

DATE: August 29, 2016
TO: Center Directives Manager
Langley Research Center



FROM: Grant M. Watson
Director, SMAO

SUBJECT: Memo Authorizing Continued Use of Expired Langley
Directive

LAPD 1700.2 Safety Assignments and Responsibilities
Expiration date: August 31, 2016

REF A: NASA Requirement Waiver for NPR 1400.1 (3.5.2.6), NRW 1400-37

In accordance with reference A, I authorize the continued use of the expired subject directive.

LAPD 1700.2 Safety Assignments and Responsibilities

The subject directive has been reviewed prior to the expiration date and a summary of the required changes is:

The document is currently being updated to comply with NASA requirements which require major revisions.

The directive was also assessed for the risk of continued use after expiration versus the risk of not having the directive available after expiration. The results of that risk assessment are:

This LAPD is part of the Langley Management system and it sets forth organizational and functional safety assignments and specifies the authorities and responsibilities of each. There would be a high risk to the efficient and effective implementation of the LaRC Safety Program if this requirements document is not available in the LMS.

Justification for the delay is:

The Safety and Facility Assurance Branch is currently working to make updates to comply with changes in industry standards. This extra effort is taking longer to complete than initially expected. There would be a high risk to the efficient and effective implementation of the LaRC Safety Program if this requirements document is not available in the LMS.

The updated directive will be submitted for Center wide review on or before January 30, 2017.

Please refer any questions or concerns regarding the continued use of this directive to Grant M. Watson, Director

A handwritten signature in black ink, appearing to read "Grant M. Watson".

Grant M. Watson, Director, SMAO

8/30/16

(Date)

cc:

218/K. C. Suddreth

304/LJNorthern:ljn 08/29/16 (44569)



**LANGLEY
POLICY
DIRECTIVE**

LAPD 1700.2T

Effective Date: September 6, 2011

Expiration Date: August 31, 2016

Responsible Office: Safety and Mission Assurance Office

SUBJECT: Safety Assignments and Responsibilities

1. POLICY

This policy directive sets forth organizational and functional safety assignments and specifies the authorities and responsibilities of each.

2. APPLICABILITY

This 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

- a. NPD 1800.2, "NASA Occupational Health Program."
- b. NPD 8700.1, "NASA Policy for Safety and Mission Success."
- c. 29 CFR 1960, "Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters."

4. APPLICABLE DOCUMENTS

- a. NPR 1040.1, "NASA Continuity of Operations (COOP) Planning Procedural Requirements."
- b. LAPD 1040.1, "NASA Langley Duty Officer."
- c. LAPD 1700.1, "Safety Program."
- d. LPR 1046.1, "Emergency Management Plan (EMP)."
- e. LPR 1710.11, "Fire Protection Program."
- f. LPR 1710.40, "Langley Research Center Pressure Systems Handbook."
- g. LPR 1710.41, "Langley Research Center Standard for the Evaluation of Socket and Branch Connection Welds."

- h. LPR 1710.42, "Safety Program for the Maintenance of Ground-Based Pressure Vessels and Pressurized Systems."
- i. LPR 1740.3, "Facility Safety Head and Facility Coordinator Guide."
- j. LMS-CP-4760, "Reporting Injuries, Illnesses, Compensation Claims and Unsafe Working Conditions."
- k. Langley Form (LF) 1, "Appointment of Facility Coordinator(s)/Facility Safety Head(s) (FC/FSH)."
- l. LF 260, "Orientation Survey for Facility Safety Heads or Facility Coordinators."
- m. LF 261, "Documentation Review for Facility Safety Heads (FSH) and Facility Coordinators (FC)."
- n. NASA STD 8719.11, "Safety Standard for Fire Protection."

5. RESPONSIBILITY

a. Center Director is responsible for:

- (1) Providing a safe and healthful workplace environment for all Center employees (on-site or off-site)
- (2) Delegating the implementation of the safety program to the Director of Safety and Mission Assurance Office (SMAO)

b. SMAO Director is responsible for:

- (1) Serving as the LaRC focal point for safety resources planning.
- (2) Developing the Center safety program with the Center Director, OUMs and Safety Manager, excluding Aviation Safety.
- (3) Working with OUMs to provide the coordination and implementation of the safety program.
- (4) Providing the LaRC safety point of contact between NASA Headquarters, other NASA installations, other Government agencies, and industry. This includes safety-reporting requirements placed on the Center.

c. Organizational Unit Managers (OUM) are responsible for:

- (1) Providing a safe and healthful workplace environment for all their organizational employees (on-site or off-site), by ensuring all facilities occupied and operated are safe

for occupancy and are maintained properly, and that activities (e.g., research operations, etc.) are conducted in a safe manner.

