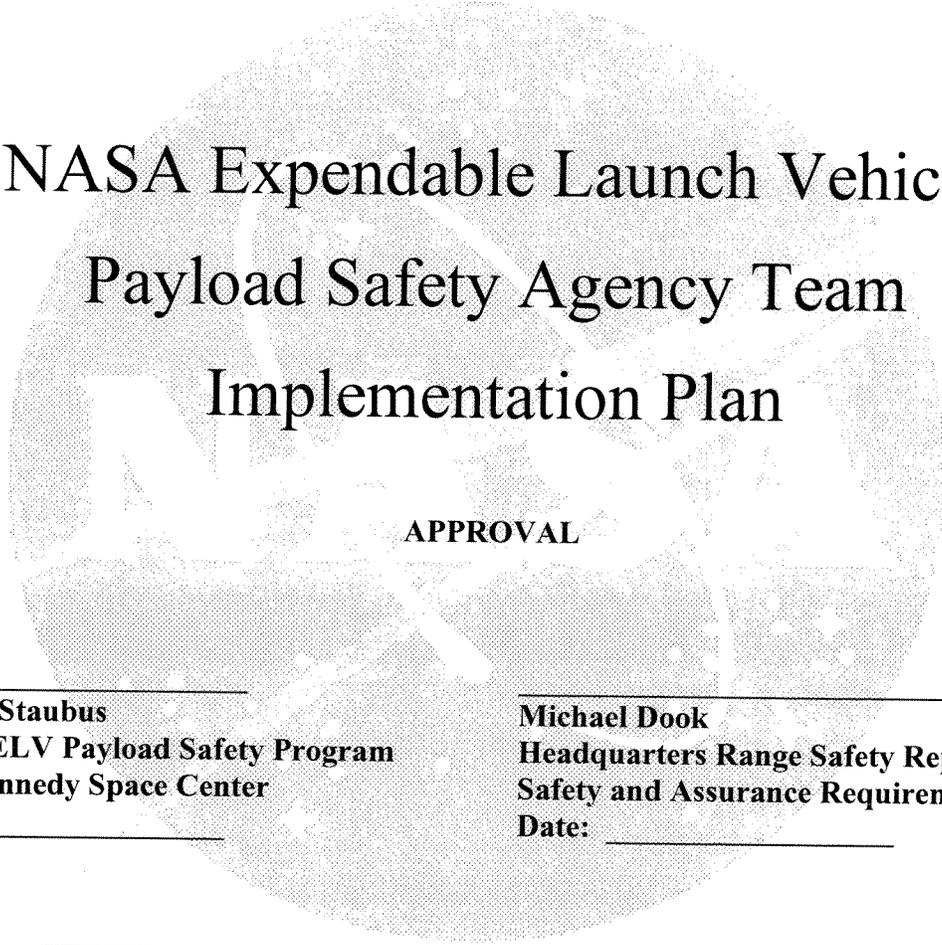
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John F. Kennedy Space Center  
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# NASA Expendable Launch Vehicle Payload Safety Agency Team Implementation Plan

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## 1.0 Purpose

This plan establishes the implementation of NASA's Expendable Launch Vehicle (ELV) Payload Safety Agency Team's activities in response to the Agency Teams roles and responsibilities found in NPR 8715.7, *Expendable Launch Vehicle Payload Safety Program*. This implementation plan delineates fundamental elements of the Agency Team including membership, operational approaches to meeting requirements, and related products.

