Responsible Office: Safety and Mission Assurance Office

SUBJECT: Project/Program Assurance

1. POLICY

This directive sets forth policy, responsibilities, and authority for the Langley Research Center (LaRC) Program Assurance (PA) functions which include: systems safety; quality assurance; systems reliability; parts, materials, and processes; software assurance; and risk management. This Center will plan and execute its activities to utilize practical and cost-effective measures to accomplish necessary high levels of PA commensurate with the research, aeronautics and space objectives.

2. APPLICABILITY

This LaRC directive is applicable to all Government, contractor, or other organization employees at LaRC, in accordance with the terms expressed in their respective agreements, joint operating procedures, or contracts with LaRC.

3. AUTHORITY

NPD 8700.1, “NASA Policy for Safety and Mission Success.”

4. APPLICABLE DOCUMENTS

a. NPD 2820.1, “NASA Software Policy.”
b. NPR 8735.2, “Management of Government Safety and Mission Assurance Surveillance Functions for NASA Contracts.”
c. LPR 1710.15, “Wind-Tunnel Model Systems Criteria.”
d. LPR 1710.16, “Aviation Operations and Safety Manual.”
e. LPR 1740.4, “Facility System Safety Analysis and Configuration Management.”
f. LPR 5300.1, “Product Assurance Plan.”
g. LMS-CP-5580, “Airworthiness and Safety Review Board (ASRB).”

5. RESPONSIBILITIES

a. General
(1) The single point of responsibility and authority for PA activities within this Center rests with the Safety and Mission Assurance Office (SMAO).
(2) LPR 5300.1, “Product Assurance Plan,” describes the PA practices necessary to accomplish this Center’s Spaceflight Projects and Systems and shall be the basis for the development of product assurance plans.

(a) Appropriate sections can be selectively applied in consultation with the Mission Assurance Branch for effective execution of specific projects in a manner consistent with the above policy.

(3) Safety and Mission Assurance practices shall apply for all exploration projects and a wide range of other projects.

(a) Traditional space flight projects that require Safety and Mission Assurance (S&MA) support shall include atmospheric science instruments and missions, Shuttle and International Space Station payloads and experiments, and planetary science payloads and missions.

(b) S&MA requirements shall be met on human space flight projects.

(c) S&MA requirements shall be met on risk reduction flights, flight experiments, flights of opportunity that are suborbital, involve sounding rockets, uncrewed aerospace vehicles, drop models and major unmanned aerial vehicle (UAV) operations.

(d) Projects and/or experiments that are technology readiness level (TRL) 6 or higher shall be subject to S&MA review and requirements.

(4) Wind tunnel models safety assurance requirements are specified in LPR 1710.15, “Wind Tunnel Model Systems Criteria.”

(a) Flight experiments in aircraft shall be additionally required to follow LPR 1710.16, “Aviation Operations and Safety Manual” and LMS-CP-5580, “Airworthiness and Safety Review Board (ASRB).”

b. Director, SMAO is responsible for:

(1) Providing guidance and direction for Center-wide PA activities.

(2) Ensuring that the actions taken are in accordance with NASA and LaRC policies and are properly coordinated.

(3) Evaluating and reporting on the effectiveness of PA activities; make recommendations for improvements in these activities; and following up on these recommendations.

(4) Serving as the Center’s focal point for inquiries from business firms, industry associations, Government agencies, and universities concerning PA matters.

c. Line Managers are responsible for:

(1) Ensuring proper application of PA requirements to activities under their supervision.

d. Project Managers are responsible for:

(1) Developing product assurance plans in concert with the Safety and Facility Assurance Branch, SMAO.

(2) Implementing product assurance plans consistent with project objectives.

(3) Coordinating PA activities with SMAO.

(4) Ensuring compliance with Center-wide policies and practices.

e. Mission Assurance Branch, SMAO is responsible for:

(1) Planning, directing, and executing a comprehensive program to provide the PA required for this Center’s programs.

(2) Defining and implementing Center-wide aeronautics and space PA policy and procedures.
(3) Planning, directing, and coordinating the application of PA methodology and analytical techniques.
(4) Representing the Center on PA matters at conferences, symposia, and meetings sponsored by industry, government, universities, and professional and technical societies.
(5) Preparing and implementing product assurance plans; systems reliability analysis; internal and external audits, surveys and assessments.
(6) Providing assurance personnel for Center-related committees, panels, boards, surveys, and teams.

f. Safety and Facility Assurance Branch, SMAO is responsible for:
(1) Defining and implementing facility PA policy and procedures.
(2) Implementing facility systems safety analysis and configuration management requirements for LaRC research facilities.

g. Research, Projects and Engineering Organizations is responsible for:
(1) Performing responsibilities in accordance with product assurance plans, and PA policies and directives.

6. DELEGATION OF AUTHORITY

None

7. MEASUREMENT/VERIFICATION

The Safety and Mission Assurance Annual Operating Agreement contains metrics that pertain to compliance with this policy directive and LPR 5300.1, “Product Assurance Plan.”

8. CANCELLATION

LAPD 5300.1, dated October 6, 2004

Original signed on file

Stephen G. Jurczyk
Deputy Director

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