



**ARMSTRONG
POLICY
DIRECTIVE (DPD)**

**Directive: DPD-8700.1-001D
Effective Date: October 1, 2015
Expiration Date: October 1, 2020**

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SUBJECT: Organizational & Individual Safety Responsibilities

RESPONSIBLE OFFICE: S/Safety & Mission Assurance

1. POLICY

a. It is the policy of Armstrong Flight Research Center (AFRC) to execute safety responsibilities consistent with NPR 8715.3, NASA General Safety Program Requirements, and NPR 8715.1, NASA Occupational Safety and Health Programs, through the establishment and implementation of safety programs for operations that entail risk to personnel and equipment.

b. The Center's overall safety objective is zero mishaps and close call events that could have or did result in serious injury or death.

c. Safety programs will be implemented employing the following key principles:

(1) Individual employee involvement and accountability.

(2) Visible and strong management support and leadership.

(3) Disciplined safety controls recognizing the potential human failure in all safety-critical flight and ground activities.

(4) Proactive, non-punitive feedback mechanisms for employee identification of potential hazards.

(5) Periodic proactive analysis of potential and existing hazards.

(6) Compliance with existing direction from controlling government agencies and higher NASA authorities.

(7) Independent quality assurance of safety-critical activities performed by personnel outside the primary organization having functional responsibility.

(8) Process, documentation, and inspections sufficient to maintain process health and enable root cause identification of mishaps and close calls.

(9) Formulation and institutionalization of lessons learned resulting from both positive and negative outcomes impacting safety.

(10) Award recognition for achievements that have yielded safe operations, heightened awareness of hazards and safety issues, and/or improvements in safety culture.

d. Safety programs will include the following three key elements: leadership, planning, and risk management. These elements represent the minimum standard for a program; however, they are not intended to limit the inclusion of other risk management concepts or techniques that may be necessary for an effective program. Explanation of these elements follows.

(1) Leadership: This element consists of those activities that ensure clear leadership support and accountability for safety of operations. The objective of such activities is to develop and sustain a viable and positive "safety culture" within the assigned workforce and supporting elements; create the environment for the implementation of volunteer work area safety teams; provide visible and tangible

support for Center-level safety program activities; and create and maintain an effective and non-attribution feedback mechanism for raising safety concerns from the lowest employee to upper management.

(2) **Planning:** This element includes all activities necessary to establish and maintain the safety program's strategy, organizational structure, and communication between elements within the respective organization and mission responsibility. These include, but are not limited to, establishing clear lines of authority and responsibility for safety program execution; establishing a program to assess the health and, where deficient, remedy shortfalls of safety program activities; establishing annual safety goals and objectives consistent with Center-level objectives and goals; ensuring contractors conducting or supporting NASA operations are complying with the requirements of this and other pertinent safety directives and procedures; and establishing an activity-wide forum involving all organizations/offices that conduct or directly support operations to coordinate the administration of the safety program.

(3) **Risk Management:** This element includes activities directed at identifying and mitigating risks to the operation. Essential to this element is a systematic approach involving individuals who conduct the processes, and track and document the results and related information.

e. Safety program documentation will be used to implement the required elements and document the program's progress/results. Documentation may be scaled to complement the size, duration, and complexity of the operation.

f. Noncompliance with this policy or the resulting safety program requirements as well as the responsibility for a safety incident as a result of negligence, misuse, or intentional failure to adhere to established requirements, may result in lower employee performance ratings, lower contract performance ratings, and/or other management action as appropriate. Compliance/noncompliance with safety requirements/standards and performance of safety programs will be reflected in the annual performance reports of each employee.

2. APPLICABILITY

a. This Armstrong Policy Directive (DPD) is applicable to the Armstrong Flight Research Center and on-site support contractors, grant recipients, and other partners to the extent specified in their contracts or agreements.

b. Safety Programs are implemented for activities that are internally controlled by the Center or are operations sponsored or supported by the Center where:

(1) The Center or its contractor personnel and its equipment are at risk,

(2) The Center has an assigned safety responsibility (i.e., flight, ground, range, environmental, etc.), or

(3) The Center owns the asset and is not otherwise excluded by agreement or contract.

c. Safety programs will be implemented for the following: aviation activity, project activity and industrial activity. See Attachment A for definitions of these activities.