(2) Accomplishing paragraph 5.c.1 through the direct managers/supervisors, FSH/FC, Safety Office and safety committees.

(3) Assigning a FSH/FC to their facilities in accordance with LPR 1740.3, "Facility Safety Head and Facility Coordinator Guide," and by submitting an LF 1, "Appointment of Facility Safety Head/Facility Coordinator (FSH/FC)."

d. All Managers/Supervisors are responsible for:

(1) Ensuring the safety of the employees who report to them directly and of the visitors to their areas of responsibility.

(2) Ensuring their direct employees obtain the appropriate safety training and the safety certifications required to perform their jobs.

(3) Ensuring all FSHs and FCs complete the training requirements as identified and instructed on LF 260, "Orientation Survey for New Facility Safety Head and Facility Coordinator," and LF 261, "Documentation Review for New Facility Safety Heads and Facility Coordinators."

(4) Ensuring their direct employees perform hazardous activities in accordance with all applicable LAPDs and LPRs.

(5) Reporting and investigating any injury/illness incurred by a direct employee in accordance with LMS-CP-4760, "Reporting Injuries, Illnesses, Compensation Claims and Unsafe Working Conditions."

(6) Resolving any safety concern within their areas of responsibility raised to them by direct employees, the FSH/FC, the SFAB, or any other Center employee or organization.

(7) Conducting a monthly safety inspection of areas occupied by their direct employees.

(8) Conducting safety meetings for their areas of responsibility. Office facilities require annual safety meetings, while industrial work areas (shops, laboratories, tunnels, etc.) require monthly safety meetings.

(9) Working with their facility's FSH and FC to ensure operations, maintenance and modifications are conducted in a safe manner and in accordance with applicable LAPDs and LPRs.

e. Principal, Alternate, and Organizational FSHs are responsible for:

- (1) Acting as agents of their OUMs/Managers/Supervisors and the SFAB to ensure the safety of their assigned facility/facilities by providing oversight of facility day-to-day operations, maintenance, and modifications.
- (2) Completing the training requirements as identified and instructed on LFs 260 and 261 within 6 months of appointment or within 6 months of this LAPDs effective date.
- (3) Ensuring all operations in their assigned facility/facilities are in compliance with all applicable LAPDs and LPRs.
- (4) Ensuring modifications of their assigned facility/facilities are performed in accordance with all applicable LAPDs and LPRs.
- (5) Understanding Principal, Alternate, and Organizational FSH responsibilities and performing duties as defined by LPR 1740.3, "Facility Safety Head and Facility Coordinator Guide."
- (6) Resolving facility-related safety concerns brought to their attention by a Manager/Supervisor, the Safety and Facility Assurance Branch (SFAB), or any other Center employee, facility or organization.
- (7) Bringing to the attention of the appropriate Manager/Supervisor any safety concern associated with an employee performing work in their assigned facility/facilities.
- (8) Keeping their OUMs and Managers/Supervisors abreast of safety issues that need the OUM's and Manager's/Supervisor's attention.

Note: These FSH roles may be held by a contractor employee upon approval from the SFAB and the employee's Contract Manager.

f. Principal, Alternate, and Organizational FCs are responsible for:

- (1) Assisting FSHs in the oversight of their assigned facilities to ensure the safety of day-to-day operations, maintenance, and modifications of their assigned facility/facilities.
- (2) Completing the training requirements as identified and instructed on LFs 260 and 261 within 6 months of appointment or within 6 months of this LAPDs effective date.
- (3) Ensuring proper maintenance and repairs are performed in their assigned facility/facilities.
- (4) Coordinating activities (e.g., modifications, repairs, utility interruptions, etc.) conducted in their assigned facility/facilities with other FCs and LaRC organizations or facilities to ensure safety throughout the Center.

