

Traceability of SMARTS Requirements from Document: various for Project: Constellation (CxP)

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NASA STD 8709.2	5.01.1	34148	NASA SMA roles and responsibilities for ELV launch services during Procurement: Participate in the NASA Launch services acquisition strategy development to assure proper S&MA considerations. (Requirement 34148) Primary Benefit: Proactive, early S&MA involvement allows for assessment of NASA insight opportunities or deficiencies associated with a procurement strategy while remedial action is still simple and inexpensive.	S	N	N	Mgmt
NASA STD 8709.2	5.01.2	34149	NASA SMA roles and responsibilities for ELV launch services during Procurement: Participate in the Source Evaluation Board (SEB) and Source Selection Board activities to verify that adequate SR&QA requirements (guidelines) are incorporated into the Request for Proposal (RFP) Statement of Work (SOW). (FAR clause requirements, ISO-9000 requirements, Preaward/Postaward surveys, etc.). (Requirement 34149)	S	N	N	Mgmt
NASA STD 8709.2	5.01.2.f	34155	NASA SMA roles and responsibilities for ELV launch services during Procurement: Evaluate the adequacy of the proposed S&MA (Product Assurance) Plan i.) Verify that lessons learned and best practices are incorporated ii.) Review / verify appropriate data item requirements "flow down" to the suppliers iii.) Review vender (previous) performance. (Requirement 34155) Primary Benefit: Assures that appropriate Safety, Reliability and Quality Assurance requirements and guidelines are incorporated into the RFP and SOW. Assures that recent S&MA lessons learned are considered and incorporated.	S	N	N	Mgmt
NASA STD 8709.2	5.01.3	34156	NASA SMA roles and responsibilities for ELV launch services during Procurement: Evaluate the adequacy of the Proposed Risk Management Plan. (Requirement 34156) Primary Benefit: Identifies deficiencies and shortcomings associated with proposed risk management plan while corrective action is still simple and inexpensive.	S	N	N	Mgmt
NASA STD 8709.2	5.01.4	34157	NASA SMA roles and responsibilities for ELV launch services during Procurement: Assess adequacy of the proposed System Effectiveness Program Plan (or equivalent). (Requirement 34157) Primary Benefit: Identifies deficiencies and shortcomings associated with proposed System Effectiveness Program Plan while corrective action is still simple and inexpensive. A thorough Systems Effectiveness Program is a good indicator of a systematic, logical, Systems Engineering process. Systems effectiveness metrics can provide some of the S&MA metrics for performance based contracts.	S	N	N	Mgmt
NASA STD 8709.2	5.02.1	34159	NASA SMA roles and responsibilities for ELV launch services during Design: Participate in design review activities (Preliminary Design Review (PDR), Critical Design Review (CDR), Design Certification Reviews (DCR)) for new Launch Vehicle Designs and for redesign of major components and systems. Note: S&MA organization chairs (or cochairs) the Design Certification Reviews. (Requirement 34159) Primary Benefit: Insight and evaluation of the contractors application of S&MA methodologies / processes during the design phase.	S	N	N	Mgmt
NASA STD 8709.2	5.02.2	34160	NASA SMA roles and responsibilities for ELV launch services during Design: Participate in design review activities for NASA mission unique vehicle modifications. (Requirement 34160) Primary Benefit: Insight of the contractor's application of S&MA methodologies / processes during the design phase.	S	N	N	Mgmt
NASA STD 8709.2	5.02.3	34161	NASA SMA roles and responsibilities for ELV launch services during Design: Participate in qualification reviews. (Requirement 34161) Primary Benefit: S&MA assessment of qualification related issues and judgments.	S	N	N	Mgmt
NASA STD 8709.2	5.02.4	34162	NASA SMA roles and responsibilities for ELV launch services during Design: Participate in Launch Vehicle prime contractor System Effectiveness Reviews (critical sub-contractor System Effectiveness Reviews). (Requirement 34162) Primary Benefit: Provides metrics for demonstrating stable, capable processes. Insight of contractor process weaknesses, long term corrective actions, and, their effectiveness. Provides opportunity for assessment of performance based metrics.	S	N	N	Mgmt
NASA STD 8709.2	5.02.5	34163	NASA SMA roles and responsibilities for ELV launch services during Design: Participate in change boards / Material Review Board (MRB) / Problem Review Board (PRB). As a minimum, review all class 1 changes, deviations, waivers and verify appropriate categorization of lower class changes. (Requirement 34163) Primary Benefit: Independent S&MA assessment of critical offnominal situations that could adversely affect mission success.	S	N	N	Mgmt
NASA STD 8709.2	5.03.01	34165	NASA SMA roles and responsibilities for ELV launch services during Production: (Resident) In plant Quality Assurance surveillance of manufacturing, fabrication, vehicle systems test and checkout, PR investigation and corrective action adequacy. (Requirement 34165) Resident staff plus support group for technical analysis of non-conforming material related activities (MRB, PRB, etc.) Primary Benefit: NASA surveillance and assessment (confidence sampling, verification and validation) of contractor production activities.	S	N	N	Mgmt
NASA STD 8709.2	5.03.02	34166	NASA SMA roles and responsibilities for ELV launch services during Production: Participate / support of the Preship Reviews /Pre-Vehicle on Stand Reviews (Pre-VOS). (Requirement 34166) Primary Benefit: S&MA assessment of vehicle readiness for shipment and assembly. S&MA assessment of significant production related issues and corrective actions.	S	N	N	Mgmt
NASA STD 8709.2	5.03.03	34167	NASA SMA roles and responsibilities for ELV launch services during Production: Participate / support of the Hardware Acceptance Reviews. (Requirement 34167) Primary Benefit: S&MA assessment of significant hardware issues and corrective actions.	S	N	N	Mgmt
NASA STD 8709.2	5.03.04	34168	NASA SMA roles and responsibilities for ELV launch services during Production: Participate / support of the contractor programmatic System Effectiveness Reviews (Fleetwide / Generic). (Requirement 34168) Primary Benefit: Provides metrics for demonstrating stable, capable processes. Insight of contractor process weaknesses, long term corrective actions, and, their effectiveness. Provides opportunity for assessment of performance based metrics.	S	N	N	Mgmt
NASA STD 8709.2	5.03.05	34169	NASA SMA roles and responsibilities for ELV launch services during Production: Participate in change boards / Material Review Board (MRB) / Problem Review Board (PRB). (Requirement 34169) As a minimum, review all class 1 changes, deviations, waivers and verify appropriate categorization of lower class changes Primary Benefit: Independent S&MA assessment of critical offnominal situations that could adversely affect mission success.	S	N	N	Mgmt

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NASA STD 8709.2	5.03.06	34170	NASA SMA roles and responsibilities for ELV launch services during Production: Assess problem investigation and corrective action identification and implementation activity adequacy. Review Engineering Review Board (ERB) activities and impacts to test modifications/deletions. (Mission Specific). (Requirement 34170) Primary Benefit: Independent S&MA assessment of critical offnominal situations that could adversely affect mission success. Note: Mission specific assessments and evaluations also serve as input to lessons learned, recurrence control, and continuous improvement initiatives for other current and upcoming missions and programs.	S	N	N	Mgmt
NASA STD 8709.2	5.03.07	34171	NASA SMA roles and responsibilities for ELV launch services during Production: Perform SR&QA compliance and spot audits. (Requirement 34171) Primary Benefit: Assurance that the contractor is using the processes they defined in their Assurance Plans. Verifies contract compliance.	S	N	N	Mgmt
NASA STD 8709.2	5.03.08	34172	NASA SMA roles and responsibilities for ELV launch services during Production: Participate in Ground Operations Working Group (GOWG) and Technical Interchange Meetings (TIMS). (Requirement 34172) Primary Benefit: Early identification and resolution of potential issues involving integration and operations. Provides independent S&MA assessment of critical offnominal situations that could adversely affect mission success.	S	N	N	Mgmt
NASA STD 8709.2	5.03.09	34173	NASA SMA roles and responsibilities for ELV launch services during Production: Perform NASA independent review of problems that occur on other vehicle flows to assess potential generic impacts. Maintain trend analysis data base management, and access to contractors non-conforming/corrective action database. (Requirement 34173) (continuous on-going function) Primary Benefit: Assurance that issues and concerns that occur on other vehicles and missions are prevented from affecting any NASA missions. Assurance that generic causes are identified and corrected. Assurance that adverse trends are recognized and remedial actions are identified and implemented.	S	N	N	Mgmt
NASA STD 8709.2	5.03.10	34174	NASA SMA roles and responsibilities for ELV launch services during Production: Develop verification checklists/procedures for S&MA execution during vehicle integration activities. Identify problems and areas of concern for special action items to be verified. (Requirement 34174) Primary Benefit: Assurance that known critical verifications and special issues are appropriately identified and dispositioned.	S	N	N	Mgmt
NASA STD 8709.2	5.04.1	34176	NASA SMA roles and responsibilities for ELV launch services during Launch Vehicle Integration: Participate in process evaluations and validations. (Requirement 34176) Primary Benefit: NASA surveillance and assessment (confidence sampling) of contractor integration, test and checkout activities. Independent S&MA assessment of critical offnominal situations that could adversely affect mission success. Provides NASA independent assessment of integration validation process. Independent verification of critical hardware serial numbers. (Used to assure pedigree and build history.)	S	N	N	Mgmt
NASA STD 8709.2	5.04.1.a	34177	NASA SMA roles and responsibilities for ELV launch services during Launch Vehicle Integration: Participate in process evaluations and validations: Perform Quality Assurance surveillance of Integrated Systems Test & Checkout. (Requirement 34177)	S	N	N	Mgmt
NASA STD 8709.2	5.04.1.b	34178	NASA SMA roles and responsibilities for ELV launch services during Launch Vehicle Integration: Participate in process evaluations and validations: Problem Review Boards. (Requirement 34178)	S	N	N	Mgmt
NASA STD 8709.2	5.04.1.c	34179	NASA SMA roles and responsibilities for ELV launch services during Launch Vehicle Integration: Participate in process evaluations and validations: Perform Insight/Oversight of problem trending Perform Insight/Oversight of special issue testing. (Requirement 34179)	S	N	N	Mgmt
NASA STD 8709.2	5.04.1.d(1)	34180	NASA SMA roles and responsibilities for ELV launch services during Launch Vehicle Integration: Participate in process evaluations and validations: Participate in change boards / MRB / PRB. (Requirement 34180)	S	N	N	Mgmt
NASA STD 8709.2	5.04.1.d(2)	34181	NASA SMA roles and responsibilities for ELV launch services during Launch Vehicle Integration: Participate in process evaluations and validations: As a minimum, review all class 1 changes, deviations, waivers and verify appropriate categorization of lower class changes Perform S&MA review & assessment of MRB actions. (Requirement 34181)	S	N	N	Mgmt
NASA STD 8709.2	5.04.2	34184	NASA SMA roles and responsibilities for ELV launch services during Launch Vehicle Integration: Perform SR&QA Compliance and spot audits. (Requirement 34184) Primary Benefit: Assurance that the contractor is performing in accordance with the processes defined in their Assurance Plans	S	N	N	Mgmt
NASA STD 8709.2	5.04.3	34185	NASA SMA roles and responsibilities for ELV launch services during Launch Vehicle Integration: Maintain a status of open problems and failed hardware, provide status at the Mission Readiness Review (MRR), Launch Site Readiness Review (LSRR), Launch Readiness Review (LRR), Flight Readiness Review (FRR) (Requirement 34185) Primary Benefit: Assurance that known critical issues and problems are appropriately dispositioned prior to each critical milestone.	S	N	N	Mgmt
NASA STD 8709.2	5.05.1	34187	NASA SMA roles and responsibilities for ELV launch services during Spacecraft Integration to Launch Vehicle: Participate in integrated Final Walkdowns (Leaks, loose hardware, workmanship, etc.). (Requirement 34187) Primary Benefit: Independent S&MA evaluation	S	N	N	Mgmt
NASA STD 8709.2	5.05.2	34188	NASA SMA roles and responsibilities for ELV launch services during Spacecraft Integration to Launch Vehicle: Perform special issue SR&QA Compliance and spot audits. (Requirement 34188) Primary Benefit: Assurance that contractor is using the appropriate discipline and processes in resolving unique integration issues.	S	N	N	Mgmt
NASA STD 8709.2	5.05.3	34189	NASA SMA roles and responsibilities for ELV launch services during Spacecraft Integration to Launch Vehicle: Maintain a status of open problems and failed hardware, provide status at the Mission Readiness Review (MRR) Launch Readiness Review (LRR), Flight Readiness Review (FRR) (Requirement 34189) Primary Benefit: Assurance that known critical issues and problems are appropriately dispositioned prior to each critical milestone.	S	N	N	Mgmt
NASA STD 8709.2	5.05.4	34190	NASA SMA roles and responsibilities for ELV launch services during Spacecraft Integration to Launch Vehicle: Perform surveillance of Spacecraft to Launch Vehicle integration process. (Requirement 34190) Primary Benefit: NASA surveillance and assessment (confidence sampling) of S/C to L/V integration, test and checkout activities.	S	N	N	Mgmt
NASA STD 8709.2	5.05.5	34191	NASA SMA roles and responsibilities for ELV launch services during Spacecraft Integration to Launch Vehicle: Participate in change boards / Material Review Boards (MRB) / Problem Review Boards (PRB) As a minimum, review all class 1 changes, deviations, waivers and verify appropriate categorization of lower class changes. (Requirement 34191) Primary Benefit: Independent S&MA assessment of critical offnominal situations that could adversely affect mission success.	S	N	N	Mgmt

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NASA STD 8709.2	5.06.1	34193	NASA SMA roles and responsibilities for ELV launch services during Systems Test and SIM Flight: Perform assessments of Operations and procedure discipline a. Participate in SIM flight activities b. Participate in Operations Dress Rehearsal c. Participate in Launch Crew Certification Activities. (Requirement 34193) Primary Benefit: Independent S&MA evaluation of operations and procedures discipline.	S	N	N	Mgmt
NASA STD 8709.2	5.06.2	34194	NASA SMA roles and responsibilities for ELV launch services during Systems Test and SIM Flight: Participate in change boards / Material Review Boards (MRB) / Problem Review Boards (PRB) As a minimum, review all class 1 changes, deviations, waivers and verify appropriate categorization of lower class changes. (Requirement 34194) Primary Benefit: Independent S&MA assessment of critical offnominal situations that could adversely affect mission success.	S	N	N	Mgmt
NASA STD 8709.2	5.07.1	34196	NASA SMA roles and responsibilities for ELV launch services during PreLaunch Activities: Maintain a status of open problems and failed hardware, provide status at the Mission Readiness Review (MRR), Flight Readiness Review (FRR). (Requirement 34196) Primary Benefit: Assurance that known critical issues and problems are appropriately dispositioned prior to each critical milestone.	S	N	N	Mgmt
NASA STD 8709.2	5.07.2	34197	NASA SMA roles and responsibilities for ELV launch services during PreLaunch Activities: Compile Quality Assessment Report and provide PreLaunch Assessments. (Requirement 34197) Primary Benefit: Report of S&MA completion of assessment activities that result in concurrence that the Vehicle is ready for launch	S	N	N	Mgmt
NASA STD 8709.2	5.07.3	34198	NASA SMA roles and responsibilities for ELV launch services during PreLaunch Activities: S&MA COFR Signature. (Requirement 34198) Primary Benefit: NASA S&MA approval to launch predicated on the successful accomplishment of the NASA S&MA roles and responsibilities. (assessments, evaluations and verifications)	S	N	N	Mgmt
NASA STD 8709.2	5.07.4	34199	NASA SMA roles and responsibilities for ELV launch services during PreLaunch Activities: S&MA GO/NO-GO input at the Mission Readiness Review (MRR), Launch Readiness Review (LRR), Flight Readiness Review (FRR). (Requirement 34199) Primary Benefit: NASA S&MA certification of the successful completion of activities necessary to fulfill the specific readiness review criteria.	S	N	N	Mgmt
NASA STD 8709.2	5.07.5	34200	NASA SMA roles and responsibilities for ELV launch services during PreLaunch Activities: Coordinate the Launch Vehicle Contingency Plan a. Coordinate the appropriate data impoundment Roles and Responsibilities b. Coordinate the S&MA Membership on the Contingency Investigation Team. (Requirement 34200) Primary Benefit: Pre-Mishap (Contingency) planning and coordination to assure that, in the event of a mishap, the critical data is preserved and investigation can begin immediately.	S	N	N	Mgmt
NASA STD 8709.2	5.08.1	34202	NASA SMA roles and responsibilities for ELV launch services during Launch Operations: S&MA GO/NO-GO input during the launch countdown. (Requirement 34202) Primary Benefit: NASA S&MA concurrence that all identified launch countdown issues have been adequately evaluated and resolved, there are no known unacceptable violations of launch commit criteria, and the launch countdown procedure discipline is acceptable.	S	N	N	Mgmt
NASA STD 8709.2	5.08.2	34203	NASA SMA roles and responsibilities for ELV launch services during Launch Operations: Participate in problem evaluation and make S&MA recommendation to continue launch count. (Requirement 34203) Primary Benefit: Assurance that all launch countdown anomalies and their resolutions are evaluated from an S&MA perspective.	S	N	N	Mgmt
NASA STD 8709.2	5.08.3	34204	NASA SMA roles and responsibilities for ELV launch services during Launch Operations: Verify PreLaunch Close-outs complete / Vehicle Walkdowns / Redtag removal and verification. (Streamer removal, Pegboard verification, close-out photos, etc.) (Requirement 34204) Primary Benefit: Independent verification that all critical PreLaunch close-outs are complete.	S	N	N	Mgmt
NASA STD 8709.2	5.09.1	34206	NASA SMA roles and responsibilities for ELV launch services during Post Launch Activities: Perform Pad Walkdowns and damage assessments. (Requirement 34206) Primary Benefit: S&MA assessment of post launch damage to launch facilities. Normally only performed on NASA launch facilities.	S	N	N	Mgmt
NASA STD 8709.2	5.09.2	34207	NASA SMA roles and responsibilities for ELV launch services during Post Launch Activities: Perform Post flight Anomaly corrective action implementation monitoring. (Requirement 34207) Primary Benefit: Assurance that anomalies are investigated, understood and that adequate corrective actions and recurrence controls are implemented.	S	N	N	Mgmt
NASA STD 8709.2	5.09.3	34208	NASA SMA roles and responsibilities for ELV launch services during Post Launch Activities: Participate in Anomaly investigation and close-out review. (Requirement 34208) Primary Benefit: Provides S&MA perspective to these investigations and provides potential lessons learned inputs for recurrence control, and continuous improvement initiatives for other, current and upcoming, missions and programs. This type of activity provides the foundation for closed loop continuous improvement.	S	N	N	Mgmt
NASA STD 8709.2	5.09.4	34209	NASA SMA roles and responsibilities for ELV launch services during Post Launch Activities: Participate in final review and assessment of problems/issues and potential impact on future missions. (Requirement 34209) Primary Benefit: Provides S&MA perspective to these reviews and provides potential lessons learned inputs for recurrence control, and continuous improvement initiatives for other, current and upcoming, missions and programs. (i.e. improved S&MA metrics for incorporation into the next procurement cycle.) This type of activity provides the foundation for closed loop continuous improvement.	S	N	N	Mgmt
NASA STD 8709.2	5.09.5	34210	NASA SMA roles and responsibilities for ELV launch services during Post Launch Activities: Document appropriate S&MA related Lessons Learned and implement lessons for future missions. (Requirement 34210) Primary Benefit: Lessons learned implementation/ recurrence control.	S	N	N	Mgmt
NASA STD 8709.2	5.10.1	34212	NASA SMA roles and responsibilities for ELV launch services during Mishap Investigation: Impound data/monitor impound activities if required. (Requirement 34212) Primary Benefit: Assures that all critical data is preserved and available for the investigation activities.	S	N	N	Mgmt
NASA STD 8709.2	5.10.2	34213	NASA SMA roles and responsibilities for ELV launch services during Mishap Investigation: Participate as a member of mishap board. (Requirement 34213) Primary Benefit: Provides S&MA perspective on mishap boards and provides potential lessons learned inputs for recurrence control, and continuous improvement initiatives for other, current and upcoming, missions and programs. (i.e. improved subcontractor supplier control guidelines for incorporation into the next procurement cycle.) This type of activity provides the foundation for closed loop continuous improvement.	S	N	N	Mgmt
NASA STD 8709.2	5.10.3	34214	NASA SMA roles and responsibilities for ELV launch services during Mishap Investigation: Participate in mishap investigation activities (NASA is not a member of board) (Requirement 34214) Primary Benefit: Lessons learned implementation/ recurrence control	S	N	N	Mgmt

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NASA STD 8719.13B	5.01.1(01)	33407	Center Safety and Mission Assurance (SMA) organizations have the responsibility to develop the necessary infrastructure to support the activities required by this Standard, to provide software safety experts to evaluate individual project/program/facility software safety programs, and to assure that the requirements of this Standard are implemented. They create the atmosphere within which individual programs, projects, or facilities operate. (Requirement 33407)	S	N	N	SWA
NASA STD 8719.13B	5.01.1(02)	33408	Center SMA organizations are the focal point for assuring a healthy software safety program. Whether the bulk of the analyses is done in-house by the program/project/facility or by the contracting organization, the ultimate responsibility for seeing that an adequate safety program is in place, is the Center SMA organization. They have the responsibility to tell the project if their system is unsafe. They are responsible for representing any problems or concerns to NASA's Office of Safety and Mission Assurance (OSMA) prior to flight or operations. How each Center organizes to fulfill this responsibility is not intended to be implied in this document, only that the additional responsibilities to ensure software safety is adequately addressed. (Requirement 33408)	S	N	N	SWA
NASA STD 8719.13B	5.01.1(03)	33409	It is assumed that the Center SMA organization will perform the following actions. The requirements for Center SMA organizations are imposed through NPD and NPR documents. They are included here as a reminder of the expected activities and their interaction with programs, projects, and facilities. (Requirement 33409)	S	N	N	SWA
NASA STD 8719.13B	5.01.1(04)	33410	It is assumed that the Center SMA organization will perform the following actions: Establish and maintain a Center software safety program as part of either their systems safety or software assurance program. (Requirement 33410)	S	N	N	SWA
NASA STD 8719.13B	5.01.1(05)	33411	It is assumed that the Center SMA organization will perform the following actions: Provide adequate resources, including: personnel trained in software safety, tools, and budget, for the software safety program. (Requirement 33411)	S	N	N	SWA
NASA STD 8719.13B	5.01.1(06)	33412	It is assumed that the Center SMA organization will perform the following actions: Assure that software safety is an integral part of the overall system safety and software development/acquisition efforts at their Center. (Requirement 33412)	S	N	N	SWA
NASA STD 8719.13B	5.01.1(07)	33413	It is assumed that the Center SMA organization will perform the following actions: Establish and maintain software safety processes, procedures, guidelines and tools which incorporate the requirements of this Standard (Requirement 33413)	S	N	N	SWA
NASA STD 8719.13B	5.01.1(08)	33414	It is assumed that the Center SMA organization will perform the following actions: Ensure that all programs, projects, and facilities at their Center are periodically evaluated for the presence of safety-critical software. Maintain a record of these evaluations and the results at each Center which are made available to the NASA OSMA upon request. (Requirement 33414)	S	N	N	SWA
NASA STD 8719.13B	5.01.1(09)	33415	It is assumed that the Center SMA organization will perform the following actions: Gather and maintain a list of all safety-critical software within the Center. The list of safety-critical systems with software are sent to NASA OSMA upon request to help focus Code Q review of programs, projects, and facilities. (Requirement 33415)	S	N	N	SWA
NASA STD 8719.13B	5.01.1(10)	33416	It is assumed that the Center SMA organization will perform the following actions: Provide a means to resolve or elevate conflicts or concerns related to software safety requirements or processes. (Requirement 33416)	S	N	N	SWA
NASA STD 8719.13B	5.01.1(11)	33417	It is assumed that the Center SMA organization will perform the following actions: Establish a process for the certification of safety-critical software [reference section 5.14]. (Requirement 33417)	S	N	N	SWA
NASA STD 8719.13B	5.01.1(12)	33418	It is assumed that the Center SMA organization will perform the following actions: Assure that project/program/facility software is evaluated for its role in safety and assure proper inclusion of safety-critical processes and products needed to acquire, develop, verify, certify and maintain safety-critical software. Starting with systems concepts and acquisition and continuing through retirement, the use of software experts will assure the proper balance of software safety planning and execution. (Requirement 33418)	S	N	N	SWA
NASA STD 8719.13B	5.01.1(13)	33419	It is assumed that the Center SMA organization will perform the following actions: Ensure software safety coverage is provided and active through the entire program, project, or facility life. (Requirement 33419)	S	N	N	SWA
NASA STD 8719.13B	5.01.1(14)	33420	It is assumed that the Center SMA organization will perform the following actions: Assure software safety personnel have evaluated, analyzed and provided input to program, project, and/or facility management on the selection of off-the-shelf or previously created (reused) software for incorporation into safety-critical systems. (Requirement 33420)	S	N	N	SWA
NASA STD 8719.13B	5.01.1(15)	33421	It is assumed that the Center SMA organization will perform the following actions: Assure that if IV&V is required on a program, project, or facility, project risk and software criticality determinations are shared between the safety personnel and IV&V. (Requirement 33421)	S	N	N	SWA
NASA STD 8719.13B	5.01.1(16)	33422	It is assumed that the Center SMA organization will perform the following actions: Provide monitoring and oversight of contractor software safety activities through the entire program, project, or facility life. (Requirement 33422)	S	N	N	SWA
NASA STD 8719.13B	5.01.2	33423	Program/Project/Facility Management Responsibilities. Program, project, or facility managers are responsible for making sure that their system is evaluated for the presence of safety-critical software. They are responsible for implementing a software safety program, providing adequate resources for the program and bear the risks if software safety activities are inadequate. Software safety should be considered as a part of the continuous risk management process adopted by the programs, projects or facilities. (Requirement 33423)	S	N	N	SWA
NASA STD 8719.13B	5.01.4.2	33452	The project/program/facility person responsible for Software Configuration Management shall assure that software safety elements are properly controlled. This includes performing the software configuration management functions of configuration control, change control, status accounting, and change verification of safety-critical software requirements and software elements. (Requirement 33452)	S	N	N	SWA
NASA STD 8719.13B	5.13(1)	33539	The requirements for software safety apply to software developed or acquired by NASA. When safety-critical software is acquired by a program/project/facility, this Standard must be imposed on those who perform the software development. Safety-critical software may be acquired from contractors, subcontractors, non-NASA government agencies, universities, and other NASA Centers. (Requirement 33539)	S	N	N	SWA

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NASA STD 8719.13B	5.13(2)	33540	This Standard is levied on all parties who develop safety-critical software, including NASA or other government agencies, contractors, and subcontractors. If the software is being acquired without specific software safety clauses or this Standard invoked in the contract or agreement (e.g., MOA/MOU), then the contract or agreement should be either renegotiated for inclusion of these software safety requirements or the NASA program/project/facility must implement and adhere to this Standard. (Requirement 33540)	S	N	N	SWA
NASA STD 8719.13B	5.14.2	33548	Center Safety and Mission Assurance software safety personnel shall participate in the certification process. (Requirement 33548)	S	N	N	SWA
NASA STD 8719.13B	5.15.3	33562	The Center SMA organization shall maintain a copy of all variances to safety requirements contained in this Standard, and provide these variances to the NASA Headquarters Office of Safety and Mission Assurance upon request. (Requirement 33562)	S	N	N	Mgmt
NASA STD 8719.13B	7(4)	33654	Note: When a safety-critical error is found during operations or if something goes awry, it is recommended that a root cause analysis be performed on how this error occurred. (Requirement 33654) This should include an examination of the operational environment and its intended usage.	S	N	N	SWA
NASA STD 8719.14	4.1.c	56346	Requirements: Objectives of Orbital Debris Assessments and Planning: The NASA ODPO is staffed and funded to provide support to programs either as an Agency overhead or cost reimbursable function. The SMA organization at each Center and NASA Headquarters can also assist programs and projects with the preparation of the required ODARs and EOMPs. Programs/projects shall use the orbital debris modeling tools provided by the NASA ODPO in assessing orbital debris generation and risk in Earth orbit (Requirement 56346).	S	N	N	Mgmt
NASA STD 8719.14	4.2.1.d	56371	Requirements: Conducting Debris Assessments: An Overview: ODA and ODARs: The assessment shall be organized in an ODAR using Appendix A, Section A.1 (Requirement 56371). The NASA ODPO reviews the ODARs using the Section A.1 criteria and reports findings back to the program via the OSMA using the evaluation sheet in Appendix A, Section A.2.	S	N	N	Mgmt
NASA STD 8719.14	4.2.2.a	56379	Requirements: Conducting Debris Assessments: An Overview: The EOMP is a living document. It is developed during the later stages of mission development to ensure that design and operational use do not preclude a safe decommissioning and disposal. The EOMP identifies milestones in the operational life of the mission which affect the EOM processing. After those milestones, the EOMP and the health of the critical items defined in the EOMP shall be evaluated and updated so that NASA management understands the constraints and options available at EOM for limiting orbital debris (Requirement 56379).	S	N	N	Mgmt
NASA STD 8719.8	0	46812	NASA Standard 8719.8 is represented by this single entry. If this entry is being viewed from a filter, list, or traceability report, then the metadata applies to the document as a whole.	S	N	N	Safety
NASA STD 8729.1	0	57096	NASA Standard 8729.1 is represented by this single entry. If this entry is being viewed from a filter, list, or traceability report, then the metadata applies to the document as a whole.	S	N	N	RMS
NASA-STD-8739.8	5.1(1)	33171	The first step once a project, program or facility is conceived and initially approved is to perform an evaluation of the intended software portion of the system(s). Once the NASA project/program/facility office informs the software assurance manager of any intended systems with software, it is evaluated using the criteria in Appendix A to (1) determine the classification of the software, (2) determine the safety criticality, (3) to help determine if it will be considered for IV&V, and (4) further determine the prioritization and level of software assurance effort. This is an initial classification and ranking of the software and needs to be updated as the contract, design, and delivery of the software progresses. The results of the evaluation/assessment of the potential software for a project are coordinated with project management, recorded, maintained, and reported to the SMA Directors and Systems Management Offices (SMO).	S	N	N	SWA
NASA-STD-8739.8	7.5.1	33319	All software projects that are identified as safety-critical or software Class A by using NPR 7150.2, Software Engineering Software Assurance Classification Assessment shall be candidates for IV&V with safety criticality as the highest criterion. (Requirement 33319)	S	N	N	SWA
NASA-STD-8739.8	7.5.2	33320	IV&V work shall be performed by the contractors selected and managed by the NASA IV&V Facility. (Requirement 33320)	S	N	N	SWA
NASA-STD-8739.8	7.5.4	33322	The NASA IV&V Facility shall initially conduct a planning and scoping exercise to determine the specific software components to be analyzed and the tasks to be performed. (Requirement 33322) The IV&V approach will be documented in an IV&V plan.	S	N	N	SWA
NASA-STD-8739.8	7.5.5	33323	The IV&V team shall provide input to the appropriate software assurance personnel, as well as provide feedback to the project manager as agreed in the IV&V Plan. (Requirement 33323)	S	N	N	SWA
NPD 8700.1C	1.b	1061	POLICY: It is NASA policy to-- Hold NASA leaders, managers, supervisors, and employees accountable for safety and mission success within their functional areas of responsibility. (Requirement 1061)	S	N	N	Mgmt
NPD 8700.1C	1.h	1066	POLICY: It is NASA policy to-- Implement structured RM processes and use qualitative and quantitative risk-assessment techniques to make decisions regarding safety and the likelihood of mission success. (Requirement 1066)	S	N	N	Mgmt
NPD 8700.1C	5.b.1	1068	RESPONSIBILITY: The Mission Directorate Associate Administrators are responsible for the safety and mission success of their programs, projects, and activities. To accomplish this, each Mission Directorate Associate Administrator shall-- Provide executive leadership in implementing Agency Safety, Reliability, Maintainability, and Quality (SRM&Q) and RM policies, plans, techniques, procedures, and standards throughout all programs, projects, and activities. (Requirement 1068)	S	N	N	Mgmt
NPD 8700.1C	5.b.2	1069	RESPONSIBILITY: The Mission Directorate Associate Administrators are responsible for the safety and mission success of their programs, projects, and activities. To accomplish this, each Mission Directorate Associate Administrator shall-- Ensure that safety and mission-success requirements are defined for all programs and projects and that a process for recurrence control of problems is accomplished through a closed-loop corrective and preventive action system. (Requirement 1069)	S	N	N	Mgmt
NPD 8700.1C	5.b.3	1070	RESPONSIBILITY: The Mission Directorate Associate Administrators are responsible for the safety and mission success of their programs, projects, and activities. To accomplish this, each Mission Directorate Associate Administrator shall-- Establish policies and procedures for formal reviews for the certification of programs, projects, and activities as detailed in paragraph 1.f. (Requirement 1070)	S	N	N	Mgmt