3. AUTHORITY

a. NPD 8700.1, NASA Policy for Safety and Mission Success

b. NPD 7900.4, NASA Aircraft Operations Management

c. NPR 7900.3, Aircraft Operations Management Manual

d. NPR 8715.3, NASA General Safety Program Requirements

e. NPR 8715.1, NASA Occupational Safety and Health Programs

4. APPLICABLE DOCUMENTS AND FORMS

- a. NPR 1800.1, NASA Occupational Health Program Procedures
- b. NPR 3451.1, NASA Awards and Recognition Program
- c. NPR 8621.1, NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping

5. RESPONSIBILITY

- a. Center Director and Associate Directors shall:

- (1) Ensure that safety responsibilities are known and understood at all levels of the organization, are routinely assessed, and that accountability is enforced.
- (2) Ensure an adequate level of safety is maintained for all activities consistent with this policy.
- (3) Approve annual goals for the effectiveness of safety programs.
- (4) Support the NASA Engineering and Safety Center (NESC) Chief Engineer in achieving established NESC goals and objectives.
- (5) Establish and maintain a safety culture where "Knock It Off" (KIO) calls to immediately cease operations are encouraged and can be made without any fear of retribution.

- b. Directors and Office Chiefs shall:

- (1) Ensure safety programs are established within their organizational and operational responsibilities at a level to effect clear control of the required elements.
- (2) Maintain and support knowledgeable management of associated activities; approve annual safety goals for their respective organizations/activities.
- (3) Establish interim safety goals to pursue the overall Center goal.
- (4) Include the pertinent requirements of this policy in contract, space act, or other agreements where practicable and the scope and applicability requirements are met.
- (5) Budget for the planned safety program activity.
- (6) Plan and direct safety down-day(s) activities on a rotational basis. Safety Day activities are intended to be conducted during periods when Center operations are not active to enhance participation and focus on safety.
- (7) Report program status at least annually at an appropriate management forum.

- c. Center Chief Engineer shall:

- (1) Establish and direct Center-level reviews of research project airworthiness as well as flight and ground safety. This includes all aviation safety requirements in NPD 7900.4, NPR 7900.3 and NPR 8715.3 as they apply to the unique activities associated with the projects modifications to aircraft and project flight and ground operations. Requirements dictating ASO participation shall be addressed in implementing directives.
- (2) Establish and direct the Center-level lessons learned program.
- (3) Manage the Center's inputs to the NASA Lesson Learned Information System (LLIS).

- d. Safety & Mission Assurance (S&MA) (Code S) Director shall:

- (1) Establish and perform independent oversight of safety programs.
- (2) Establish and maintain Center-wide safety processes for Mishap/Close Call investigation, reporting, and corrective action verification, Aviation Safety Management, Pressure Vessel Systems, Critical Lifts,

Environmental Management, Occupational Safety, Continuous Risk Management, Explosive Safety, Range Safety, and Quality Assurance.

(3) Establish and direct Center-level reviews for aviation and industrial activity.

(4) Facilitate periodic and ad hoc safety down-day activities.

(5) Facilitate the Executive Safety Council agenda and activities.

(6) Establish and promote a Safety Awards Program. See Attachment A, Definitions.

e. Flight Research Project Managers, Facility Managers, and Construction Project Managers are responsible for the safety of their assigned activity, and include the pertinent requirements of this policy in agreements with contract and external agencies where the scope and applicability requirements are met.

f. The Chief Medical Officer is responsible for implementing the Occupational Health program as defined in NPR 1800.1.

g. Supervisors shall:

(1) Notify their organizational safety representative and the Safety Office immediately of a close call or mishap and assume responsibility for the operational safety of their assigned activities.

(2) Upon receiving a Knock It OFF indication immediately focus their attention on the safety concern, and disseminate and reinforce the call by an orderly ceasing of activities until the safety concern can be properly addressed.

h. Employees shall:

(1) Plan and perform their daily work activities in a way that creates a safe and healthy work environment.

