policy
NEWS.

POLICY UPDATES IMPROVE EXPENDABLE LAUNCH VEHICLE PAYLOAD SAFETY PROGRAM PROCESSES

FEBRUARY 24, 2014

Updates to NPR 8715.7 improve the safety review and approval process for expendable launch vehicles.

Updates to NASA Procedural Requirements (NPR) 8715.7, Expendable Launch Vehicle (ELV) Payload Safety Program went into effect on Feb. 24, 2014. These changes, made by an agency-wide team, reflect new program standards and improve the overall ELV payload safety review and approval process.

WHAT'S NEW.

The following were major changes made to the NPR:

1. Revisions **align** the NPR **with NASA-STD-8719.24**, NASA Expendable Launch Vehicle Payload Safety Requirements.

WHY IT MATTERS
NASA-STD 8719.24 is a pre-tailored version of Air Force Range Safety User Requirements, Air Force Space Command Manual 91-710 and NASA safety requirements for payloads flying on a non-crewed ELV not interfacing with the International Space Station. Other items now covered in the standard include the tailoring requirements, System Safety Plan, Safety Data Packages, hazard assessments and reports, Ground Operations Plan, and presentation information for the Payload Safety Introduction Briefing. Members of the payload community need to be aware of both documents and know where to find information.

RATIONALE
NASA-STD 8719.24 did not exist when the NPR originally was released. The NPR needed to reflect this other key program document.

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2. Changes to the safety review and approval process **address** less expensive, higher risk **secondary payloads** that launch both with and without the use of the Launch Services Program (LSP).

WHY IT MATTERS
Secondary, auxiliary payloads are becoming more common. When LSP is used to launch these payloads, the revised NPR dictates that the Safety and Mission Assurance technical authority is to determine if the safety review and approval process outlined in the NPR is necessary and appropriate; the decision is then proposed to the ELV payload safety program manager for approval. When LSP is not used, this assignment is given to the program or project technical authority.

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RATIONALE

NASA currently launches secondary payloads, in addition to primary payloads, and the safety review and approval process outlined in the NPR is not always appropriate. The changes give more authority to the technical authorities and engineers to determine a specific project's needs.

3. Clarifications better **define** the **data package deliverables** required throughout the safety review and approval process.

WHY IT MATTERS

Previously, centers handled the safety review and approval process very differently. The changes affect what is required of the payload community to prepare for the review process.

RATIONALE

The change will result in consistent data packages from all centers and will help expedite the review process due to clarity on what needs to be reviewed.

4. Additional clarifications **specify** that the **ELV Payload Safety Program's involvement** with a **payload** continues until payload separation occurs and includes hazards related to recovery operations for return-to-Earth payloads.

WHY IT MATTERS

Unlike many programs, the ELV Payload Safety Program's involvement does not cover in-flight safety.

RATIONALE

Although the program always has focused on ground processing, the community still was unclear when its involvement with a payload truly ended. The clarification defines the program's role within the life cycle timeline.

5. Additions address **recovery operations** and **safety hazards** associated with **return-to-Earth payloads** containing samples.

WHY IT MATTERS

The ELV payload community needs to be prepared to provide input on payload recovery needs during the design phase of a project so that engineers can incorporate them into design.

RATIONALE

Requirements and procedures for payload recovery need to be incorporated into the design of projects to avoid complications during the recovery phase. The revised NPR provides guidance on these operations and is aligned with NPR 8715.3C, NASA General Safety Program Requirements, Chapter 3.

6. Administrative changes throughout the document reflect **current program needs**.

WHY IT MATTERS

The changes affect requirements throughout the policy.

RATIONALE

The policy originally was written in 2008 when the program was still quite new. The revisions incorporate what was learned over the past few years and better reflect the program.

TAKE ACTION

Payload project managers, system engineers and members of the ELV Payload Safety community should review the revised policy carefully to become familiar with the requirements and expectations. Compliance with this policy is mandatory when building, launching or otherwise working on an ELV payload contract. Training is available that provides an overview of this NPR. It can be found in SATERN by searching for NASA ELV Payload Safety Program Overview of NPR 8715.7.

Keep an eye out for the revised NASA-STD-8719.24, which is expected to be released within the next year.

Have questions about the new policy? Contact Cal Staubus, ELV payload safety manager, at Calvert.A.Staubus@nasa.gov or Jennifer Holland, senior engineer with ManTech SRS, at Jennifer.A.Holland@nasa.gov.

or

View the official NASA document at
http://nodis3.gsfc.nasa.gov/displayDir.cfm?t=NPR&c=8715&s=7