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NPD 8700.1C	5.b.4	1071	RESPONSIBILITY: The Mission Directorate Associate Administrators are responsible for the safety and mission success of their programs, projects, and activities. To accomplish this, each Mission Directorate Associate Administrator shall-- Coordinate with the responsible Mission Support Offices, Functional Support Offices, and Administrative Staff Offices to ensure that domains of potential risk (information management, environment, security, legal) are properly included in Risk Management plans. (Requirement 1071)	S	N	N	Mgmt
NPD 8700.1C	5.b.5	1072	RESPONSIBILITY: The Mission Directorate Associate Administrators are responsible for the safety and mission success of their programs, projects, and activities. To accomplish this, each Mission Directorate Associate Administrator shall-- Serve as the ultimate risk acceptance/disposition official for programs, projects, and activities. (Requirement 1072)	S	N	N	Mgmt
NPD 8700.1C	5.c.02	1017	RESPONSIBILITY: The Chief Safety and Mission Assurance Officer shall-- Provide SRM&Q and RM expectations and evaluations at Program Management Committee activities and other major program milestone reviews. (Requirement 1017)	S	N	N	Mgmt
NPD 8700.1C	5.c.03	1020	RESPONSIBILITY: The Chief Safety and Mission Assurance Officer shall--	S	N	N	U
NPD 8700.1C	5.c.03.b	44004	RESPONSIBILITY: The Chief Safety and Mission Assurance Officer shall-- Review and concur with each Center's SMA Annual Operating Agreement. (Requirement 44004)	S	N	N	Mgmt
NPD 8700.1C	5.c.03.d	44006	RESPONSIBILITY: The Chief Safety and Mission Assurance Officer shall-- Ensure that each Center has designated an SMA functional manager. (Requirement 44006)	S	N	N	Mgmt
NPD 8700.1C	5.c.03.e	44007	RESPONSIBILITY: The Chief Safety and Mission Assurance Officer shall-- provide SMA input to performance planning and annual performance evaluations for Mission Directorate Associate Administrators, Center Directors and Center SMA functional managers. (Requirement 44007)	S	N	N	Mgmt
NPD 8700.1C	5.c.04	1018	RESPONSIBILITY: The Chief Safety and Mission Assurance Officer shall-- Direct the suspension of any activity that presents either a present hazard (imminent danger) or future hazard to personnel, property, or mission operations due to unsafe acts or conditions that might be identified by either inspection or analysis. (Requirement 1018)	S	N	N	Mgmt
NPD 8700.1C	5.c.06	1075	RESPONSIBILITY: The Chief Safety and Mission Assurance Officer shall-- Establish review processes to certify the safety and operational readiness of flight hardware/software, mission-critical support equipment, hazardous facilities/operations, and high-energy ground-based systems. (Requirement 1075)	S	N	N	Mgmt
NPD 8700.1C	5.c.07	1076	RESPONSIBILITY: The Chief Safety and Mission Assurance Officer shall-- Participate in selected certification reviews established by the Mission Directorate Associate Administrators. (Requirement 1076)	S	N	N	Mgmt
NPD 8700.1C	5.c.09	1024	RESPONSIBILITY: The Chief Safety and Mission Assurance Officer shall-- Direct and oversee (in coordination with the appropriate Mission Directorate Associate Administrators) the prompt and accurate reporting, investigating, and analyzing of all NASA mishaps and close calls, including closure of problems, nonconformances, and anomalies, and assure the collection, retention, and communication of their lessons learned as one means of recurrence control. (Requirement 1024)	S	N	N	Mgmt
NPD 8700.1C	5.c.10	1078	RESPONSIBILITY: The Chief Safety and Mission Assurance Officer shall-- Formulate and direct SRM&Q education, training, and career development programs to enable SMA staff, program/project management, senior Agency management, and the NASA workforce to obtain the understanding of SRM&Q principles, tools, methods, and standards necessary to successfully perform their functions. (Requirement 1078)	S	N	N	Mgmt
NPD 8700.1C	5.c.15	1025	RESPONSIBILITY: The Chief Safety and Mission Assurance Officer shall-- Support the development and rapid transfer of new SMA technologies, processes, and methodologies to various market sectors and Government agencies. (Requirement 1025)	S	N	N	Mgmt
NPD 8700.1C	5.d.1	1083	RESPONSIBILITY: The Center Directors are responsible for the safety and mission success of their activities and operations. To accomplish this, each Center Director shall-- Maintain the safe and successful functioning of facilities and operations, use lessons learned to improve operations and activities, and prevent recurrence of undesired events through a closed-loop corrective action process. (Requirement 1083)	S	N	N	Mgmt
NPD 8700.1C	5.d.2	1033	RESPONSIBILITY: The Center Directors are responsible for the safety and mission success of their activities and operations. To accomplish this, each Center Director shall-- Implement Agency SRM&Q policies, plans, techniques, procedures, and standards and ensure that safety and mission-success requirements are established for Center operations and activities. (Requirement 1033)	S	N	N	Mgmt
NPD 8700.1C	5.d.3(1)	1084	RESPONSIBILITY: The Center Directors are responsible for the safety and mission success of their activities and operations. To accomplish this, each Center Director shall-- Serve as the final risk acceptance/disposition official for Center activities. (Requirement 1084)	S	N	N	Mgmt
NPD 8700.1C	5.d.3(2)	30885	RESPONSIBILITY: The Center Directors are responsible for the safety and mission success of their activities and operations. To accomplish this, each Center Director shall-- Assure that any delegation of this authority is performed based on an assessment of the frequency of occurrence and the severity of the risk. (Requirement 30885)	S	N	N	Mgmt
NPD 8700.1C	5.d.5	1036	RESPONSIBILITY: The Center Directors are responsible for the safety and mission success of their activities and operations. To accomplish this, each Center Director shall-- Staff Center SMA organizations with qualified SRM&Q and RM professionals. (Requirement 1036)	S	N	N	Mgmt
NPD 8700.1C	5.d.6	1035	RESPONSIBILITY: The Center Directors are responsible for the safety and mission success of their activities and operations. To accomplish this, each Center Director shall-- Develop and approve the Center's SMA Annual Operating Agreement. (Requirement 1035)	S	N	N	Mgmt
NPD 8700.1C	5.f.01	1087	RESPONSIBILITY: The Center SMA functional managers shall-- Provide local SMA executive leadership and policy implementation direction for Center-level projects and operations. (Requirement 1087)	S	N	N	Mgmt
NPD 8700.1C	5.f.02	1044	RESPONSIBILITY: The Center SMA functional managers shall-- Serve as the Center focal point for the alternative, independent SMA line of communication. (Requirement 1044)	S	N	N	Mgmt
NPD 8700.1C	5.f.03	1047	RESPONSIBILITY: The Center SMA functional managers shall-- Assure that effective and efficient SMA processes are in place to enhance the potential for success of NASA programs, projects, and activities at the Center level. (Requirement 1047)	S	N	N	Mgmt

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NPD 8700.1C	5.f.04	1048	RESPONSIBILITY: The Center SMA functional managers shall-- Conduct surveillance and independent assessments to enhance (a) the success of programs, projects, and activities; and (b) the effectiveness of SMA activities. This includes overseeing any SMA activities managed by other organizations, such as aviation safety, lifting safety, pressure-systems safety, firefighting, and emergency response. (For a list of typical SMA activities and program elements, see Attachment A.) (Requirement 1048)	S	N	N	Mgmt
NPD 8700.1C	5.f.05	1088	RESPONSIBILITY: The Center SMA functional managers shall-- Direct the suspension of any activity that presents either a present hazard (imminent danger) or future hazard to personnel, property, or mission operation due to unsafe acts or conditions that might be identified by either inspection or analysis. (Requirement 1088)	S	N	N	Safety
NPD 8700.1C	5.f.06	1089	RESPONSIBILITY: The Center SMA functional managers shall-- Review, in coordination with their Center's program and project personnel, SMA, and RM plans for the programs and projects at the Center. (Requirement 1089)	S	N	N	Mgmt
NPD 8700.1C	5.f.07	1090	RESPONSIBILITY: The Center SMA functional managers shall-- Provide support to projects and programs by performing hazards analyses and SMA assessments in support of project and program needs. (Requirement 1090)	S	N	N	Mgmt
NPD 8700.1C	5.f.08	1091	RESPONSIBILITY: The Center SMA functional managers shall-- Provide SMA expectations and evaluations to local Governing Program Management Committee activities. (Requirement 1091)	S	N	N	Mgmt
NPD 8700.1C	5.f.09	1045	RESPONSIBILITY: The Center SMA functional managers shall-- Assist the Center Director in formulating the Center SMA Annual Operating Agreement (see paragraph 5.d(6)). (Requirement 1045)	S	N	N	Mgmt
NPD 8700.1C	5.f.10	1046	RESPONSIBILITY: The Center SMA functional managers shall-- Provide the SMA products and services agreed to in the applicable SMA Annual Operating Agreement. (Requirement 1046)	S	N	N	Mgmt
NPD 8700.1C	5.f.11	1092	RESPONSIBILITY: The Center SMA functional managers shall-- Assure the prompt and accurate reporting, investigating, tracking, and closure of all mishaps, close calls, problems, nonconformances, and anomalies within the Center's jurisdiction. This includes collection and retention of lessons learned as one means of recurrence control. (Requirement 1092)	S	N	N	Mgmt
NPD 8700.1C	5.f.12	1093	RESPONSIBILITY: The Center SMA functional managers shall-- Identify the need for and support the development of new SRM&Q and RM tools, techniques, and processes. (Requirement 1093)	S	N	N	Mgmt
NPD 8700.1C	5.g.1	1095	RESPONSIBILITY: The Director, Office of Headquarters Operations, is responsible for the operational safety program at Headquarters. The Director shall-- Maintain the safe and successful functioning of facilities and operations, use lessons learned to improve operations and activities, and prevent recurrence of undesired events through a closed-loop corrective action system. (Requirement 1095)	S	N	N	Mgmt
NPD 8700.1C	5.g.2	1096	RESPONSIBILITY: The Director, Office of Headquarters Operations, is responsible for the operational safety program at Headquarters. The Director shall-- Implement Agency safety policies, plans, techniques, procedures, and standards and ensure that safety requirements are established for Headquarters operations. (Requirement 1096)	S	N	N	Mgmt
NPD 8700.1C	5.g.3	1097	RESPONSIBILITY: The Director, Office of Headquarters Operations, is responsible for the operational safety program at Headquarters. The Director shall-- Direct the suspension of any activity that presents either a present hazard (imminent danger) or future hazard to personnel, property, or mission operations due to unsafe acts or conditions that might be identified by either inspection or analysis. (Requirement 1097)	S	N	N	Mgmt
NPD 8700.1C	5.g.4	1098	RESPONSIBILITY: The Director, Office of Headquarters Operations, is responsible for the operational safety program at Headquarters. The Director shall-- Serve as the final safety risk acceptance/disposition official for Headquarters activities. (Requirement 1098)	S	N	N	Mgmt
NPD 8700.1C	5.g.5	1099	RESPONSIBILITY: The Director, Office of Headquarters Operations, is responsible for the operational safety program at Headquarters. The Director shall-- Designate a safety manager to serve as the leader and focal point for the Headquarters safety activities. (Requirement 1099)	S	N	N	Mgmt
NPD 8700.3A	1.a.(1)	28003	It is NASA policy to perform the following: Establish SMA requirements for NASA spacecraft, instruments, and launch services, including integration of the payload with the launch vehicle.	S	N	N	Safety
NPD 8700.3A	1.a.(2)	28004	It is NASA policy to perform the following: Conduct periodic audits of all elements of the project including spacecraft, instrument, and launch service providers to verify that SMA and risk management requirements and processes have been implemented.	S	N	N	Safety
NPD 8700.3A	1.a.(4)(1)	28006	It is NASA policy to perform the following: Verify and validate SMA and risk management process implementation for each mission through a Certification of Flight Readiness (CoFR) process supported by an Integrated Mission Assurance Review (IMAR). (Requirement 28006)	S	N	N	Safety
NPD 8700.3A	1.a.(4)(2)	30887	It is NASA policy to perform the following: When appropriate, the CoFR will include the signature of the spacecraft or instrument contractor in addition to the signatures specified in NPD 8710.24, paragraph 5.d.(2). (Requirement 30887)	S	N	N	Mgmt
NPD 8700.3A	5.a.(1)	28013	The Associate Administrator for Safety and Mission Assurance is responsible for the following activities: Defining SMA policies, procedures and guidelines, and standards for NASA spacecraft, instruments, and launch services and assuring their implementation.	S	N	N	Safety
NPD 8700.3A	5.a.(2)	28014	The Associate Administrator for Safety and Mission Assurance is responsible for the following activities: Conducting independent, technical, and internal assessments to verify SMA process implementation (as specified in SMA policies, procedures and guidelines, and standards) and on other issues deemed critical to the safety and mission success of NASA launch services.	S	N	N	Safety
NPD 8700.3A	5.a.(3)	28015	The Associate Administrator for Safety and Mission Assurance is responsible for the following activities: Chairing the IMAR and executing or delegating SMA signature authority on the CoFR for each NASA spacecraft, instrument, and launch service mission. (Requirement 28015) The signature indicates concurrence in spacecraft, instrument, and launch service readiness and the satisfactory implementation of SMA processes.	S	N	N	Safety
NPD 8700.3A	5.b.(1)	28017	The Enterprise Associate Administrators who are responsible for spacecraft, instruments, and launch services shall be responsible for the following activities: Providing resources to support NASA spacecraft, instrument, and launch service SMA process implementation. (Requirement 28017)	S	N	N	Safety
NPD 8700.3A	5.b.(2)	28018	The Enterprise Associate Administrators who are responsible for spacecraft, instruments, and launch services shall be responsible for the following activities: Ensuring the development and implementation of spacecraft, instrument, and launch service SMA and risk management requirements (see paragraph 4.g) for each NASA spacecraft, instrument, and launch service program.	S	N	N	Safety

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NPD 8700.3A	5.b.(3)	28019	The Enterprise Associate Administrators who are responsible for spacecraft, instruments, and launch services shall be responsible for the following activities: Ensuring the development of risk assessment relating to the integration of the payload with the launch vehicle. (Requirement 28019)	S	N	N	Safety
NPD 8700.3A	5.b.(4)	28020	The Enterprise Associate Administrators who are responsible for spacecraft, instruments, and launch services shall be responsible for the following activities: Certifying that the risks related to the success or safety of NASA spacecraft, instrument, and launch service missions have been identified, assessed, and either mitigated or accepted by the appropriate level of management. (Requirement 28020)	S	N	N	Safety
NPD 8700.3A	5.c.(1)	28022	The Launch Services Program Manager is responsible for the following activities: Ensuring the development, incorporation, and implementation of SMA and risk management requirements in KSC future and existing launch service contracts, agreements, grants, or other launch service acquisition instruments and implementing changes necessary to assure safety or mission success. (Requirement 28022)	S	N	N	Mgmt
NPD 8700.3A	5.c.(2)	28023	The Launch Services Program Manager is responsible for the following activities: Providing resources to support assurance process implementation by skilled, knowledgeable, and experienced KSC launch service SMA staffs. (Requirement 28023)	S	N	N	Mgmt
NPD 8700.3A	5.c.(3)	28024	The Launch Services Program Manager is responsible for the following activities: Defining, documenting, and implementing launch service SMA and risk management requirements for each program-managed launch service, including coordination of spacecraft and instrument assurance support activities once the spacecraft and/or instrument is integrated with the launch vehicle. (Requirement 28024)	S	N	N	Mgmt
NPD 8700.3A	5.c.(4)	28025	The Launch Services Program Manager is responsible for the following activities: Performing periodic audits of launch service providers and performing joint audits with the providers of key suppliers to verify ongoing implementation of agreed-to or contractual SMA and risk management requirements and processes. (Requirement 28025)	S	N	N	Mgmt
NPD 8700.3A	5.c.(5)	28026	The Launch Services Program Manager is responsible for the following activities: Conducting independent, technical, and internal assessments of launch service SMA process implementation. (Requirement 28026)	S	N	N	Mgmt
NPD 8700.3A	5.c.(6)(1)	28027	The Launch Services Program Manager is responsible for the following activities: Participating in a documented CoFR decision process which includes the IMAR. (Requirement 28027)	S	N	N	Mgmt
NPD 8700.3A	5.c.(6)(2)	30890	The Launch Services Program Manager is responsible for the following activities: The IMAR verifies and validates SMA implementation and is required for each NASA launch service managed by the KSC Launch Services Program Office. (Requirement 30890)	S	N	N	Mgmt
NPD 8700.3A	5.d.(1)	28029	The KSC Safety and Mission Assurance Directorate, as the Center Director's agent, is responsible for the following activities: Participating in a documented CoFR decision process which includes presenting the IMAR to the Associate Administrator for Safety and Mission Assurance. (Requirement 28029)	S	N	N	Mgmt
NPD 8700.3A	5.d.(2)	28030	The KSC Safety and Mission Assurance Directorate, as the Center Director's agent, is responsible for the following activities: Providing an independent SMA assessment of the launch service, to include a risk assessment at the IMAR. (Requirement 28030)	S	N	N	Mgmt
NPD 8700.3A	5.e.(1)	28032	The Center Directors who are responsible for the spacecraft and/or instruments shall be responsible for the following activities: Providing skilled, knowledgeable, and experienced Center SMA staffs to support NASA spacecraft and instrument SMA process implementation.	S	N	N	Safety
NPD 8700.3A	5.e.(2)	28033	The Center Directors who are responsible for the spacecraft and/or instruments shall be responsible for the following activities: Defining, coordinating, documenting, and implementing spacecraft and instrument SMA and risk management requirements.	S	N	N	Safety
NPD 8700.3A	5.e.(3)	28034	The Center Directors who are responsible for the spacecraft and/or instruments shall be responsible for the following activities: Ensuring the incorporation of SMA and risk management requirements in spacecraft and instrument contracts, agreements, grants, or other acquisition instruments. (Requirement 28034)	S	N	N	Mgmt
NPD 8700.3A	5.e.(4)	28035	The Center Directors who are responsible for the spacecraft and/or instruments shall be responsible for the following activities: Performing periodic audits of spacecraft and instrument providers and performing joint audits with the providers of their key suppliers to verify ongoing implementation of agreed-to or contractual SMA and risk management requirements and processes. (Requirement 28035)	S	N	N	Mgmt
NPD 8700.3A	5.e.(5)	28036	The Center Directors who are responsible for the spacecraft and/or instruments shall be responsible for the following activities: Evaluating the implementation of SMA and risk management requirements in existing spacecraft and instrument contracts, agreements, grants, and other acquisition instruments and recommending changes. (Requirement 28036)	S	N	N	Mgmt
NPD 8700.3A	5.e.(6)	28037	The Center Directors who are responsible for the spacecraft and/or instruments shall be responsible for the following activities: Assessing and establishing confidence in the success potential and safety for each NASA spacecraft and instrument by conducting independent, technical, or internal SMA assessments. (Requirement 28037)	S	N	N	Mgmt
NPD 8700.3A	5.e.(7)	28038	The Center Directors who are responsible for the spacecraft and/or instruments shall be responsible for the following activities: Participating in the IMAR for each associated NASA spacecraft and/or instrument being launched. (Requirement 28038)	S	N	N	Mgmt
NPD 8700.3A	5.f	28039	For NASA missions using launch services not managed by the KSC Launch Services Program Office, the spacecraft or instrument program or project implementation Center SMA Director, as the Center Director's agent will coordinate spacecraft, instrument, and launch service CoFR activities with the Associate Administrator for Safety and Mission Assurance. (Requirement 28039)	S	N	N	Mgmt
NPD 8700.3A	5.g	28040	When a spacecraft or instrument does not have an assigned responsible NASA Center and/or does not use a KSC-managed launch service, the assigned Headquarters Enterprise office will be responsible for implementing this policy via the program/project manager. (Requirement 28040)	S	N	N	Mgmt
NPD 8720.1B	5.b	13005	Enterprise Associate Administrators are responsible for sharing Reliability and Maintainability data across programs and for using metrics for cost-effective management and evaluation of Reliability and Maintainability performance of programs and projects under their cognizance. (Requirement 13005)	S	N	N	RMS
NPD 8730.1B	5.b.(1)	11004	The Associate Administrator for Safety and Mission Assurance is responsible for the following activities: Designating a responsible Center for developing and implementing the Metrology and Calibration Program Plan. (Requirement 11004)	S	N	N	Quality

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NPD 8730.1B	5.b.(2)	11005	The Associate Administrator for Safety and Mission Assurance is responsible for the following activities: Approving the Metrology and Calibration Program Plan and metrology and calibration operating plans and authorizing such specific policy and requirements as identified therein. (Requirement 11005)	S	N	N	Quality
NPD 8730.1B	5.b.(3)	11006	The Associate Administrator for Safety and Mission Assurance is responsible for the following activities: Authorizing the charter and resources for the NASA Metrology and Calibration Working Group (MCWG). (Requirement 11006) The group will act as a technical forum to discuss Agency policy and issues common to all standards and calibration operations and to recommend research projects that meet the present needs and future strategic goals of the Agency.	S	N	N	Safety
NPD 8730.1B	5.c.(1)	11007	Center Directors are responsible for the following activities: Implementing and monitoring use of this NPDP at their respective NASA Centers and Component Facilities. (Requirement 11007)	S	N	N	Safety
NPD 8730.1B	5.c.(2)	11008	Center Directors are responsible for the following activities: Designating a representative to the NASA MCWG and ensuring representation at the annual MCWG workshops as well as representation at other appropriate industry-related symposia and other government agency metrology and calibration meetings. (Requirement 11008)	S	N	N	Quality
NPD 8730.2B	1.d	10017	To carry out this policy, NASA shall accomplish the following: Coordinate procurement of parts among programs/Centers whenever feasible. (Requirement 10017)	S	N	N	Mgmt
NPD 8730.2B	1.e	10018	To carry out this policy, NASA shall accomplish the following: Maintain a NASA Parts Selection List (NPSL) to provide candidate selections for program use. (Requirement 10018)	S	N	N	Quality
NPD 8730.2B	1.f	10019	To carry out this policy, NASA shall accomplish the following: Participate in the Defense Standardization Program and appropriate voluntary consensus standards programs for the EEE and Mechanical Parts commodities. (Requirement 10019)	S	N	N	Mgmt
NPD 8730.2B	5.a.(2)	10005	The Associate Administrator for Safety and Mission Assurance is responsible for the following: Assuring that effective processes and controls are in place for EEE and Mechanical Parts within the NASA Enterprises and at the Centers. (Requirement 10005)	S	N	N	Mgmt
NPD 8730.2B	5.b.(1)	10006	Enterprise Associate Administrators and Center Directors are responsible for the following: Assuring that the results of supplier audits/surveys, qualification testing, risk assessments, experience data, parts data, use of the NASA Parts Selection List (NPSL), and production line certifications are provided to other Centers and to the Government-Industry Data Exchange Program as appropriate. (Requirement 10006)	S	N	N	Quality
NPD 8730.2B	5.b.(2)	10007	Enterprise Associate Administrators and Center Directors are responsible for the following: Assuring that Center parts management procedures are developed, documented, and implemented. (Requirement 10007)	S	N	N	Quality
NPD 8730.2B	5.b.(3)	10008	Enterprise Associate Administrators and Center Directors are responsible for the following: Assuring that appropriate EEE parts and electronic packaging and mechanical parts requirements are applied on NASA contracts. (Requirement 10008)	S	N	N	Quality
NPD 8730.5	5.a.1	42178	Responsibility: The Chief Safety and Mission Assurance Officer Shall: Establish NASA quality assurance program policies related to NASA work. (Requirement 42178)	S	N	N	Quality
NPD 8730.5	5.a.2	42179	Responsibility: The Chief Safety and Mission Assurance Officer Shall: Provide technical guidance on the type and extent of quality assurance program requirements that are required and appropriate for NASA work. (Requirement 42179)	S	N	N	Quality
NPD 8730.5	5.a.3	42180	Responsibility: The Chief Safety and Mission Assurance Officer Shall: Facilitate implementation of quality assurance program requirements. (Requirement 42180)	S	N	N	Quality
NPD 8730.5	5.a.4	42181	Responsibility: The Chief Safety and Mission Assurance Officer Shall: Oversee Center implementation of quality assurance program requirements, including: review and approval of Center Quality Assurance Program implementation, verification of compliance with the requirements of this NPDP, adequacy of quality assurance professional and technical staffing, and adequacy of quality assurance training. (Requirement 42181)	S	N	N	Quality
NPD 8730.5	5.a.5	42182	Responsibility: The Chief Safety and Mission Assurance Officer Shall: Facilitate continual improvement of the Agency's quality assurance program through: advocacy; awareness training; integration of quality assurance processes; dissemination of lessons learned and best practices; teaming; and sharing of quality assurance tools, techniques, and data. (Requirement 42182)	S	N	N	Quality
NPD 8730.5	5.b.1	42184	Responsibility: NASA Center Directors shall: Delegate authority for managing the quality assurance program to an organization not responsible for the cost or schedule of performing NASA work. This will typically be the Safety and Mission Assurance (SMA) organization. (Requirement 42184)	S	N	N	Quality
NPD 8730.5	5.b.2	42185	Responsibility: NASA Center Directors shall: Assure that the Center SMA Director is provided the needed staffing and skills to implement a quality assurance program that complies with the requirements of this NPDP, including Center program/project activities conducted at remote locations. (Requirement 42185)	S	N	N	Quality
NPD 8730.5	5.b.3	42186	Responsibility: NASA Center Directors shall: Obtain approval from the Chief Safety and Mission Assurance Officer for use of any alternative quality system model that does not conform to the quality system requirements identified in Attachment A of this NPDP. (Requirement 42186)	S	N	N	Quality
NPD 8730.5	5.c.1	42188	Responsibility: NASA Center SMA Directors (or other delegated quality assurance organization) shall: Support program/project offices in the determination of quality assurance requirements to be invoked/applied to the program/project, including identification of the applicable quality system (see Appendix A), quality risks, and associated risk mitigation actions. (Requirement 42188)	S	N	N	Quality
NPD 8730.5	5.c.2	42189	Responsibility: NASA Center SMA Directors (or other delegated quality assurance organization) shall: Support procurement offices in identifying applicable quality assurance requirements to be incorporated into procurement contracts, in verifying contractor satisfaction of contract qualification requirements (quality system, product, process, personnel), and by providing/analyzing contractor quality performance data. (Requirement 42189)	S	N	N	Quality
NPD 8730.5	5.c.3	42190	Responsibility: NASA Center SMA Directors (or other delegated quality assurance organization) shall: Assure NASA contractor compliance with invoked technical/quality requirements, including the performance of GMIPs. (Requirement 42190)	S	N	N	Quality
NPD 8730.5	5.c.4	42191	Responsibility: NASA Center SMA Directors (or other delegated quality assurance organization) shall: Assure NASA Center compliance with prescribed technical/quality requirements. (Requirement 42191)	S	N	N	Quality
NPD 8730.5	5.c.5	42192	Responsibility: NASA Center SMA Directors (or other delegated quality assurance organization) shall: Assure tenant NASA program/project compliance with prescribed technical/quality requirements as delegated by the program/project responsible NASA Center. (Requirement 42192)	S	N	N	Quality

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NPD 8730.5	5.c.6	42193	Responsibility: NASA Center SMA Directors (or other delegated quality assurance organization) shall: Assure delegated agency and support contractor compliance with prescribed direction concerning performance of quality assurance support services. (Requirement 42193)	S	N	N	Quality
NPD 8730.5	5.c.7	42194	Responsibility: NASA Center SMA Directors (or other delegated quality assurance organization) shall: Support NASA initiatives related to improving quality assurance practices, resolving quality problems, analyzing quality risks, and sharing lessons learned and best practices. (Requirement 42194)	S	N	N	Quality
NPD 8730.5	5.c.8	42195	Responsibility: NASA Center SMA Directors (or other delegated quality assurance organization) shall: Maintain adequately trained civil service personnel necessary to satisfy the requirements of this NPD and NPR 8735.2, including performance of safety/mission critical GMIPs, assuring that delegated agencies and support contractor effectively perform quality assurance functions in accordance with prescribed direction, and accepting delivery of contractor products. (Requirement 42195)	S	N	N	Quality
NPR 8000.4	1.3.3.a	26008	The PMC or Governing PMC is responsible for the following: a.) Evaluating the program/projects risk status and ensuring that the formal acceptance/closure of program/project risks is consistent with NASAs goals and requirements. (Requirement 26008)	S	N	N	Risk
NPR 8000.4	1.3.3.b	30906	The PMC or Governing PMC is responsible for the following: a.) Evaluating the program/projects risk status and ensuring that the formal acceptance/closure of program/project risks is consistent with NASAs goals and requirements. b.) Concurrence on the acceptance of all primary risks. (Requirement 30906)	S	N	N	Risk
NPR 8000.4	1.3.4	26009	The Safety and Mission Assurance (SMA) organizations at the NASA Centers are responsible for providing ongoing risk management consultation, facilitation, and training to program/project organizations. (Requirement 26009)	S	N	N	Risk
NPR 8000.4	1.3.5	26010	The Systems Management Offices (SMO) at Centers and the Independent Program Assessment Office (IPAO) are responsible for assessing risk management as an element of their Independent Assessments (IA), Independent Annual Reviews (IAR), Non-Advocate Reviews (NAR), other independent reviews, or in their participation within regular program/project reviews. (Requirement 26010) Appendix C provides a checklist for use in such assessments.	S	N	N	Risk
NPR 8000.4	1.3.6.a	26011	Headquarters Functional Offices (see Appendix A, Glossary) are responsible for the following: a.) Providing guidance concerning the identification, analysis, and mitigation of risks within their respective functional areas including support to their equivalents at the NASA Centers. (Requirement 26011)	S	N	N	Risk
NPR 8000.4	1.3.6.b	30907	Headquarters Functional Offices (see Appendix A, Glossary) are responsible for the following: b.) Supporting the PMC in the evaluation and assessment of programs/projects with respect to their risk management status within their respective functional areas. (Requirement 30907)	S	N	N	Risk
NPR 8000.4	1.3.7.a	26012	Center Functional Offices are responsible for the following: a.) Providing support to programs/projects to assist in their identification, analysis, and mitigation of risks within their respective functional areas. (Requirement 26012)	S	N	N	Risk
NPR 8000.4	1.3.7.b	30908	Center Functional Offices are responsible for the following: b.) Supporting the Governing PMC in their evaluation and assessment of programs/projects with respect to their risk management status within their respective functional areas. (Requirement 30908)	S	N	N	Risk
NPR 8705.5	0.P.2.d(1)	32947	Decisions concerning applicability for projects/programs in progress will be made on a case-by-case basis involving program/project manager recommendations to the Governing Program Management Committee, which shall have approval authority (Requirement 32947).	S	N	N	PRA
NPR 8705.5	1.4.1.2.a	32991	EAs shall: Ensure that appropriate resources (funding, personnel, methods, and software applications) are made available for PRA (Requirement 32991).	S	N	N	PRA
NPR 8705.5	1.4.1.2.b	32992	EAs shall: Ensure that technical quality is maintained throughout the PRA effort (Requirement 32992).	S	N	N	Mgmt
NPR 8705.5	1.4.1.2.c	32993	EAs shall: Ensure that PRA methodology and results are effectively transferred to appropriate NASA personnel who are not directly involved in conducting the PRA (Requirement 32993).	S	N	N	Mgmt
NPR 8705.5	1.4.1.2.d	32994	EAs shall: Ensure that formal PRA awareness training and methodology training are provided periodically to managers and practitioners (Requirement 32994).	S	N	N	Mgmt
NPR 8705.5	1.4.1.2.e	32995	EAs shall: Ensure that PRA requirements are appropriately implemented on contracts (Requirement 32995).	S	N	N	Mgmt
NPR 8705.5	1.4.2.2.a	32999	The AA/SMA shall: Develop, coordinate, publish, disseminate, explain, interpret, and maintain NASA PRA policy and procedures and assure their correct implementation at Headquarters and at the Centers (Requirement 32999).	S	N	N	Mgmt
NPR 8705.5	1.4.2.2.b	33000	The AA/SMA shall: Have primary responsibility for developing criteria and guidelines for the use of PRA results in management decision-making (Requirement 33000).	S	N	N	Mgmt
NPR 8705.5	1.4.2.2.c	33001	The AA/SMA shall: Provide PRA functional leadership, mentoring, technical direction, and consultation on methodology (on how to conduct a PRA), tools, and oversight Agencywide (Requirement 33001).	S	N	N	Mgmt
NPR 8705.5	1.4.2.2.d	33002	The AA/SMA shall: Provide corporate leadership and establish a community of practice for the exchange of PRA-related information, best practices, and lessons learned across programs/projects, Centers, government agencies, and international partners (Requirement 33002).	S	N	N	Mgmt
NPR 8705.5	1.4.2.2.e	33003	The AA/SMA shall: Assess and assure that PRAs are correctly initiated, conducted, and utilized within Enterprises and programs/projects (Requirement 33003).	S	N	N	Mgmt
NPR 8705.5	1.4.2.2.f	33004	The AA/SMA shall: Enable, facilitate, and organize the development of a PRA corporate memory (Requirement 33004). This includes:	S	N	N	Mgmt
NPR 8705.5	1.4.2.2.f.(1)	33005	The AA/SMA shall: Assist in the maintenance of PRAs and their updating, as necessary (Requirement 33005).	S	N	N	Mgmt
NPR 8705.5	1.4.2.2.f.(2)	33006	The AA/SMA shall: Collect, from NASA programs/projects, documentation of all PRAs conducted, including their scope, PRA models developed and data used, preliminary and final reports issued, and the results of independent or peer reviews (Requirement 33006).	S	N	N	Mgmt
NPR 8705.5	1.4.2.2.f.(3)	33007	The AA/SMA shall: Assure the availability of all approved PRA documentation for present and future programs/projects (Requirement 33007).	S	N	N	Mgmt
NPR 8705.5	1.4.2.2.g	33008	The AA/SMA shall: Designate and provide or assist in acquiring state-of-the-art and verified PRA methods, computer applications, and training for NASA personnel (Requirement 33008).	S	N	N	Mgmt
NPR 8705.5	1.4.2.2.h	33009	The AA/SMA shall: Organize and coordinate peer reviews of PRA work performed, if deemed appropriate, and assure the implementation of peer review recommendations and the overall credibility of PRA efforts and results (Requirement 33009).	S	N	N	Mgmt