## 2.0 Membership

The ELV Payload Safety Agency Team membership is as follows:

(Lead) KSC	Cal Staubus (Mail Code SA-G1)
KSC	Judy Gari (Mail Code SA-D)
HQ	Mike Dook (Mail Code 5Y74)
GSFC	Bo Lewis (Mail Code 321.0)
JPL	James Lumsden (Mail Code 125-156)

- 2.1. Agency Team Lead and members are appointed by the Chief, Office of Safety and Mission Assurance (OSMA). The ELV Payload Safety Manager is the Agency Team Lead.
- 2.2. Each Agency Team member may designate one other support person, typically an SMA engineer, to assist them in representing their Center and in upholding the roles and responsibilities of NPR 8715.7 and this implementation plan. Others may support the Agency Team member in performing member actions as needed, but only the designated support person may serve long-term as a representative for the member in Agency Team meetings and matters.
- 2.3. Other support representatives from NASA, the Air Force, other agencies, or industry may be requested to support the Agency Team as deemed necessary by the Agency Team to participate on an "as needed" basis.
- 2.4. Agency Team membership is not limited to a specific term of membership. Agency Team membership shall be reviewed annually.
- 2.5. When an Agency Team member needs to be replaced and/or added, the Agency Team Lead will identify potential candidates in coordination with the current Agency Team members and make a recommendation to the Chief, OSMA for appointment.

### Support Members:

KSC -	Chuck Loftin (SA-D1)
	Jennifer Mirenda (ManTech SRS)
GSFC -	James Harper (321.0)
JPL -	Scott Michel (125-156)
WFF -	Tom Moskios (WFF:803.1)

### 3.0 Responsibilities and Implementation Approach

Per the NPR 8715.7, *Expendable Launch Vehicle Payload Safety Program*, the Agency Team develops, maintains, and ensures consistent implementation of NASA’s ELV payload safety requirements. The Agency Team assists payload project Payload Safety Working Groups (PSWGs) when needed, provides Agency-wide technical perspective and insight on ELV payload safety-related issues, and supports SMA Technical Authorities and the Office of Safety and Mission Assurance in matters involving ELV payload safety.

Table 1 provides the Agency Team’s responsibilities from NPR 8715.7 and the Agency Team’s respective implementation approach to satisfying these responsibilities.

**Table 1 – ELV Payload Safety Agency Team Implementation of Responsibilities**

<b>Responsibilities (NPR 8715.7, Paragraphs 1.3.4a-h)</b>	<b>Implementation</b>
<p>a. Independently assess ELV Payload Projects to assure that the policy and requirements of NPR 8715.7 (including requirements incorporated by reference) are consistently implemented throughout the Agency.</p>	<p>Periodic Agency Team meetings include overview discussions on all current and upcoming projects (mission). A primary focus of these discussions is on identifying payload safety concerns that warrant more detailed assessment and/or other attention by the Agency Team. The ELV Payload Safety Program staff at KSC compiles project overview data for review by the Agency Team. Agency Team members and support personnel bring forward any specific concerns they identify for consideration by the full Team. The objectives and scope of detailed assessments undertaken by the Agency Team may vary dependent upon spacecraft complexity (technically, processes, contractual), new technology, importance, potential hazards, and project personnel experience levels. Assessments may pertain to a single project, numerous projects, a program, targeted processes, and/or technical requirement(s) or issues. Projects are chosen to undergo assessments to ensure a reasonable representation of all types of NASA ELV payloads, payload contractors, and project offices, while focusing on the most pressing cross-agency payload safety issues. Assessments are documented, including any findings, recommendations, decisions, and/or corrective actions where applicable. All related documentation is maintained by the ELV Payload Safety Program.</p>
<p>b. Remain cognizant of payload safety concerns and disseminate related information to applicable payload projects.</p>	<p>To remain cognizant of payload safety concerns, the Agency Team:</p> <ul style="list-style-type: none"> <li>i. Maintains communication with the NASA payload Centers and other Agencies.</li> </ul>