- (5) Working with their respective FSH to ensure all operations in their assigned facility/facilities are in compliance with all applicable LAPDs and LPRs.
- (6) Working with their respective FSH to ensure all modifications of their assigned facility/facilities are performed in accordance with all applicable LAPDs and LPRs.
- (7) Understanding Principal, Alternate, and Organizational FC responsibilities and performing duties as defined LPR 1740.3, "Facility Safety Head and Facility Coordinator Guide."
- (8) Working with their respective FSH to resolve facility-related safety concerns brought to their attention by a Manager/Supervisor, the SFAB, or any other Center employee, facility or organization.
- (9) Bringing to the attention of their respective FSH any safety concern associated with an employee performing work in their assigned facility/facilities.
- (10) Keeping their OUMs, Managers/Supervisors abreast of safety issues that need the OUM's and Manager's/Supervisor's attention.

Note: These FC roles may be held by a contractor employee upon approval from the SFAB and the employee's Contract Manager.)

g. Branch Head, SFAB, is responsible for:

- (1) Functioning as the LaRC Safety Manager.
- (2) Functioning as the "Authority Having Jurisdiction" (AHJ) over Center areas of design, maintenance, repair, and operations that affect the safety of personnel or facilities.
- (3) Reviewing and approving requests submitted by Center personnel (civil servant and contractor), and subcontractors prior to performing work involving the addition, deletion, upgrade or modification of facilities, systems, or equipment.
- (4) Providing an SFAB point-of-contact for each facility, including office buildings, at LaRC.
- (5) Maintaining a list of SFAB point-of-contacts and Principal, Alternate, and Organizational FSHs and FCs.
- (6) Providing assistance to OUMs, Managers/Supervisors, FSHs, and FCs in their safety duties and responsibilities.
- (7) Participating in the formulation and implementation of LaRC occupational safety and health and facility assurance policies, including updating and maintaining LaRC safety-related LAPDs and LPRs.

- (8) Providing a member for each project review meeting and Executive Safety Council (ESC) safety committees. This member may be a civil servant or a contractor as circumstances warrant.
- (9) Providing programmatic oversight of LaRC's occupational safety and health program to ensure all Center activities are conducted in accordance with applicable LAPDs, LPRs, Agency, Occupational Safety and Health Administration (OSHA) and other applicable regulations and standards.
- (10) Providing occupational safety and health services for civil service employees, including a safety training/certification program.
- (11) Maintaining and reviewing safety records and metrics, as applicable.
- (12) Assisting Contracting Officers in determining the adequacy of contractors' safety programs, including off-site programs.
- (13) Serving as the Center's interface with OSHA in maintaining the Center as an OSHA Voluntary Protection Program (VPP) STAR site.
- (14) Providing programmatic oversight of LaRC's safety and facility assurance program as delineated in applicable LAPDs, LPRs, Agency, OSHA, and other applicable regulations and standards.
- (15) Ensuring configuration management services are provided for facilities designated as high-risk.
- (16) Ensuring system safety services are provided for designated high-risk facilities and other identified research equipment systems.
- (17) Providing programmatic oversight of LaRC's Pressure Systems Safety Program as delineated in LPR 1710.40, "Safety Regulations Covering Pressurized Systems;" LPR 1710.41, "Langley Research Center Standard for the Evaluation of Socket and Branch Connection Welds;" and LPR 1710.42, "Safety Program for Maintenance of Ground Based Pressure Vessels and Pressurized Systems."
- (18) Providing programmatic oversight of all aspects of the fire protection and engineering program in accordance with LPR 1710.11, "Fire Protection Program," and NASA STD 8719.11, "Safety Standard for Fire Protection."
- (19) Providing programmatic oversight of Inspection, Testing, and Maintenance (IT&M) activities involving fire protection, fire alarm and detection systems, emergency communication systems, Center evacuation alarm system, the Emergency Dispatch Office, and the Emergency Operations Center in accordance with LPR 1710.11 and NASA STD 8719.11.

(20) Providing emergency response activities, including, but not limited to, those involving fire suppression, emergency medical response, rescue, weapons of mass destruction, hazardous materials response and mitigation, and inclement weather.

(21) Providing an individual to serve as the LaRC Fire Chief.

(22) Serving as the Emergency Preparedness Officer (EPO) SFAB or his/her designee responsible for the implementation of LPR 1046.1, "NASA Langley Research Center Emergency Plan."

(23) Providing Center safety status to Senior Management.