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NPR 8705.5	1.4.2.2.i	33010	The AA/SMA shall: Contribute to and approve program/project Level 1 (NASA Headquarters-level program management) probabilistic risk assessment requirements; and provide oversight and advice on Level 2 (NASA Center-level program management) and lower-level probabilistic risk assessment requirements (Requirement 33010).	S	N	N	Mgmt
NPR 8705.5	1.4.2.2.j	33011	The AA/SMA shall: Assure that PRA results are provided in an acceptable, useable form (e.g., medians, means, lower and upper uncertainty bounds, and risk drivers) and are accurately represented and communicated to NASA management (Requirement 33011).	S	N	N	Mgmt
NPR 8705.5	1.4.2.2.k	33012	The AA/SMA shall: Guide and direct the use of PRA during the system development life cycle to improve design, operation, and upgrade (Requirement 33012).	S	N	N	Mgmt
NPR 8705.5	1.4.2.2.l	33013	The AA/SMA shall: Enable, facilitate, and organize a central resource and repository of PRA tools, methods, and data, and the transfer of PRA technology to NASA Civil Service personnel (Requirement 33013).	S	N	N	Mgmt
NPR 8705.5	1.4.2.2.m	33014	The AA/SMA shall: Assist in the acquisition and verify the credentials of PRA practitioners, both for Civil Service personnel and for supporting contractors or consultants (Requirement 33014).	S	N	N	Mgmt
NPR 8705.5	1.4.3	33015	Center Directors shall ensure that their Safety and Mission Assurance (SMA) and Engineering organizations acquire and maintain expertise in PRA necessary to support Center-based programs/projects (Requirement 33015).	S	N	N	Mgmt
NPR 8705.5	1.4.6	33025	NASA shall, through prudent hiring, professional development, and mentoring, increase and maintain its capability to conduct, understand, and use PRA in support of a program/project life cycle (Requirement 33025).	S	N	N	Mgmt
NPR 8705.6	2.2.1.1	42275	The Agency Associate Administrator shall: Ensure that Centers comply with and implement institutional, facility, and operational-related SMA and technical requirements. (Requirement 42275)	S	N	N	Mgmt
NPR 8705.6	2.2.1.2	42276	The Agency Associate Administrator shall: Ensure that Centers have adequate resources to perform IFO SMA Audits and to support Headquarters-led IFO SMA Audits. (Requirement 42276)	S	N	N	Mgmt
NPR 8705.6	2.2.2.01	42278	The Chief Safety and Mission Assurance Officer shall: Implement the Headquarters-led IFO SMA Audit process. (Requirement 42278)	S	N	N	Mgmt
NPR 8705.6	2.2.2.02	42279	The Chief Safety and Mission Assurance Officer shall: Develop annual integrated audit plans for OSMA. (Requirement 42279)	S	N	N	Mgmt
NPR 8705.6	2.2.2.03	42280	The Chief Safety and Mission Assurance Officer shall: Work with the NASA Chief Engineer and Associate Administrator for Institutions and Management to define the applicable IFO BRS. (Requirement 42280)	S	N	N	Mgmt
NPR 8705.6	2.2.2.04	42281	The Chief Safety and Mission Assurance Officer shall: Provide an auditor selection and screening process to ensure that potential audit team members have the requisite institutional, facility, and/or operational safety experience and competency to participate in the Headquarters IFO SMA Audit process. (Requirement 42281)	S	N	N	Mgmt
NPR 8705.6	2.2.2.05	42282	The Chief Safety and Mission Assurance Officer shall: Conduct Headquarters IFO SMA Audits on a biennial basis at all NASA Centers, Component Facilities, and the JPL NASA Management Office and include all focus areas applicable to each organization. (Requirement 42282)	S	N	N	Mgmt
NPR 8705.6	2.2.2.06	42283	The Chief Safety and Mission Assurance Officer shall: Provide NASA Centers access to current Headquarters IFO SMA Audit schedule. (Requirement 42283)	S	N	N	Mgmt
NPR 8705.6	2.2.2.07	42284	The Chief Safety and Mission Assurance Officer shall: Select the IFO SMA Audit requirement set for review from the applicable IFO BRS with concurrence from the responsible center SMA organization. (Requirement 42284)	S	N	N	Mgmt
NPR 8705.6	2.2.2.08	42285	The Chief Safety and Mission Assurance Officer shall: Request the Center to identify participants to act as audit liaisons and to facilitate assistance from the Center SMA organization. (Requirement 42285)	S	N	N	Mgmt
NPR 8705.6	2.2.2.09	42286	The Chief Safety and Mission Assurance Officer shall: Conduct follow-up activities to verify implementation of effective corrective and preventive actions for Headquarters IFO SMA Audit findings. (Requirement 42286)	S	N	N	Mgmt
NPR 8705.6	2.2.2.10	42287	The Chief Safety and Mission Assurance Officer shall: Provide feedback of IFO SMA Audit results and corrective actions to affected/applicable institutional offices within Headquarters organizations.	S	N	N	Mgmt
NPR 8705.6	2.2.3.1	42289	The NASA Chief Engineer shall: Ensure that relevant program Chief Engineer(s) supports the OSMA Review and Assessment Division by explicitly defining and documenting the applicable IFO BRS and the associated OQE. (Requirement 42289)	S	N	N	Mgmt
NPR 8705.6	2.2.3.2	42290	The NASA Chief Engineer shall: Assist the Chief Safety and Mission Assurance Officer in defining the applicable IFO BRS. (Requirement 42290)	S	N	N	Mgmt
NPR 8705.6	2.2.4.1	42292	The Associate Administrator for Institutions and Management shall: Assist the Chief Safety and Mission Assurance Officer in selecting the pertinent set of requirements for audit from the IFO BRS. (Requirement 42292)	S	N	N	Mgmt
NPR 8705.6	2.2.5.1	42294	Center Directors shall: Provide the necessary review materials to facilitate the audit planning stage of the IFO SMA Audit. (Requirement 42294)	S	N	N	Mgmt
NPR 8705.6	2.2.5.2	42295	Center Directors shall: Identify and provide subject matter experts to the OSMA as requested for Headquarters-led IFO SMA Audit activities. (Requirement 42295)	S	N	N	Mgmt
NPR 8705.6	2.2.5.3	42296	Center Directors shall: Provide the logistic and resource support required for successful execution of Center-led IFO SMA Audit activities. (Requirement 42296)	S	N	N	Mgmt
NPR 8705.6	2.2.5.4	42297	Center Directors shall: In concert with the Center SMA Director and applicable facility or project manager, provide a Corrective Action Plan to the OSMA for resolution of Headquarters-led IFO SMA Audit findings within 60 calendar days of the audit. (Requirement 42297)	S	N	N	Mgmt
NPR 8705.6	2.2.5.5	42298	Center Directors shall: Present periodic status of IFO SMA Audit corrective actions to the Chief Safety and Mission Assurance Officer or designee every 60 calendar days thereafter until all findings have been closed. (Requirement 42298)	S	N	N	Mgmt
NPR 8705.6	2.2.6.1	42300	Center SMA Directors shall: Support and participate in the IFO SMA Audit process. (Requirement 42300)	S	N	N	Mgmt
NPR 8705.6	2.2.6.1.1	42301	Center SMA Directors shall: Incorporate IFO SMA Audit activities into Center SMA plans. (Requirement 42301)	S	N	N	Mgmt
NPR 8705.6	2.2.6.1.2	42302	Center SMA Directors shall: Provide to the IFO SMA Audit Team Leader all necessary review materials to facilitate the planning and execution of the IFO SMA Audit. (Requirement 42302)	S	N	N	Mgmt
NPR 8705.6	2.2.6.1.3	42303	Center SMA Directors shall: Identify to the IFO SMA Audit Team Leader other relevant IFO audits, reviews, or assessments that may have previously verified compliance with requirements. (Requirement 42303)	S	N	N	Mgmt

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NPR 8705.6	2.2.6.1.4	42304	Center SMA Directors shall: Provide logistic and resource support required for the execution of the IFO SMA Audit Plan. (Requirement 42304)	S	N	N	Mgmt
NPR 8705.6	2.2.6.1.5	42305	Center SMA Directors shall: Coordinate with Center procurement and Center institutions, facilities, and/or operations personnel to ensure that contracts provide for adequate contractor support of Headquarters-led and Center-led IFO SMA Audit activities. (Requirement 42305)	S	N	N	Mgmt
NPR 8705.6	2.2.6.1.6	42306	Center SMA Directors shall: Prepare and present a Closed-loop Corrective Action Plan to the Chief Safety and Mission Assurance Officer or designee for resolution of Headquarters-led IFO SMA Audit findings. (Requirement 42306)	S	N	N	Mgmt
NPR 8705.6	2.2.6.1.7	42307	Center SMA Directors shall: Submit a Closed-loop Corrective Action Plan to the Center Director for resolution of Center-led IFO SMA Audit findings. (Requirement 42307)	S	N	N	Mgmt
NPR 8705.6	2.2.6.2	42308	Center SMA Directors shall: Establish a Center-led IFO SMA Audit process by planning, obtaining Center funds, and executing Center-based IFO SMA Audits to verify organizational compliance with institutional, facility, operational, and SMA process and technical requirements. (Requirement 42308)	S	N	N	Mgmt
NPR 8705.6	2.2.6.3	42309	Center SMA Directors shall: Present status of Headquarters-led IFO SMA Audit corrective actions to the Chief Safety and Mission Assurance Officer or designee every 60 calendar days thereafter until all findings have been closed. (Requirement 42309)	S	N	N	Mgmt
NPR 8705.6	2.2.7.1	42311	Center Organizations with responsibility for institutions, facilities, or operations shall: Incorporate IFO SMA Audit activities into program/project plans. (Requirement 42311)	S	N	N	Mgmt
NPR 8705.6	2.2.7.2	42312	Center Organizations with responsibility for institutions, facilities, or operations shall: Support the audit plan by providing program/project logistic and resource support required for successful execution of and response to the IFO SMA Audit. (Requirement 42312)	S	N	N	Mgmt
NPR 8705.6	2.2.7.3	42313	Center Organizations with responsibility for institutions, facilities, or operations shall: Coordinate with Center SMA and Center procurement to ensure that contracts provide for adequate contractor support of Headquarters-led and Center-led IFO SMA Audit activities. (Requirement 42313)	S	N	N	Mgmt
NPR 8705.6	2.2.7.4	42314	Center Organizations with responsibility for institutions, facilities, or operations shall: Provide a Closed-loop Corrective Action Plan to the OSMA for resolution of Headquarters-led IFO SMA Audit findings within 60 calendar days of the audit. (Requirement 42314)	S	N	N	Mgmt
NPR 8705.6	2.2.8.1	42316	SMA Managers (matrixed/assigned to the Program/Project Manager) shall: Support the IFO SMA Audit by providing the IFO SMA Audit Team Leader the necessary review materials to facilitate the audit planning stage. (Requirement 42316)	S	N	N	Mgmt
NPR 8705.6	2.2.8.2	42317	SMA Managers (matrixed/assigned to the Program/Project Manager) shall: Identify to the IFO SMA Audit Team Leader any other relevant audits, reviews, or assessments that may have previously verified compliance with requirements. (Requirement 42317)	S	N	N	Mgmt
NPR 8705.6	2.2.8.3	42318	SMA Managers (matrixed/assigned to the Program/Project Manager) shall: In concert with the Center Director, Center SMA Director, and Program/Project Manager, provide a Closed-loop Corrective Action Plan to the OSMA within 60 calendar days for resolution of Headquarters-led IFO SMA Audit findings. (Requirement 42318)	S	N	N	Mgmt
NPR 8705.6	2.2.9.1	42320	Headquarters- or Center-led IFO SMA Audit Team Leader shall: Develop and execute the IFO SMA Audit Plan, including: (Requirement 42320)	S	N	N	Mgmt
NPR 8705.6	2.2.9.1.1	42321	Headquarters- or Center-led IFO SMA Audit Team Leader shall: Develop and execute the IFO SMA Audit Plan, including: Coordinate the audit with the organization to be audited by identifying the general scope of the audit and the expected start and finish dates. (Requirement 42321)	S	N	N	Mgmt
NPR 8705.6	2.2.9.1.2	42322	Headquarters- or Center-led IFO SMA Audit Team Leader shall: Develop and execute the IFO SMA Audit Plan, including: Recruit subject matter experts to be audit team members. (Requirement 42322)	S	N	N	Mgmt
NPR 8705.6	2.2.9.1.2.1	42323	Headquarters- or Center-led IFO SMA Audit Team Leader shall: Develop and execute the IFO SMA Audit Plan, including: Audit team members shall be independent of the organization or program/project being audited. (Requirement 42323)	S	N	N	Mgmt
NPR 8705.6	2.2.9.1.2.2	42324	Headquarters- or Center-led IFO SMA Audit Team Leader shall: Develop and execute the IFO SMA Audit Plan, including: Subject matter experts will be recruited from NASA Headquarters and Center organizations with IFO SMA policy/procedures responsibilities and may also include other government agency experts.	S	N	N	Mgmt
NPR 8705.6	2.2.9.1.3	42325	Headquarters- or Center-led IFO SMA Audit Team Leader shall: Develop and execute the IFO SMA Audit Plan, including: Ensure that each team member is qualified to conduct the IFO SMA Audit; i.e., has requisite institutional, facility, and operational SMA experience and training. (Requirement 42325)	S	N	N	Mgmt
NPR 8705.6	2.2.9.2	42326	Headquarters- or Center-led IFO SMA Audit Team Leader shall: Provide findings in a formal report to the appropriate Center Director, SMA Director, Program Manager, and affected institutional organization. (Requirement 42326)	S	N	N	Mgmt
NPR 8705.6	2.2.9.3	42327	Headquarters- or Center-led IFO SMA Audit Team Leader shall: Ensure that appropriate records of audit activities are maintained. (Requirement 42327)	S	N	N	Mgmt
NPR 8705.6	2.2.9.4	42328	Headquarters- or Center-led IFO SMA Audit Team Leader shall: Ensure that each auditor collects and documents the OQE verifying the Center meets the IFO BRS appropriate to the audit objective(s). Note: Information derived from IFO SMA Audits often contains lessons learned and best practices. Headquarters- or Center-led IFO SMA Audit Team Leaders may share this information via appropriate Web-based resources; e.g. Lessons Learned Information System (LLIS), Process Based Mission Assurance-Knowledge Management System (PBMA-KMS). (Requirement 42328)	S	N	N	Mgmt
NPR 8705.6	3.2.01.1	42346	The Agency Associate Administrator shall: Ensure that Centers implement the applicable programmatic BRS. (Requirement 42346)	S	N	N	Mgmt
NPR 8705.6	3.2.01.2	42347	The Agency Associate Administrator shall: Ensure that Centers support the PA&R processes described in this document. (Requirement 42347)	S	N	N	Mgmt
NPR 8705.6	3.2.02.1	42349	Associate Administrators for Mission Directorates shall: Ensure that programs/projects under the Mission Directorate implement the applicable programmatic BRS. (Requirement 42349)	S	N	N	Mgmt
NPR 8705.6	3.2.02.2	42350	Associate Administrators for Mission Directorates shall: Ensure that programs/projects under the Mission Directorate are prepared to support the PA&R process described in this document. (Requirement 42350)	S	N	N	Mgmt
NPR 8705.6	3.2.03.1	42352	The Chief Safety and Mission Assurance Officer shall: Identify programs/projects requiring a Headquarters-led PA&R. The determination will be based on general criteria including such factors as size, complexity, visibility, cost, risk, and human rating. (Requirement 42352)	S	N	N	Mgmt
NPR 8705.6	3.2.03.2	42353	The Chief Safety and Mission Assurance Officer shall: Assist in defining the applicable programmatic BRS and associated OQE. (Requirement 42353)	S	N	N	Mgmt

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NPR 8705.6	3.2.03.3	42354	The Chief Safety and Mission Assurance Officer shall: Implement and execute the Headquarters-led PA&R process for selected programs/projects in concert with the appropriate Center SMA organization(s) to provide assurance that the program/project has complied with the applicable programmatic BRS. (Requirement 42354)	S	N	N	Mgmt
NPR 8705.6	3.2.03.4	42355	The Chief Safety and Mission Assurance Officer shall: For multi-Center programs/projects, identify the lead SMA organization for coordination of Headquarters-led PA&R process activities and implementation of Center-led PA&R process activities. (Requirement 42355)	S	N	N	Mgmt
NPR 8705.6	3.2.03.5	42356	The Chief Safety and Mission Assurance Officer shall: Employ Center-based SMA independent assessment groups as a resource to conduct Headquarters-led programmatic audits, reviews, and assessments in accordance with the PA&R process defined herein. (Requirement 42356)	S	N	N	Mgmt
NPR 8705.6	3.2.03.6	42357	The Chief Safety and Mission Assurance Officer shall: Coordinate the direct supply chain audits/reviews conducted by the Agency Supplier Assurance Contract in support of the PA&R process. (Requirement 42357)	S	N	N	Mgmt
NPR 8705.6	3.2.03.7	42358	The Chief Safety and Mission Assurance Officer shall: Provide appropriate Mission Directorates, Program/Project Managers, and other independent assessment organizations with current PA&R implementation plans and schedules. (Requirement 42358)	S	N	N	Mgmt
NPR 8705.6	3.2.03.8	42359	The Chief Safety and Mission Assurance Officer shall: Provide an auditor selection and screening process to ensure that potential audit/review team members have the requisite program/project, subject matter, and auditor experience and competency to participate in PA&R onsite audits and reviews. (Requirement 42359)	S	N	N	Mgmt
NPR 8705.6	3.2.03.9	42360	The Chief Safety and Mission Assurance Officer shall: Establish a PA&R records management system compliant with NPD 1440.6, NASA Records Management. (Requirement 42360)	S	N	N	Mgmt
NPR 8705.6	3.2.04.1	42362	The NASA Chief Engineer shall: Ensure that program Chief Engineers support the OSMA in defining and documenting the applicable programmatic BRS and associated OQE. (Requirement 42362)	S	N	N	Mgmt
NPR 8705.6	3.2.05.1	42364	Center Directors shall: Provide the necessary Center support to the PA&R process. (Requirement 42364)	S	N	N	Mgmt
NPR 8705.6	3.2.05.2	42365	Center Directors shall: Identify and provide Center subject matter experts to the OSMA, as requested, to support Headquarters-led PA&R process activities. (Requirement 42365)	S	N	N	Mgmt
NPR 8705.6	3.2.05.3	42366	Center Directors shall: Establish and support Center-led PA&R process activities by providing the logistic and resource support required for successful planning and execution of the PA&R process at the Center. (Requirement 42366)	S	N	N	Mgmt
NPR 8705.6	3.2.05.4	42367	Center Directors shall: In concert with the Center SMA Director, Program/Project Manager, and Program/Project SMA Manager, provide a Closed-loop Corrective Action Plan to the OSMA for resolution of Headquarters-led PA&R findings within 60 calendar days of the completion of the audit/review. (Requirement 42367)	S	N	N	Mgmt
NPR 8705.6	3.2.05.5	42368	Center Directors shall: Present periodic status of all PA&R process corrective actions to the Chief Safety and Mission Assurance Officer or designee every 60 calendar days thereafter until all findings have been close. (Requirement 42368)	S	N	N	Mgmt
NPR 8705.6	3.2.06.1	42370	Center SMA Directors shall: Support and participate in Headquarters-led PA&R process activities. (Requirement 42370)	S	N	N	Mgmt
NPR 8705.6	3.2.06.1.1	42371	Center SMA Directors shall: Incorporate Headquarters-led PA&R process activities into Center SMA plans. (Requirement 42371)	S	N	N	Mgmt
NPR 8705.6	3.2.06.1.2	42372	Center SMA Directors shall: Provide to the PA&R Audit/Review Lead all necessary review materials to facilitate the planning and execution of the Headquarters-led audit/review. (Requirement 42372)	S	N	N	Mgmt
NPR 8705.6	3.2.06.1.3	42373	Center SMA Directors shall: Submit a copy of the most recent applicable Center-led PA&R report(s) to the OSMA sufficiently in advance of Headquarters-led PA&R process activities to facilitate review, planning, and execution of such activities. (Requirement 42373)	S	N	N	Mgmt
NPR 8705.6	3.2.06.1.4	42374	Center SMA Directors shall: In concert with the Center Director, Program/Project Manager, and Program/Project SMA Manager, prepare and present a Closed-loop Corrective Action Plan to the Chief Safety and Mission Assurance Officer or designee for resolution of Headquarters-led PA&R findings within 60 calendar days of the completion of the audit/review. (Requirement 42374)	S	N	N	Mgmt
NPR 8705.6	3.2.06.1.5	42375	Center SMA Directors shall: In concert with the Center Director, present periodic status of Headquarters-led PA&R corrective actions to the Chief Safety and Mission Assurance Officer or designee every 60 calendar days thereafter until the findings are closed. (Requirement 42375)	S	N	N	Mgmt
NPR 8705.6	3.2.06.2	42376	Center SMA Directors shall: Implement a Center-led PA&R process, consistent with the elements outlined in paragraph 3.1.5, by planning and executing Center-managed and/or Center-located activities to provide: 1) requirements flow-down verification; 2) assessment of program/project SMA process capability; 3) independent verification of in-process work discipline and compliance with requirements based on OQE; and 4) communication of attendant SMA residual risk to the program/project and to OSMA. (Requirement 42376)	S	N	N	Mgmt
NPR 8705.6	3.2.06.2.1	42377	Center SMA Directors shall: Incorporate Center-led PA&R process activities into Center SMA plans. (Requirement 42377)	S	N	N	Mgmt
NPR 8705.6	3.2.06.2.2	42378	Center SMA Directors shall: Support the Center-led PA&R process with the appropriate logistic and resource support required for successful execution of required audits/reviews. (Requirement 42378)	S	N	N	Mgmt
NPR 8705.6	3.2.06.2.3	42379	Center SMA Directors shall: Provide to the PA&R Audit/Review Lead all necessary review materials to facilitate the planning and execution of the Center-led audit/review. (Requirement 42379)	S	N	N	Mgmt
NPR 8705.6	3.2.06.2.4	42380	Center SMA Directors shall: In concert with the Program/Project Manager and Program/Project SMA Manager, prepare and present a Closed-loop Corrective Action Plan to the Center Director for resolution of Center-led PA&R findings within 60 calendar days of the audit/review. (Requirement 42380)	S	N	N	Mgmt
NPR 8705.6	3.2.06.2.5	42381	Center SMA Directors shall: Present periodic status of Center-led PA&R corrective actions to the Center Director and provide periodic status to the Chief Safety and Mission Assurance Officer or designee. (Requirement 42381)	S	N	N	Mgmt
NPR 8705.6	3.2.06.3	42382	Center SMA Directors shall: Coordinate with program/project management and Center procurement to ensure that contracts provide for adequate contractor support of Headquarters-led and Center-led PA&R process activities.	S	N	N	Mgmt

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NPR 8705.6	3.2.09.1	42396	Other Independent Assessment organizations shall: Communicate and coordinate their program or project audit/review plans, schedules, and findings with OSMA Review and Assessment Division to minimize duplication and overlap among the various independent assessment activities. Note: This includes, but is not limited to, the Office of Program Analysis and Evaluation, Independent Verification and Validation (IV&V) Facility, and NASA Engineering and Safety Center (NESC). (Requirement 42396)	S	N	N	Mgmt
NPR 8705.6	3.2.10.1	42398	Headquarters-led or Center-led PA&R Audit/Review Lead shall: Develop and execute the PA&R audit/review plan. (Requirement 42398)	S	N	N	Mgmt
NPR 8705.6	3.2.10.2	42399	Headquarters-led or Center-led PA&R Audit/Review Lead shall: For each PA&R audit/review, coordinate with the specific Program/Project Manager by supplying notification of the general scope of the audit/review and the expected start and finish dates. (Requirement 42399)	S	N	N	Mgmt
NPR 8705.6	3.2.10.3	42400	Headquarters-led or Center-led PA&R Audit/Review Lead shall: Recruit appropriate subject matter experts to be audit/review team members. (Requirement 42400)	S	N	N	Mgmt
NPR 8705.6	3.2.10.4	42401	Headquarters-led or Center-led PA&R Audit/Review Lead shall: Ensure audit/review team members are independent of the program/project being audited. (Requirement 42401)	S	N	N	Mgmt
NPR 8705.6	3.2.10.5	42402	Headquarters-led or Center-led PA&R Audit/Review Lead shall: Ensure that all team members are qualified to conduct programmatic audits, reviews, and assessments; i.e., have the requisite program/project, subject matter and auditor experience and competency. (Requirement 42402)	S	N	N	Mgmt
NPR 8705.6	3.2.10.6	42403	Headquarters-led or Center-led PA&R Audit/Review Lead shall: Develop a program/project-specific audit/review guide to support the onsite audit/review. (Requirement 42403)	S	N	N	Mgmt
NPR 8705.6	3.2.10.7	42404	Headquarters-led or Center-led PA&R Audit/Review Lead shall: Conduct the onsite audit/review and ensure that records of all audit/review activities are maintained; specifically, ensure that each auditor collects/documents evidence that the program/project meets the applicable programmatic BRS relevant to the audit/review objectives. Acceptable OQE includes the following: (Requirement 42404)	S	N	N	Mgmt
NPR 8705.6	3.2.10.8	42409	Headquarters-led or Center-led PA&R Audit/Review Lead shall: Provide findings in a formal report to the participating Mission Directorate, Center Director, SMA Director, Program Manager, and Program Risk Management Officer for disposition of findings. Note: Information derived from PA&R activities often contains lessons learned and best practices. Headquarters- or Center-led PA&R Audit/Review Lead may share this information via appropriate Web-based resources; e.g., LLIS, PBMA-KMS. (Requirement 42409)	S	N	N	Mgmt
NPR 8705.6	4.1.6	42422	Objective: A record of each Headquarters SMARR shall be prepared and maintained by the OSMA Review and Assessment Division for six years after mission completion. (Requirement 42422)	S	N	N	Mgmt
NPR 8705.6	4.2.1.1	42425	The Agency Associate Administrator shall: Ensure that Centers support the SMARR processes described in this document. (Requirement 42425)	S	N	N	Mgmt
NPR 8705.6	4.2.2.1	42427	Associate Administrators for Mission Directorates shall: Ensure that programs and projects within the Mission Directorate support the SMARR requirements described in this document. (Requirement 42427)	S	N	N	Mgmt
NPR 8705.6	4.2.3.1	42429	The Chief Safety and Mission Assurance Officer shall: Direct the conduct of a SMARR for any high-risk program or project activity requiring Mission Directorate-level or higher decision to proceed, and, as necessary, to ensure the safety and mission success of program or project activities. (Requirement 42429)	S	N	N	Mgmt
NPR 8705.6	4.2.3.2	42430	The Chief Safety and Mission Assurance Officer shall: Chair each Headquarters-led SMARR and conduct a poll of selected SMARR participants for a recommendation to proceed. (Requirement 42430)	S	N	N	Mgmt
NPR 8705.6	4.2.4.1	42432	Center Directors shall: Provide the logistic and resource support required for successful execution of the Headquarters- and Center-led SMARR activities. (Requirement 42432)	S	N	N	Mgmt
NPR 8705.6	4.2.5.1	42434	Center SMA Directors shall: Participate in the Headquarters-led SMARR process for each program/project applicable to their Center. (Requirement 42434)	S	N	N	Mgmt
NPR 8705.6	4.2.5.2	42435	Center SMA Directors shall: Direct the implementation of a Center-led SMARR process for any major milestone event or program line management operational review chaired below the Agency Directorate level in which the Center SMA organization is asked to concur/nonconcur and capitalize on a Headquarters-led SMARR to meet the intent of the Center-led SMARR, if applicable. (Requirement 42435)	S	N	N	Mgmt
NPR 8705.6	4.2.5.3	42436	Center SMA Directors shall: Chair each Center-led SMARR and conduct a poll of selected SMARR participants for a recommendation to proceed. (Requirement 42436)	S	N	N	Mgmt
NPR 8705.6	4.2.5.4	42437	Center SMA Directors shall: Include an assurance process analysis and an SMA residual risk-centric approach to assessing program/project readiness prior to a critical milestone in Center-led SMARRs. (Requirement 42437)	S	N	N	Mgmt
NPR 8705.6	4.2.5.5	42438	Center SMA Directors shall: Ensure that the basic elements of a Center-led SMARR, at a minimum, address the Headquarters-led SMARR elements and, to the extent possible, parallel Headquarters-led SMARR residual risk reporting formats. (Requirement 42438)	S	N	N	Mgmt
NPR 8705.6	4.2.5.6	42439	Center SMA Directors shall: Coordinate with program/project management and Center procurement to ensure that contracts provide for adequate contractor support of Headquarters-led and Center-led SMARR activities. (Requirement 42439)	S	N	N	Mgmt
NPR 8705.6	4.2.8.1	42450	Other Independent Assessment organizations shall: Identify program/project assessments conducted by their respective organizations, summarize, and provide them to the OSMA Review and Assessment Division to ensure that the Chief Safety and Mission Assurance Officer has all relevant data at the SMARR and to avoid duplication of effort on the part of other independent assessment organizations. (Requirement 42450)	S	N	N	Mgmt
NPR 8705.6	4.2.8.2	42451	Other Independent Assessment organizations shall: Identify any issues or SMA residual risks related to their respective assessments. (Requirement 42451)	S	N	N	Mgmt
NPR 8705.6	4.2.8.3	42452	Other Independent Assessment organizations shall: Identify any areas where the findings of the independent assessments differ from the program/project assessment. (Requirement 42452)	S	N	N	Mgmt
NPR 8705.6	4.2.8.4	42453	Other Independent Assessment organizations shall: Participate, as applicable, in SMARR polling described in paragraph 4.2.3.2. (Requirement 42453)	S	N	N	Mgmt
NPR 8705.6	4.2.8.5	42454	Other Independent Assessment organizations shall: Complete SMARR action items as assigned. (Requirement 42454)	S	N	N	Mgmt
NPR 8705.6	4.2.9.1	42456	The OSMA Review and Assessment Division SMARR Manager shall: Coordinate with the OSMA Mission Manager, Center-based SMA managers, and independent assessment organizations (e.g., IV&V Facility, NESC) to identify participants for the review. (Requirement 42456)	S	N	N	Mgmt

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NPR 8705.6	4.2.9.2	42457	The OSMA Review and Assessment Division SMARR Manager shall: Coordinate with the OSMA Mission Manager, Center-based SMA managers, and independent assessment organizations (e.g., IV&V Facility, NESO) to establish an appropriate schedule and agenda for the upcoming SMARR. (Requirement 42457)	S	N	N	Mgmt
NPR 8705.6	4.2.9.3	42458	The OSMA Review and Assessment Division SMARR Manager shall: Coordinate with the program/project SMA Managers to establish the team members for the SMARR polling group in coordination with the Chief Safety and Mission Assurance Officer. (Requirement 42458)	S	N	N	Mgmt
NPR 8705.6	4.2.9.4	42459	The OSMA Review and Assessment Division SMARR Manager shall: Maintain and update, based on operational experience, detailed SMARR process documentation and work instructions. (Requirement 42459)	S	N	N	Mgmt
NPR 8715.3C	0.P.04.bi	45467	PREFACE: REFERENCES: Air Force AFOSH Standard 48-12, Health Hazard Control for Laser Operations.	U	N	N	Safety
NPR 8715.3C	01.02.1	45565	Institutional and Programmatic Safety Requirements: NASA General Safety Program Roles and Responsibilities: Per NPD 1000.3, The NASA Organization, Mission Directorate Associate Administrators, through their project managers, and Center Directors, through their line managers, are responsible for the safety of their assigned personnel, facilities, and mission systems. Toward that end, they shall establish a safety program that adheres to the following principles: (Requirement 45565)	S	N	N	Mgmt
NPR 8715.3C	01.02.1.j	45576	Institutional and Programmatic Safety Requirements: NASA General Safety Program Roles and Responsibilities: Ensure that an interagency review and approval process is implemented for the use of radioactive materials in spacecraft to avoid unacceptable radiation exposure for normal or abnormal conditions, including launch aborts with uncontrolled return to Earth (See Chapter 6). (Requirement 45576)	S	N	N	Mgmt
NPR 8715.3C	01.03.1.b	45583	Institutional and Programmatic Safety Requirements: Public Safety: Center Directors, project managers, supervisors and NASA employees shall: Disallow non-NASA (either by contractors or visitors) research and development operations (under grants or cooperative agreements) that interfere with or damage NASA facilities or operations or threaten the health and safety of NASA personnel. (Requirement 45583)	S	N	N	Mgmt
NPR 8715.3C	01.03.2.a	45585	Institutional and Programmatic Safety Requirements: Public Safety: Center SMA Directors Shall: Require non-NASA research and development personnel and operations exposed to hazardous operations on NASA property to follow all Federal, NASA, and Center safety precautions and to procure needed protective clothing and equipment at their own expense. (Requirement 45585)	S	N	N	Mgmt
NPR 8715.3C	01.03.2.b	45586	Institutional and Programmatic Safety Requirements: Public Safety: Center SMA Directors shall: Assure non-NASA research and development personnel operating or using potentially hazardous NASA equipment have received required training and are certified as qualified operators in accordance with Chapter 7 of this NPR. (Requirement 45586)	S	N	N	Mgmt
NPR 8715.3C	01.04.1.a	45591	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: The Chief Health and Medical Officer shall: Terminate any NASA operation considered an immediate health hazard. (Requirement 45591)	S	N	N	Mgmt
NPR 8715.3C	01.04.1.b	45592	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: The Chief Health and Medical Officer shall: When termination occurs, immediately notify affected Center offices (Requirement 45592).	S	N	N	Mgmt
NPR 8715.3C	01.04.2.a	45594	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: The Director, Safety and Assurance Requirements Division, OSMA, shall: Establish and develop the overall NASA safety program policy and priorities. (Requirement 45594)	S	N	N	Mgmt
NPR 8715.3C	01.04.2.b	45595	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: The Director, Safety and Assurance Requirements Division, OSMA, shall: Serve as the senior safety official for the Agency and exercise functional management authority over all NASA safety and risk management activities. (Requirement 45595)	S	N	N	Mgmt
NPR 8715.3C	01.04.2.c	45596	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: The Director, Safety and Assurance Requirements Division, OSMA, shall: Terminate any operation that presents an immediate and unacceptable risk to personnel, property, or mission operations. (Requirement 45596)	S	N	N	Mgmt
NPR 8715.3C	01.04.2.d	45597	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: The Director, Safety and Assurance Requirements Division, OSMA, shall: When termination occurs, immediately notify affected Center and Mission Directorate officials. (Requirement 45597)	S	N	N	Mgmt
NPR 8715.3C	01.04.3.a	45599	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center directors shall: Be responsible for safety at NASA facilities. (Requirement 45599)	S	N	N	Mgmt
NPR 8715.3C	01.04.3.b	45600	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Place their safety organization at a level that ensures the safety review function can be conducted independently. (Requirement 45600)	S	N	N	Mgmt
NPR 8715.3C	01.04.3.c(1)	45601	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Designate a senior manager as the Center safety and health officer and the safety program implementation authority. (Requirement 45601)	S	N	N	Mgmt
NPR 8715.3C	01.04.3.d.1	45604	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Ensure that: Adequate resources (personnel and budget) are provided to support mishap prevention efforts (Requirement 45604).	S	N	N	Mgmt
NPR 8715.3C	01.04.3.d.2	45605	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center directors shall: Ensure that: Resource control is independent from any influence that would affect the independence of the advice, counsel, and services provided (Requirement 45605).	S	N	N	Mgmt
NPR 8715.3C	01.04.3.e(1)	45606	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center directors shall: Ensure that the policies, plans, procedures, and standards that define the characteristics of their safety program are established, documented, maintained, communicated, and implemented (Requirement 45606).	S	N	N	Mgmt
NPR 8715.3C	01.04.3.f	45608	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Ensure that the development, implementation, and maintenance of an effective safety and health program are in compliance with NASA, Federal, State, and local requirements. (Requirement 45608)	S	N	N	Mgmt