(2) Terminate operations immediately if conditions indicate that risk has exceeded the assessed level or an unsafe condition has manifested itself. If termination language has not been established for a specific operation, employees will use the phrase "Knock It Off!" as the verbal instruction to cease operations, as follows:

(a) Every employee, civil servant and contractor, are empowered to call "knock it off" if an unsafe condition or act is taking place and requires immediate attention.

(b) When the phrase "Knock It Off" is used, all activities shall be suspended until the safety concern can be mitigated and the unsafe conditions or actions are addressed to the satisfaction of the person calling "Knock It Off" and/or Center senior management.

(c) If "Knock It Off" is not heard or understood, the employee will repeat "Knock It Off" until it is heard and understood.

(d) Ignoring a KIO call will not be tolerated.

(e) Reprisal or harassment directed towards individuals that call a KIO will not be tolerated.

(f) Abate risk of further damage or injury.

(g) Call the Armstrong Safety Office (661) 276-2500 or Protective Services Post 1 (661) 276-3256 after working hours. At Bldg 703, Protective Services may be contacted. (661) 947-4803.

(h) Notify your supervisor as soon as possible once safe conditions have been established.

6. DELEGATION OF AUTHORITY

a. The Center Chief Engineer is delegated the air vehicle airworthiness and engineering technical authority for activity which is assessed to be at or below an everyday risk level.

b. The S&MA Director is delegated as the appointing official for close calls and Type C and D mishap investigations. This authorization may be delegated one additional level below the S&MA Director.

c. Delegation does not relieve the requirements for appointing and approval of an investigation and reporting as specified in NPR 8621.1.

7. MEASUREMENTS/VERIFICATION

a. Safety programs develop, collect, and report on the top-level metrics indicating the health of their respective program and progress toward the safety goals and objectives. Top-level metrics are presented at the Armstrong Center Management Council (ACMC) or the Executive Safety Council and indicate at a minimum:

- (1) Lost time injury rates.
- (2) Mishap and close call occurrences and rates.
- (3) Deviations from regulatory guidance impacting safety.
- (4) Inspection and audit results and trends of safety critical operations.
- (5) Status of safety-related corrective actions.

b. S&MA Directorate and the Chief Engineer will report quarterly on the health of their center-wide safety processes/activities and center-wide trending of the top-level metrics at the Center Management Council forum and/or Executive Safety Council.

8. CANCELLATION

DPD-8700.1-001C, Organizational & Individual Safety Responsibilities, dated February 1, 2014.

Center Director



5/13/2016

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ATTACHMENT A. DEFINITIONS

Activity Definitions: These definitions are provided to delineate safety responsibilities for major operations at AFRC.

Aviation Activity: Those nominal aircraft operations and maintenance activities that are not project unique involving flight and flight preparation activity to include, but not limited to, airworthiness of the vehicle and life support equipment; vehicle upgrade and modification; vehicle maintenance and release; launch and recovery activities; qualification and readiness of aircrew; qualification and readiness of maintenance personnel; taxi and flight operation; range operations; and ground tests.

Industrial Activity: Activity that establishes and maintains the general Armstrong infrastructure to including building construction and maintenance; utility construction and maintenance; and physical security infrastructure.

Project Activity: Activity that results from the modification and test of a project-unique end item or subsystem. It is those project-unique activities that are not part of the aircraft's nominal flight and maintenance operations defined by its technical orders or the Center's operational guidance. This includes, but is not limited to, fabrication and installation of test modifications; airworthiness of project unique equipment/modifications; ground test of project-unique equipment; ground training for flight test; flight test operations; range operations; and deployed operations.

Non-Programmatic Activity: Activity that supports non-programmatic functions, including but not limited to, on or off site education programs; student robotic events; NASA exhibits at public events; NASA gift shop and museum; and NASA cafeteria.

Safety Awards Program consists of:

Safety Star: Recognition of a significant event or task that reflected or promoted the awareness or essence of a healthy safety culture, awarded by supervisors to employees. The supervisor should forward recognition in the Armstrong Monday Morning Meeting (AM3) notes for the week. There is no formal process for submittal or approval. Safety Stars are available at the Code S Directorate Office.