(24) Appointing a Continuity of Operations Plan (COOP) Coordinator for the Center.

h. Office of Human Capital Management (OHCM) Director is responsible for:

(1) Maintaining LaRC's medical services and workers compensation programs.

(2) Providing an individual to serve as LaRC's Occupational Health Officer (OHO).

i. Center Operations Directorate (COD) is responsible for providing a NASA Langley Duty Officer.

j. NASA Langley Duty Officer is responsible for:

(1) Adhering to the duties as indicated in LAPD 1040.1, "NASA Langley Duty Officer."

(2) Serving as the official Center point-of-contact for securing systems after normal working hours, including evenings, weekends and holidays.

(3) Responding whenever a safety problem arises after normal duty hours.

(4) Immediately notifying the LaRC Safety Manager of any after hour safety problems.

k. Research Services Directorate is responsible for:

(1) Providing an individual to serve as LaRC's Aviation Safety Officer (ASO).

(2) Providing an individual to serve as LaRC's Range Safety Officer (RSO).

l. All LaRC employees (civil servant and contractor) are responsible for:

(1) Ensuring a safe and healthful workplace.

(2) Reporting and stopping any unsafe condition or work practice that presents imminent danger to personnel or equipment/property.

(3) Notifying a line Manager/Supervisor or the Safety Manager of any hazardous condition that may cause or result in employee injury/illness or that may cause equipment and/or property damage without fear of disciplinary action or any form of retaliation.

m. Critical Center Safety Positions

The following positions are Center unique or mandated by NASA or Industry standards/requirements. The positions and the proposed individuals to fill them will be submitted to the Center Director for approval through the Secretary of the Executive Safety Council by the individual's OUM (in accordance with appendix A).

(1) Authority Having Jurisdiction for Fire:

(a) The LaRC Fire Chief is responsible for:

(b) Ensuring compliance for matters involving compliance with safety-related portions of regulations in accordance with LPR 1700.1, "Safety Program," including current building codes, National Fire Protection Association regulations, Life Safety Codes, American Society of Mechanical Engineers elevator codes, NASA Pyrotechnics and Explosives documents, and other related NASA-specific criteria.

(c) Verifying the Center's fire protection and detection system design, installation, and maintenance; life safety; fire prevention; elevators; pyrotechnics, explosives, and propellants; fire suppression; incident command; water supply (as it pertains to fire suppression); emergency vehicle access; hazardous material storage; and areas of rescue assistance for the disabled.

(d) Seeking to secure compliance to the extent practicable with all nationally recognized codes and standards, state and local regulations, industry safe practices, the Occupational Safety and Health Administration, the Underwriters Laboratories, the Factory Mutual Research Corporation, the National Fire Protection Association, NASA specific regulations, as well as other applicable requirements.

(e) Rendering interpretations of the above mentioned regulations, making decisions regarding their applicability and equivalencies, and mediating disputes that arise when technically justified.

(2) Authority Having Jurisdiction for Electrical is responsible for:

(a) The Electrical Systems Standard Practice Engineer (SPE) is designated as the Center's Authority Having Jurisdiction for Electrical Systems.

(b) Ensuring compliance for matters involving compliance with safety-related portions of regulations in accordance with LPR 1700.1, "Safety Program," including National Electric Code, National Fire Protection Association (70E), as well as other related NASA-specific criteria.

(3) Standard Practice Engineers:

(a) The Standard Practice Engineers (SPEs) provide engineering consulting services for design, procurement, field, and service operations to ensure code compliance and standard practices; serve as a point of contact for technical questions, unique and complex applications, and facility breakdowns; provide guidance and options to accomplish work; transfer lessons learned; and promote good engineering practices. SPE areas and their function are as follows:

(b) The Pressure Systems SPE serves as the Center expert and final authority on the application of national consensus standards and LaRC requirements concerning ground-based pressure systems. He/she is responsible for reviewing all new designs and all plans for modifications or repairs to LaRC pressure systems.

(c) The Electrical Systems SPE serves as the Center authority for high-energy electrical systems, including the LaRC's power distribution system. He/she is responsible for reviewing project activities affecting new and existing electrical systems for compliance with applicable codes, NASA policies and procedural requirements, and standard practices. He/she interprets electrical safety requirements as needed for Center facilities and personnel to ensure compliance with LPR 1710.6, "Electrical Safety" and LPR 1710.10, "Langley Research Center Energy Control Program (Lockout/Tagout)".