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NPR 8715.3C	01.04.3.g	45609	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Ensure the establishment of an effective system safety program based on a continuous risk assessment process to include the development of safety requirements early in the planning phase, the implementation of those requirements during the acquisition, development, and operational phases, and the use of a scenario-based risk assessment and tracking system to maintain the status of risks during the process. See Chapter 2. (Requirement 45609)	S	N	N	Mgmt
NPR 8715.3C	01.04.3.h	45610	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Ensure that all NASA operations and operations performed on NASA property are performed in accordance with existing safety standards, consensus national standards (e.g., ANSI, NFPA), or special supplemental or alternative standards when there are no known applicable standards. (Requirement 45610)	S	N	N	Mgmt
NPR 8715.3C	01.04.3.i.1	45611	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Ensure that for hazardous NASA operations, procedures are developed for the following circumstances: to provide an organized and systematic approach to identify and control risks (Requirement 45611).	S	N	N	Mgmt
NPR 8715.3C	01.04.3.i.2	45612	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Ensure that for hazardous NASA operations, procedures are developed for the following circumstances: when equipment operations, planned or unplanned, are hazardous or constitute a potential launch, test, vehicle, or payload processing constraint (Requirement 45612).	S	N	N	Mgmt
NPR 8715.3C	01.04.3.i.3	45613	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Ensure that for hazardous NASA operations, procedures are developed for the following circumstances: when an operation is detailed or complicated and there is reasonable doubt that it can be performed correctly without written procedures (Requirement 45613). (See Chapter 3 of this NPR for requirements for hazardous operating procedures.)	S	N	N	Mgmt
NPR 8715.3C	01.04.3.j	45614	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Ensure that an aviation safety program that meets the specific operational needs of their Center is established and maintained to comply with national standards and NASA directives and requirements. (Requirement 45614) (See Chapter 4.)	S	N	N	Mgmt
NPR 8715.3C	01.04.3.k(1)	45615	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Ensure that safety lessons learned are disseminated and included in Center communication media to improve the understanding of hazards and risks, the prevention of mishaps, and to suggest better ways of implementing system safety programs (Requirement 45615).	S	N	N	Mgmt
NPR 8715.3C	01.04.3.L(1)	45617	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Inform personnel of the availability of the NASA Safety Reporting System (NSRS) at their Center. (Requirement 45617)	S	N	N	Mgmt
NPR 8715.3C	01.04.3.m	45621	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Assist with the investigation of NSRS reports. (Requirement 45621)	S	N	N	Mgmt
NPR 8715.3C	01.04.3.n	45622	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Ensure that all facilities are designed, constructed, and operated in accordance with applicable/approved codes, standards, procedures, and requirements. (Requirement 45622) (See Chapters 8 and 9.)	S	N	N	Mgmt
NPR 8715.3C	01.04.3.o	45623	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Ensure that the safety responsibilities of each organizational element are defined and accomplished. (Requirement 45623)	S	N	N	Mgmt
NPR 8715.3C	01.04.3.p	45624	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Ensure that line managers incorporate safety and health requirements into the planning, support and oversight of hosted programs, projects, and operations as part of their management function. (Requirement 45624)	S	N	N	Mgmt
NPR 8715.3C	01.04.3.q	45625	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Evaluate and document the incorporation of safety and health requirements into the planning and support of hosted programs, projects, and operations in senior managers' performance evaluations. (Requirement 45625)	S	N	N	Mgmt
NPR 8715.3C	01.04.3.r	45626	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Ensure a qualified safety workforce is available to perform the safety function. (Requirement 45626)	S	N	N	Mgmt
NPR 8715.3C	01.04.3.s(1)	45627	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Ensure that properly equipped and trained personnel are provided to perform or support potentially hazardous or critical technical operations. (Requirement 45627)	S	N	N	Mgmt
NPR 8715.3C	01.04.3.t	45629	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center directors shall: Ensure that SMA risk-based acquisition management requirements are included in procurement, design, development, fabrication, test, or operations of equipment and facilities (Requirement 45629).	S	N	N	Mgmt
NPR 8715.3C	01.04.3.u(1)	45630	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Analyze and utilize nonconformance and process control data as feedback in the assessment and management of technical risk. (Requirement 45630)	S	N	N	Mgmt
NPR 8715.3C	01.04.3.v(1)	45632	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Ensure that qualitative and quantitative risk assessment results, hazard controls and risk mitigation strategies are not negated when accounting for the analysis of nonconformance and process control data in the assessment and management of technical risk (Requirement 45632).	S	N	N	Mgmt
NPR 8715.3C	01.04.3.v(2)	45633	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: center Directors shall: Note: Quality assurance requirements are provided in NPD 8730.5, NASA Quality Assurance Program Policy.	S	N	N	Mgmt

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NPR 8715.3C	01.04.3.w	45634	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Ensure the results of contractor safety and health provision evaluations are provided to the award fee boards for use in fee determination. (Requirement 45634)	S	N	N	Mgmt
NPR 8715.3C	01.04.3.x(1)	45635	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Ensure that the Governance Model is being implemented in the procurement process for the acquisition of hardware, software, services, materials, and equipment. (Requirement 45635) (See Chapter 9.)	S	N	N	Mgmt
NPR 8715.3C	01.04.3.y(1)	45637	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Pursue and obtain, within two years, certification under the Occupational Safety and Health Administration (OSHA) Voluntary Protection Program (VPP) or through an equivalent recognized occupational safety certification program. (Requirement 45637)	S	N	N	Mgmt
NPR 8715.3C	01.04.3.y(2)	45638	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Note: The OSHA VPP is established by 5 U.S.C. section 7902; 29 U.S.C. section 651 et seq.; 49 U.S.C. section 1421, the Occupational Safety and Health Act of 1970, as amended, to assure every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources by encouraging employers and employees to reduce the number of occupational safety and health hazards at their work places and to institute new (and to perfect existing) programs for providing safe and healthful working conditions. (Requirement 45638)	S	N	N	Mgmt
NPR 8715.3C	01.04.3.z	45639	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors shall: Ensure their safety organization (or its support contractors) has access to certified safety professionals meeting the requirements of the OSHA VPP. (Requirement 45639)	S	N	N	Mgmt
NPR 8715.3C	01.04.4(1)	45640	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Center Directors and line managers shall ensure that up-to-date configuration control is maintained on all assigned equipment and systems. (Requirement 45640)	S	N	N	Mgmt
NPR 8715.3C	01.04.5.a	45643	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Line Managers and supervisors are accountable for the safety and health of their assigned personnel. To that end, they shall: Ensure employee safety and health training is completed by employees pursuant to the requirements of the job to be performed. (Requirement 45643)	S	N	N	Mgmt
NPR 8715.3C	01.04.5.b	45644	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Line Managers and supervisors are accountable for the safety and health of their assigned personnel. To that end, they shall: Ensure that safety is included in the employee's performance plan objectives. (Requirement 45644)	S	N	N	Mgmt
NPR 8715.3C	01.04.5.c	45645	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Line Managers and supervisors are accountable for the safety and health of their assigned personnel. To that end, they shall: Encourage safe performance through safety and health incentive awards programs or other institutional programs establishing the safety organization. (Requirement 45645)	S	N	N	Mgmt
NPR 8715.3C	01.04.6.a	45647	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Supervisors shall: Incorporate measurable leading safety and health performance criteria in line managers' performance plans. (Requirement 45647)	S	N	N	Mgmt
NPR 8715.3C	01.04.6.b	45648	Institutional and Programmatic Safety Requirements: Institutional Roles and Responsibilities in the NASA Safety Program: Supervisors shall: Evaluate and document achievement of the measureable safety and health performance criteria in the line manager's performance evaluations. (Requirement 45648)	S	N	N	Mgmt
NPR 8715.3C	01.05.2	45651	Institutional and Programmatic Safety Requirements: Program Management Roles and Responsibilities in the NASA Safety Program: Project managers shall ensure that the SMA Plan: (Requirement 45651)	U	N	N	Mgmt
NPR 8715.3C	01.05.2.f	45657	Institutional and Programmatic Safety Requirements: Program Management Roles and Responsibilities in the NASA Safety Program: Project Managers shall ensure that the SMA Plan: As a minimum, addresses the following topics and associated requirements: (Requirement 45657)	U	N	N	Mgmt
NPR 8715.3C	01.06.1.1.a(2)	45673	Institutional and Programmatic Safety Requirements: Risk Assessment and Risk Acceptance: Risk Assessment: Project managers for flight systems and line managers for institutional systems shall: Note: Requirements for risk management are provided per NPR 8000.4, Risk Management Procedural Requirements; requirements for probabilistic risk assessments are provided per NPR 8705.5, Probabilistic Risk Assessment (PRA) Procedures for NASA Programs and Projects.	U	N	N	Mgmt
NPR 8715.3C	01.07.1.1	45688	Institutional and Programmatic Safety Requirements: Technical Safety Requirements for NASA-Unique Designs and Operations: Risk Reduction Protocol: Project managers shall ensure that hazards are mitigated according to the following stated order of precedence: (Requirement 45688)	U	N	N	Mgmt
NPR 8715.3C	01.08.2.a	45728	Institutional and Programmatic Safety Requirements: SMA Program Reviews: Center Directors shall ensure that The Center's safety program is formally assessed annually. (Requirement 45728)	S	N	N	Mgmt
NPR 8715.3C	01.08.2.b(1)	45729	Institutional and Programmatic Safety Requirements: SMA Program Reviews: Center Directors shall ensure that The Center's annual safety program assessment is conducted by competent and qualified personnel. (Requirement 45729)	S	N	N	Mgmt
NPR 8715.3C	01.08.3.a	45732	Institutional and Programmatic Safety Requirements: SMA Program Reviews: Center Directors shall ensure that the Center's formal annual assessment has the following elements: A formal assessment report that includes a discussion of the safety posture of the Center and each program reviewed. (Requirement 45732)	S	N	N	Mgmt
NPR 8715.3C	01.08.3.b	45733	Institutional and Programmatic Safety Requirements: SMA Program Reviews: Center Directors shall ensure that the Center's formal annual assessment has the following elements: An assessment of the effectiveness of safety program management. (Requirement 45733)	S	N	N	Mgmt
NPR 8715.3C	01.08.3.c	45734	Institutional and Programmatic Safety Requirements: SMA Program Reviews: Center Directors shall ensure that the Center's formal annual assessment has the following elements: A safety culture survey that includes at least the management and communications functions of the Performance Evaluation Profile (PEP) survey. (Requirement 45734)	S	N	N	Mgmt

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NPR 8715.3C	01.08.3.d	45735	Institutional and Programmatic Safety Requirements: SMA Program Reviews: Center Directors shall ensure that the Center's formal annual assessment has the following elements: An assessment of safety program documentation (e.g., plans, procedures, monitoring data). (Requirement 45735)	S	N	N	Mgmt
NPR 8715.3C	01.08.3.e	45736	Institutional and Programmatic Safety Requirements: SMA Program Reviews: Center Directors shall ensure that the Center's formal annual assessment has the following elements: An assessment of the adequacy of safety standards and procedures. (Requirement 45736)	S	N	N	Mgmt
NPR 8715.3C	01.08.3.f	45737	Institutional and Programmatic Safety Requirements: SMA Program Reviews: Center Directors shall ensure that the Center's formal annual assessment has the following elements: Interviews of key facility and/or program personnel. (Requirement 45737)	S	N	N	Mgmt
NPR 8715.3C	01.08.3.g	45738	Institutional and Programmatic Safety Requirements: SMA Program Reviews: Center Directors shall ensure that the Center's formal annual assessment has the following elements: Observations and inspections of workplace compliance with safety practices. (Requirement 45738)	S	N	N	Mgmt
NPR 8715.3C	01.08.3.h	45739	Institutional and Programmatic Safety Requirements: SMA Program Reviews: Center Directors shall ensure that the Center's formal annual assessment has the following elements: Identification of deficiencies in the safety program. (Requirement 45739)	S	N	N	Mgmt
NPR 8715.3C	01.08.3.i	45740	Institutional and Programmatic Safety Requirements: SMA Program Reviews: Center Directors shall ensure that the Center's formal annual assessment has the following elements: The development of formal plans of actions and milestones to correct all open deficiencies that shall be tracked to completion including interim controls that will be implemented if the hazard cannot be immediately corrected. (Requirement 45740)	S	N	N	Mgmt
NPR 8715.3C	01.08.3.j	45741	Institutional and Programmatic Safety Requirements: SMA Program Reviews: Center Directors shall ensure that the Center's formal annual assessment has the following elements: Assessment and verification of corrective actions from previous assessments. (Requirement 45741)	S	N	N	Mgmt
NPR 8715.3C	01.08.3.k	45742	Institutional and Programmatic Safety Requirements: SMA Program Reviews: Center Directors shall ensure that the Center's formal annual assessment has the following elements: Evaluation of the implementation of 5 U.S.C. section 7902; 29 U.S.C. section 651 et seq.; 49 U.S. C. section 1421, the Occupational Safety and Health Act of 1970, as amended; E.O. 12196, Occupational Safety and Health Programs for Federal Employees dated February 26, 1980, as amended; OSHA regulations at 29 CFR Part 1910, Occupational Safety and Health Standards; and other pertinent Federally-mandated requirements. (Requirement 45742)	S	N	N	Mgmt
NPR 8715.3C	01.08.4	45743	Institutional and Programmatic Safety Requirements: SMA Program Reviews: Center Directors shall ensure that periodic training is conducted for Center safety personnel on safety program assessments covering prereview, review, and postreview procedures and requirements. (Requirement 45743)	S	N	N	Mgmt
NPR 8715.3C	01.09.3.1(1)	45750	Institutional and Programmatic Safety Requirements: Advisory Panels, Committees, and Boards: OEP: The Chief, Safety and Mission Assurance, shall establish and maintain an OEP. (Requirement 45750)	S	N	N	Mgmt
NPR 8715.3C	01.09.3.2(1)	45752	Institutional and Programmatic Safety Requirements: Advisory Panels, Committees, and Boards: OEP: The OEP shall evaluate processes and systems for assuring the continuing operational integrity of NASA test facilities, operations, and engineering technical support systems, address problems and issues at Centers, and provide recommendations to the Chief, Safety and Mission Assurance. (Requirement 45752)	S	N	N	Mgmt
NPR 8715.3C	01.09.6	45757	Institutional and Programmatic Safety Requirements: Advisory Panels, Committees, and Boards: Center Directors and the Chief, Safety and Mission Assurance, shall have the authority to establish ad hoc committees to provide safety oversight review of programs, projects, and other activities. (Requirement 45757)	S	N	N	Mgmt
NPR 8715.3C	01.10.1(1)	45759	Institutional and Programmatic Safety Requirements: Coordination with Organizations External to NASA: The Chief, Safety and Mission Assurance, in coordination with the Office of External Relations (for exchanges with the Department of Defense (DoD), intelligence agencies, and foreign entities) and in consultation with the NASA Office of the General Counsel, shall establish guidelines for exchanging safety information with organizations external to NASA. (Requirement 45759)	S	N	N	Mgmt
NPR 8715.3C	01.10.2(1)	45761	Institutional and Programmatic Safety Requirements: Coordination with Organizations External to NASA: NASA shall encourage participation by NASA safety professionals in outside safety-related professional organizations. (Requirement 45761)	S	N	N	Mgmt
NPR 8715.3C	01.11.1(1)	45764	Institutional and Programmatic Safety Requirements: Safety Motivation and Awards Program: The Chief, Safety and Mission Assurance shall establish a Safety Motivation and Awards Program that recognizes the safety achievements of NASA and other Federal Government employees supporting NASA objectives in all occupational categories and grade levels. (Requirement 45764)	S	N	N	Mgmt
NPR 8715.3C	01.12.1.a	45772	Institutional and Programmatic Safety Requirements: Safety Management Information: Center Directors shall provide or make accessible to the OSMA (through an Internet Web site): Center executive safety committee or board documentation (e.g., minutes and reports). (Requirement 45772)	S	N	N	Mgmt
NPR 8715.3C	01.12.1.b	45773	Institutional and Programmatic Safety Requirements: Safety Management Information: Center Directors shall provide or make accessible to the OSMA (through an Internet Web site): Results of external (such as OSHA) safety program management reviews. (Requirement 45773)	S	N	N	Mgmt
NPR 8715.3C	01.12.1.c(1)	45774	Institutional and Programmatic Safety Requirements: Safety Management Information: Center Directors shall provide or make accessible to the OSMA (through an Internet Web site): Top-level center or program safety procedure documents that implement Headquarters requirements. (Requirement 45774)	S	N	N	Mgmt
NPR 8715.3C	01.12.1.c(2)	45775	Institutional and Programmatic Safety Requirements: Safety Management Information: Center Directors shall provide or make accessible to the OSMA (through an Internet Web site): Note: Electronic versions or Web addresses are acceptable and should be forwarded in conjunction with the data. (Requirement 45775)	U	N	N	Mgmt
NPR 8715.3C	01.12.1.d	45776	Institutional and Programmatic Safety Requirements: Safety Management Information: Center Directors shall provide or make accessible to the OSMA (through an Internet Web site): Copies of safety variances granted at the Center (see paragraph 1.13). (Requirement 45776)	S	N	N	Mgmt
NPR 8715.3C	01.12.2	45777	Institutional and Programmatic Safety Requirements: Safety Management Information: The Chief of Strategic Communications shall provide or make accessible (through Internet Web site), to the OSMA, copies of comment sent to outside regulatory agencies (e.g., OSHA, Department of Transportation (DOT), Environmental Protection Agency (EPA)) concerning proposed rule-making that could affect the NASA Safety Program. (Requirement 45777)	S	N	N	Mgmt

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NPR 8715.3C	01.12.3	45778	Institutional and Programmatic Safety Requirements: Safety Management Information: Center SMA Directors shall maintain a census of Government and contract employees performing safety, reliability, maintainability and quality functions (engineering, operations, and assurance) by organization or contractor company at their sites. (Requirement 45778)	S	N	N	Mgmt
NPR 8715.3C	01.12.4	45779	Institutional and Programmatic Safety Requirements: Safety Management Information: Cos and COTRs shall ensure that the census of employees performing safety, reliability, maintainability, and quality functions (engineering, operations, and assurance) by organization is a requirement under contracts. (Requirement 45779)	S	N	N	Mgmt
NPR 8715.3C	1.13	45780	Institutional and Programmatic Safety Requirements: Safety Variances	U	N	N	Safety
NPR 8715.3C	01.13.5.a	45801	Institutional and Programmatic Safety Requirements: Safety Variances: Center SMA Directors shall: Assist programs/projects in the preparation of variance requests. (Requirement 45801)	S	N	N	Mgmt
NPR 8715.3C	01.13.5.b	45802	Institutional and Programmatic Safety Requirements: Safety Variances: Center SMA Directors shall: Assure that the risk associated with a variance request is properly characterized (quantitatively or qualitatively) and that any increase in overall risk (as compared to a system or operation designed to meet the requirement in question) is properly indentified. (Requirement 45802)	S	N	N	Mgmt
NPR 8715.3C	01.13.5.c	45803	Institutional and Programmatic Safety Requirements: Safety Variances: Center SMA Directors shall: Assure that the variance process is carried out in accordance with this NPR. (Requirement 45803)	S	N	N	Mgmt
NPR 8715.3C	01.13.5.d(1)	45804	Institutional and Programmatic Safety Requirements: Safety Variances: Center SMA Directors shall: Concur (or nonconcur) with variance requests based on paragraphs 1.13.5.b and 1.13.5.c. above. (Requirement 45804)	S	N	N	Mgmt
NPR 8715.3C	01.13.6.a	45807	Institutional and Programmatic Safety Requirements: Safety Variances: The Chief, Safety and Mission Assurance, shall: Serve as the approving official for variances to program-level safety, reliability, and quality requirements under SMA cognizance (ownership). (Requirement 45807)	S	N	N	Mgmt
NPR 8715.3C	01.13.6.b	45808	Institutional and Programmatic Safety Requirements: Safety Variances: The Chief, Safety and Mission Assurance, shall: Oversee Center/project/program implementation of the variance policy and associated requirements provided in this NPR. (Requirement 45808)	S	N	N	Mgmt
NPR 8715.3C	01.13.6.c	45809	Institutional and Programmatic Safety Requirements: Safety Variances: The Chief, Safety and Mission Assurance, shall: Review all requests for variance to Federal, State, or local regulations before submittal to the Federal/State/local agency for approval. (Requirement 45809)	S	N	N	Mgmt
NPR 8715.3C	01.13.7	45810	Institutional and Programmatic Safety Requirements: Safety Variances: The Chief Engineer shall serve as the approving official for variances to program level technical requirements under OCE cognizance (ownership). (Requirement 45810)	S	N	N	Mgmt
NPR 8715.3C	01.13.8	45811	Institutional and Programmatic Safety Requirements: Safety Variances: The Chief Health and Medical Officer shall serve as the approving official for variances to program level requirements under Chief Health and Medical Officer cognizance (ownership). (Requirement 45811)	S	N	N	Mgmt
NPR 8715.3C	02.2.2	45819	System Safety: Institutional Roles and Responsibilities: Center Directors, through their Center SMA Directors, shall ensure that knowledgeable system safety and technical risk analysts are made available to program/project managers and Center engineering directors to define and conduct system safety activities, including assurance of prime contractor system safety activities. (Requirement 45819)	S	N	N	Mgmt
NPR 8715.3C	02.5.1.2.a	45897	System Safety: Core Requirements for System Safety Processes: System Safety Technical Plan (SSTP): The Center SMA Director shall: In coordination with the program/project manager, assign a System Safety Manager to have specific responsibility for the development and implementation of the SSTP. (Requirement 45897)	S	N	N	Safety
NPR 8715.3C	02.5.1.2.b	45898	System Safety: Core Requirements for System Safety Processes: System Safety Technical Plan (SSTP): The Center SMA Director shall: Ensure that the assigned System Safety Manager has demonstrated expertise in safety analysis including, in the case of Category I and II projects, the application of probabilistic risk assessment techniques. (Requirement 45898)	S	N	N	Safety
NPR 8715.3C	02.5.1.2.c	45899	System Safety: Core Requirements for System Safety Processes: System Safety Technical Plan (SSTP): The Center SMA Director shall: Ensure that all personnel with project safety oversight responsibilities are funded by other than direct project funding sources. (Requirement 45899)	S	N	N	Safety
NPR 8715.3C	03.01.1	45981	Operational Safety: Purpose and Objectives: Center Directors shall conduct safety inspections of all facilities, occupied or unoccupied, at least annually to ensure compliance with safety, fire protection, and building codes and standards. (Requirement 45981)	S	N	N	Mgmt
NPR 8715.3C	03.02.1	45983	Operational Safety: Motor Vehicle Safety: Center Directors shall ensure that motor vehicle operating procedures comply with Federal, State, and local motor vehicle safety regulations. (Requirement 45983)	S	N	N	Mgmt
NPR 8715.3C	03.02.2.1.a	45986	Operational Safety: Motor Vehicle Safety: Motor Vehicle Operation: Operators of motor vehicles on NASA property or operating a NASA vehicle both on and off NASA property shall: Not drive a motor vehicle for a continuous period of more than 10 hours, including a combination of personal driving and driving for official NASA business. (Requirement 45986)	S	N	N	Mgmt
NPR 8715.3C	03.02.2.1.b	45987	Operational Safety: Motor Vehicle Safety: Motor Vehicle Operation: Operators of motor vehicles on NASA property or operating a NASA vehicle both on and off NASA property shall: Not drive a motor vehicle for a combined duty period that exceeds 12 hours in any 24-hour period, without at least 8 consecutive hours of rest. (Requirement 45987)	S	N	N	Mgmt
NPR 8715.3C	03.02.2.1.c	45988	Operational Safety: Motor Vehicle Safety: Motor Vehicle Operation: Operators of motor vehicles on NASA property or operating a NASA vehicle both on and off NASA property shall: Not use hand-held communication devices while the vehicle is motion except for emergency, security, and fire vehicles during official operations. (Requirement 45988) Note: This includes cell phones, UHF radios, or other hand-held wireless communication devices. When there are two individuals traveling in an emergency, security, or fire vehicle during official operations, the passenger should be the person to use the hand-held communication device.	S	N	N	Mgmt
NPR 8715.3C	03.02.2.1.d	45989	Operational Safety: Motor Vehicle Safety: Motor Vehicle Operation: Operators of motor vehicles on NASA property or operating a NASA vehicle both on and off NASA property shall: Ensure that children unable to use seat belts while in Federal vehicles are secured in DOT-approved child safety seats that are properly installed. (Requirement 45989)	S	N	N	Mgmt
NPR 8715.3C	03.02.2.1.e	45990	Operational Safety: Motor Vehicle Safety: Motor Vehicle Operation: Operators of motor vehicles on NASA property or operating a NASA vehicle both on and off NASA property shall: Have formal training, as required in paragraph 7.3.1 of this NPR, if operation of the vehicle involves skills beyond those associated with normal, everyday operation of private motor vehicles. (Requirement 45990)	S	N	N	Mgmt

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NPR 8715.3C	03.02.2.2	45991	Operational Safety: Motor Vehicle Safety: Motor Vehicle Operation: Center Directors shall ensure that any variation from the above policy safety office approval. (Requirement 45991)	S	N	N	Mgmt
NPR 8715.3C	03.02.2.3	45992	Operational Safety: Motor Vehicle Safety: Motor Vehicle Operation: Center Directors shall ensure that all NASA motor vehicles used off NASA Centers are inspected to the standards of the State or other jurisdiction's vehicle safety inspection requirements. (Requirement 45992)	S	N	N	Mgmt
NPR 8715.3C	03.02.3.1.a	45995	Operational Safety: Motor Vehicle Safety: Seat Belts: Center Directors shall ensure that: Center policy requires passengers not be carried in the cargo area of pickup trucks, flatbeds, or special purpose equipment such as fire trucks or escape trucks unless designated occupant positions with seat belts are provided (see 49 CFR Part 571 Federal Motor Vehicle Safety Standards) (Requirement 45995)	S	N	N	Mgmt
NPR 8715.3C	03.02.3.1.b	45996	Operational Safety: Motor Vehicle Safety: Seat Belts: Center Directors shall ensure that: Center policy requires the use of seat belts for all occupants of motor vehicles operated on NASA property, including delivery vans and trucks of all sizes, at all times the vehicle is in motion. (Requirement 45996)	S	N	N	Mgmt
NPR 8715.3C	03.02.4.1.a	45999	Operational Safety: Motor Vehicle Safety: Annual Seat Belt Report: Director, Safety and Assurance Requirements Division, shall: Prepare and submit an annual status report to the Secretary of Transportation on NASA-wide seat belt use. (Requirement 45999) Note: Required by EO 13043, Increasing Seat Belt Use in the United States, dated April 16, 1997, as amended. The annual report includes seat belt usage rates and statistics of crashes, injuries, and related costs involving Federal employees on official business. DOT consolidates this data into an annual status report to the President for all Federal agencies.	S	N	N	Mgmt
NPR 8715.3C	03.02.4.1.b	46000	Operational Safety: Motor Vehicle Safety: Annual Seat Belt Report: Director, Safety and Assurance Requirements Division, shall: Coordinate data for the annual report with the Office of Institutions and Management and the OCHMO. (Requirement 46000) Note: The format and submittal date for the report will be directed each year by the Secretary of Transportation.	S	N	N	Mgmt
NPR 8715.3C	03.02.5.1	46002	Operational Safety: Motor Vehicle Safety: Traffic Control Devices and Markings: Center Directors shall use the ANSI D6.1, Manual on Uniform Traffic Control Devices for Streets and Highways, for guidance when setting traffic control devices or marking roads for motor vehicle operations on NASA property. (Requirement 46002)	S	N	N	Mgmt
NPR 8715.3C	03.03.5.a	46018	Operational Safety: Personal Protective Equipment (PPE): Center Directors shall: Issue PPE to NASA employees at Government expense in those situations where engineering controls, management controls, or other corrective actions have not reduced the hazard to an acceptable level or where use of engineering controls, management controls, or other techniques is not feasible. (Requirement 46018)	S	N	N	Mgmt
NPR 8715.3C	03.03.5.c	46020	Operational Safety: Personal Protective Equipment (PPE): Center Directors shall: Ensure that only clothing and equipment meeting Federal regulations, industrial standards, or NASA special testing requirements are used for PPE. (Requirement 46020) Note: Transients or visitors may be furnished PPE on a temporary basis if they are on site for NASA-related business purposes or at NASA's invitation.	S	N	N	Mgmt
NPR 8715.3C	03.03.5.d	46021	Operational Safety: Personal Protective Equipment (PPE): Center Directors shall: Ensure that non-NASA, contractor, and noncontractor personnel at their Center procure their own PPE to provide an equivalent level of safety. (Requirement 46021)	S	N	N	Mgmt
NPR 8715.3C	03.03.5.e	46022	Operational Safety: Personal Protective Equipment (PPE): Center Directors shall: Ensure that non-NASA, contractor, and noncontractor personnel at their Center provide the appropriate training, fit testing, and compliance with other Federal, State, Local and NASA PPE requirements. (Requirement 46022)	S	N	N	Mgmt
NPR 8715.3C	03.03.5.f	46023	Operational Safety: Personal Protective Equipment (PPE): Center Directors shall: Have a formal Respiratory Protection Program if respirators are used at their Center. (Requirement 46023) Note: The OCHMO at NASA Headquarters provides guidance for purchasing, training, selection, and qualification for use of respiratory protective devices and other health-related PPE.	S	N	N	Mgmt
NPR 8715.3C	03.03.7	46025	Operational Safety: Personal Protective Equipment (PPE): NASA hosts, guides, or area supervisors shall be responsible for obtaining, issuing, and recovering PPE issued to transients or visitors onsite for NASA-related business purposes or at NASA's invitation. (Requirement 46025)	S	N	N	Mgmt
NPR 8715.3C	03.04.2	46028	Operational Safety: Control of Hazardous Energy (Lockout/Tagout Program): Center Directors shall establish a program for controlling hazardous energy during service and maintenance operations where unexpected energizing or startup of equipment could cause injury to employees or equipment damage. (Requirement 46028)	S	N	N	Mgmt
NPR 8715.3C	03.06.1.a	46035	Operational Safety: Electrical Safety: Center Directors shall ensure that: Electrical systems are designed in accordance with NFPA 70, National Electric Code, MIL-454, Standard General Requirements for Electronic Equipment, or Center-specific requirements if more specific. (Requirement 46035)	S	N	N	Mgmt
NPR 8715.3C	03.06.1.b	46036	Operational Safety: Electrical Safety: Center Directors shall ensure that: Electrical systems are operated and maintained to adequately control hazards likely to cause death or serious physical harm or severe system damage. (Requirement 46036)	S	N	N	Mgmt
NPR 8715.3C	03.06.1.c	46037	Operational Safety: Electrical Safety: Center Directors shall ensure that: All electrical systems are reviewed by the Center's safety office for appropriate location and proximity to ignitable or combustible material such as gas, vapor, dust, or fiber (Requirement 46037)	S	N	N	Mgmt
NPR 8715.3C	03.06.1.d	46038	Operational Safety: Electrical Safety: Center Directors shall ensure that: All electrical work deemed hazardous by job safety analysis is performed by personnel familiar with electrical code requirements in accordance with NFPA 70E, Standard for Electrical Safety in the Workplace, and qualified/certified for the class of work to be performed (Requirement 46038)	S	N	N	Mgmt
NPR 8715.3C	03.06.1.e	46039	Operational Safety: Electrical Safety: Center Directors shall ensure that: Transformer banks or high-voltage equipment (600+ volts) are protected by an enclosure to prevent unauthorized access with metallic enclosures being grounded. (Requirement 46039)	S	N	N	Mgmt
NPR 8715.3C	03.06.1.f	46040	Operational Safety: Electrical Safety: Center Directors shall ensure that: Entrances to enclosed transformer banks or high-voltage equipment (600+ volts) not under constant observation are kept locked. (Requirement 46040)	S	N	N	Mgmt
NPR 8715.3C	03.06.1.g	46041	Operational Safety: Electrical Safety: Center Directors shall ensure that: Signs warning of high voltage and prohibiting unauthorized entrance are posted at entrances and on the perimeter of enclosed transformer banks or high-voltage equipment (600+ volts). (Requirement 46041)	S	N	N	Mgmt

