

JSC Safety and Health Requirements	JPR No.	1700.1
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CHAPTER 2.1 PRE-USE ANALYSIS

2.1.1. Applicability of this chapter

You are required to follow this chapter if you are a manager, facility manager, principal investigator, researcher supervisor or are responsible for operations or people at any level.

2.1.2. Pre-use analysis at JSC

JSC shall analyze all newly acquired or altered facilities, processes, materials, equipment, or project phases before use begins to identify safety and health hazards, environmental impacts, and the means to prevent or control them.

2.1.3. Requirements

2.1.3.1 JSC handles pre-use analyses as follows:

- a. For new or modified facilities and proposed programs or projects (such as Construction of Facilities, and lesser funding levels):
 - (1) Safety, health, and fire protection engineers shall review the drawings and participate in design reviews. All new or modified facilities require at least acceptance inspections and tests of fire protection systems. See Chapter 10.1 for more details.
 - (2) JSC organizations shall make sure an environmental review is done during the planning phase as described in JPR 8550.1, “JSC Environmental Compliance Procedural Requirements.” The “environmental review” is required by the National Environmental Policy Act (NEPA) to identify and assess the potential environmental effects for proposed programs and projects. The Project Manager, in collaboration with the JSC Environmental Office, conducts the environmental review during the earliest planning stages, before the point when NASA’s ability to implement reasonable alternatives is precluded.
- b. Hazardous, unique, or critical facilities require a facility readiness review as described in Chapter 10.3.
- c. The following checklists are available for the review process and may be customized to the situation:
 - (1) New item checklist ([NS-PA-CH03](https://smasp.jsc.nasa.gov/ns/ns1/Checklists/Checklists.aspx)) at URL:
<https://smasp.jsc.nasa.gov/ns/ns1/Checklists/Checklists.aspx>.
 - (2) Configuration change checklist ([NS-PA-CH04](https://smasp.jsc.nasa.gov/ns/ns1/Checklists/Checklists.aspx)) at URL:
<https://smasp.jsc.nasa.gov/ns/ns1/Checklists/Checklists.aspx>.
- d. Ground tests that could pose hazards to test subjects or test personnel shall have a Test Readiness Review as described in Chapter 6.8.
- e. Hazardous materials require a hazard analysis as described in Chapter 9.1.
- f. Employees in potentially hazardous jobs shall be provided or help create a Job Hazard Analysis as described in Chapter 2.3.

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g. Organizations that produce educational or outreach materials intended for distribution to the public or for publication on NASA websites shall have the materials and related operations reviewed by the Safety and Test Operations Division and Occupational Health for hazards before use. This review shall include all educational products and those products used in outreach activities where instructions are provided that would allow the creation of a device or the completion of an experiment. Send the materials via e-mail to the JSC-TSO-Mailbox and JSC-DL-OCC-HEALTH email. The Safety and Test Operations Division and Occupational Health shall:

- (1) Review all associated links, products, and videos.
- (2) Consider the ages of the proposed participants to the greatest extent possible.
- (3) Determine if a separate safety section is required in either the instructor's or student's versions of the procedure due to the complexity of the activities proposed.
- (4) Assess all potential activities that will create or transform energy from one type to another and shall ensure that the instructions for the use of any energy sources are controlled to prevent injury to the participants. This assessment will also include tool use.
- (5) Determine the need for embedded "Caution" or "Warning" statements.
- (6) Provide written feedback on the product to the producing organization.

NOTE: Education or outreach presentations that do not involve demonstrations or provide instructions do not need to be reviewed (for example, presentations on the solar system or NASA missions).

NOTE: Organizations that produce these educational or outreach materials are encouraged to consult resources for age-appropriate safety guidance from professional groups such as the National Science Teachers Association.

2.1.4. Responsibilities for pre-use analysis

- a. As a manager or project manager, you are responsible for:
 - (1) Making sure the analyses in paragraph 2.1.3 above are done as required.
 - (2) Making sure the Safety and Test Operations Division and Occupational Health are involved in evaluating any new facilities, equipment, materials, or processes and any changes to your facilities, equipment, materials, or processes.
- b. The Center Operations Directorate is responsible for:
 - (1) Notifying the Safety and Test Operations Division and Occupational Health of plans for new or modified facilities, and providing drawings and notice of design reviews.
 - (2) Conducting environmental reviews according to JPR 8550.1.
- c. The Safety and Test Operations Division and Occupational Health are responsible for:
 - (1) Reviewing facility drawings for safety and health.
 - (2) Supporting design reviews and readiness reviews, as needed.

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d. The Office of Education is responsible for ensuring that JSC educational materials are reviewed by the Safety and Test Operations Division.

2.1.5. Safety and health records and documentation for pre-use analysis

a. For new or modified facilities, Center-level records include:

- (1) Design review, acceptance test, and inspection documentation kept by the Center Operations Directorate.
- (2) Records of safety and health comments kept by the Safety and Test Operations Division or Occupational Health.
- (3) Records of the NEPA environmental reviews kept by the Environmental Management Office.

b. The organization owning a facility having a readiness review shall keep a copy of the facility readiness review package as described in Chapter 10.3.

c. Organizations engaged in hazardous ground testing shall keep Test Readiness Review documentation.

d. Hazard analyses, as described in Chapter 2.3, also support pre-use analysis.

NOTE: See Appendix F, Attachment 1.1A for details on records and documentation required by this chapter.