(d) The Mechanical Systems SPE is the Center authority for high-energy mechanical systems. He/she is responsible for reviewing new designs, modifications, and repairs of high-energy mechanisms for compliance with national codes, NASA policies and procedural requirements, and standard practices.

(e) The Facility Automation Systems SPE is the Center authority for the review of facility automation systems and software. He/she is responsible for reviewing project activities affecting new and existing systems for compliance with national codes, NASA policy and procedural requirements, and standard practices.

(f) The Welding SPE is the Center authority for welding operations. In concert with the Welding SPE for Facilities, he/she is responsible for reviewing new designs, modifications, and repairs for compliance with national codes, NASA policies and procedural requirements, and standard practices applicable to

welding. The Welding SPE shall verify that acceptable quality welding is always performed at Langley Research Center. Duties include:

- i. Auditing all welding operations being performed for NASA-Langley Research Center.
- ii. Reviewing and approving the welding documentation requirements for contracts.
- iii. Approving procedure qualification records, weld procedure specifications and welder qualifications prior to the start of welding operations.
- iv. Analyzing weld joint configurations.
- v. Review of drawings containing welding requirements for correctness and applicability of the correct welding specifications.
- vi. Determining the materials for which welding procedures should be developed, and also establishing the priorities for weld procedure development.
- vii. Providing direction on improving welding practices, including consulting with various organizations on the purchase of any new welding equipment.

(g) The Welding SPE for Facilities is the Center authority for welding operations associated with facility systems. He/she is responsible for reviewing new designs, modifications, and repairs for compliance with national codes, NASA policies and procedural requirements, and standard practices applicable to welding. He/she performs the duties of the Welding SPE as they apply to facility systems. He/she also serves as an alternate to the Welding SPE.

(h) The Wind Tunnel Models SPE is the resident expert for the review of wind tunnel model systems design and analysis. He/she serves as the point of contact to assist facilities in interpreting the requirements for compliance with LPR 1710.15, "Wind Tunnel Model Systems Criteria."

(i) Pyrotechnic SPE is responsible for providing support to the Center Programs and Projects utilizing explosives, pyrotechnics and propulsion by:

- i. Reviewing hardware specifications.
- ii. Assisting in the design of explosive, pyrotechnic, and propulsion systems and procedures.

iii. Reviewing and approving procedures requiring explosive, pyrotechnics and/or propulsion engineering.

iv. Coordinating with the Explosive Safety Officer (ESO) to ensure procedures are in compliance with approved Center Pyrotechnics and Explosives Requirements.

v. Reviewing active Explosives Safety Permits annually with Potentially Hazardous Materials Committee (PHMC) Chair, ESO, AHJ, and FSH.

vi. Presenting to the PHMC an annual status report regarding projects and programs utilizing explosives, pyrotechnic, and propulsion systems.

(j) Space/Flight Systems Pressure Systems SPE serves as the Center expert and final authority on the application of Agency and Aerospace Industry consensus standards and LaRC requirements concerning flight-grade pressure systems. He/she is responsible for reviewing all new designs and all plans for modifications or repairs to LaRC space/aviation pressure systems.

(k) Structural/Civil SPE serves as the Center expert and final authority on the application of Agency and Industry consensus standards and LaRC requirements concerning structural systems. He/she is responsible for reviewing all new designs and all plans for modifications or repairs to LaRC facilities/structures systems.

(l) The Metrology and Calibration Program SPE is the Center authority on metrology, calibration, and measurement assurance related matters. He/she provides specialized expertise to NASA HQ, NASA Centers and other government agencies in designing and monitoring policies, strategies, and programs in metrology. He/she is responsible for advising/reviewing project and facility activities for compliance with metrology and calibration requirements of NPD 8730.1c, implementation of standard practices, and ensuring metrology related contracts are compliant with ANSI/NCSL Z540.1-1994 or ANSI/ISO/IEC 1725: 2000.

(4) System Managers:

(a) Lifting Device and Equipment Manager implements and coordinates the Center's lifting devices and equipment program in accordance with NASA STD 8719.9; "Standard for Lifting Devices and Equipment."