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NPR 8715.3C	03.06.1.h	46042	Operational Safety: Electrical Safety: Center Directors shall ensure that: An authorized access list of qualified personnel is maintained for enclosed transformer banks and high-voltage equipment (600+ volts). (Requirement 46042)	S	N	N	Mgmt
NPR 8715.3C	03.06.1.i	46043	Operational Safety: Electrical Safety: Center Directors shall ensure that: Inductive floors or others methods are used where electrostatic discharge is a significant hazard to personnel or hardware. (Requirement 46043)	S	N	N	Mgmt
NPR 8715.3C	03.06.2.a	46045	Operational Safety: Electrical Safety: Supervisors shall ensure that: No person works alone with high-voltage electricity. (Requirement 46045)	S	N	N	Mgmt
NPR 8715.3C	03.06.2.b	46046	Operational Safety: Electrical Safety: Supervisors shall ensure that: One person, trained to recognize electrical hazards, is delegated to watch the movements of other personnel working electrical equipment to warn them if they get dangerously close to live conductors or perform unsafe acts and to assist in the event of a mishap. (Requirement 46046)	S	N	N	Mgmt
NPR 8715.3C	03.07.5.1.a	46054	Operational Safety: Hazardous Material Transportation, Storage, and Use: Transporting Hazardous Material: Center Directors shall ensure: That the mode of transportation is inspected to the standards of the Federal Highway Administration, U.S. Coast Guard, Department of Transportation, and Federal Railroad Administration. (Requirement 46054)	S	N	N	Mgmt
NPR 8715.3C	03.07.5.1.b	46055	Operational Safety: Hazardous Material Transportation, Storage, and Use: Transporting Hazardous Material: Center Directors shall ensure: That all contractor motor vehicles, rail cars, boats, ships covered by NASA Bill of Lading and used for the transportation of hazardous material have passed an inspection prior to loading to assure that the vehicle or vessel is in safe mechanical condition. (Requirement 46055)	S	N	N	Mgmt
NPR 8715.3C	03.07.5.1.c	46056	Operational Safety: Hazardous Material Transportation, Storage, and Use: Transporting Hazardous Material: Center Directors shall ensure: That all vehicles transporting hazardous materials on NASA and public roadways display all DOT-required placards, lettering, or numbering. (Requirement 46056)	S	N	N	Mgmt
NPR 8715.3C	03.07.5.1.d	46057	Operational Safety: Hazardous Material Transportation, Storage, and Use: Transporting Hazardous Material: Center Directors shall ensure: That hazardous material defined in 49 CFR Part 171.8, Hazardous Material Regulations, Definitions, and Abbreviations, is not transported in NASA administrative aircraft. (Requirement 46057) NOTE: To ensure hazardous material is not inadvertently loaded on administrative aircraft, all cargo for shipment should be routed through the Center's transportation office or, if en route, cargo should be accepted only from a certified shipper or freight forwarding agency.	S	N	N	Mgmt
NPR 8715.3C	03.07.6.1.a	46060	Operational Safety: Hazardous Material Transportation, Storage, and Use: Hazardous Material Storage, Use, and Disposal Inventories: Center Directors shall ensure: That hazardous material storage, use, and disposal inventories are conducted at least annually. (Requirement 46060)	S	N	N	Mgmt
NPR 8715.3C	03.07.6.1.b	46061	Operational Safety: Hazardous Material Transportation, Storage, and Use: Hazardous Material Storage, Use, and Disposal Inventories: Center Directors shall ensure: That the conditions of materials in storage are assessed at least quarterly, and those determined to be unsuitable for use are removed from active inventory. (Requirement 46061)	S	N	N	Mgmt
NPR 8715.3C	03.07.6.1.d	46063	Operational Safety: Hazardous Material Transportation, Storage, and Use: Hazardous Material Storage, Use, and Disposal Inventories: Center Directors shall ensure: That NASA procurement activities reference 29 CFR Part 1910.1200, Hazard Communication, and Federal Standard 313, Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities, as revised, in commodity specifications, purchase descriptions, purchase orders, contracts, and other purchase documents. (Requirement 46063)	S	N	N	Mgmt
NPR 8715.3C	03.07.6.1.e	46064	Operational Safety: Hazardous Material Transportation, Storage, and Use: Hazardous Material Storage, Use, and Disposal Inventories: Center Directors shall ensure: That electronic, magnetic, optical, or paper copies of all Material Safety Data Sheets (MSDS) are maintained in the work area where the material is being used or stored. (Requirement 46064)	S	N	N	Mgmt
NPR 8715.3C	03.07.6.1.f	46065	Operational Safety: Hazardous Material Transportation, Storage, and Use: Hazardous Material Storage, Use, and Disposal Inventories: Center Directors shall ensure: The employees in work areas where hazardous materials are being used or stored are permitted to view any MSDS sheet maintained on file. (Requirement 46065) Note: The NASA MSDS Inventory is accessible at: http://msds.ksc.nasa.gov .	S	N	N	Mgmt
NPR 8715.3C	03.07.6.2	46066	Operational Safety: Hazardous Material Transportation, Storage, and Use: Hazardous Material Storage, Use, and Disposal Inventories: Receiving offices at each Center shall provide copies of the MSDS for receipt of such commodities to the central office responsible for maintaining the MSDS records. (Requirement 46066) Note: Safety forms and reports are retained per NPR 1441.1, NASA Records Retention Schedules.	S	N	N	Mgmt
NPR 8715.3C	03.08.2.j	46079	Operational Safety: Hazardous Operations: Center Directors and project managers shall: Ensure that personnel other than certified operators are excluded from exposure to hazardous operations that depend on adherence to specific standards, guidelines, and training. (Requirement 46079)	S	N	N	Mgmt
NPR 8715.3C	03.08.3	46081	Operational Safety: Hazardous Operations: Center SMA Directors or their designee shall review and approve HOPs. (Requirement 46081)	S	N	N	Mgmt
NPR 8715.3C	03.09.2.a	46085	Operational Safety: Laboratory Hazards: Center Directors and project managers shall ensure that: The design of laboratories incorporates the requirements of State and Federal codes required for the individual Center (e.g., building, electrical, and fire protection for laboratory facilities). (Requirement 46085)	S	N	N	Mgmt
NPR 8715.3C	03.09.2.b	46086	Operational Safety: Laboratory Hazards: Center Directors and project managers shall ensure that: Escape routes are provided, designed, and marked in accordance with the NFPA 101, Life Safety Code. (Requirement 46086)	S	N	N	Mgmt
NPR 8715.3C	03.09.2.c	46087	Operational Safety: Laboratory Hazards: Center Directors and project managers shall ensure that: Occupational safety and health considerations such as ventilation, shower stalls, and eyewash stations are included in the design of laboratories. (Requirement 46087) Note: For facility acquisition and construction safety requirements, see Chapter 8.	S	N	N	Mgmt
NPR 8715.3C	03.09.2.e	46089	Operational Safety: Laboratory Hazards: Center Directors and project managers shall ensure that: Laboratory facilities and areas with significant quantities of flammable, combustible, corrosive, and toxic liquids, solids, or gases are protected in accordance with provisions of NFPA 45, Standard on Fire Protection for Laboratories Using Chemicals, as modified below. (Requirement 46089)	S	N	N	Mgmt

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NPR 8715.3C	03.09.2.f	46090	Operational Safety: Laboratory Hazards: Center Directors and project managers shall ensure that: Laboratories not using or fitting the above chemical classification, yet housing unique, mission-critical, or high-value research equipment, conform to the provisions of NASA-STD 8719.11, Safety Standard for Fire Protection. (Requirement 46090) Note: In the design of laboratories, special facilities should be considered to ensure the integrity of the terrestrial environment as well as the integrity of biological and physical samples returned from space.	S	N	N	Mgmt
NPR 8715.3C	03.09.2.g	46091	Operational Safety: Laboratory Hazards: Center Directors and project managers shall ensure that: Laboratory designs include additional considerations for biohazards resulting from use or handling of biological materials such as infectious microorganisms, viruses, medical waste, or genetically engineered organisms. (Requirement 46091) Note: See 29 Part CFR 1910.1030, Blood Borne Pathogens, and NPR 1800.1, NASA Occupational Health Program Procedures, for additional details.	S	N	N	Mgmt
NPR 8715.3C	03.09.2.h	46092	Operational Safety: Laboratory Hazards: Center Directors and project managers shall ensure that: Laboratory designs include additional considerations to protect physical samples returned from space against terrestrial contamination and to protect the terrestrial environment against potential biological or toxic hazards due to these samples. (Requirement 46092)	S	N	N	Mgmt
NPR 8715.3C	03.09.3.1.a	46096	Operational Safety: Laboratory Hazards: Chemical and Hazardous Materials: Center Directors and project managers shall ensure that: Laboratories meeting the definition as described in 29 CFR Part 1910.1450, Occupational Exposure to Hazardous Chemicals in Laboratories, are in operated in accordance with chemical hygiene plans. (Requirement 46096)	S	N	N	Mgmt
NPR 8715.3C	03.09.3.1.b	46097	Operational Safety: Laboratory Hazards: Chemical and Hazardous Materials: Center Directors and project managers shall ensure that: Suitable facilities for quick drenching or flushing of the eyes and body of any person exposed to injurious corrosive materials are provided within the work area for immediate emergency use. (Requirement 46097)	S	N	N	Mgmt
NPR 8715.3C	03.09.3.1.c	46098	Operational Safety: Laboratory Hazards: Chemical and Hazardous Materials: Center Directors and project managers shall ensure that: Installation, maintenance, and access to facilities for quick drenching and flushing of the eyes and safety showers are in accordance with ANSI 358.1, Emergency Eyewash and Shower Equipment, latest edition. (Requirement 46098)	S	N	N	Mgmt
NPR 8715.3C	03.09.3.1.d	46099	Operational Safety: Laboratory Hazards: Chemical and Hazardous Materials: Center Directors and project managers shall ensure that: Eyewashes and/or safety showers are located no more that 10 seconds or 50 feet distance away from the hazard source. (Requirement 46099)	S	N	N	Mgmt
NPR 8715.3C	03.09.4.1	46101	Operational Safety: Laboratory Hazards: Solar Simulators: Center Directors and project managers shall ensure that all personnel wear skin and eye protection while in direct view of a bare pressurized arc lamp, whether energized or not, unless the system is locked out or tagged out for maintenance or repair. (Requirement 46101)	S	N	N	Safety
NPR 8715.3C	03.09.5.2	46104	Operational Safety: Laboratory Hazards: Ventilation: Center Directors shall ensure that their occupational health programs assure proper ventilation. (Requirement 46104)	S	N	N	Mgmt
NPR 8715.3C	03.11.3	46111	Operational Safety: Explosive, Propellant, and Pyrotechnic Safety: Center Directors shall designate, in writing, an Explosive Safety Officer (ESO) for explosives, propellant, and pyrotechnic operations at their Center. (Requirement 46111) Note: The Center SMA Director may recommend a candidate for Center ESO, if requested by the Center Director. For specific responsibilities of the ESO, refer to NSS 1740.12, Safety Standard for Explosives, Propellants, and Pyrotechnics.	S	N	N	Mgmt
NPR 8715.3C	03.11.4.a	46113	Operational Safety: Explosive, Propellant, and Pyrotechnic Safety: The ESO shall: Manage the Center Explosives, Propellants and Pyrotechnic Safety Program to assure a robust mishap prevention program is in place. (Requirement 46113)	S	N	N	Mgmt
NPR 8715.3C	03.11.4.b	46114	Operational Safety: Explosive, Propellant, and Pyrotechnic Safety: The ESO shall: Ensure that the Explosives, Propellants, and Pyrotechnic Safety Program meets all Federal, NASA, State, and local requirements. (Requirement 46114)	S	N	N	Mgmt
NPR 8715.3C	03.11.4.c	46115	Operational Safety: Explosive, Propellant, and Pyrotechnic Safety: The ESO shall: Represent the Center Director in this program to help assure that minimum number of required personnel and critical resources are exposed to the minimum amount of explosives for the minimal amount of time for all explosive operations. (Requirement 46115)	S	N	N	Mgmt
NPR 8715.3C	03.11.4.d	46116	Operational Safety: Explosive, Propellant, and Pyrotechnic Safety: The ESO shall: Advise the Center Director on the programmatic health of the Explosives, Propellants, and Pyrotechnic Safety Program. (Requirement 46116)	S	N	N	Mgmt
NPR 8715.3C	03.11.4.e	46117	Operational Safety: Explosive, Propellant, and Pyrotechnic Safety: The ESO shall: Represent the Center Director for all explosives, propellants, and pyrotechnic safety matters. (Requirement 46117)	S	N	N	Mgmt
NPR 8715.3C	03.11.4.f	46118	Operational Safety: Explosive, Propellant, and Pyrotechnic Safety: The ESO shall: Assure oversight of all processes required by NSS 1740.12, Safety Standard for Explosives, Propellants, and Pyrotechnics. (Requirement 46118)	S	N	N	Mgmt
NPR 8715.3C	03.11.4.g	46119	Operational Safety: Explosive, Propellant, and Pyrotechnic Safety: The ESO shall: Review all operating procedures for handling explosives, propellants, and pyrotechnics. (Requirement 46119)	S	N	N	Mgmt
NPR 8715.3C	03.11.4.h	46120	Operational Safety: Explosive, Propellant, and Pyrotechnic Safety: The ESO shall: Review and participate in the development of construction and/or modification plans for facilities or structures containing explosives, propellants, and pyrotechnics. (Requirement 46120)	S	N	N	Mgmt
NPR 8715.3C	03.11.4.i	46121	Operational Safety: Explosive, Propellant, and Pyrotechnic Safety: The ESO shall: Review all locations and routes that provide for the transportation, storage and handling of explosives, propellants, and pyrotechnic materials. (Requirement 46121)	S	N	N	Mgmt
NPR 8715.3C	03.11.4.j	46122	Operational Safety: Explosive, Propellant, and Pyrotechnic Safety: The ESO shall: Provide oversight for staff training and records and participate in the evaluation of selected training programs for explosive, propellant, and pyrotechnic safety. (Requirement 46122) Note: Safety forms and reports are retained per NPR 1441.1, NASA Records Retention Schedules.	S	N	N	Mgmt
NPR 8715.3C	03.11.4.k	46123	Operational Safety: Explosive, Propellant, and Pyrotechnic Safety: The ESO shall: Process and provide inputs for the approval of all explosive-related site plans and review current explosive site plans on an annual basis. (Requirement 46123)	S	N	N	Mgmt
NPR 8715.3C	03.11.4.L	46124	Operational Safety: Explosive, Propellant, and Pyrotechnic Safety: The ESO shall: Manage deviations and waivers in accordance with Chapter 1 of this NPR. (Requirement 46124)	S	N	N	Mgmt

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NPR 8715.3C	03.11.4.m	46125	Operational Safety: Explosive, Propellant, and Pyrotechnic Safety: The ESO shall: Validate, approve, and sign a explosive licenses. (Requirement 46125) Note: As defined in NSS 1740.12, Safety Standard for Explosives, Propellants, and Pyrotechnics: Licensed Explosive Locations - Ammunition and explosive storage locations (not for explosive operations and excluding Hazard Division 1.1 & 1.2), which are normally outside the Center's explosive storage area but within NASA's area of control.	S	N	N	Mgmt
NPR 8715.3C	03.11.4.n	46126	Operational Safety: Explosive, Propellant, and Pyrotechnic Safety: The ESO shall: Review all Memorandums of Agreement associated with explosives, propellant, and pyrotechnic operations. (Requirement 46126) Note: If the ESO represents NASA as a tenant organization, the ESO assures compliance with the host requirements through formal negotiations and documentation of those agreements. If the ESO represents NASA as the Host, the ESO assures compliance with all appropriate elements of this NPR. In all cases, the ESO assures that agreements are formalized to maximize the health and safety of NASA employees and facilities.	S	N	N	Mgmt
NPR 8715.3C	03.11.4.o	46127	Operational Safety: Explosive, Propellant, and Pyrotechnic Safety: The ESO shall: Perform an independent hazard assessment of all laboratories and test facilities having activities that involve the mixing, blending, extruding, synthesizing, assembling, disassembling and other activities involved in the making of a chemical compound, mixture, or device which is intended to explode. (Requirement 46127)	S	N	N	Mgmt
NPR 8715.3C	03.13.2.a	46134	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: The Chief, Safety and Mission Assurance, shall: Establish and oversee the Agency Safety Operations Program elements needed to assure successful implementation of operations safety requirements and assure related concerns are evaluated and resolved. (Requirement 46134)	S	N	N	Mgmt
NPR 8715.3C	03.13.2.b	46135	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: The Chief, Safety and Mission Assurance, shall: Approve and promulgate Agency-level operations safety policy and requirements, including the provisions of this NPR and associated implementation documents. (Requirement 46135)	S	N	N	Mgmt
NPR 8715.3C	03.13.2.c.1	46137	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: The Chief, Safety and Mission Assurance, shall: Designate Agency safety representatives needed to: Monitor preparations for operations to determine compliance with Agency safety policies, processes, and requirements. (Requirement 46137)	S	N	N	Mgmt
NPR 8715.3C	03.13.2.c.2	46138	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: The Chief, Safety and Mission Assurance, shall: Designate Agency safety representatives needed to: Support programs/projects to provide advice and technical support and act as a link to independent engineering, safety, and assessment capabilities. (Requirement 46138)	S	N	N	Mgmt
NPR 8715.3C	03.13.2.c.3	46139	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: The Chief, Safety and Mission Assurance, shall: Designate Agency safety representatives needed to: Maintain cognizance over safety issues that have the potential to be evaluated to NASA Headquarters for resolution. (Requirement 46139)	S	N	N	Mgmt
NPR 8715.3C	03.13.2.c.4	46140	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: The Chief, Safety and Mission Assurance, shall: Designate Agency safety representatives needed to: Provide a concurrence or nonconcurrence on the safety readiness to begin operations when the decision is elevated to NASA Headquarters. (Requirement 46140)	S	N	N	Mgmt
NPR 8715.3C	03.13.2.c.5	46141	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: The Chief, Safety and Mission Assurance, shall: Designate Agency safety representatives needed to: Participate prior to and during operations to communicate the Agency safety position to appropriate program/project officials. (Requirement 46141)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.1.a	46146	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: To accomplish this policy NASA shall: Establish and maintain technical and procedural safety requirements applicable to the design, production, flight-area processing and testing, vehicle integration, flight, and planned recovery of NASA payloads. (Requirement 46146)	U	N	N	Mgmt
NPR 8715.3C	03.13.4.1.b	46147	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: To accomplish this policy NASA shall: Coordinate with U.S. or foreign entities that participate in NASA payload projects as needed to ensure compliance with all safety requirements that apply to each payload. (Requirement 46147)	U	N	N	Mgmt
NPR 8715.3C	03.13.4.1.c	46148	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: To accomplish this policy NASA shall: Incorporate all applicable safety requirements into the overall requirements for each NASA payload, the contracts for any related procurements, and any related cooperative or grant agreements. (Requirement 46148)	U	N	N	Mgmt
NPR 8715.3C	03.13.4.1.d	46149	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: To accomplish this policy NASA shall: Maintain an independent payload safety review and approval process designed to ensure that each NASA payload project implements all applicable safety requirements and to facilitate safety risk management appropriate to each payload. (Requirement 46149)	U	N	N	Mgmt
NPR 8715.3C	03.13.4.2	46150	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: Manned Space Flight Payloads. For payloads that will fly on, or interface with, a manned space launch vehicle, spacecraft or entry vehicle controlled by NASA, Center Directors and program/project managers shall establish the processes and requirements needed to satisfy Paragraph 3.13.4.1 of this NPR. (Requirement 46150) For example: Space Shuttle payloads are subject to NSTS 1700.7, Safety Policy and Requirements for Payloads Using the Space Transportation System; NSTS/ISS 13830, Payload Safety Review and Data Submittal Requirements for Payloads Using the Space Shuttle and International Space Station; and KHB 1700.7, Space Shuttle Payload Ground Safety Handbook.	S	N	N	Mgmt
NPR 8715.3C	03.13.4.3	46151	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: Unmanned Suborbital Payloads. For a payload that will fly on an unmanned suborbital vehicle controlled by NASA (such as a sounding rocket, balloon, or experimental aeronautical vehicle), Center Directors and program/project managers shall establish the processes and requirements needed to satisfy Paragraph 3.13.4.1 of this NPR. (Requirement 46151) For example: The Wallops Flight Facility Range Safety Manual applies to Wallops-controlled suborbital payloads.	S	N	N	Mgmt

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NPR 8715.3C	03.13.4.4	46152	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: Return-to-Earth Payloads. For a payload that will be launched into space and will return to Earth for recovery or purposes other than disposal, Center Directors and program/project managers shall establish the processes and requirements needed to satisfy Paragraph 3.13.4.1 of this NPR for the recovery aspects of the mission. (Requirement 46152) Note: Disposal of space flight hardware is covered by the NASA Orbital Debris Program. See paragraph 3.13.6 of this NPR.	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.1.a	46155	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The Chief, Safety and Mission Assurance, (or designee) shall: Oversee the NASA ELV Payload Safety Program. (Requirement 46155)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.1.b	46156	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The Chief, Safety and Mission Assurance, (or designee) shall: Approve and promulgate Agency-level ELV payload safety policy and requirements, including the provisions of this NPR and associated implementation documents. (Requirement 46156)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.1.c	46157	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The Chief, Safety and Mission Assurance, (or designee) shall: Designate in writing, fund, and provide input to the performance evaluation of the NASA ELV Payload Safety Manager (see paragraph 3.13.4.5.2 of this NPR). (Requirement 46157)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.1.d	46158	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The Chief, Safety and Mission Assurance, (or designee) shall: Designate in writing the members of the NASA ELV Payload Safety Executive Team (see paragraph 3.13.4.5.3 of this NPR). (Requirement 46158)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.2.a	46160	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The NASA ELV Payload Safety Manager shall: Lead the NASA ELV Payload Safety Program and serve as the Agency focal point for all matters involving ELV payload safety, to include managing ELV Payload Safety Program funds and participating in panels, joint working groups, and safety policy initiation or change activities affecting NASA ELV payloads. (Requirement 46160)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.2.b	46161	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The NASA ELV Payload Safety Manager shall: Develop and maintain Agency-level ELV payload safety policy, processes, and requirements in accordance with the applicable Agency directives development processes. (Requirement 46161)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.2.c	46162	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The NASA ELV Payload Safety Manager shall: Develop and administer the safety review and approval process for NASA ELV payloads in coordination with the NASA ELV Payload Safety Executive Team. (Requirement 46162)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.2.d	46163	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The NASA ELV Payload Safety Manager shall: Provide NASA ELV payload projects with guidance on the implementation of the safety policy, processes, and requirements. (Requirement 46163)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.2.e	46164	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The NASA ELV Payload Safety Manager shall: Provide input and guidance to NASA officials responsible for development of ELV payload-related contracts, grants, and cooperative agreements with entities internal and external to NASA, including foreign entities. (Requirement 46164).	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.2.f	46165	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The NASA ELV Payload Safety Manager shall: Report on ELV payload safety concerns to the NASA Headquarters OSMA. (Requirement 46165)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.2.g	46166	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The NASA ELV Payload Safety Manager shall: Perform an audit as an element of the NASA Headquarters SMA Audits, Reviews, and Assessments program defined by NPR 8705.6, Safety and Mission Assurance Audits, Reviews, and Assessments, for the area of ELV payload safety. (Requirement 46166)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.2.h	46167	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The NASA ELV Payload Safety Manager shall: Participate in independent assessments of payload safety processes at NASA Centers, component and range facilities, payload processing facilities (including commercial or contractor facilities used to process NASA ELV payloads), and launch sites. (Requirement 46167)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.2.i	46168	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The NASA ELV Payload Safety Manager shall: Coordinate independent assessment of payload safety processes with audits, reviews, and assessments performed by the OSMA to ensure an effective and efficient overall safety assessment process. (Requirement 46168)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.2.j	46169	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The NASA ELV Payload Safety Manager shall: Open or further enhance communication with U.S. and foreign entities that support NASA ELV payload projects and document partnerships, joint activities, and special arrangements through formal agreements. (Requirement 46169)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.2.k	46170	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The NASA ELV Payload Safety Manager shall: Coordinate safety review activities and actions with the NASA ELV Payload Safety Executive Team, NASA Centers, ELV payload projects, launch vehicle contractors, appropriate Technical Authority official, range safety and other launch site safety organizations, and other U.S. and foreign entities as needed to resolve payload safety concerns and support approval for flight. (Requirement 46170)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.2.L	46171	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The NASA ELV Payload Safety Manager shall: Establish and maintain an ELV payload safety training program to ensure that project and other personnel, as appropriate, are knowledgeable of the NASA ELV payload safety requirements and safety review and approval processes and related activities. (Requirement 46171)	S	N	N	Mgmt

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NPR 8715.3C	03.13.4.5.2.m	46172	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The NASA ELV Payload Safety Manager shall: Provide a forum for technical interchange and lessons learned to include educational conferences and workshops for the benefit of the ELV payload community. (Requirement 46172)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.2.n	46173	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The NASA ELV Payload Safety Manager shall: Track and implement lessons learned for continuous improvement and update policy, processes, and requirements as needed. (Requirement 46173)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.3.a	46175	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The NASA ELV Payload Safety Executive Team shall: Participate in the ELV payload safety review process and approve the safety readiness of NASA ELV payloads, facilities, and related GSE for launch-area processing and launch in coordination with all authorities for each mission. (Requirement 46175)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.3.b	46176	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The NASA ELV Payload Safety Executive Team shall: Support the NASA Safety and Mission Success Review (or equivalent) for each NASA ELV payload mission. (Requirement 46176)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.3.c	46177	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The NASA ELV Payload Safety Executive Team shall: Interpret safety requirements, if requested and support each payload project as needed to ensure proper implementation. (Requirement 46177)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.3.d	46178	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The NASA ELV Payload Safety Executive Team shall: Approve alternative approaches to satisfying a safety requirement in coordination with the appropriate technical authority (or equivalent) responsible for the requirement. (Requirement 46178)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.3.e	46179	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The NASA ELV Payload Safety Executive Team shall: Assess proposed variances to safety requirements and assure that any residual risk associated with a variance is properly characterized. (Requirement 46179)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.3.f	46180	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The NASA ELV Payload Safety Executive Team shall: Coordinate with all variance approval authorities, including the technical authority (or equivalent) responsible for the requirement and the Center Director(s) or other NASA official(s) responsible for people or property exposed to any risk associated with the variance (see the safety variance policy in paragraph 1.13 of this NPR). (Requirement 46180).	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.3.g	46181	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: The NASA ELV Payload Safety Executive Team shall: Coordinate with each range safety and launch site safety organization that shares responsibilities for a NASA ELV payload mission to ensure that any mission-specific decision made by the Executive Team is consistent with NASA's safety requirements and the safety requirements of the other organizations. (Requirement 46181)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.4	46182	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: Each Center Director Responsible for a Payload, Payload Processing Facility, or Launch Site (or designee) shall:	U	N	N	Mgmt
NPR 8715.3C	03.13.4.5.4.a	46183	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: Each Center Director Responsible for a Payload, Payload Processing Facility, or Launch Site (or designee) shall: Establish the Center-level processes and associated requirements needed to ensure Paragraph 3.13.4.1 of this NPR is satisfied for each ELV payload project that uses the Center's resources. (Requirement 46183)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.4.b	46184	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: Each Center Director Responsible for a Payload, Payload Processing Facility, or Launch Site (or designee) shall: Support independent safety assessments of ELV payload activities and respond to all findings and recommendations for which the Center is responsible. (Requirement 46184)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.4.c	46185	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: Each Center Director Responsible for a Payload, Payload Processing Facility, or Launch Site (or designee) shall: Ensure that training defined in 3.13.4.5.2.1 is completed. (Requirement 46185)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.5.a	46187	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: Each ELV Payload Project Manager (or designee) shall: Ensure that funding and other resources are allocated for payload projects to satisfy all aspects of the NASA ELV Payload Safety Program, including proper implementation of the applicable safety requirements and successful completion of the payload safety review and approval process. (Requirement 46187)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.5.b	46188	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: Each ELV Payload Project Manager (or designee) shall: Ensure that the payload project's timeline provides for compliance with the established payload safety review and approval process. (Requirement 46188)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.5.c	46189	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: Each ELV Payload Project Manager (or designee) shall: Establish and implement any project-level processes and requirements needed to satisfy safety requirements and successfully complete the payload safety review and approval process. (Requirement 46189)	S	N	N	Mgmt
NPR 8715.3C	03.13.4.5.6	46190	Operational Safety: Launch, Entry, and Experimental Aeronautical Vehicle Operations Safety: Payload Safety: ELV payloads: Each NASA Contract, Grant, Cooperative Agreement, or Other Agreement Officer shall coordinate with the NASA ELV Payload Safety Manager to ensure that all applicable safety requirements are incorporated into the agreement(s) governing each payload, including compliance with Federal, State, and local requirements relating to safety as specified in NPR 5800.1, Grant and Cooperative Agreement Handbook, and safety requirements pertaining to the use of NASA facilities and equipment. (Requirement 46190)	S	N	N	Mgmt

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NPR 8715.3C	03.14.3.1	46197	Operational Safety: Test Operations Safety: Safety Documentation: Safety documentaion establishes the basis for safe test conduct by means of engineering analyses (including hazard analyses).	U	N	N	Mgmt
NPR 8715.3C	03.14.7.1	46216	Operational Safety: Test Operations Safety: Human Research Subjects: The requirements for the protection of human research subjects are contained in NPD 7100.8, Protection of Human Research Subjects, and 45 CFR Part 46, Protection of Human Subjects.	U	N	N	Mgmt
NPR 8715.3C	03.15.5.1	46240	Operational Safety: Non-Ionizing Radiation: Laser Radiation Safety Officer: The Center SMA Director shall designate a qualified Laser Radiation Safety Officer for their site. (Requirement 46240)	S	N	N	Mgmt
NPR 8715.3C	03.15.5.2.a	46242	Operational Safety: Non-Ionizing Radiation: Laser Radiation Safety Officer: The Laser Radiation Safety Officer shall: Contact the laser safety clearing house to obtain a "Site Window" clearance where a planned laser operation has the potential for the beam to strike an orbiting craft. (Requirement 46242) Note: Clearance is obtained from the Orbital Safety Officer, U.S. Space Command/J3SOO, 1 NORAD Road, Suite 9-101, Cheyenne Mountain AFB, CO 80914-6020, Stop 4, Phone: (719) 474-3056/4404/4444.	S	N	N	Mgmt
NPR 8715.3C	03.15.5.2.b	46243	Operational Safety: Non-Ionizing Radiation: Laser Radiation Safety Officer: The Laser Radiation Safety Officer shall: Review procedures for all tests that use lasers. (Requirement 46243)	S	N	N	Mgmt
NPR 8715.3C	03.15.5.2.c	46244	Operational Safety: Non-Ionizing Radiation: Laser Radiation Safety Officer: The Laser Radiation Safety Officer shall: Be onsite to monitor all laser tests. (Requirement 46244)	S	N	N	Mgmt
NPR 8715.3C	03.15.6.1.a	46247	Operational Safety: Non-Ionizing Radiation: Ground Operations Using Class III-B and IV Lasers: Class III-B and IV laser users shall: Operate III-B and IV lasers only in controlled environments or designated areas that have no unintended reflective or transmitting surfaces. (Requirement 46247)	S	N	N	Mgmt
NPR 8715.3C	03.15.6.1.b	46248	Operational Safety: Non-Ionizing Radiation: Ground Operations Using Class III-B and IV Lasers: Class III-B and IV laser users shall: Post laser operations areas with standard warning placards as set forth in ANSI Z136.1, American National Standard for Safe Use of Lasers. (Requirement 46248)	S	N	N	Mgmt
NPR 8715.3C	03.15.6.1.c	46249	Operational Safety: Non-Ionizing Radiation: Ground Operations Using Class III-B and IV Lasers: Class III-B and IV laser users shall: Ensure that the posted area is isolated to prevent inadvertent entry. (Requirement 46249)	S	N	N	Mgmt
NPR 8715.3C	03.15.6.1.d	46250	Operational Safety: Non-Ionizing Radiation: Ground Operations Using Class III-B and IV Lasers: Class III-B and IV laser users shall: Wear laser goggles or other approved methods of eye protection in accordance with requirements of ANSI Z136.1, American National Standard for Safe Use of Lasers. (Requirement 46250)	S	N	N	Mgmt
NPR 8715.3C	03.15.6.1.e	46251	Operational Safety: Non-Ionizing Radiation: Ground Operations Using Class III-B and IV Lasers: Class III-B and IV laser users shall: Keep all flammable materials/vapors away from any laser during operation unless specifically authorized by the operation/test plan. (Requirement 46251)	S	N	N	Mgmt
NPR 8715.3C	03.15.7.2	46263	Operational Safety: Non-Ionizing Radiation: Airborne Operations Using Class III-B and IV Lasers: The Pilot-in-Command shall ensure that the laser system is used in accordance with the test plan. (Requirement 46263)	S	N	N	Mgmt
NPR 8715.3C	03.17.3	46275	Operational Safety: Confined Spaces: Center Directors shall develop and document a confined space operations plan that, at a minimum, establishes a confined space working group, outlines the confined space permit process and identifies all confined spaces on their Center. (Requirement 46275)	S	N	N	Mgmt
NPR 8715.3C	03.17.4.a	46277	Operational Safety: Confined Spaces: Center Directors and project managers shall ensure that: Entry into permit-required confined spaces is performed with written procedures and authorizations. (Requirement 46277)	S	N	N	Mgmt
NPR 8715.3C	03.17.4.b	46278	Operational Safety: Confined Spaces: Center Directors and project managers shall ensure that: No entry into confined spaces is made until an assessment of that space has been made and a permit or operating procedure is posted. (Requirement 46278)	S	N	N	Mgmt
NPR 8715.3C	03.17.4.c	46279	Operational Safety: Confined Spaces: Center Directors and project managers shall ensure that: All contractors or persons performing work on the Center are notified of all confined spaces. (Requirement 46279)	S	N	N	Mgmt
NPR 8715.3C	04.2.1	46285	Aviation Safety: Aviation Safety Program Responsibilities: Mission Directorate Associate Administrators, Center Directors, project managers, and line managers shall ensure that adequate resources are applied to aviation operations to meet aviation safety objectives. (Requirement 46285)	S	N	N	Mgmt
NPR 8715.3C	04.2.2.a	46287	Aviation Safety: Aviation Safety Program Responsibilities: The Chief, Safety and Mission Assurance, shall: Establish NASA Aviation Safety Program requirements and provide support and functional oversight of NASA aviation safety. (Requirement 46287)	S	N	N	Mgmt
NPR 8715.3C	04.2.2.b	46288	Aviation Safety: Aviation Safety Program Responsibilities: The Chief, Safety and Mission Assurance, shall: When required, provide the NASA Administrator with an independent assessment of NASA's aviation safety status and provide immediate information on critical safety issues. (Requirement 46288) Note: The Aviation Safety Panel (refer to Appendix G) is chartered by the Chief, Safety and Mission Assurance, to assist in the independent oversight of NASA's aviation safety.	S	N	N	Mgmt
NPR 8715.3C	04.2.2.c	46289	Aviation Safety: Aviation Safety Program Responsibilities: The Chief, Safety and Mission Assurance, shall: Conduct reviews (staff assistance visits, safety inspections, and process verifications) to provide insight and to monitor management's effectiveness in aviation safety. (Requirement 46289)	S	N	N	Mgmt
NPR 8715.3C	04.2.2.d	46290	Aviation Safety: Aviation Safety Program Responsibilities: The Chief, Safety and Mission Assurance, shall: Provide technical and operational assistance to improve the overall aviation safety program. (Requirement 46290)	S	N	N	Mgmt
NPR 8715.3C	04.2.2.e	46291	Aviation Safety: Aviation Safety Program Responsibilities: The Chief, Safety and Mission Assurance, shall: Assure that the highly diversified aviation activities within NASA have an Aviation Safety Program at Headquarters that covers each flight activity. (Requirement 46291)	S	N	N	Mgmt
NPR 8715.3C	04.2.2.f	46292	Aviation Safety: Aviation Safety Program Responsibilities: The Chief, Safety and Mission Assurance, shall: Assure Aviation Safety Program requirements are comprehensive and proactive in covering all aspects of flight. (Requirement 46292)	S	N	N	Mgmt
NPR 8715.3C	04.2.2.g	46293	Aviation Safety: Aviation Safety Program Responsibilities: The Chief, Safety and Mission Assurance, shall: Assure that NASA Aviation Safety Program requirements cover each level of aviation management. (Requirement 46293)	S	N	N	Mgmt
NPR 8715.3C	04.2.3	46294	Aviation Safety: Aviation Safety Program Responsibilities: The Director, Safety and Assurance Requirements Division, shall designate the NASA Aviation Safety Manager. (Requirement 46294)	S	N	N	Mgmt

