

## Independent Assessment

In accordance with NPR 8715.5, *Range Safety Program*, the NASA Range Safety Manager is required to conduct an independent assessment of applicable NASA Centers, component and range facilities, and programs at least once every two years to verify conformance with range safety policies, procedures, and requirements. NASA Range Safety has conducted audits at a number of facilities over the past few years, including Dryden Flight Research Center, Wallops Flight Facility, and the Goddard Center.

### Conduct of Audit

In April of 2007, NASA Headquarters performed an Institutional/Facility/Operational Safety Audit at the Kennedy Space Center.

Although this discussion focuses on the Range Safety aspects of the audit, other disciplines reviewed included the following:

- Pressure Vessel Systems
- Electrical Safety
- Lifting and Handling Equipment
- Fire Protection
- Kennedy Space Center Government-Industry Data Exchange Program.

This safety audit satisfies the Range Safety Manager requirement for assessing Kennedy Space Center.



### Range Safety Audit Results

The Range Safety portion of the audit focused on ensuring Kennedy Space Center compliance with the requirements of NPR 8715.5. Although the audit found Kennedy Space Center Range Safety to be in compliance with the document with no major deficiencies, a few items that require action are identified below.

- **Item:** There is no Range Safety risk management plan for expendable launch vehicle launches as required by NPR 8715.5, paragraph 3.2.4.4. **Corrective Action:** Range Safety is working with the Launch Service Program to develop Range Safety risk management plans for expendable launch vehicles.
- **Item:** KDP-KSC-P-3619, *NASA Range Safety Variance (Waiver)* process needs to be expanded to address the unique aspects of dealing with variance/waiver situations that can occur in real time during a launch countdown. **Corrective Action:** Range Safety has worked with headquarters to develop a real time process and to capture the process within a new revision of NPR 8715.5 which is expected in 2008. Range Safety is working locally with the Space Shuttle Program Launch Commit Criteria Working Group to develop a similar process. A similar process will be worked with the Launch Services Program.

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- **Item:** KSC-PLN-2805, *KSC Range Safety Risk Management Plan for Launch and Landing of the Space Shuttle*, needs to be updated to fully describe how Kennedy Space Center manages toxics and distant focusing overpressure. A revision to NPR distant focus overpressure risks during Shuttle launches and to demonstrate how that approach satisfies the risk criteria of NPR 8715.5 is needed. **Corrective Action:** Range Safety is working with Kennedy Space Center, Center Operations to fully describe the risk mitigation efforts performed during a Space Shuttle launch countdown and document how these processes lower overall risk estimates and aid in satisfying the acceptable risk criterion of NPR 8715.5.

All corrective actions are expected to be completed in early to mid 2008.