Extra-Mile Award: Awarded for a significant contribution to the safety of Center operations that went beyond the normal duties expected of the employee/group in that setting. Nominations are forwarded to the Code S Directorate Office for review and approval. Nominations should be a simple paragraph in bullet form explaining the individual's/team's contributions and the effect that was achieved. The Code S Director will review and approve nominations. Disapproved nominations will be returned to the supervisor for possible resubmission with additional facts for reconsideration or recognition through the award of the Safety Star. All recipients will receive a certificate. Civil servant recipients may receive monetary compensation under the NASA award category of an "On the Spot" Award as outlined in NPR 3451.1, NASA Awards and Recognition Program. Code S will manage the logistics, civil servant funding and coordination of these awards. Code S will advertise award recipients at appropriate forums and on AFRC's internal web pages to encourage submission and promote a healthy safety culture. Support contractors are encouraged to award in kind to their employees who receive the award.

Annual Safety Awards: This recognition is for individuals and teams that have demonstrated exceptional safety contributions over the past calendar year. Awards will be given for four categories, Civil Servant, Contractor, Safety Representative and Team of the Year (includes a potential mix of civil servant and contractors). Safety Representative(s) will be an individual who is assigned as the safety representative for an office/branch or higher organization and for which safety responsibilities represent collateral duties not to exceed 50% of their assigned responsibilities. The appropriate Code Director will submit nominations and will be a one page nomination, in bullet format specifying the accomplishments and their impact to safety at the Center. Extra Mile Awards for the nomination year will be automatically entered into the annual award nomination process. Team nominations will include a separate page listing the individuals considered as part of the team. These nominations will be submitted directly to Code S

Director's Office by 31 Jan of the following calendar year. Winners will be announced and presented a certificate. Civil servants will be given a "Time-Off Award" as outlined in NPR 3451.1. Recognition will be made at the Center annual Safety Day. Support contractors are encouraged to award in kind to their employees who receive the award. Code S will manage the logistics of award preparation and coordination to include the development and maintenance of a permanent record of past winners to encourage recognition and promote a healthy safety culture. Submission and/or recognition here do not preclude or guarantee submission for other Agency safety awards.

-Safety Definitions: These definitions augment those found in NPR 8715.2 and provide logical segmentation of safety domains within the above activities and are graphically represented in the diagram below. This should further allow assignment of safety responsibility within internal activities and with external organizations.

Safety: Activity such as hazard analysis, mishap investigation and reporting, hazard awareness, occupational training, and inspections that is intended to prevent or reduce the risk of injury or damage to equipment.

Aviation Safety: Safety efforts targeted at hazards associated with aviation activity.

Flight Safety: Safety efforts targeted at air vehicle operations that occur between the initiation of the takeoff and completion of the landing.

Ground Safety: Safety efforts targeted at activity not included within the definition of flight safety.

Ground Test Safety: Ground safety efforts targeted at project-unique ground/operations.

Range Safety: Safety efforts targeted at flight operations that threaten personnel and property to ensure that the risk of casualty/damage from an out-of-control impact is at or below an acceptable threshold. There is a recognized conceptual overlap with "Flight Safety." It is generally recognized that aircrew are not included within the responsibility of range safety.

Facility Safety: Safety efforts targeted at industrial activity associated with the access to and operation of all facilities, including special support capabilities that are resident within these facilities.

Occupational Safety & Health: Safety efforts to achieve a safe and healthful working environment.