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NPR 8715.3C	04.2.4.a	46296	Aviation Safety: Aviation Safety Program Responsibilities: The NASA Aviation Safety Manager shall: Coordinate all OSMA requirements affecting aviation safety or reporting. (Requirement 46296)	S	N	N	Mgmt
NPR 8715.3C	04.2.4.b	46297	Aviation Safety: Aviation Safety Program Responsibilities: The NASA Aviation Safety Manager shall: Identify aviation safety issues through mishap investigation and analysis. (Requirement 46297)	S	N	N	Mgmt
NPR 8715.3C	04.2.4.c	46298	Aviation Safety: Aviation Safety Program Responsibilities: The NASA Aviation Safety Manager shall: Participate in the annual NASA Aviation Safety Officer meeting. (Requirement 46298)	S	N	N	Mgmt
NPR 8715.3C	04.2.4.d	46299	Aviation Safety: Aviation Safety Program Responsibilities: The NASA Aviation Safety Manager shall: Monitor the implementation of the Agency's Aviation Safety Program requirements. (Requirement 46299)	S	N	N	Mgmt
NPR 8715.3C	04.2.4.e	46300	Aviation Safety: Aviation Safety Program Responsibilities: The NASA Aviation Safety Manager shall: Attend selected program flight readiness and safety reviews. (Requirement 46300)	S	N	N	Mgmt
NPR 8715.3C	04.2.4.f	46301	Aviation Safety: Aviation Safety Program Responsibilities: The NASA Aviation Safety Manager shall: Serve as an advisor to the Inter-Center Aircraft Operations Panel (AOP) and participate in IAOP activities, including meetings, reviews, and subpanel activities. (Requirement 46301)	S	N	N	Mgmt
NPR 8715.3C	04.2.4.g	46302	Aviation Safety: Aviation Safety Program Responsibilities: The NASA Aviation Safety Manager shall: Develop the NASA Aviation Safety Reference Manual and ensure that it is current and meets the needs of NASA. (Requirement 46302)	S	N	N	Mgmt
NPR 8715.3C	04.2.4.h	46303	Aviation Safety: Aviation Safety Program Responsibilities: The NASA Aviation Safety Manager shall: Conduct aviation safety staff assistance visits and reviews. (Requirement 46303)	S	N	N	Mgmt
NPR 8715.3C	04.2.4.i	46304	Aviation Safety: Aviation Safety Program Responsibilities: The NASA Aviation Safety Manager shall: Coordinate recommendations from mishap investigations that require corrective action from sources or agencies outside of NASA. (Requirement 46304)	S	N	N	Mgmt
NPR 8715.3C	04.2.4.j	46305	Aviation Safety: Aviation Safety Program Responsibilities: The NASA Aviation Safety Manager shall: Participate in selected aircraft flight operations. (Requirement 46305)	S	N	N	Mgmt
NPR 8715.3C	04.2.4.k	46306	Aviation Safety: Aviation Safety Program Responsibilities: The NASA Aviation Safety Manager shall: Serve as ex officio board member to major aircraft mishap investigations and provide independent oversight and expert guidance in investigation procedures and techniques. (Requirement 46306)	S	N	N	Mgmt
NPR 8715.3C	04.2.4.L	46307	Aviation Safety: Aviation Safety Program Responsibilities: The NASA Aviation Safety Manager shall: Provide aviation safety oversight to ensure Headquarters and Center aircraft operations comply with NASA safety policy. (Requirement 46307)	S	N	N	Mgmt
NPR 8715.3C	04.2.4.m	46308	Aviation Safety: Aviation Safety Program Responsibilities: The NASA Aviation Safety Manager shall: Interface with other safety organizations involving aviation safety. (Requirement 46308)	S	N	N	Mgmt
NPR 8715.3C	04.3.1	46310	Aviation Safety: Interfaces with Other Agencies: Center Chiefs of Flight Operations shall have a process in place for communicating with outside organizations to exchange flight information that affects their assigned aircraft. (Requirement 46310)	S	N	N	Mgmt
NPR 8715.3C	04.3.2.1.a	46313	Aviation Safety: Interfaces with Other Agencies: DoD: Because NASA uses many military airfields and aircraft common to the military services, Center Chiefs of Flight Operations shall: Ensure coordination with the United States Air Force, Army, Navy, and Marine Corps where applicable. (Requirement 46313)	S	N	N	Mgmt
NPR 8715.3C	04.3.2.1.b	46314	Aviation Safety: Interfaces with Other Agencies: DoD: Because NASA uses many military airfields and aircraft common to the military services, Center Chiefs of Flight Operations shall: Ensure the use of the various military safety publications, cross-exchange of accident preventions data, and participate in joint safety efforts. (Requirement 46314)	S	N	N	Mgmt
NPR 8715.3C	05.2.1.a	46322	Fire Safety: Responsibilities: Director, Safety and Assurance Requirements Division, shall: Provide advocacy for fire protection for Construction of Facilities (CoF) projects. (Requirement 46322)	S	N	N	Mgmt
NPR 8715.3C	05.2.1.b	46323	Fire Safety: Responsibilities: Director, Safety and Assurance Requirements Division, shall: Support NASA Center budget submittals for fire protection, fire suppression, and fire research. (Requirement 46323)	S	N	N	Mgmt
NPR 8715.3C	05.2.1.c	46324	Fire Safety: Responsibilities: Director, Safety and Assurance Requirements Division, shall: Review NASA Center fire safety programs. (Requirement 46324)	S	N	N	Mgmt
NPR 8715.3C	05.2.2.a	46326	Fire Safety: Responsibilities: Center Directors shall: Be responsible for identifying and reducing fire risks, ensuring fire safety of Center operations, and implementing the requirements of this chapter. (Requirement 46326)	S	N	N	Mgmt
NPR 8715.3C	05.2.2.b	46327	Fire Safety: Responsibilities: Center Directors shall: Implement a comprehensive fire safety program at their Center and facilities in accordance with specific program requirements and procedures given in NASA-STD-8719.11, Safety Standard for Fire Protection. (Requirement 46327)	S	N	N	Mgmt
NPR 8715.3C	05.2.2.c	46328	Fire Safety: Responsibilities: Center Directors shall: Ensure that the fire safety program complies with National Fire Protection Association standards including their appendices, unless the requirements of local codes are more stringent; nationally recognized building and fire safety codes and requirements; and local building and fire codes and requirements. (Requirement 46328)	S	N	N	Mgmt
NPR 8715.3C	05.2.2.d	46329	Fire Safety: Responsibilities: Center Directors shall: Ensure implementation of NASA operational fire safety procedures. (Requirement 46329)	S	N	N	Mgmt
NPR 8715.3C	05.2.2.e	46330	Fire Safety: Responsibilities: Center Directors shall: Ensure each Center adopts, implements, and trains in the use of the Incident Management System in accordance with the NFPA 1561, Standard on Emergency Services Incident Management System and the National Incident Management System, when responding to and managing any emergency or disaster. (Requirement 46330)	S	N	N	Mgmt
NPR 8715.3C	05.2.2.f	46331	Fire Safety: Responsibilities: Center Directors shall: Ensure the the Center Security Office is notified of all fires that are suspicious in nature. (Requirement 46331)	S	N	N	Mgmt
NPR 8715.3C	05.2.2.g	46332	Fire Safety: Responsibilities: Center Directors shall: Ensure that employees, other than trained professional firefighters, trained volunteers, or emergency response personnel, do not fight fires except in cases where the fire is incipient in nature. (Requirement 46332)	S	N	N	Mgmt
NPR 8715.3C	05.2.2.h	46333	Fire Safety: Responsibilities: Center Directors shall: Ensure that compliance with NASA-STD- 8719.11, Safety Standard for Fire Protection, is made part of the contractual requirements at NASA Centers with contractors performing work as deemed necessary by the CO and the responsible NASA Center fire safety program office. (Requirement 46333)	S	N	N	Mgmt
NPR 8715.3C	05.2.2.i	46334	Fire Safety: Responsibilities: Center Directors shall: Appoint, in writing, an Authority Having Jurisdiction (AHJ) for NASA fire protection. (Requirement 46334) Note: The Center SMA Director should interface directly with the Center Director concerning Fire Safety Officer activities.	S	N	N	Mgmt
NPR 8715.3C	05.2.3.a	46336	Fire Safety: Responsibilities: The AHJ shall: Be a safety of fire protection professional with requisite skills and knowledge. (Requirement 46336) Note: For specific responsibilities of the AHJ, refer to NASA-STD-8719.11, Safety Standard for Fire Protection.	S	N	N	Mgmt

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NPR 8715.3C	05.2.3.b	46337	Fire Safety: Responsibilities: The AHJ shall: Designate personnel responsible for the investigation of all fires at their Center and facilities. (Requirement 46337)	S	N	N	Mgmt
NPR 8715.3C	05.2.3.c	46338	Fire Safety: Responsibilities: The AHJ shall: Perform a risk assessment and determine on a case-by-case basis the need to incorporate newer requirements and standards into existing facility and equipment operating procedures when standards are updated and superseded by newer, more stringent requirements. (Requirement 46338)	S	N	N	Mgmt
NPR 8715.3C	05.3.1.a	46341	Fire Safety: Fire Safety Program: Center Directors shall ensure that the implementation of an effective fire safety program at their Center complies with the following minimum requirements: Requirements are established for a reasonable level of fire safety and property protection from the hazards created by fire and explosions in accordance with NFPA 1, Uniform Fire Code. (Requirement 46341)	S	N	N	Mgmt
NPR 8715.3C	05.3.1.b	46342	Fire Safety: Fire Safety Program: Center Directors shall ensure that the implementation of an effective fire safety program at their Center complies with the following minimum requirements: An appropriate level of fire service operations is provided to protect lives and property based on the size and mission of the Center. (Requirement 46342)	S	N	N	Mgmt
NPR 8715.3C	05.3.1.c	46343	Fire Safety: Fire Safety Program: Center Directors shall ensure that the implementation of an effective fire safety program at their Center complies with the following minimum requirements: Risk management processes are applied in order to assess individual programs and adopt additional fire safety requirements. (Requirement 46343)	S	N	N	Mgmt
NPR 8715.3C	05.3.1.e	46344	Fire Safety: Fire Safety Program: Center Directors shall ensure that the implementation of an effective fire safety program at their Center complies with the following minimum requirements: Fire safety discrepancies are documented and abatement plans are prepared for corrective action(s) and tracking. (Requirement 46344)	S	N	N	Mgmt
NPR 8715.3C	05.3.1.f	46345	Fire Safety: Fire Safety Program: Center Directors shall ensure that the implementation of an effective fire safety program at their Center complies with the following minimum requirements: Fire safety discrepancies that cannot be corrected or funded locally are forwarded to Headquarters for resolution. (Requirement 46345)	S	N	N	Mgmt
NPR 8715.3C	05.3.1.g	46346	Fire Safety: Fire Safety Program: Center Directors shall ensure that the implementation of an effective fire safety program at their Center complies with the following minimum requirements: Fire safety violations are reviewed and corrected (e.g., work orders for repair, construction, follow-up, and acceptance). (Requirement 46346)	U	N	N	Mgmt
NPR 8715.3C	05.3.1.h	46347	Fire Safety: Fire Safety Program: Center Directors shall ensure that the implementation of an effective fire safety program at their Center complies with the following minimum requirements: All project design criteria, conceptual plans, and design documents with life safety and/or fire protection/prevention implications are reviewed and approved. (Requirement 46347)	S	N	N	Mgmt
NPR 8715.3C	05.3.1.i	46348	Fire Safety: Fire Safety Program: Center Directors shall ensure that the implementation of an effective fire safety program at their Center complies with the following minimum requirements: CoF projects are reviewed for fire safety and protection. (Requirement 46348)	S	N	N	Mgmt
NPR 8715.3C	05.3.1.j	46349	Fire Safety: Fire Safety Program: Center Directors shall ensure that the implementation of an effective fire safety program at their Center complies with the following minimum requirements: Procedures are in place for control of flammable materials and hazardous operations. (Requirement 46349)	S	N	N	Mgmt
NPR 8715.3C	05.3.1.k	46350	Fire Safety: Fire Safety Program: Center Directors shall ensure that the implementation of an effective fire safety program at their Center complies with the following minimum requirements: Automatic fire detection and suppression systems for all facilities containing significant hazards, mission essential equipment, or permanently housed personnel are in place. (Requirement 46350)	S	N	N	Mgmt
NPR 8715.3C	05.3.1.L	46351	Fire Safety: Fire Safety Program: Center Directors shall ensure that the implementation of an effective fire safety program at their Center complies with the following minimum requirements: Requirements are established for life-cycle review and replacement for fire suppression and protection equipment. (Requirement 46351)	S	N	N	Mgmt
NPR 8715.3C	05.3.1.m	46352	Fire Safety: Fire Safety Program: Center Directors shall ensure that the implementation of an effective fire safety program at their Center complies with the following minimum requirements: Requirements are established for proper functioning of the Center Fire Department and/or coordination with the responsible local fire department. (Requirement 46352)	S	N	N	Mgmt
NPR 8715.3C	05.3.1.n	46353	Fire Safety: Fire Safety Program: Center Directors shall ensure that the implementation of an effective fire safety program at their Center complies with the following minimum requirements: Procedures are in place and reviewed for reporting and investigating fires. (Requirement 46353)	S	N	N	Mgmt
NPR 8715.3C	05.3.1.o	46354	Fire Safety: Fire Safety Program: Center Directors shall ensure that the implementation of an effective fire safety program at their Center complies with the following minimum requirements: Emergency action plans and a Center fire safety program plan are developed and reviewed. (Requirement 46354)	S	N	N	Mgmt
NPR 8715.3C	05.3.1.p	46355	Fire Safety: Fire Safety Program: Center Directors shall ensure that the implementation of an effective fire safety program at their Center complies with the following minimum requirements: Assistance is available for assuring the adequacy of fire design and code compliance from a contractual and cost benefit standpoint for major construction projects. (Requirement 46355)	S	N	N	Mgmt
NPR 8715.3C	05.3.1.q	46356	Fire Safety: Fire Safety Program: Center Directors shall ensure that the implementation of an effective fire safety program at their Center complies with the following minimum requirements: Facility design drawings are reviewed for inclusion of adequate fire protection features and systems and for compliance with applicable codes and criteria. (Requirement 46356)	S	N	N	Mgmt
NPR 8715.3C	05.3.1.r	46357	Fire Safety: Fire Safety Program: Center Directors shall ensure that the implementation of an effective fire safety program at their Center complies with the following minimum requirements: All contract documents are reviewed for fire protection specifications. (Requirement 46357)	S	N	N	Mgmt
NPR 8715.3C	05.4.2.1.a	46362	Fire Safety: Fire Protection Systems: Extinguishing Systems: Center Directors shall ensure that: Extinguishing systems and fire extinguishers comply, as a minimum, with the NFPA codes and standards. (Requirement 46362)	S	N	N	Mgmt
NPR 8715.3C	05.4.2.1.b	46363	Fire Safety: Fire Protection Systems: Extinguishing Systems: Center Directors shall ensure that: All fire protection equipment are Underwriter Laboratories (UL) listed, Factory Mutual (FM), or Canadian Safety approved. (Requirement 46363)	S	N	N	Mgmt
NPR 8715.3C	05.5.2.a	46367	Fire Safety: Firefighting: Center Directors shall ensure that: NFPA recommendations and OSHA regulations are used for determining type, size, and training of firefighting organizations. (Requirement 46367)	S	N	N	Mgmt

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NPR 8715.3C	05.5.2.b	46368	Fire Safety: Firefighting: Center Directors shall ensure that: Firefighting organizations are equipped with a sufficient amount of firefighting vehicles and equipment to combat anticipated fires. (Requirement 46368)	S	N	N	Mgmt
NPR 8715.3C	05.5.2.c	46369	Fire Safety: Firefighting: Center Directors shall ensure that: Agreed-upon arrangements with external agencies to provide NASA with fire protection services are documented and retained on file. (Requirement 46369)	S	N	N	Mgmt
NPR 8715.3C	05.7.1	46372	Fire Safety: Fire Safety Training: Center Directors shall ensure that fire safety training for NASA employees is conducted in accordance with the requirements contained in Chapter 7 of this NPR. (Requirement 46372)	S	N	N	Mgmt
NPR 8715.3C	05.8.1.a	46375	Fire Safety: Reporting: Center Directors shall ensure that: Reporting is an integral part of the fire safety program. (Requirement 46375) Note: Effective reporting procedures disseminate the knowledge and experience gained by one Center to the rest of NASA and the Federal Government.	S	N	N	Mgmt
NPR 8715.3C	05.8.1.b	46376	Fire Safety: Reporting: Center Directors shall ensure that: Investigation of fire-related mishaps is in accordance with NFPA 921, Guide for Fire and Explosive Investigations, in addition to NPR 8621.1, NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping. (Requirement 46376) Note: Requirements for mishap investigation, reporting, and recordkeeping are provided in NPR 8621.1, NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recording.	S	N	N	Mgmt
NPR 8715.3C	05.9.1	46378	Fire Safety: Current Regulations, Codes, and Standards and Variances: With the goal of protecting life and property, Center Directors shall comply with the most current fire requirements in the design, construction, and operation of all NASA buildings and structures. (Requirement 46378) Note: Existing buildings and facilities do not automatically need to implement all code upgrades.	S	N	N	Mgmt
NPR 8715.3C	06.1.3	46383	Nuclear Safety for Launching of Radioactive Materials: Purpose: Mission Directorate Associate Administrators, Center Directors, and program executives shall ensure that NASA missions involving the launch of radioactive materials comply with the provisions of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.), and follow the policy and procedures contained in 14 CFR Part 1216, Subpart 1216.3, Procedures for Implementing the National Environmental Policy Act and Executive Order 12114. (Requirement 46383)	S	N	N	Safety
NPR 8715.3C	06.2.1.a	46386	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The NASA Administrator or designee shall: Determine, for NASA, the acceptability of the potential risk of launching and using nuclear materials in space as described in Table 6.1. (Requirement 46386)	S	N	N	Safety
NPR 8715.3C	06.2.1.b	46387	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The NASA Administrator or designee shall: Request empanelment of an Interagency Nuclear Safety Review Panel (INSRP) with membership and responsibilities in accordance with PD/NSC-25 after receiving a request from the Program Executive (in coordination with SMA). (Requirement 46387)	S	N	N	Safety
NPR 8715.3C	06.2.1.c	46388	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The NASA Administrator or designee shall: Appoint a NASA member to the empanelled INSTP with consideration of the recommendations(s) by the Chief, Safety and Mission Assurance. (Requirement 46388)	S	N	N	Safety
NPR 8715.3C	06.2.2.a	46390	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: Mission Directorate Associate Administrators, Center Directors and program executives involved with the control and processing of radioactive materials for launch into space shall ensure: Compliance with space nuclear launch safety requirements and processes provided in this NPR. (Requirement 46390)	S	N	N	Safety
NPR 8715.3C	06.2.2.b	46391	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: Mission Directorate Associate Administrators, Center Directors and program executives involved with the control and processing of radioactive materials for launch into space shall ensure: Basic design of vehicles, spacecraft, and systems utilizing radioactive materials provide protection to the public, the environment, and users such that radiation risk resulting from exposures to radioactive sources are as low as reasonably achievable. (Requirement 46391)	S	N	N	Safety
NPR 8715.3C	06.2.2.c	46392	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: Mission Directorate Associate Administrators, Center Directors and program executives involved with the control and processing of radioactive materials for launch into space shall ensure: Nuclear safety considerations are incorporated from the initial design stages throughout all project stages to ensure that overall mission radiological risk is acceptable. (Requirement 46392)	S	N	N	Safety
NPR 8715.3C	06.2.2.d	46393	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: Mission Directorate Associate Administrators, Center Directors and program executives involved with the control and processing of radioactive materials for launch into space shall ensure: All space flight equipment (including medical and other experimental devices) that contain or use radioactive materials are identified and analyzed (per paragraph 6.3 of this NPR) for radiological risk. (Requirement 46393)	S	N	N	Safety
NPR 8715.3C	06.2.2.e	46394	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: Mission Directorate Associate Administrators, Center Directors and program executives involved with the control and processing of radioactive materials for launch into space shall ensure: Development of site-specific ground operations and radiological contingency plans commensurate with the risk represented by the planned launch of nuclear materials. (Requirement 46394)	S	N	N	Safety
NPR 8715.3C	06.2.2.f	46395	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: Mission Directorate Associate Administrators, Center Directors and program executives involved with the control and processing of radioactive materials for launch into space shall ensure: Contingency planning, as required by the National Response Plan, includes provisions for emergency response and support for source recovery efforts. (Requirement 46395) Note: NPD 8710.1, Emergency Preparedness Program, and NPR 8715.2, NASA Emergency Preparedness Plan Procedural Requirements, address the NASA emergency preparedness policy and program requirements. (Requirement 46395)	S	N	N	Safety
NPR 8715.3C	06.2.2.g	46396	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: Mission Directorate Associate Administrators, Center Directors and program executives involved with the control and processing of radioactive materials for launch into space shall ensure: Involve the OCHMO in the Federal Radiological Emergency Response planning process. (Requirement 46396)	S	N	N	Safety
NPR 8715.3C	06.2.3.a	46398	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The Chief, Safety and Mission Assurance, shall: Assure that NASA missions involving the launch of radioactive materials comply with paragraph 9 of PD/NSC-25, as appropriate. (Requirement 46398)	S	N	N	Safety
NPR 8715.3C	06.2.3.b	46399	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The Chief, Safety and Mission Assurance, shall: Assist in the review and evaluation of nuclear safety risk. (Requirement 46399)	S	N	N	Safety

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NPR 8715.3C	06.2.3.c	46400	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The Chief, Safety and Mission Assurance, shall: Per Table 6.1, prepare, coordinate, and provide the required notification of planned launches of radioactive materials to the Executive Office of the President, Office of Science and Technology Policy (OSTP). (Requirement 46400)	S	N	N	Safety
NPR 8715.3C	06.2.3.d	46401	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The Chief, Safety and Mission Assurance, shall: Designate a Nuclear Flight Safety Assurance Manager (NFSAM). (Requirement 46401)	S	N	N	Safety
NPR 8715.3C	06.2.3.e	46402	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The Chief, Safety and Mission Assurance, shall: Designate a NASA INSRP Coordinator. (Requirement 46402)	S	N	N	Safety
NPR 8715.3C	06.2.3.f	46403	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The Chief, Safety and Mission Assurance, shall: Nominate a NASA member for each empanelled ad hoc INSRP following a request by the program or mission office to the NASA Administrator. (Requirement 46403) Note: The NFSAM and NASA INSRP Coordinator may be separate individuals.	S	N	N	Safety
NPR 8715.3C	06.2.3.g	46404	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The Chief, Safety and Mission Assurance, shall: Provide assistance to the cognizant NASA Mission Directorate and project office(s) in meeting nuclear launch safety analysis/evaluation requirements. (Requirement 46404)	S	N	N	Safety
NPR 8715.3C	06.2.3.h	46405	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The Chief, Safety and Mission Assurance, shall: Review all radiological contingency and emergency planning as part of the SMA audits, review and assessments process. (Requirement 46405) Note: The requirements for conducting and supporting these reviews are provided in NPR 8705.6, Safety and Mission Assurance Audits, Reviews, and Assessments.	S	N	N	Safety
NPR 8715.3C	06.2.3.i	46406	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The Chief, Safety and Mission Assurance, shall: Ensure that the OCHMO is notified of the intent to launch radioactive materials. (Requirement 46406)	S	N	N	Safety
NPR 8715.3C	06.2.3.j	46407	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The Chief, Safety and Mission Assurance, shall: Coordinate health physics aspects with the OCHMO periodically and in the event of any related radiological emergencies during the mission. (Requirement 46407)	S	N	N	Safety
NPR 8715.3C	06.2.4.c	46411	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: Mission Directorate Associate Administrators and program executives shall: Identify the amount of radioactive material and the process for documenting the risk represented by the use of the radioactive materials to the NFSAM in accordance with paragraph 6.4 of this NPR. (Requirement 46411)	S	N	N	Safety
NPR 8715.3C	06.2.4.d	46412	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: Mission Directorate Associate Administrators and program executives shall: Provide required reports to the NFSAM in accordance with paragraphs 6.3 and 6.4 of this NPR. (Requirement 46412)	S	N	N	Safety
NPR 8715.3C	06.2.4.e	46413	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: Mission Directorate Associate Administrators and program executives shall: Prepare or have prepared the nuclear safety analyses. (Requirement 46413)	S	N	N	Safety
NPR 8715.3C	06.2.4.f	46414	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: Mission Directorate Associate Administrators and program executives shall: Obtain nuclear launch safety approval or launch concurrence in accordance with paragraph 6.3 of this NPR. (Requirement 46414)	S	N	N	Safety
NPR 8715.3C	06.2.5.a	46416	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: Mission Directorate Associate Administrators, Center Directors, and line managers shall: Ensure, to the extent of responsibility applicable under defined licensing/permitting documentation or agreements, compliance with all pertinent directives, licenses, agreements, and requirements promulgated by regulatory agencies relative to the use of radioactive materials planned for a space launch. (Requirement 46416)	S	N	N	Safety
NPR 8715.3C	06.2.5.b	46417	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: Mission Directorate Associate Administrators, Center Directors, and line managers shall: Coordinate with appropriate project office(s) to ensure radioactive material source reports that are submitted per paragraph 6.4 of this NPR accurately reflect all known radioactive material sources intended for flight. (Requirement 46417)	S	N	N	Safety
NPR 8715.3C	06.2.6.a	46419	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: NASA launch and landing site managers shall: Apply range safety requirements, with regard to the safe launch of radioactive materials, specified in range safety standards. (Requirement 46419) Note: Requirements for range safety concerning the launch of radioactive material are given in the Air Force Space Command Manual 91-710, Volume 2, Safety, Range Safety User Requirements Manual Volume 2 - Flight Safety Requirements (1 July 2004).	S	N	N	Safety
NPR 8715.3C	06.2.6.b	46420	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: NASA launch and landing site managers shall: Develop and implement site-specific ground operations and radiological contingency plans to address potential ground handling accidents and potential launch/landing accident scenarios and to support source recovery operations commensurate with the radioactive materials present. (Requirement 46420) Note: Requirements for contingency plans are provided in NPR 8715.2, NASA Emergency Preparedness Plan Procedural Requirements.	S	N	N	Safety
NPR 8715.3C	06.2.6.c	46421	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: NASA launch and landing site managers shall: Coordinate radiological contingency plans and exercises with the OCHMO. (Requirement 46421)	S	N	N	Safety
NPR 8715.3C	06.2.6.d	46422	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: NASA launch and landing site managers shall: Exercise contingency response capabilities as deemed necessary to ensure adequate readiness of participants and adequacy of planning to protect the public, site personnel, and facilities. (Requirement 46422)	S	N	N	Safety
NPR 8715.3C	06.2.6.e	46423	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: NASA launch and landing site managers shall: Ensure appropriate and timely coordination with regional Federal, State, territorial, and local emergency management authorities to provide for support to, and coordination with, offsite emergency response elements. (Requirement 46423)	S	N	N	Safety
NPR 8715.3C	06.2.6.f	46424	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: NASA launch and landing site managers shall: Make provisions for special offsite monitoring and assistance in recovery of radioactive materials that could spread into areas outside the geographical boundaries of the launch site. (Requirement 46424)	S	N	N	Safety

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NPR 8715.3C	06.2.6.g	46425	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: NASA launch and landing site managers shall: Establish a radiological control center (RADCC) for launches and landings with radioactive sources possessing a significant health or environmental risk, of having an activity of A2 mission multiple greater than 1,000 as determined per paragraph 6.3 of this NPR, or as specified in applicable interagency agreements. (Requirement 46425)	S	N	N	Safety
NPR 8715.3C	06.2.6.i	46426	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: NASA launch and landing site managers shall: Ensure, when required, that the RADCC is operational during launch and landing phases any time there is potential for an accident that could release radioactive material. (Requirement 46426)	S	N	N	Safety
NPR 8715.3C	06.2.6.j	46427	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: NASA launch and landing site managers shall: Ensure, when required, that the RADCC is staffed commensurate with the risk associated with the radioactive materials present. (Requirement 46427)	S	N	N	Safety
NPR 8715.3C	06.2.7.a	46429	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The NASA INSRP Coordinator shall: Coordinate NASA's participation in activities supporting empanelled INSRP(s) to ensure adequate information is available to the INSRP(s). (Requirement 46429)	S	N	N	Safety
NPR 8715.3C	06.2.7.b	46430	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The NASA INSRP Coordinator shall: Make arrangements for NASA personnel to provide assistance to empanelled INSRP(s). (Requirement 46430)	S	N	N	Safety
NPR 8715.3C	06.2.7.c	46431	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The NASA INSRP Coordinator shall: Coordinate the support needs of those selected to provide assistance to empanelled INSRP(s) as may be appropriate (i.e.; travel, funding, technical). (Requirement 46431)	S	N	N	Safety
NPR 8715.3C	06.2.7.d	46432	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The NASA INSRP Coordinator shall: Coordinate health physics aspects with the OCHMO. (Requirement 46432)	S	N	N	Safety
NPR 8715.3C	06.2.8.a	46434	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The NASA member of an empanelled INSRP shall: Represent NASA in accordance with PD/NSC-25. (Requirement 46434)	S	N	N	Safety
NPR 8715.3C	06.2.8.b	46435	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The NASA member of an empanelled INSRP shall: Provide technical liaison between the empanelled INSRP and NASA management. (Requirement 46435)	S	N	N	Safety
NPR 8715.3C	06.2.9.a	46437	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The Office of Security and Program Protection shall: Ensure appropriate coordination with the Department of Homeland Security (Federal Emergency Management Agency) to provide adequate emergency and recovery planning for all NASA missions above a threshold of 1,000 for A2 mission multiple as defined in paragraph 6.3 of this NPR. (Requirement 46437)	S	N	N	Safety
NPR 8715.3C	06.2.9.b	46438	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The Office of Security and Program Protection shall: Ensure that radiological emergency and recovery plans are developed and implemented where NASA is the Lead Federal Agency as defined by the National Response Plan - Nuclear/Radiological Incident Annex. (Requirement 46438)	S	N	N	Safety
NPR 8715.3C	06.2.9.c	46439	Nuclear Safety for Launching of Radioactive Materials: Responsibilities: The Office of Security and Program Protection shall: Upon request, provide the program executive and OSMA with mission-specific information recommended for consideration during launch or potential accident site emergency response and clean-up planning as part of the nuclear launch approval process. (Requirement 46439)	S	N	N	Safety
NPR 8715.3C	06.3.1.a	46442	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For all planned launches of radioactive materials, program executives shall: Use the A2 mission multiple value to determine the level of assessment required. (Requirement 46442)	S	N	N	Safety
NPR 8715.3C	06.3.1.b	46443	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For all planned launches of radioactive materials, program executives shall: Use total mission radioactive material inventory contained on the launch to calculate the total A2 mission multiple per Appendix D, Activity and Radioactivity Limits - Basic A1/A2 Values. (Requirement 46443)	S	N	N	Safety
NPR 8715.3C	06.3.1.c	46444	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For all planned launches of radioactive materials, program executives shall: Use the highest of the algebraic sum of the isotopes' A2 multiples at launch, any time the spacecraft will be in Earth orbit or during near-Earth interplanetary flight (e.g., Earth Gravity Assists) to determine the level of assessment required. (Requirement 46444)	S	N	N	Safety
NPR 8715.3C	06.3.1.d	46445	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For all planned launches of radioactive materials, program executives shall: Consult with the NFSAM and the NASA Office of the General Counsel to determine what provisions, if any, of this chapter apply when NASA participates in the launch of a vehicle or spacecraft from other countries or territories, and these vehicles or spacecraft contain a radioactive source. (Requirement 46445)	S	N	N	Safety
NPR 8715.3C	06.3.3.1.a	46454	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples less than 0.001: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Request nuclear launch safety concurrence, in writing, from the NFSAM. (Requirement 46454)	S	N	N	Safety

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NPR 8715.3C	06.3.3.1.b	46455	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples less than 0.001: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Submit the request to the NFSAM a minimum of 4 months prior to launch. (Requirement 46455) Note: The request should be accompanied by the Radioactive Materials On-Board Report defined in paragraph 6.4.1 of this NPR.	S	N	N	Safety
NPR 8715.3C	06.3.3.2	46456	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples less than 0.001: The NFSAM shall review the report and inform the program executive, in writing, of concurrence (or nonconcurrence) and any safety concerns not less than two months prior to launch. (Requirement 46456)	S	N	N	Safety
NPR 8715.3C	06.3.4.1	46458	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples between 0.001 and 10: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: (Requirement 46458)	U	N	N	Mgmt
NPR 8715.3C	06.3.4.1.a	46459	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples between 0.001 and 10: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Request nuclear launch safety concurrence, in writing, from the NFSAM. (Requirement 46459)	S	N	N	Safety
NPR 8715.3C	06.3.4.1.b	46460	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples between 0.001 and 10: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Submit the request to the NFSAM a minimum of four months prior to launch. (Requirement 46460) Note: The request should be accompanied by the Radioactive On-Board Materials Report defined in paragraph 6.4 with a brief technical description of the radioactive material.	S	N	N	Safety
NPR 8715.3C	06.3.4.2.a	46462	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples between 0.001 and 10: The NFSAM shall: Review the request and inform the program executive, in writing, of nuclear launch safety concurrence (or nonconcurrence) and any safety concerns not less than two months prior to launch. (Requirement 46462)	S	N	N	Safety
NPR 8715.3C	06.3.4.2.b	46463	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples between 0.001 and 10: The NFSAM shall: Report launches with these quantities of radioactive material to OSTP prior to launch. (Requirement 46463)	S	N	N	Safety
NPR 8715.3C	06.3.5.1.a	46466	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 10 but less than 500: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Develop and document, in consultation with the NFSAM, a mutually agreed upon schedule for developing a nuclear safety review. (Requirement 46466)	S	N	N	Safety
NPR 8715.3C	06.3.5.1.b	46467	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 10 but less than 500: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Prepare or have prepared a nuclear safety review of the radiological risk for the proposed mission. (Requirement 46467)	S	N	N	Safety
NPR 8715.3C	06.3.5.1.c	46468	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 10 but less than 500: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Ensure that the nuclear safety review contains the report described in paragraph 6.4 of this NPR. (Requirement 46468)	S	N	N	Safety
NPR 8715.3C	06.3.5.1.d	46469	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 10 but less than 500: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Ensure that the nuclear safety review contains program excerpts describing the mission. (Requirement 46469)	S	N	N	Safety
NPR 8715.3C	06.3.5.1.e	46470	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 10 but less than 500: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Ensure that the nuclear safety review contains an analysis of the probabilities of launch and in-flight accidents which could result in the terrestrial release of radioactive materials (surface and air). (Requirement 46470)	S	N	N	Safety