	<ul style="list-style-type: none"> <li>ii. Reviews and responds to all payload safety issues brought to them from any project or PSWG.</li> <li>iii. Reviews waivers, alternative approaches and equivalent levels of safety (ELOS) determinations; PSWG minutes and comments; and selected project deliverables.</li> <li>iv. Participates in selected safety reviews (i.e., Payload Safety Introduction, Safety Reviews I, II, III, and other PSWG meetings).</li> </ul> <p>The Agency Team disseminates payload safety related information to applicable NASA projects and the payload safety community via agreed upon guidance letters, technical notes, emails, and workshops, and by interfacing with NASA KSC SMA Launch Services Division, payload Centers (including JPL), Air Force Range Safety, and others.</p>
<p>c. Coordinate Agency Team positions regarding any concerns, guidance, or comments applicable to a payload project and provide those positions to the project’s PSWG as early as possible in the safety review process.</p>	<p>The Agency Team Lead (or support contractor) collects all comments, concerns, and guidance on a given issues and ensures that Agency Team positions are consolidated and approved by the Agency Team prior to forwarding them to the PSWG. The Agency Team works to meet the project’s scheduled due dates.</p>
<p>d. Provide guidance on ELV payload safety concerns to the Chief, Safety and Mission Assurance and the SMA Technical Authorities, including any issues requiring an Agency-level decision.</p>	<p>The Agency Team Lead and the HQ Agency Team member work to facilitate communications with the Chief, SMA and the SMA Technical Authorities as needed. Such communications may be formal or informal and address, at a minimum:</p> <ul style="list-style-type: none"> <li>i. Concerns that require an Agency level decision (such as tailoring and waivers) and dissenting opinions that can not be resolved by the Agency Team (see NPR 8715.7, paragraphs 1.3.1f, 1.3.4d, 1.4.9, and 1.5.7).</li> <li>ii. Concerns dealing with Agency policy where the Agency Team needs guidance from the Chief, SMA.</li> <li>iii. Concerns with potential for Agency implications.</li> </ul> <p>The Agency Team generates an annual report to the Chief, SMA that highlights Team activities, issues resolved, and other accomplishments for the year. The Report is distributed within the payload community including associated SMA Technical Authorities.</p>

<p>e. Provide consistent interpretation of safety requirements (including determination of requirements applicability) and provide guidance on the proper implementation of safety requirements.</p>	<p>The Agency Team is directly involved in the development of ELV payload safety requirements and acts as a repository for the developmental history and intent of the requirements. Through ongoing coordination with payload projects and associated organizations, internal and external to NASA, the Agency Team works to identify and resolve concerns associated with interpretation, applicability, and implementation of published safety requirements. For each such concern, the Agency Team members coordinate to perform any needed research and arrive at a Team position. The Agency Team Lead (or support staff) documents these Team positions, maintains associated records, and makes this data available to payload projects. Similarly, the Agency Team responds to any specific requests for interpretations or guidance that may come from a PSWG or other organization.</p>
<p>f. Issue interim guidance to the NASA ELV payload community on safety requirements, processes, and specific payload design concerns as needed to assure the policy and requirements of NPR 8715.7 are satisfied.</p>	<p>The need to develop interim guidance on any issue may be raised by an Agency Team member or support personnel at any time. At a minimum, such issues will be discussed at the periodic Agency Team meetings. The Agency Team identifies a lead for drafting and coordinating each interim guidance document. Interim guidance documents regarding the ELV payload safety process and/or associated requirements may be signed by the Agency Team Lead after coordination with the Agency Team members. If interim guidance is related to Agency policy, the Agency Team develops draft guidance for signature by the Chief, SMA. The Agency Team ensures any interim guidance is distributed to appropriate members of the ELV Payload safety community.</p>
<p>g. Provide the SMA Technical Authorities with assessments of alternative approaches proposed as part of tailoring and waivers of requirements (see paragraphs 1.4 and 1.5 of this NPR).</p>	<p>The NASA KSC SMA Launch Services Division (PSWG Chairperson) provides documentation of any alternative approaches (equivalent levels of safety determinations) proposed during tailoring of requirements for a payload project to the Agency Team for assessment. The NASA KSC SMA Launch Services Division (PSWG Chairperson) provides all proposed waivers to the Agency Team for assessment and concurrence.</p> <p>Agency Team members and/or support personnel work directly with the PSWG to obtain any additional data needed and to resolve any concerns associated with tailoring or waivers. The Agency Team communicates any related concerns directly to the cognizant SMA Technical Authorities as needed. The Agency Team Lead signs concurrence for the</p>