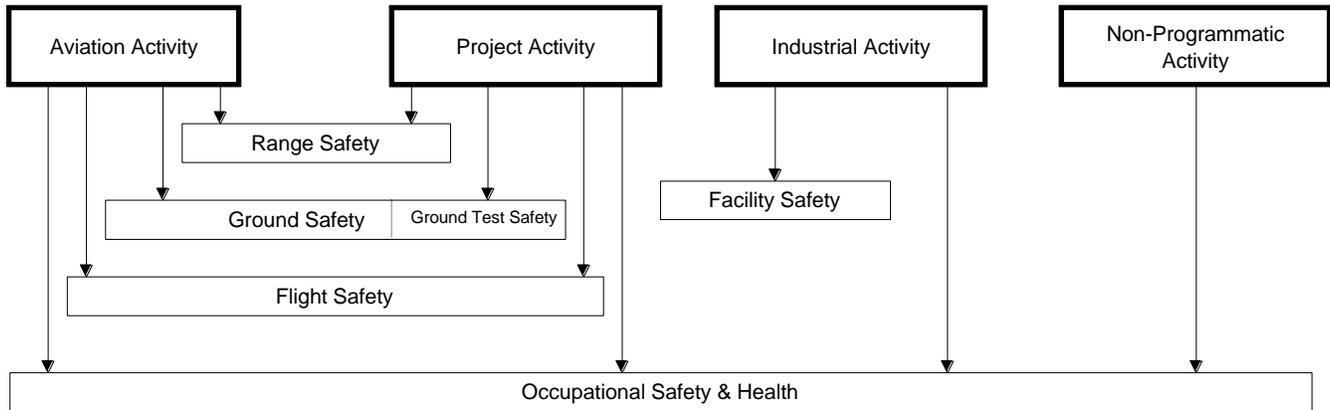
Attachment B. Acronyms

AFRC	Armstrong Flight Research Center
AM3	Armstrong Monday Morning Meeting
ACMC	Armstrong Center Management Council
AMSB	Armstrong Management Systems Board
ASP	Aviation Safety Program
CAP	Corrective Action Plan
CD	Center Director
CIP	Center Implementation Plan
DCP	Center-wide Procedure
DPD	Policy Directive
LLIS	Lessons Learned Information System
NASA	National Aeronautics and Space Administration
NESC	NASA Engineering and Safety Center
NPR	NASA Procedural Requirements
OPR	Office of Primary Responsibility
S&MA	Safety and Mission Assurance

Attachment C. References

- a. NPD 1800.2, NASA Occupational Health Program
- b. NPR 8553.1, NASA Environmental Management System

Attachment D



Activity and Safety Domain Relationships

Document History Log

Review Date: 08-25-15

This page is for informational purposes and does not have to be retained with the document.

Baseline, 08-19-05

Admin Change Baseline-1, 07-23-09

- Added serial number to document name. Name changed from DPD-8700.1 to DPD-8700.1-001. The content did not change.

Revision A, 08-31-10

- Extended expiration date by 6 months.

Revision B, 10-20-10

- Updates responsibilities of various organizations / managers based on changes to organizational structure and assignment of responsibilities by HQ NASA.
- Assigns investigation authority and responsibilities to Code O Director for close call investigations related to aviation activity.
- Refined metric areas
- Removed reference to cancelled NPD 1820.1
- Moved NPD 1800.2, NASA Occupational Health Program from applicable documents to reference documents since it is not referenced in the DPD
- Formatted to comply with Agency requirements

Admin Change Revision B-1, 02-17-11

Pages 1, 2, 3, 6:

- Added to 1. Policy, "NPR 8715.1, NASA Occupational Safety and Health Programs"
- Added to 3. Authority NPR 8715.1, NASA Occupational Safety and Health Programs
- Added to 5. Responsibility, e. "Environmental Management, Occupational Safety and Health"
- Added to Attachment C, References, NPR 1800.1, NASA Occupational Health Program Procedures and NPR 8553.1, NASA Environmental Management System

Revision C, 02-01-14

- Section 4 Applicable Documents and Section 5, paragraph h (2) referenced DPD-8700.1-002, Knock it Off Policy
- Section 5, paragraph a delegates responsibility from Center Director to Deputy and Associate Directors
- Section 5, paragraph b delegates responsibility from Deputy and Associate Directors to Directors and Office Chiefs
- Section 5, paragraph e (6) formally establishes a Safety Award Program documenting the existing "Safety Star" and "Extra Mile Award" and initiating an annual safety award for civil servants, contractors, and teams.
- Attachment A. Definitions A.6 (1) (2) (3) added description of Safety Award Programs

Revision D, 10-01-15

- Addresses finding SA-01c, Audit Shell 14-P-11 IAOP (internal), Issue number 635-61
- Clarified assignment of Agency-level aviation safety requirements for test activity to the Center Chief Engineer; Section 5, paragraph c (1)
- Incorporated DPD 8700.1-002; Section 5
- Added safety award category for Center Safety Representative; Attachment A