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NPR 8715.3C	06.3.5.1.f	46471	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 10 but less than 500: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Ensure that the nuclear safety review contains an estimate of the upper bound of health and environmental effects due to a radioactive material release. (Requirement 46471)	S	N	N	Safety
NPR 8715.3C	06.3.5.1.g	46472	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 10 but less than 500: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Ensure that the nuclear safety review contains mission-specific information recommended for consideration in the launch or potential accident site emergency response and clean-up planning. (Requirement 46472)	S	N	N	Safety
NPR 8715.3C	06.3.5.1.h	46473	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 10 but less than 500: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Provide the Chief, Safety and Mission Assurance, and the NFSAM with the nuclear safety review along with a request for nuclear launch concurrence at least five months prior to the launch (Requirement 46473)	S	N	N	Safety
NPR 8715.3C	06.3.5.2.a	46475	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 10 but less than 500: The NFSAM shall: Make a preliminary scoping evaluation of the radiological risk to identify the extent of analyses needed as part of a prelaunch nuclear safety review. (Requirement 46475)	S	N	N	Safety
NPR 8715.3C	06.3.5.2.b	46476	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 10 but less than 500: The NFSAM shall: Develop and document, in consultation with the program executive, a mutually agreed upon schedule for developing a nuclear safety review. (Requirement 46476)	S	N	N	Safety
NPR 8715.3C	06.3.5.2.c	46477	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 10 but less than 500: The NFSAM shall: Notify OSTP of the planned launch with these quantities of radioactive material as a part of the quarterly report. (Requirement 46477)	S	N	N	Safety
NPR 8715.3C	06.3.6.1.a	46480	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 500 but less than 1,000: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Develop and document, in consultation with the NFSAM, a mutually agreed upon schedule for developing a nuclear safety review. (Requirement 46480)	S	N	N	Safety
NPR 8715.3C	06.3.6.1.b	46481	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 500 but less than 1,000: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Prepare or have prepared a Safety Analysis Summary (SAS) that, in coordination with the NFSAM, addresses the radiological risk of the proposed mission. (Requirement 46481) Note: The level of detail in the SAS will be commensurate with the radiological risk. The program is encouraged to use other program documentation to provided mission and potential accident information in the SAS.	S	N	N	Safety
NPR 8715.3C	06.3.6.1.c	46482	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 500 but less than 1,000: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Ensure that the SAS contains a brief description of the planned mission, schedule, launch vehicle, and spacecraft to include operations while in-orbit and during near-Earth flight. (Requirement 46482)	S	N	N	Safety
NPR 8715.3C	06.3.6.1.d	46483	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 500 but less than 1,000: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Ensure that the SAS contains a description of all radioactive materials, their physical state/chemical form, and quantities. (Requirement 46483)	S	N	N	Safety
NPR 8715.3C	06.3.6.1.e	46484	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 500 but less than 1,000: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Ensure that the SAS contains probabilities and resulting consequences of launch and in-flight accidents that could result in the terrestrial release of radiological materials. (Requirement 46484)	S	N	N	Safety

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NPR 8715.3C	06.3.6.1.f	46485	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 500 but less than 1,000: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Ensure that the SAS contains an estimate of any health and environmental effects due to a radioactive material release. (Requirement 46485)	S	N	N	Safety
NPR 8715.3C	06.3.6.1.g	46486	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 500 but less than 1,000: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Ensure that the SAS contains mission-specific information recommended for consideration in the launch or potential accident site emergency response and clean-up planning. (Requirement 46486)	S	N	N	Safety
NPR 8715.3C	06.3.6.1.h	46487	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 500 but less than 1,000: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Provide the Chief, Safety and Mission Assurance, with the SAS along with a request for nuclear launch concurrence at least six months prior to launch. (Requirement 46487)	S	N	N	Safety
NPR 8715.3C	06.3.6.1.i	46488	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 500 but less than 1,000: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Provide the OCHMO with the SAS at least six months prior to launch. (Requirement 46488)	S	N	N	Safety
NPR 8715.3C	06.3.6.1.j	46489	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 500 but less than 1,000: Program executives (in addition to requirements in paragraph 6.2 of this NPR) shall: Forward the SAS to the NASA Administrator, along with the concurrence of the Chief, Safety and Mission Assurance, no later than four months before launch, and request nuclear launch safety approval from the NASA Administrator. (Requirement 46489)	S	N	N	Safety
NPR 8715.3C	06.3.6.2.a	46491	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 500 but less than 1,000: The NFSAM shall: Make a preliminary assessment of the radiological risk and provide a written assessment to the program executive. (Requirement 46491)	S	N	N	Safety
NPR 8715.3C	06.3.6.2.b	46492	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 500 but less than 1,000: The NFSAM shall: Develop and document, in consultation with the program executive, a mutually agreed upon schedule for nuclear launch safety analyses and review activities to be conducted to support a nuclear launch safety concurrence request. (Requirement 46492)	S	N	N	Safety
NPR 8715.3C	06.3.6.2.c	46493	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 500 but less than 1,000: The NFSAM shall: Review the SAS and provide timely comments to the program in accordance with the mutually agreed upon schedule. (Requirement 46493)	S	N	N	Safety
NPR 8715.3C	06.3.6.2.d	46494	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 500 but less than 1,000: The NFSAM shall: Notify OSTP of the planned launch as a part of the quarterly report. (Requirement 46494)	S	N	N	Safety
NPR 8715.3C	06.3.7.1.a	46497	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 1,000: Program executives (in addition to requirements in Paragraph 6.2 of this NPR) shall: Request, in coordination with the Chief, Safety and Mission Assurance, the NASA Administrator to empanel an ad hoc INSRP for the mission. (Requirement 46497)	S	N	N	Safety
NPR 8715.3C	06.3.7.1.b	46498	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 1,000: Program executives (in addition to requirements in Paragraph 6.2 of this NPR) shall: Factor the time required for an INSRP into the program master schedule. (Requirement 46498)	S	N	N	Safety

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NPR 8715.3C	06.3.7.1.c	46499	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 1,000: Program executives (in addition to requirements in Paragraph 6.2 of this NPR) shall: Develop and document, in consultation with the NFSAM, the empanelled INSRP, the program, and the appropriate Department of Energy (DOE) offices (in accordance with interagency agreements for specific missions), a schedule for the delivery of a Safety Analysis Report (SAR), using a phased approach, with the complete final SAR being delivered no later than ten months prior to the launch. (Requirement 46499) Note: The mutually agreed upon schedule should address the planned analysis schedule, base assumptions, analysis limitations/bounds, and model descriptions associated with the SAR development. Interim reviews should be held for all individual analyses before completion and to provide a status of analyses as of a given date.	S	N	N	Safety
NPR 8715.3C	06.3.7.1.d(1)	46500	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 1,000: Program executives (in addition to requirements in Paragraph 6.2 of this NPR) shall: Prepare or have prepared a SAR. (Requirement 46500) Note: The level of detail and content of the SAR will be commensurate with the mission radiological risk. In cases where the DOE provides the radioactive material, the DOE programmatic SAR may be adopted to satisfy this requirement, in accordance with the interagency agreement(s) for specific missions. In cases where launch vehicles, configuration, and radioactive materials are similar, the program executive, in consultation with the NFSAM and the INSRP, is encouraged to use a comparative analysis based upon previous mission(s) safety analyses that bound the anticipated risk for the new mission. Where radioactive materials are being provided from multiple sources, the program executive r	S	N	N	Safety
NPR 8715.3C	06.3.7.1.d(2)	46501	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 1,000: Program executives (in addition to requirements in Paragraph 6.2 of this NPR) shall: Prepare or have prepared a SAR. (Requirement 46501) Note: The program executive is encouraged to begin coordination with the empanelled ad hoc INSRP in the early stages of mission development. The program executive should invite the INSRP to review the development of launch and mission accident scenarios probabilities of occurrence, dispersion, specification of associated environments, and health effects via documentation and program safety reviews. The INSRP normally reviews and evaluates all program documentation associated with radioactive material safety for completeness and defensibility. The INSRP evaluation is documented in a Safety Evaluation Report (SER). The INSRP is normally assisted in its evaluation	S	N	N	Safety
NPR 8715.3C	06.3.7.1.e	46502	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 1,000: Program executives (in addition to requirements in Paragraph 6.2 of this NPR) shall: Deliver the agreed upon iterations of the SAR to the INSRP according to the documented schedule. (Requirement 46502)	S	N	N	Safety
NPR 8715.3C	06.3.7.2	46503	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For launches with A2 mission multiples equal to or greater than 1,000: Following the approval by the NASA Administrator to empanel an INSRP, the NASA INSRP Coordinator shall, in accordance with paragraph 6.2.7, facilitate the preparation of an INSRP-developed SER of the radiological risk for the proposed nuclear mission as required by PD/NSC-25. (Requirement 46503) Note: The SER should typically be completed no later than six months prior to launch. The SER, along with the final SAR and other related documents, are considered by the NASA Administrator before requesting a nuclear launch safety approval in accordance with PD/NSC-25.	S	N	N	Safety
NPR 8715.3C	06.3.8	46504	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For orbiting spacecraft being resupplied or modified in which the U.S. Government is the lead (e.g., International Space Station) and the A2 mission multiple is equal to 10 but less than 1000:	U	N	N	Mgmt
NPR 8715.3C	06.3.8.1.a	46506	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For orbiting spacecraft being resupplied or modified in which the U.S. Government is the lead (e.g., International Space Station) and the A2 mission multiple is equal to 10 but less than 1000: Program executives shall: Request a nuclear launch safety approval from the NFSAM. (Requirement 46506)	S	N	N	Safety
NPR 8715.3C	06.3.8.1.b	46507	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For orbiting spacecraft being resupplied or modified in which the U.S. Government is the lead (e.g., International Space Station) and the A2 mission multiple is equal to 10 but less than 1000: Program executives shall: Perform a safety analysis to the level of detail defined in paragraph 6.3.6 of this NPR. (Requirement 46507)	S	N	N	Safety
NPR 8715.3C	06.3.8.1.c	46508	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For orbiting spacecraft being resupplied or modified in which the U.S. Government is the lead (e.g., International Space Station) and the A2 mission multiple is equal to 10 but less than 1000: Program executives shall: Meet the launch concurrence/approval requirements defined in paragraph 6.3.6 of this NPR. (Requirement 46508)	S	N	N	Safety

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NPR 8715.3C	06.3.8.2	46509	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For orbiting spacecraft being resupplied or modified in which the U.S. Government is the lead (e.g., International Space Station) and the A2 mission multiple is equal to 10 but less than 1000: The NFSAM shall conduct reviews as defined in paragraph 6.3.6 of this NPR. (Requirement 46509)	S	N	N	Safety
NPR 8715.3C	06.3.9.1.a	46512	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For orbiting spacecraft being resupplied or modified in which the U.S. Government is the lead (e.g., International Space Station) and the A2 mission multiple exceeds 1000: Program executives shall: Request a nuclear launch safety approval from the NFSAM. (Requirement 46512)	S	N	N	Safety
NPR 8715.3C	06.3.9.1.b	46513	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For orbiting spacecraft being resupplied or modified in which the U.S. Government is the lead (e.g., International Space Station) and the A2 mission multiple exceeds 1000: Program executives shall: Perform a safety analysis to the level of detail defined in paragraph 6.3.7 of this NPR. (Requirement 46513)	S	N	N	Safety
NPR 8715.3C	06.3.9.1.c	46514	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For orbiting spacecraft being resupplied or modified in which the U.S. Government is the lead (e.g., International Space Station) and the A2 mission multiple exceeds 1000: Program executives shall: Meet the launch concurrence/approval requirements defined in paragraph 6.3.7 of this NPR. (Requirement 46514)	S	N	N	Safety
NPR 8715.3C	06.3.9.2.a	46516	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For orbiting spacecraft being resupplied or modified in which the U.S. Government is the lead (e.g., International Space Station) and the A2 mission multiple exceeds 1000: The NFSAM shall: Advise the program executive concerning a request to the NASA Administrator to empanel an INSRP as per paragraph 6.2.2 of this NPR.	U	N	N	Mgmt
NPR 8715.3C	06.3.9.2.b	46517	Nuclear Safety for Launching of Radioactive Materials: Nuclear Launch Safety Approval Process: The level of analysis, evaluation, review and the total concurrence or approval required for a radiological risk assessment varies with the total amount of radioactive materials planned for launch as follows: For orbiting spacecraft being resupplied or modified in which the U.S. Government is the lead (e.g., International Space Station) and the A2 mission multiple exceeds 1000: The NFSAM shall: Coordinate a safety evaluation as defined in paragraph 6.3.7.1 of this NPR. (Requirement 46517)	S	N	N	Safety
NPR 8715.3C	06.4.2.1.a	46522	Nuclear Safety for Launching of Radioactive Materials: Reporting Requirements: Radioactive Materials Report: NASA program executives, Center Directors, facility managers, laboratory managers, and launch and landing site managers shall: Use the Planned Launches of Radioactive Materials Report shown in Figure 6.1 to report planned launches of radioactive materials and request for nuclear launch concurrence/spproval. (Requirement 46522)	S	N	N	Safety
NPR 8715.3C	06.4.2.1.b	46523	Nuclear Safety for Launching of Radioactive Materials: Reporting Requirements: Radioactive Materials Report: NASA program executives, Center Directors, facility managers, laboratory managers, and launch and landing site managers shall: Ensure that entries are made for each isotopic source for planned launch and resupplying missions. (Requirement 46523) Note: Isotopes of similar size, chemical form, and activity level may be combined on a single line entry.	S	N	N	Safety
NPR 8715.3C	06.4.2.2	46524	Nuclear Safety for Launching of Radioactive Materials: Reporting Requirements: Radioactive Materials Report: The NFSAM shall use the format of the Radioactive Materials Report shown in Figure 6.1 and Figure 6.2 for the quarterly report to notify OSTP of planned launches. (Requirement 46524) Note: Figure 6.2 shows the format for the report for resupplying radioactive materials to on-orbit spacecraft.	S	N	N	Safety
NPR 8715.3C	07.2.1	46528	Safety Training and Personnel Certification: Responsibilities: Mission Directorate Associate Administrators, Center Directors, project managers, and line managers shall provide training to assist managers/ supervisors and employees with their specific roles and responsibilities in safety programs. (Requirement 46528) Note: EO 12196, Occupational Safety and Health Programs for Federal Employees, dated February 26, 1980, as amended and 12 CFR 1960, Subpart H, Training, require the NASA establish comprehensive safety training programs.	S	N	N	Mgmt
NPR 8715.3C	07.2.2.a	46530	Safety Training and Personnel Certification: Responsibilities: The Chief, Safety and Mission Assurance, shall: Assist Center counterparts in ensuring that 29 CFR Part 1960, Basic Program Elements for Federal Employees, Occupational Safety and Health programs, and Related Matters, requirements are followed. (Requirement 46530)	S	N	N	Mgmt
NPR 8715.3C	07.2.2.b	46531	Safety Training and Personnel Certification: Responsibilities: The Chief, Safety and Mission Assurance, shall: Ensure Agency-wide consistency and uniformity in the NASA safety training program. (Requirement 46531)	S	N	N	Mgmt
NPR 8715.3C	07.2.2.c	46532	Safety Training and Personnel Certification: Responsibilities: The Chief, Safety and Mission Assurance, shall: Act as a clearinghouse for information regarding available safety training courses and materials. (Requirement 46532)	S	N	N	Mgmt
NPR 8715.3C	07.2.2.d	46533	Safety Training and Personnel Certification: Responsibilities: The Chief, Safety and Mission Assurance, shall: Develop, in conjunction with the Training and Development Division at NASA Headquarters, training courses suited to specific Agency safety needs. (Requirement 46533)	S	N	N	Mgmt
NPR 8715.3C	07.2.2.e	46534	Safety Training and Personnel Certification: Responsibilities: The Chief, Safety and Mission Assurance, shall: Co-develop, in conjunction with the OCHMO at NASA Headquarters, training courses and materials in areas of overlapping regulatory or programmatic responsibility. (Requirement 46534) Note: Safety forms and reports are retained per NPR 1441.1, NASA Records Retention Schedules.	S	N	N	Mgmt
NPR 8715.3C	07.2.3.a	46536	Safety Training and Personnel Certification: Responsibilities: Center training and personnel development offices and safety offices shall be jointly responsible for: Determining safety and certification training needs. (Requirement 46536)	S	N	N	Mgmt

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NPR 8715.3C	07.2.3.b	46537	Safety Training and Personnel Certification: Responsibilities: Center training and personnel development offices and safety offices shall be jointly responsible for: Overseeing training efforts. (Requirement 46537)	S	N	N	Mgmt
NPR 8715.3C	07.2.3.c	46538	Safety Training and Personnel Certification: Responsibilities: Center training and personnel development offices and safety offices shall be jointly responsible for: Identifying budget requirements for training. (Requirement 46538)	S	N	N	Mgmt
NPR 8715.3C	07.2.3.d	46539	Safety Training and Personnel Certification: Responsibilities: Center training and personnel development offices and safety offices shall be jointly responsible for: Developing training courses and materials. (Requirement 46539)	S	N	N	Mgmt
NPR 8715.3C	07.2.3.e	46540	Safety Training and Personnel Certification: Responsibilities: Center training and personnel development offices and safety offices shall be jointly responsible for: Assuring that training records reflect employee safety training. (Requirement 46540)	S	N	N	Mgmt
NPR 8715.3C	07.3.1.a	46543	Safety Training and Personnel Certification: Planning and Implementation of the Safety Training Program: Center Directors shall: Formulate and document a comprehensive safety training program (see Figure 7-1 below) at the Center. (Requirement 46543)	S	N	N	Mgmt
NPR 8715.3C	07.3.1.b	46544	Safety Training and Personnel Certification: Planning and Implementation of the Safety Training Program: Center Directors shall: Develop and maintain a Center Safety Training Plan. (Requirement 46544)	S	N	N	Mgmt
NPR 8715.3C	07.3.1.c	46545	Safety Training and Personnel Certification: Planning and Implementation of the Safety Training Program: Center Directors shall: Ensure that all persons engaged in physical work are instructed in accident prevention and fully informed of the hazards involved. (Requirement 46545)	S	N	N	Mgmt
NPR 8715.3C	07.3.1.d	46546	Safety Training and Personnel Certification: Planning and Implementation of the Safety Training Program: Center Directors shall: Ensure that training for all persons in electrical work includes first-aid procedures and cardiopulmonary resuscitation. (Requirement 46546)	S	N	N	Mgmt
NPR 8715.3C	07.3.1.e	46547	Safety Training and Personnel Certification: Planning and Implementation of the Safety Training Program: Center Directors shall: Ensure that personnel at risk of exposure to cryogenic liquids receive training in correct first aid measures for these liquids. (Requirement 46547)	S	N	N	Mgmt
NPR 8715.3C	07.3.1.f	46548	Safety Training and Personnel Certification: Planning and Implementation of the Safety Training Program: Center Directors shall: Provide system safety training to meet the needs of programmatic activities. (Requirement 46548)	S	N	N	Mgmt
NPR 8715.3C	07.3.1.g	46549	Safety Training and Personnel Certification: Planning and Implementation of the Safety Training Program: Center Directors shall: Ensure that software safety personnel and project/program lead software safety analysts are trained to NASA-STD-8719.13, Software Safety Standard, and NASA-STD-8739.8, Software Assurance Standard. (Requirement 46549)	S	N	N	Mgmt
NPR 8715.3C	07.3.1.h	46550	Safety Training and Personnel Certification: Planning and Implementation of the Safety Training Program: Center Directors shall: Ensure that operators of motorized equipment (including motor vehicles) have formal initial training, consisting of both classroom and operational testing, if operating the motorized equipment involves skills beyond those associated with normal, everyday operation of private motor vehicles, to assure operator proficiency. (Requirement 46550)	S	N	N	Mgmt
NPR 8715.3C	07.3.1.i	46551	Safety Training and Personnel Certification: Planning and Implementation of the Safety Training Program: Center Directors shall: Ensure that operators of motorized equipment have periodic refresher training and testing, as determined by the safety office, if operating the motor vehicle requires skills beyond those associated with normal, everyday operation of private motor vehicles. (Requirement 46551)	S	N	N	Mgmt
NPR 8715.3C	07.3.1.j	46552	Safety Training and Personnel Certification: Planning and Implementation of the Safety Training Program: Center Directors shall: Annually review operations being performed at their Center to ensure that the implemented safety training program is working effectively and to identify and include training for jobs that are potentially hazardous in addition to the mandatory listing in paragraph 7.4.5. (Requirement 46552) Note: Employee safety committees, employee representatives, and other interested groups should be provided an opportunity to assist in the hazardous job identification process.	S	N	N	Mgmt
NPR 8715.3C	07.3.2	46553	Safety Training and Personnel Certification: Planning and Implementation of the Safety Training Program: Center subject matter experts shall review NASA training materials at least annually and update materials as needed when regulatory agencies or changes in NASA policy documents generate technical changes. (Requirement 46553)	S	N	N	Mgmt
NPR 8715.3C	07.3.3	46554	Safety Training and Personnel Certification: Planning and Implementation of the Safety Training Program: Center SMA Directors shall maintain a current copy of the Center Safety Training Plan. (Requirement 46554)	S	N	N	Mgmt
NPR 8715.3C	07.4.2	46560	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Center SMA Directors shall develop required safety certification programs for their Center. (Requirement 46560)	S	N	N	Mgmt
NPR 8715.3C	07.4.3.a	46562	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Medical offices and cognizant health officials shall: Determine the need for physical and medical examinations including their depth, scope, and frequency to support certification requirements. (Requirement 46562)	S	N	N	Mgmt
NPR 8715.3C	07.4.3.b	46563	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Medical offices and cognizant health officials shall: Be responsible for medical certification in health hazard and related activities. (Requirement 46563)	S	N	N	Mgmt
NPR 8715.3C	07.4.3.c	46564	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Medical offices and cognizant health officials shall: Oversee or conduct required personnel medical examinations in support of the safety certification effort. (Requirement 46564)	S	N	N	Mgmt
NPR 8715.3C	07.4.3.d	46565	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Medical offices and cognizant health officials shall: Ensure that physical and medical examinations to support certification requirements are in compliance with OSHA and other Federal, State, and local agency applicable codes, regulations, and standards covering the occupation or environment including medical monitoring and recordkeeping requirements. (Requirement 46565) Note: The need for fitness-for-duty examinations should be based on the hazardous consequences of the employee's inability to perform the job correctly due to physical or mental deficiencies.	S	N	N	Mgmt

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NPR 8715.3C	07.4.4	46566	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Line managers shall manage the certification program for their employees and contractors in accordance with procedures in this NPR. (Requirement 46566)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.a	46569	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: Flight crew member certification (FAA licensing may not be sufficient). (Requirement 46569)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.b	46570	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: Firefighter certification. (Requirement 46570)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.c	46571	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: Propellant and explosives user certification per NSS 1740.12. (Requirement 46571)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.d	46572	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: Propellant and explosives handler certification per NSS 1740.12. (Requirement 46572)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.e	46573	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: Rescue personnel certification. (Requirement 46573)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.f	46574	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: Self-contained breathing apparatus user certification. (Requirement 46574)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.g	46575	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: Self-contained underwater breathing apparatus user certification. (Requirement 46575)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.h	46576	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: High-voltage electrician certification that adheres to NASA and State/local requirements (Requirement 46576)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.i	46577	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: Altitude chamber operator certification. (Requirement 46577)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.j	46578	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: High-pressure liquid/vapor/gas system operator certification. (Requirement 46578)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.k	46579	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: Hyperbaric chamber operator certification. (Requirement 46579)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.L	46580	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: Tank farm worker certification. (Requirement 46580)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.m	46581	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: Wind tunnel operator certification. (Requirement 46581)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.n	46582	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: Welder certification. (Requirement 46582)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.o	46583	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: Laser operator/maintenance personnel certification. (Requirement 46583)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.p	46584	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: Centrifuge operator certification. (Requirement 46584)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.q	46585	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: Range safety officer certification. (Requirement 46585)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.r	46586	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: Crane operator certification. (Requirement 46586)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.s	46587	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: Certification for riggers for hoisting operations. (Requirement 46587)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.t	46588	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: Heavy equipment operator certification. (Requirement 46588)	S	N	N	Mgmt

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NPR 8715.3C	07.4.5.1.u	46589	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: Confined space entry personnel certification. (Requirement 46589)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.v	46590	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: Certification for lockout/tagout personnel. (Requirement 46590)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.1.w	46591	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors or their designees shall ensure: Certification for individuals involved strictly with the handling, transport, or packaging of hazardous materials that will not otherwise disturb the integrity of the basic properly packaged shipping container that holds the hazardous material. Note: Operations that involve the reduction of palletized or otherwise combined items of packaged hazardous materials qualify as handling. Center safety officials or their designees may require additional hazardous operations safety certifications. (Requirement 46591)	S	N	N	Mgmt
NPR 8715.3C	07.4.5.2	46592	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Hazardous Operations Requiring Safety Certification: Center SMA Directors who certify individuals to perform or control hazardous operations, or to use or transport hazardous material, shall ensure the individuals possess the necessary knowledge, skill, judgment, and physical ability to do the job in a safe and a healthful manner. (Requirement 46592)	S	N	N	Mgmt
NPR 8715.3C	07.4.6.1.a	46595	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Certification Requirements: Center training and personnel development offices and safety offices shall ensure that hazardous operations certification and hazardous material handler certification include as a minimum: A physical examination (see paragraph 7.4.3). (Requirement 46595)	S	N	N	Mgmt
NPR 8715.3C	07.4.6.1.b	46596	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Certification Requirements: Center training and personnel development offices and safety offices shall ensure that hazardous operations certification and hazardous material handler certification include as a minimum: Initial training (classroom, online, and/or on-the-job). Note: The level and structure of training is established according to the hazards of the job being performed. (Requirement 46596)	S	N	N	Mgmt
NPR 8715.3C	07.4.6.1.c	46597	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Certification Requirements: Center training and personnel development offices and safety offices shall ensure that hazardous operations certification and hazardous material handler certification include as a minimum: A written examination to determine adequacy and retention of training. (Requirement 46597)	S	N	N	Mgmt
NPR 8715.3C	07.4.6.1.d	46598	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Certification Requirements: Center training and personnel development offices and safety offices shall ensure that hazardous operations certification and hazardous material handler certification include as a minimum: Periodic refresher training, as determined by the Center safety official, including review of emergency response procedures. (Requirement 46598)	S	N	N	Mgmt
NPR 8715.3C	07.4.6.1.e	46599	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Certification Requirements: Center training and personnel development offices and safety offices shall ensure that hazardous operations certification and hazardous material handler certification include as a minimum: A recertification period as determined by the Center safety official in the absence of any local, State or Federal requirements (but not to exceed a four-year interval). (Requirement 46599)	S	N	N	Mgmt
NPR 8715.3C	07.4.6.1.f	46600	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Certification Requirements: Center training and personnel development offices and safety offices shall ensure that hazardous operations certification and hazardous material handler certification include as a minimum: Applicable requirements of 29 CFR Part 1910, Occupational Safety and Health Standards. (Requirement 46600)	S	N	N	Mgmt
NPR 8715.3C	07.4.6.1.g	46601	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Certification Requirements: Center training and personnel development offices and safety offices shall ensure that hazardous operations certification and hazardous material handler certification include as a minimum: Specific training in the Federal, NASA, and local rules for preparing, packaging, marking, and transporting hazardous material and/or equipment operation associated with the job. (Requirement 46601)	S	N	N	Mgmt
NPR 8715.3C	07.4.6.2	46602	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Certification Requirements: Center training and personnel development offices and Center safety offices shall ensure that drivers or operators of vehicles transporting hazardous materials are instructed in the specific hazards of the cargo or material in their vehicle and the standard emergency and first-aid procedures that should be followed in the event of a spill or exposure to the hazardous material. Note: Training requirements can be found in 29 CFR Part 1910, Occupational Safety and Health Standards, and 49 CFR Part 177, Carriage by Public Highway. (Requirement 46602)	S	N	N	Mgmt
NPR 8715.3C	07.4.6.3.a	46604	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Certification Requirements: Mission Directorate Associate Administrators, Center Directors, project managers, and supervisors shall ensure that: Personnel who are hazardous-operations-safety-certified or hazardous-material-handler-certified are identified through the issuance of a card, license, or badge (to be immediately available) or a listing on a personnel certification roster or database. (Requirement 46604)	S	N	N	Mgmt
NPR 8715.3C	07.4.6.3.b	46605	Safety Training and Personnel Certification: Personnel Safety Certification Programs for Potentially Hazardous Operations and Materials: Certification Requirements: Mission Directorate Associate Administrators, Center Directors, project managers, and supervisors shall ensure that: Personnel certification rosters indicate the name, date, materials or operations for which certification is valid, name of certifying official, and date of expiration. (Requirement 46605)	S	N	N	Mgmt

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NPR 8715.3C	07.5.1	46607	Safety Training and Personnel Certification: Mission Critical Personnel Reliability Program (PRP): The Director of each NASA installation shall designate mission critical areas for the Space Shuttle and other critical systems including the International Space Station, designated ELVs, designated payloads, Shuttle Carrier Aircraft, and other designated resources that provide access to space. (Requirement 46607)	S	N	N	Mgmt
NPR 8715.3C	07.5.2	46608	Safety Training and Personnel Certification: Mission Critical Personnel Reliability Program (PRP): Personnel having unescorted access to these areas shall meet the suitability, qualification, and screening provisions detailed in 14 CFR Part 1214.5, Space Flight: Mission Critical Systems Personnel Reliability Program: Screening Requirements. (Requirement 46608)	S	N	N	Mgmt
NPR 8715.3C	07.6.1.a	46612	Safety Training and Personnel Certification: Hazardous Materials and Chemicals Risk Information: Mission Directorate Associate Administrators, Center Directors, project managers, and supervisors shall ensure that: The risk of all hazardous chemicals produced or imported are evaluated and included in their safety training and certification program. (Requirement 46612)	S	N	N	Mgmt
NPR 8715.3C	07.6.1.b	46613	Safety Training and Personnel Certification: Hazardous Materials and Chemicals Risk Information: Mission Directorate Associate Administrators, Center Directors, project managers, and supervisors shall ensure that: Information involving the risk of all hazardous chemicals is made available to all employees in accordance with 29 CFR Part 1910.1200. (Requirement 46613)	S	N	N	Mgmt
NPR 8715.3C	08.2.1.a	46625	Safety for Facility Acquisition, Construction, Activation, and Disposal: Roles and Responsibilities: Center Directors shall: Ensure this NPR is applied to the CoF projects and facility maintenance projects. (Requirement 46625)	S	N	N	Mgmt
NPR 8715.3C	08.2.1.b	46626	Safety for Facility Acquisition, Construction, Activation, and Disposal: Roles and Responsibilities: Center Directors shall: Ensure this NPR is applied to Center-approved facility projects according to the degree of safety policy impact and regulatory considerations on those projects. (Requirement 46626)	S	N	N	Mgmt
NPR 8715.3C	08.2.1.c	46627	Safety for Facility Acquisition, Construction, Activation, and Disposal: Roles and Responsibilities: Center Directors shall: Ensure that the requirements in this NPR do not supersede more stringent requirements imposed by individual NASA organizations and other Government agencies. (Requirement 46627)	S	N	N	Mgmt
NPR 8715.3C	08.2.1.d	46628	Safety for Facility Acquisition, Construction, Activation, and Disposal: Roles and Responsibilities: Center Directors shall: Use NASA-STD-8719.7, Facilities System Safety Guidebook, which provides for a review of the facility life cycle and the safety tasks that shall be accomplished during acquisition, modification, and test activities and facility operations, maintenance, and disposal. (Requirement 46628)	S	N	N	Mgmt
NPR 8715.3C	08.2.1.e	46629	Safety for Facility Acquisition, Construction, Activation, and Disposal: Roles and Responsibilities: Center Directors shall: Ensure that existing facilities undergoing major renovations meet national consensus codes in effect at the time of the renovations. Note: Major renovations are any facility modifications controlled by a design review process as provided in NASA-STD-8719.7, Facility System Safety Guidebook. (Requirement 46629)	S	N	N	Mgmt
NPR 8715.3C	08.3.1.a	46632	Safety for Facility Acquisition, Construction, Activation, and Disposal: Facility Acquisition, Construction, and Activation Objectives: Center Directors shall ensure that NASA facility acquisition, construction, and activation safety activities: Identify, track, and resolve hazards at the earliest possible life-cycle phase to eliminate risk to personnel and mission success and to minimize the cost and need for a retrofit program. (Requirement 46632)	S	N	N	Mgmt
NPR 8715.3C	08.3.1.b	46633	Safety for Facility Acquisition, Construction, Activation, and Disposal: Facility Acquisition, Construction, and Activation Objectives: Center Directors shall ensure that NASA facility acquisition, construction, and activation safety activities: Perform safety oversight functions to ensure compliance with NASA safety policies. (Requirement 46633)	S	N	N	Mgmt
NPR 8715.3C	08.3.1.c	46634	Safety for Facility Acquisition, Construction, Activation, and Disposal: Facility Acquisition, Construction, and Activation Objectives: Center Directors shall ensure that NASA facility acquisition, construction, and activation safety activities: Monitor facility construction, modification, repair, and rehabilitation for compliance with safety, fire protection, and building codes and standards. (Requirement 46634)	S	N	N	Mgmt
NPR 8715.3C	08.3.1.d	46635	Safety for Facility Acquisition, Construction, Activation, and Disposal: Facility Acquisition, Construction, and Activation Objectives: Center Directors shall ensure that NASA facility acquisition, construction, and activation safety activities: Provide for the programmatic and technical review of all proposed facility acquisition, design, and construction projects to assure that all safety requirements are specified and funded. (Requirement 46635)	S	N	N	Mgmt
NPR 8715.3C	08.3.1.e	46636	Safety for Facility Acquisition, Construction, Activation, and Disposal: Facility Acquisition, Construction, and Activation Objectives: Center Directors shall ensure that NASA facility acquisition, construction, and activation safety activities: Maintain current building configurations during all phases of the facility acquisition, maintenance, operation, and disposal process. (Requirement 46636)	S	N	N	Mgmt
NPR 8715.3C	08.3.1.f	46637	Safety for Facility Acquisition, Construction, Activation, and Disposal: Facility Acquisition, Construction, and Activation Objectives: Center Directors shall ensure that NASA facility acquisition, construction, and activation safety activities: Process any change to facility hardware, software, or procedures through the configuration management program. (Requirement 46637)	S	N	N	Mgmt
NPR 8715.3C	08.3.1.g	46638	Safety for Facility Acquisition, Construction, Activation, and Disposal: Facility Acquisition, Construction, and Activation Objectives: Center Directors shall ensure that NASA facility acquisition, construction, and activation safety activities: Include the safety inspection of all facilities, occupied or unoccupied, at least annually to ensure compliance with safety, fire protection, and building codes and standards. (Requirement 46638)	S	N	N	Mgmt
NPR 8715.3C	08.3.2.a	46640	Safety for Facility Acquisition, Construction, Activation, and Disposal: Facility Acquisition, Construction, and Activation Objectives: For projects with safety or fire protection implications, Center Directors shall ensure that: NASA fire protection and safety personnel formally monitor fire protection and safety compliance efforts during the various phases of the projects. (Requirement 46640)	S	N	N	Mgmt
NPR 8715.3C	08.3.2.b	46641	Safety for Facility Acquisition, Construction, Activation, and Disposal: Facility Acquisition, Construction, and Activation Objectives: For projects with safety or fire protection implications, Center Directors shall ensure that: NASA fire protection and safety monitoring efforts are documented. (Requirement 46641)	S	N	N	Mgmt