	Agency Team after appropriate coordination with the other Team members.
h. When making a project-specific decision, coordinate with any other organization that shares safety responsibility for the mission to arrive at a mutually acceptable approach.	Prior to making any mission decisions, the Agency Team works with the Project Manager to ensure coordination with all involved or impacted organizations (NASA and non-NASA) that share in safety responsibility. The Agency Team maintains documentation (e.g., meeting minutes) that identifies all those involved, any unique concerns associated with the issue, and the mutually accepted approach and/or actions that will lead to resolution.

## 4.0 Meeting Approach

- 4.1. The Agency Team strives to meet at least quarterly and may meet more often as needed to resolve ELV payload issues and concerns. It is preferred that members meet together at a single location for quarterly meetings, while the additional meetings may take place at a single location or via telephone or video/telephone conference.
- 4.2. The Agency Team Lead is responsible for:
  - a) Scheduling and coordinating meetings (time, place, and format).
  - b) Providing timely notification to all members, presenters, and others that need to attend.
  - c) Ensuring an Agenda is provided.
  - d) Ensuring minutes are taken and provided within five business days of the meeting. The minutes shall include a list of all attendees, major decisions made, and a list of action items.
  - e) Ensuring Agency Team actions and their status are tracked and periodically disclosed to Team members until closed.

## 5.0 Decision-making Approach

- 5.1. The Agency Team strives for unanimous concurrence among the Team members in making decisions and resolving issues. If a unanimous decision can not be achieved, then the Team members may agree to put the issue to a vote or raise the issue to the Chief, SMA for resolution.
- 5.2. If an issue is put to a vote, the simple majority determines the decision and the meeting minutes (or equivalent documentation) reflect how each member voted and the resulting outcome. The rationale for any dissenting opinions shall also be captured in the minutes. (As always, any dissenting opinion may be taken to the Chief, SMA for further consideration.).
- 5.3. If an issue is brought to the Chief, SMA for resolution, the HQ Agency Team member provides the Chief, SMA with an overview of the issue and facilitates any needed

meetings/briefings and follow-on discussions where all interested parties are invited to brief the issue and their position.

## **6.0 Administrative Support**

General administrative support to the Agency Team is provided primarily by the ELV Payload Safety Manager's support contractor.

6.1. The ELV Payload Safety Manager's support contractor:

- a) Maintains the ELV Payload Safety Program Project List
- b) Maintains the ELV Payload Safety Program website
- c) Coordinates Agency Team meetings and document reviews and responses
- d) Develops and distributes minutes from Agency Team meetings
- e) Maintains proposed changes for the NPR 8715.7.

*NOTE: The support contractor is also responsible for assisting in technical payload safety engineering work performed by the Agency Team.*

6.2. The Agency Team member hosting an Agency Team meeting is responsible for ensuring that an adequate meeting room is provided with computer-compatible projector, screen, telephone conference capability (when needed), and wireless computer network access (where available).

## **7.0 Agency Team Products**

All Agency Team activities are documented in meeting minutes or reports. The following is a list of Agency Team products:

- a) Assessment Reports
- b) Annual Report (for Chief, OSMA)
- c) Technical Briefing Notes
- d) Policy interpretations and NPR 8715.7 changes
- e) Documented consultation (with PSWGs, Technical Authorities, and others)
- f) ELV Payload Safety Program Project List
- g) Interim Guidance Letters (as needed)
- h) Agency Team Meeting Minutes

## **8.0 Changes to and Cancellation of this Plan**

Proposed comments and/or changes concerning this plan should be addressed to the ELV Payload Safety Program Manager.