(b) Pressure Systems Manager implements and coordinates the Center's pressure systems recertification program in accordance with NPD 8710.5, "NASA Safety Policy for Pressure Vessels and Pressurized Systems" and NASA STD 8719.17, "NASA Requirements for Ground-Based Pressure Vessels and Pressurized Systems"

(c) Fall Protection Systems Manager implements and coordinates the Center's fall protection program in accordance with NPR 8715.3; "NASA General Safety Program Requirements."

(d) Radio Frequency (RF) Manager implements and coordinates the Center's Electromagnetic (EM) Spectrum Management program in accordance with NPD 2750.5; "NASA Electromagnetic (EM) Spectrum Management."

(5) Safety Officers

(a) Radiation Safety Officer is responsible for:

- i. Meeting the Nuclear Regulatory Commission requirements for a Radiation Safety Officer.
- ii. Serving as the Center's Ionizing and Non-Ionizing Radiation Safety Officer.
- iii. Implementing and coordinating the Center's Ionizing and Non-Ionizing safety program in accordance with Department of Labor, OSHA Title 29 Codes of Federal Regulations (CFR), Part 1910.1096 and NPR 8715.3; "NASA General Safety Program Requirements."

(b) Occupational Health Officer is responsible for:

- i. Providing initial first aid treatment/service/referral as medically required for all individuals injured on LaRC.
- ii. Providing job-related physical protocols and examinations for civil service employees.
- iii. Providing medical and injury/illness data to the SFAB as described in LMS-CP-4760.
- iv. Providing an individual to serve as a member of the Institutional Review Board.
- v. Providing occupational health status reports to Senior Management.

(c) Aviation Safety Officer (ASO) is responsible for:

- i. Providing technical guidance on safety aspects of flight programs.
- ii. Maintaining surveillance of aviation activities for conformance with prescribed directives, standards, and procedures, and proposing corrective action when required.

- iii. Reviewing aviation training and assessing qualifications to ensure safety of operations.
- iv. Serving as a member of the Airworthiness and Safety Review Board.
- v. Providing aviation safety status reports to Senior Management.
- vi. Implementing and coordinating the Center's aviation safety program in accordance with NPR 8715.3; "NASA General Safety Program Requirements"

(d) Explosive Safety Officer is responsible for implementing and coordinating the Center's explosive safety program in accordance with NPR 8715.3; "NASA General Safety Program Requirements" and LPR 1710.7; "Handling and Use of Explosives."

(e) Range Safety Officer is responsible for implementing and coordinating the Center's Range Flight Safety program in accordance with NPR 8715.5; "Range Flight Safety Program."

6. DELEGATION OF AUTHORITY

None

7. MEASUREMENT/VERIFICATION

None

8. CANCELLATION

LAPD 1700.2, dated June 9, 2006.

Original signed on file

Lesa B. Roe
Director

Distribution:

Approved for public release via the Langley Management System; distribution is unlimited.

Appendix A: Safety Functions and Directorate Assignments

Assignment	Naming Directorate
AHJ, Electrical Systems (This function will be delegated to the Electrical SPE)	Center Operations Directorate
AHJ, Fire, Elevators, Explosives	Safety & Mission Assurance Office
Occupational Health Officer (OHO)	Office Human Capital Management
SM, Fall Protection Manager	Safety & Mission Assurance Office
SM, Lifting Device & Equipment Manager	Center Operations Directorate
SM, Pressure System Manager	Center Operations Directorate
SM, RF Manager	Engineering Directorate
SO, Aviation Safety Officer	Research Services Directorate
SO, Explosive Safety Officer	Safety & Mission Assurance Office
SO, Radiation Safety Officer (Ionizing & Non-Ionizing)	Safety & Mission Assurance Office
SO, Range Safety Officer	Research Services Directorate
SPE, Electrical Systems	Center Operations Directorate
SPE, Facility Automation Systems	Center Operations Directorate
SPE, Mechanical Systems	Center Operations Directorate
SPE, Metrology and Calibration Program	Ground Facilities and Testing Directorate
SPE, Pressure Systems	Center Operations Directorate
SPE, Project Pyrotechnics & Propulsion	Engineering Directorate
SPE, Space/Flight Pressure Systems	Engineering Directorate
SPE, Structural/Civil	Center Operations Directorate
SPE, Welding	Safety & Mission Assurance Office
SPE, Welding for Facilities	Center Operations Directorate
SPE, Wind Tunnel Models	Ground Facilities and Testing Directorate