

PER Overview

The purpose of the PER is to demonstrate readiness to proceed with environmental testing of the integrated flight system and to demonstrate that the project is on track to complete the flight and ground system development and mission operations in order to fully meet mission performance requirements within allocated cost and schedule resources. To that end, the project demonstrates that a requirements-compliant flight system design has been fabricated, appropriately tested at lower levels of assembly, integrated, and subjected to a successful comprehensive systems test. In addition, adequacy of planning for subsequent flight system activities, satisfactory progress on development of other system elements, and adequacy of available resources to complete remaining project activities shall be demonstrated.

PER
Scope and Success Criteria

Review Objectives

- The objectives of the PER are to demonstrate that:
 - all supportive flight system design analyses have been successfully completed and demonstrate adequate margin
 - all lower level flight system verification activities have been satisfactorily completed, compliance with requirements has been verified and all discrepancies are sufficiently understood to warrant proceeding,
 - flight system performance testing has established a valid performance baseline that complies with requirements,
 - planning is adequate for all remaining flight system activities,
 - development of all other flight system elements (e.g.: launch vehicle, ground system, data processing and analysis system) is satisfactory, and
 - available schedule resources support completion of all necessary remaining activities with adequate margin.

Success Criteria

The review board is able to conclude that:

- All lower level flight system verification activities have been satisfactorily completed and all discrepancies are sufficiently understood to warrant proceeding
- A performance baseline that meets requirements has been established
- The instrument configuration to be tested adequately represent the flight article
- The preparations for environmental testing are comprehensive, and progress is occurring at a rate compatible with the available schedule
- The planned environmental tests will, when successfully completed, verify the flight system design meets its environmental requirements.
- All appropriate mitigations of the risks to personnel and flight hardware have been taken.
- Available schedule resources support completion of all necessary remaining activities with adequate margin.