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NPR 8715.3C	08.3.2.c	46642	Safety for Facility Acquisition, Construction, Activation, and Disposal: Facility Acquisition, Construction, and Activation Objectives: For projects with safety or fire protection implications, Center Directors shall ensure that: Fire protection or safety monitoring document(s) have formal concurrence from the safety office or fire protection office. (Requirement 46642)	S	N	N	Mgmt
NPR 8715.3C	08.3.3.a	46644	Safety for Facility Acquisition, Construction, Activation, and Disposal: Facility Acquisition, Construction, and Activation Objectives: Center Directors shall ensure that: Any final inspection effort (operational readiness inspection, operational readiness review, test readiness review, pre-final inspection, final inspection) includes a safety and/or health representative. (Requirement 46644)	S	N	N	Mgmt
NPR 8715.3C	08.3.3.b	46645	Safety for Facility Acquisition, Construction, Activation, and Disposal: Facility Acquisition, Construction, and Activation Objectives: Center Directors shall ensure that: All facility safety and health issues are documented, resolved, or adequately controlled prior to acceptance, activation, and operation. (Requirement 46645)	S	N	N	Mgmt
NPR 8715.3C	08.4.1.a	46648	Safety for Facility Acquisition, Construction, Activation, and Disposal: Basic Requirements for Facility Acquisition, Construction, and Activation: Center Directors shall: Designate and assign facility safety program management responsibilities to a NASA Center SMA organization that is independent from the specific facility (user) management. (Requirement 46648)	S	N	N	Mgmt
NPR 8715.3C	08.4.1.b	46649	Safety for Facility Acquisition, Construction, Activation, and Disposal: Basic Requirements for Facility Acquisition, Construction, and Activation: Center Directors shall: Assure that the NASA fire protection and safety organizations review all proposed NASA-owned, controlled, or operated facility configuration changes and construction work change orders that have a potential fire protection or safety impact. Note: This does not preclude the use of checklists and other guidelines to assist the project in determining the potential fire or safety impact and necessary protection requirements. (Requirement 46649)	S	N	N	Mgmt
NPR 8715.3C	08.4.1.c	46650	Safety for Facility Acquisition, Construction, Activation, and Disposal: Basic Requirements for Facility Acquisition, Construction, and Activation: Center Directors shall: Ensure compliance with EM 385-1-1, U.S. Army Corps of Engineers, Safety and Health Requirements or local Center requirements, which ever are most stringent, for construction undertaken at NASA sites and facilities by the U.S. Army Corps of Engineers. Note: For related NASA-managed projects, EM 385-1-1 is considered an advisory document. (Requirement 46650)	S	N	N	Mgmt
NPR 8715.3C	08.5.1.a	46653	Safety for Facility Acquisition, Construction, Activation, and Disposal: Facility Managers: The Center Directors or designees shall: Appoint a facility operations manager or facility coordinator to oversee proper operation of the facility. Note: A safety coordinator may be appointed to assist the manager. (Requirement 46653)	S	N	N	Mgmt
NPR 8715.3C	08.5.1.b	46654	Safety for Facility Acquisition, Construction, Activation, and Disposal: Facility Managers: The Center Directors or designees shall: Ensure that the extent of each facility operations manager's authority is detailed in writing for the complete safety coverage of all facility operations. Note: The Center safety office will interface with the facility operations managers or safety coordinators, as appropriate, to ensure proper safety program implementation. (Requirement 46654)	S	N	N	Mgmt
NPR 8715.3C	08.6.1.a	46657	Safety for Facility Acquisition, Construction, Activation, and Disposal: FSMP: Center Directors shall: Develop and maintain a written FSMP that includes facility acquisition, modification, test activities, operations, maintenance, and disposal to monitor timely completion of all required life-cycle safety program tasks. (Requirement 46657)	S	N	N	Mgmt
NPR 8715.3C	08.6.1.b	46658	Safety for Facility Acquisition, Construction, Activation, and Disposal: FSMP: Center Directors shall: Ensure that the FSMP includes a facility hazard analysis, hazard analysis tracking index, and hazard resolution verification in accordance with NASA-STD-8719.7, Facilities System Safety Guidebook. (Requirement 46658)	S	N	N	Mgmt
NPR 8715.3C	08.6.1.c	46659	Safety for Facility Acquisition, Construction, Activation, and Disposal: FSMP: Center Directors shall: Ensure that the FSMP is used to implement safety requirements including organizational responsibilities, resources, milestones, methods of accomplishment, depth of efforts, and integration with other program engineering and management activities. (Requirement 46659)	S	N	N	Mgmt
NPR 8715.3C	08.6.1.d	46660	Safety for Facility Acquisition, Construction, Activation, and Disposal: FSMP: Center Directors shall: Ensure that the FSMP includes applicable local directives, instructions, and guidelines for minor or normal acquisitions and facility modification projects, as a minimum. (Requirement 46660)	S	N	N	Mgmt
NPR 8715.3C	08.6.1.e	46661	Safety for Facility Acquisition, Construction, Activation, and Disposal: FSMP: Center Directors shall: Ensure that the FSMP contains a realistic milestone schedule commencing with the development of functional requirements during the facility conceptual development phase to monitor timely completion of all required safety program tasks for facility design. (Requirement 46661)	S	N	N	Mgmt
NPR 8715.3C	08.6.1.f	46662	Safety for Facility Acquisition, Construction, Activation, and Disposal: FSMP: Center Directors shall: Ensure that all FSMP milestones support the scheduled facility need date or occupancy date, as appropriate. (Requirement 46662)	S	N	N	Mgmt
NPR 8715.3C	09.3.3	46687	Safety and Risk Management for NASA Contracts: Authority and Responsibility: COs or the COTR shall ensure the contractors' safety risk assessments are developed and provided to NASA for approval before the start of any hazardous deliverable work or support operations. (Requirement 46687)	S	N	N	Mgmt
NPR 8715.3C	09.4.1	46693	Safety and Risk Management for NASA Contracts: Requirements: COs and COTRs shall:	U	N	N	Safety
NPR 8715.3C	09.4.1.a	46694	Safety and Risk Management for NASA Contracts: Requirements: COs and COTRs shall: Ensure contract solicitations require the submission of safety and risk management documentation (e.g., corporate safety policies implementation procedures, safety performance experience, and mishap rates by the North American Industrial Classification System (NAICS) codes and draft program planning documents, such as safety and health plans and risk management plans) as provided by the Center's SMA Organization. (See Appendix E and Appendix F for more information to ensure that solicitation instructions included the requirements outlined in both Appendices.) (Requirement 46694)	S	N	N	Mgmt
NPR 8715.3C	09.4.1.b	46695	Safety and Risk Management for NASA Contracts: Requirements: COs and COTRs shall: Ensure contract solicitations include the evaluation of safety and risk management documentation (e.g., corporate safety policies implementation procedures, safety performance experience, and mishap rates by the NAICS codes) and draft program planning documents, such as safety and health plans and risk management plans as a factor for evaluating bids. (See Appendix E and Appendix F for more information). (Requirement 46695)	S	N	N	Mgmt

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NPR 8715.3C	09.4.1.c	46696	Safety and Risk Management for NASA Contracts: Requirements: COs and COTRs shall: Ensure that safety and risk management evaluation criteria and solicitation instructions are developed in conjunction with responsible project personnel and Center SMA organization representatives. (See Appendix E and Appendix F for more information.) (Requirement 46696)	S	N	N	Mgmt
NPR 8715.3C	09.4.2.a	46698	Safety and Risk Management for NASA Contracts: Requirements: Center SMA Directors shall: Brief all onsite contractors on local safety requirements to include incident and accident reporting, emergency evacuation procedures, fire reporting, medical emergency notification and response actions, hazardous material spill reporting and response, site entry/exit procedures, and hot work permit requirements before contract performance begins and at least annually, thereafter. (Requirement 46698)	S	N	N	Mgmt
NPR 8715.3C	09.4.2.b	46699	Safety and Risk Management for NASA Contracts: Requirements: Center SMA Directors shall: Document the onsite contractors briefings. (Requirement 46699)	S	N	N	Mgmt
NPR 8715.3C	09.4.2.c	46700	Safety and Risk Management for NASA Contracts: Requirements: Center SMA Directors shall: Inform the onsite contractor of any adjacent NASA and any other contractor operations that could pose a hazard to their operation and employees. (Requirement 46700)	S	N	N	Mgmt
NPR 8715.3C	09.4.2.d	46701	Safety and Risk Management for NASA Contracts: Requirements: Center SMA Directors shall: Assist the program or project manager or other responsible officer in implementing contractor safety surveillance and evaluation programs. (Requirement 46701)	S	N	N	Mgmt
NPR 8715.3C	09.4.2.e	46702	Safety and Risk Management for NASA Contracts: Requirements: Center SMA Directors shall: During the pre-award phase of acquisition, develop, document, and provide to the CO safety, mission success and risk management requirements for design, development, fabrication, test, and the operations of systems, equipment, and facilities in a timely manner to ensure inclusion in the solicitation. (Requirement 46702)	S	N	N	Mgmt
NPR 8715.3C	09.4.2.f	46703	Safety and Risk Management for NASA Contracts: Requirements: Center SMA Directors shall: During pre-award phase of acquisition, develop, document, and provide to the CO a statement of work elements, evaluation criteria, and solicitation instructions requiring the submittal of safety and risk management documentation (e.g., corporate safety policies, implementation procedures, safety performance experience, and mishap rates by the NAICS codes and draft program planning documents, such as safety and health plans and risk management plans) in a timely manner to ensure inclusion in the solicitation. (Requirement 46703)	S	N	N	Mgmt
NPR 8715.3C	09.4.2.g	46704	Safety and Risk Management for NASA Contracts: Requirements: Center SMA Directors shall: Participate in the contractor selection and evaluation process providing support to the CO to ensure the proper evaluation of contractor proposal information (e.g., corporate safety policies, implementation procedures, safety performance experience, and mishap rates by the NAICS codes) and draft program planning documents, such as safety and health plans and risk management plans, as a factor for evaluating bids. (Requirement 46704)	S	N	N	Mgmt
NPR 8715.3C	09.4.3	46705	Safety and Risk Management for NASA Contracts: Requirements: Center SMA Directors, COs, and COTRs shall ensure that contracts include a provision to require the contractor to provide a written plan for mitigating risks from hazardous operations to adjacent and other contractors. (See Appendix E and Appendix F for more information.) (Requirement 46705)	S	N	N	Mgmt
NPR 8715.3C	10.2.1.1	46726	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: Responsibility: The Chief, Safety and Mission Assurance, shall: The Chief, Safety and Mission Assurance, may designate, in writing, a NASA management official to represent NASA SMA at EAV reviews. The designee shall keep the Chief, Safety and Mission Assurance, apprised of all SMA issues and actions. (Requirement 46726)	S	N	N	Mgmt
NPR 8715.3C	10.2.1.a	46727	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: Responsibility: The Chief, Safety and Mission Assurance, shall: Oversee the process of for evaluating the safety review portion of any requests made for liability insurance or indemnification. (Requirement 46727)	S	N	N	Mgmt
NPR 8715.3C	10.2.1.b	46728	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: Responsibility: The Chief, Safety and Mission Assurance, shall: Provide the NASA Administrator or delegee with an evaluation of the safety procedures and practices associated with a request for liability insurance or indemnification. (Requirement 46728)	S	N	N	Mgmt
NPR 8715.3C	10.2.1.c	46729	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: Responsibility: The Chief, Safety and Mission Assurance, shall: Provide the cognizant Mission Directorate Associate Administrator with a listing of the documentation needed to perform a safety review of the request for liability insurance or indemnification (see paragraph 10.3.2). (Requirement 46729)	S	N	N	Mgmt
NPR 8715.3C	10.2.2.1	46731	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: Responsibility: The cognizant Mission Directorate Associate Administrator shall: Coordinate the processing of requests for liability insurance or indemnification made to the NASA Administrator or delegee. (Requirement 46731)	S	N	N	Mgmt
NPR 8715.3C	10.2.2.2	46732	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: Responsibility: The cognizant Mission Directorate Associate Administrator shall: Obtain the concurrence of the Chief, Safety and Mission Assurance, the NASA General Counsel, NASA Chief Engineer, and the NASA Chief Financial Officer prior to submission of the request for liability insurance or indemnification to the NASA Administrator or delegee for approval. (Requirement 46732)	S	N	N	Mgmt
NPR 8715.3C	10.2.2.3	46733	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: Responsibility: The cognizant Mission Directorate Associate Administrator shall: Ensure that the Chief, Safety and Mission Assurance, is provided full access to all safety documentation related to the request for liability insurance or indemnification (see paragraph 10.3.2). (Requirement 46733)	S	N	N	Mgmt
NPR 8715.3C	10.2.3	46734	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: Responsibility: The NASA General Counsel shall interpret and certify that requests for liability insurance or indemnification for EAV developers are processed in accordance with applicable laws, regulations, and policies. (Requirement 46734)	S	N	N	Mgmt

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NPR 8715.3C	10.2.4	46735	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: Responsibility: The overall lead EAV Program/Project Center's SMA Director shall assure that the required safety procedures and practices are being followed in the development of the EAV and ensure that adequate records are maintained to support the safety reviews associated with any decision on liability insurance or indemnification. (Requirement 46735)	S	N	N	Mgmt
NPR 8715.3C	10.2.5	46736	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: Responsibility: The EAV Program/Project Manager shall collect and certify as accurate the safety review material provided to the Chief, Safety Mission Assurance, as part of a request for liability insurance or indemnification. (Requirement 46736)	S	N	N	Mgmt
NPR 8715.3C	10.2.6	46737	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: Responsibility: The Contracting Officer, Grants Officer, or other designated NASA official shall ensure that EAV funding instruments include procedures and requirements for safety reviews needed with requests for liability insurance or indemnification. (Requirement 46737)	S	N	N	Mgmt
NPR 8715.3C	10.2.7	46738	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: Responsibility: The NASA Chief Engineer shall review requests for liability insurance or indemnification for compliance to NASA engineering practices and provide comments to the Chief, Safety and Mission Assurance, and the Mission Directorate Associate Administrator. (Requirement 46738)	S	N	N	Mgmt
NPR 8715.3C	10.3.1	46740	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: EAV SMA Assessment Reviews: Safety and Mission Success Reviews, as defined in NPR 8705.6, Safety and Mission Assurance Audits, Reviews, and Assessments, shall be performed at the following times, at a minimum, during a request for liability insurance or indemnification of an EAV: (Requirement 46740)	S	N	N	Mgmt
NPR 8715.3C	10.3.1.a	46741	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: EAV SMA Assessment Reviews: Safety and Mission Success Reviews, as defined in NPR 8705.6, Safety and Mission Assurance Audits, Reviews, and Assessments, shall be performed at the following times, at a minimum, during a request for liability insurance or indemnification of an EAV: Within 1 month of request being officially submitted. (Requirement 46741)	S	N	N	Mgmt
NPR 8715.3C	10.3.1.b	46742	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: EAV SMA Assessment Reviews: Safety and Mission Success Reviews, as defined in NPR 8705.6, Safety and Mission Assurance Audits, Reviews, and Assessments, shall be performed at the following times, at a minimum, during a request for liability insurance or indemnification of an EAV: A minimum of 1 month prior to any decision meeting with the NASA Administrator on granting liability insurance or indemnification.	S	N	N	Safety
NPR 8715.3C	10.3.1.c	46743	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: EAV SMA Assessment Reviews: Safety and Mission Success Reviews, as defined in NPR 8705.6, Safety and Mission Assurance Audits, Reviews, and Assessments, shall be performed at the following times, at a minimum, during a request for liability insurance or indemnification of an EAV: A minimum of 3 weeks prior to each EAV flight where liability insurance or indemnification has been granted.	S	N	N	Safety
NPR 8715.3C	10.3.2	46744	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: EAV SMA Assessment Reviews: The overall lead EAV Program/Project Manager, with their Center SMA Director, shall present the following safety materials nominally required as a part of a program compliant with NPD 7120.4 and NPD 8700.1, and the subordinate documents, at the Safety and Mission Success Review as a minimum: (Requirement 46744)	S	N	N	Mgmt
NPR 8715.3C	10.3.2.a	46745	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: EAV SMA Assessment Reviews: The overall lead EAV Program/Project Manager, with their Center SMA Director, shall present the following safety materials nominally required as a part of a program compliant with NPD 7120.4 and NPD 8700.1, and the subordinate documents, at the Safety and Mission Success Review as a minimum: Program/project safety or SMA plan(s) implementation (e.g., system safety plan, quality assurance plan, test/mission plan, risk assessment/management plan, hardware/software assurance plan, independent verification and validation plan, emergency/contingency plan(s), and environmental management plans).	S	N	N	Safety
NPR 8715.3C	10.3.2.b	46746	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: EAV SMA Assessment Reviews: The overall lead EAV Program/Project Manager, with their Center SMA Director, shall present the following safety materials nominally required as a part of a program compliant with NPD 7120.4 and NPD 8700.1, and the subordinate documents, at the Safety and Mission Success Review as a minimum: Results of as-built reviews.	S	N	N	Safety
NPR 8715.3C	10.3.2.c	46747	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: EAV SMA Assessment Reviews: The overall lead EAV Program/Project Manager, with their Center SMA Director, shall present the following safety materials nominally required as a part of a program compliant with NPD 7120.4 and NPD 8700.1, and the subordinate documents, at the Safety and Mission Success Review as a minimum: The adequacy of the SMA processes to cover all facets of the program.	S	N	N	Safety
NPR 8715.3C	10.3.2.d	46748	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: EAV SMA Assessment Reviews: The overall lead EAV Program/Project Manager, with their Center SMA Director, shall present the following safety materials nominally required as a part of a program compliant with NPD 7120.4 and NPD 8700.1, and the subordinate documents, at the Safety and Mission Success Review as a minimum: Risk identification, risk management, and risk tradeoffs.	S	N	N	Safety
NPR 8715.3C	10.3.2.e	46749	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: EAV SMA Assessment Reviews: The overall lead EAV Program/Project Manager, with their Center SMA Director, shall present the following safety materials nominally required as a part of a program compliant with NPD 7120.4 and NPD 8700.1, and the subordinate documents, at the Safety and Mission Success Review as a minimum: Safety and hazard risk identification/analyses (including NEPA documentation), and how the risks are closed/mitigated/tracked.	S	N	N	Safety

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NPR 8715.3C	10.3.2.f	46750	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: EAV SMA Assessment Reviews: The overall lead EAV Program/Project Manager, with their Center SMA Director, shall present the following safety materials nominally required as a part of a program compliant with NPD 7120.4 and NPD 8700.1, and the subordinate documents, at the Safety and Mission Success Review as a minimum: Prioritization of the above risk items as to their criticality.	S	N	N	Safety
NPR 8715.3C	10.3.2.g	46751	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: EAV SMA Assessment Reviews: The overall lead EAV Program/Project Manager, with their Center SMA Director, shall present the following safety materials nominally required as a part of a program compliant with NPD 7120.4 and NPD 8700.1, and the subordinate documents, at the Safety and Mission Success Review as a minimum: The method for reviewing SMA provisions of external interfaces (e.g., system safety working group, Space Shuttle/International Space Station program, Ground Safety Review Panel, range, international partners/participants).	S	N	N	Safety
NPR 8715.3C	10.3.2.h	46752	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: EAV SMA Assessment Reviews: The overall lead EAV Program/Project Manager, with their Center SMA Director, shall present the following safety materials nominally required as a part of a program compliant with NPD 7120.4 and NPD 8700.1, and the subordinate documents, at the Safety and Mission Success Review as a minimum: Review of demonstrated and documented compliance with applicable range safety requirements.	S	N	N	Safety
NPR 8715.3C	10.3.2.i	46753	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: EAV SMA Assessment Reviews: The overall lead EAV Program/Project Manager, with their Center SMA Director, shall present the following safety materials nominally required as a part of a program compliant with NPD 7120.4 and NPD 8700.1, and the subordinate documents, at the Safety and Mission Success Review as a minimum: Any required probabilistic risk assessment(s) for the EAV.	S	N	N	Safety
NPR 8715.3C	10.3.3	46754	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: EAV SMA Assessment Reviews: For EAV program-wide or EAV preflight reviews being held after the Safety and Mission Success Review discussed in paragraph 10.3.1.c, the Mission Directorate Associate Administrator shall ensure that the Chief, Safety and Mission Assurance (or designee), is invited to participate in the reviews. (Requirement 46754)	S	N	N	Mgmt
NPR 8715.3C	10.3.4	46755	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: EAV SMA Assessment Reviews: For EAV flights which are performed outside of established U.S. ranges, the EAV Program/Project Manager shall invite any ranges involved in the EAV flight to participate in the safety review process defined in this chapter. (Requirement 46755)	S	N	N	Safety
NPR 8715.3C	10.4.1	46757	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: SMA Review Process Products: Upon completion of each Safety and Mission Success Review, the Chief, Safety and Mission Assurance (and/or designee), shall issue an initial assessment of the EAV program/project's SMA process(es) to the applicable Mission Directorate Associate Administrator. The assessment shall include: (Requirement 46757)	S	N	N	Mgmt
NPR 8715.3C	10.4.1.a	46758	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: SMA Review Process Products: Upon completion of each Safety and Mission Success Review, the Chief, Safety and Mission Assurance (and/or designee), shall issue an initial assessment of the EAV program/project's SMA process(es) to the applicable Mission Directorate Associate Administrator. The assessment shall include: A preliminary assessment of whether the developer is following appropriate safety procedures and practices in the development of the EAV.	U	N	N	Mgmt
NPR 8715.3C	10.4.1.b	46759	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: SMA Review Process Products: Upon completion of each Safety and Mission Success Review, the Chief, Safety and Mission Assurance (and/or designee), shall issue an initial assessment of the EAV program/project's SMA process(es) to the applicable Mission Directorate Associate Administrator. The assessment shall include: Recommendations for corrections or additions to the program/project SMA planning.	U	N	N	Mgmt
NPR 8715.3C	10.4.1.c	46760	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: SMA Review Process Products: Upon completion of each Safety and Mission Success Review, the Chief, Safety and Mission Assurance (and/or designee), shall issue an initial assessment of the EAV program/project's SMA process(es) to the applicable Mission Directorate Associate Administrator. The assessment shall include: Requests for further actions or information along with a written response to the assessment.	U	N	N	Mgmt
NPR 8715.3C	10.4.2	46761	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: SMA Review Process Products: The Mission Directorate Associate Administrator shall ensure that the results of the safety review are included in the package submitted to the Administrator or delegatee for review and decision regarding the request for liability insurance or indemnification. (Requirement 46761)	S	N	N	Mgmt
NPR 8715.3C	10.4.3	46762	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: SMA Review Process Products: The Chief, Safety and Mission Assurance, shall maintain a record of the safety reviews associated with any request for liability insurance or indemnification per NPD 1441.1, NASA Records Retention Schedules, for a minimum of 10 years beyond the life of the EAV program/project. (Requirement 46762)	S	N	N	Mgmt
NPR 8715.3C	10.5	46763	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: Range Safety Requirements (Note: The following two basic program/project requirements are summarized from 14 CFR Chapter III (FAA) and the range safety requirement documents (i.e., EWR 127-1). These requirements are not to be considered as all-inclusive but are provided to assist the program/project manager in understanding which fundamental requirements must be met. These requirements form the basis for developing an acceptable safety risk mitigation plan for EAV projects.)	U	N	N	Mgmt
NPR 8715.3C	10.5.1	46764	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: Range Safety Requirements: Operations: The EAV operator should use a structured analytical approach in preplanning for orbital, suborbital, and entry flight by developing detailed flight rules, procedures, and checklists prior to the Flight Readiness Review, for both nominal and contingency operations. The EAV operator shall document scenarios that allow for continued safe flight and landing or flight termination in a manner that minimizes risk in off-nominal situations. (Requirement 46764)	S	N	N	Mgmt

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NPR 8715.3C	10.5.2	46765	Process/Requirements for the SMA Portions of Requests for Liability Insurance or Indemnification of EAV Developers: Range Safety Requirements: Notification: The EAV operator shall coordinate, develop procedures, and demonstrate (in conjunction with the host range and/or FAA), prior to launch and reentry, the capability to notify maritime and aviation authorities with sufficient time to clear the trajectory, ground-track, and emergency abort areas (if applicable) of traffic. (Requirement 46765)	S	N	N	Mgmt
NPR 8715.3C	11.3.1.a	57254	NASA Meteoroid Environment Program: Responsibility: The Chief, Safety and Mission Assurance, shall: Lead the NASA ME Program (Requirement 57254).	S	N	N	Safety
NPR 8715.3C	11.3.1.b	57255	NASA Meteoroid Environment Program: Responsibility: The Chief, Safety and Mission Assurance, shall: Establish policies for the understanding of the ME (Requirement 57255).	S	N	N	Safety
NPR 8715.3C	11.3.1.c	57256	NASA Meteoroid Environment Program: Responsibility: The Chief, Safety and Mission Assurance, shall: Provide resources and support needed to continue ME research and quantification by the ME Program (Requirement 57256).	S	N	N	Safety
NPR 8715.3C	11.3.1.d	57257	NASA Meteoroid Environment Program: Responsibility: The Chief, Safety and Mission Assurance, shall: Ensure that software tools, models, and their associated databases are provided (or made available) to aid programs/projects in ME evaluation of mitigation options (Requirement 57257).	S	N	N	Safety
NPR 8715.3C	11.3.1.e	57258	NASA Meteoroid Environment Program: Responsibility: The Chief, Safety and Mission Assurance, shall: Provide oversight of the Meteoroid Environment Office (MEO) in the implementation of the NASA ME Program and coordination of ME research with spaceflight programs and organizations inside of and outside of NASA (Requirement 57258).	S	N	N	Safety
NPR 8715.3C	11.3.1.f	57259	NASA Meteoroid Environment Program: Responsibility: The Chief, Safety and Mission Assurance, shall: Ensure assistance and expertise in ME is provided to NASA programs/projects in the evaluation of the ME upon request by the programs (Requirement 57259).	S	N	N	Safety
NPR 8715.3C	11.3.2.a	57261	NASA Meteoroid Environment Program: Responsibility: The cognizant Mission Directorate Associate Administrator shall: Ensure that evaluation of the ME is included in NASA spaceflight programs in design and operations (Requirement 57261).	S	N	N	Safety
NPR 8715.3C	11.3.2.b	57262	NASA Meteoroid Environment Program: Responsibility: The cognizant Mission Directorate Associate Administrator shall: Determine the level of acceptable risk due to ME (Requirement 57262). Note: Level of acceptable risk is normally expressed jointly for ME and Orbital Debris. (See NPR 8715.6, NASA Procedural Requirements for Limiting Orbital Debris, paragraph 1.3.2.1.) Note: Upon request, the NASA MEO can provide technical expertise on ME.	S	N	N	Safety
NPR 8715.3C	11.3.3	57263	NASA Meteoroid Environment Program: Responsibility: The Assistant Administrator, Office of External Relations shall endeavor to incorporate the NASA ME Program interfaces in negotiated international agreements for space activities and launch services (Requirement 57263).	S	N	N	Safety
NPR 8715.3C	11.3.4	57264	NASA Meteoroid Environment Program: Responsibility: The Director, NASA Marshall Space Flight Center, shall provide administrative support for the NASA MEO and may supplement MEO funding (Requirement 57264).	S	N	N	Safety
NPR 8715.3C	11.3.6.a	57267	NASA Meteoroid Environment Program: Responsibility: The NASA MEO shall: Lead the technical work for the ME Program (Requirement 57267).	S	N	N	Safety
NPR 8715.3C	11.3.6.b	57268	NASA Meteoroid Environment Program: Responsibility: The NASA MEO shall: Provide technical expertise and assistance to NASA mission program/project managers in technical ME assessments by providing information and/or directing queries to the knowledgeable technical staff (Requirement 57268).	S	N	N	Safety
NPR 8715.3C	11.3.6.c	57269	NASA Meteoroid Environment Program: Responsibility: The NASA MEO shall: Provide technical support to NASA management in the understanding of the ME (Requirement 57269).	S	N	N	Safety
NPR 8715.3C	11.3.6.d	57270	NASA Meteoroid Environment Program: Responsibility: The NASA MEO shall: Perform and support research into improved techniques for determination of the ME in government and academia (Requirement 57270).	S	N	N	Safety
NPR 8715.3C	11.3.6.e	57271	NASA Meteoroid Environment Program: Responsibility: The NASA MEO shall: Develop techniques and technical support for NASA programs/projects and NASA partners in the inclusion of ME quantification with probabilistic risk assessments (i.e.; NPR 8705.5, Probabilistic Risk Assessment (PRA) Procedures for NASA Programs and Projects) and other risk quantification documents (i.e.; NPR 8000.4, Risk Management Procedural Requirements) (Requirement 57271).	S	N	N	Safety
NPR 8715.3C	11.3.6.f	57272	NASA Meteoroid Environment Program: Responsibility: The NASA MEO shall: Develop, validate, and update ME models and databases (such as the MEM) and makes those software tools available to NASA programs and partners (Requirement 57272).	S	N	N	Safety
NPR 8715.3C	11.3.6.g	57273	NASA Meteoroid Environment Program: Responsibility: The NASA MEO shall: Coordinate the collection of ME data and information internal and external to NASA (Requirement 57273).	S	N	N	Safety
NPR 8715.3C	11.3.6.h	57274	NASA Meteoroid Environment Program: Responsibility: The NASA MEO shall: Collect information on spacecraft meteoroid impacts and resulting damage and maintain a database of close calls and mishaps due to meteoroids (Requirement 57274). Note: Spacecraft programs/projects are responsible for determining ME damage and any associated mishap or close call reporting. The NASA MEO will collect that information for NASA-wide use.	S	N	N	Safety
NPR 8715.3C	11.3.6.i	57275	NASA Meteoroid Environment Program: Responsibility: The NASA MEO shall: Develop and provide forecasting of the ME for NASA space flight programs upon request (Requirement 57275).	S	N	N	Safety
NPR 8715.3C	11.3.6.j	57276	NASA Meteoroid Environment Program: Responsibility: The NASA MEO shall: Develop ME fluxes for Earth orbital and lunar regions (Requirement 57276).	S	N	N	Safety
NPR 8715.3C	11.3.6.k	57277	NASA Meteoroid Environment Program: Responsibility: The NASA MEO shall: Develop and maintain a NASA Guidebook on ME to provide further information and guidance to NASA programs/projects, ME professionals, and NASA partners (Requirement 57277). Note: Development of the NASA Guidebook on ME will be a technical update to existing NASA ME documentation which includes NASA SP-8013, NASA Micrometeoroid Environment Model [Near Earth to Lunar Surface], NASA SP 8038, Micrometeoroid Environment Model [Interplanetary and Planetary], NASA TM 4527 Natural Orbital Environment Guidelines for Use in Aerospace Vehicle Development, and SSP 30425 Space Station Program Natural Environment Definition for Design. The NASA Guidebook on ME will not contain requirements for ME mitigation.	S	N	N	Safety
NPR 8715.3C	11.3.6.L	57278	NASA Meteoroid Environment Program: Responsibility: The NASA MEO shall: Provide ad hoc assistance to the Department of Defense and other U.S. Government departments and organizations on matters related to the characterization of the ME for NASA space missions (Requirement 57278).	S	N	N	Safety

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NPR 8715.3C	11.3.6.m	57279	NASA Meteoroid Environment Program: Responsibility: The NASA MEO shall: Participate in the determination, adoption, and use of international meteoroid mitigation guidelines through international forums (Requirement 57279).	S	N	N	Safety
NPR 8715.5	1.3.1.a	42624	Roles and Responsibilities: NASA Chief Safety and Mission Assurance Officer. The NASA Chief Safety and Mission Assurance Officer or NASA designee shall: Approve and promulgate Agency-level range safety policies and requirements (Requirement 42624).	S	N	N	Safety
NPR 8715.5	1.3.1.b	42625	Roles and Responsibilities: NASA Chief Safety and Mission Assurance Officer. The NASA Chief Safety and Mission Assurance Officer or NASA designee shall: Oversee the Agency Range Safety Program and implementation of this NPR (Requirement 42625).	S	N	N	Safety
NPR 8715.5	1.3.1.c	42626	Roles and Responsibilities: NASA Chief Safety and Mission Assurance Officer. The NASA Chief Safety and Mission Assurance Officer or NASA designee shall: Review and approve the Range Safety Risk Management Plan (RSRMP) (including any updates) per paragraphs 1.3.7.p and 3.2.4.4 of this NPR for any vehicle program that is not supported by a NASA Center range safety organization (Requirement 42626).	S	N	N	Safety
NPR 8715.5	1.3.1.d	42627	Roles and Responsibilities: NASA Chief Safety and Mission Assurance Officer. The NASA Chief Safety and Mission Assurance Officer or NASA designee shall: Designate in writing, fund, and provide input to the performance evaluation of the NASA Range Safety Manager (see paragraph 1.3.2 of this NPR) (Requirement 42627).	S	N	N	Safety
NPR 8715.5	1.3.2.a	42629	Roles and Responsibilities: NASA Range Safety Manager. The NASA Range Safety Manager shall perform the following Headquarters-level functions: Develop, coordinate, and update Agency range safety policy, including this NPR (Requirement 42629).	S	N	N	Safety
NPR 8715.5	1.3.2.b	42630	Roles and Responsibilities: NASA Range Safety Manager. The NASA Range Safety Manager shall perform the following Headquarters-level functions: Serve as the Agency focal point for all matters involving range safety (Requirement 42630).	S	N	N	Safety
NPR 8715.5	1.3.2.c	42631	Roles and Responsibilities: NASA Range Safety Manager. The NASA Range Safety Manager shall perform the following Headquarters-level functions: Lead a team of Range Safety Representatives (see paragraph 1.3.6) to evaluate and resolve range safety program concerns and ensure consistent implementation of range safety requirements throughout the Agency (Requirement 42631).	S	N	N	Safety
NPR 8715.5	1.3.2.d	42632	Roles and Responsibilities: NASA Range Safety Manager. The NASA Range Safety Manager shall perform the following Headquarters-level functions: Review Center and program implementation of this NPR and provide findings and recommendations to the responsible Center, program manager, and the Office of Safety and Mission Assurance (Requirement 42632).	S	N	N	Safety
NPR 8715.5	1.3.2.e	42633	Roles and Responsibilities: NASA Range Safety Manager. The NASA Range Safety Manager shall perform the following Headquarters-level functions: Conduct independent assessments of applicable NASA Centers, component and range facilities, and programs at least once every 2 years to verify conformance with range safety policies, procedures, and requirements (Requirement 42633).	S	N	N	Safety
NPR 8715.5	1.3.2.f	42634	Roles and Responsibilities: NASA Range Safety Manager. The NASA Range Safety Manager shall perform the following Headquarters-level functions: Participate in panels, joint working groups, or other range safety policy initiation or change activities affecting NASA operation or use of ranges (Requirement 42634).	S	N	N	Safety
NPR 8715.5	1.3.2.g	42635	Roles and Responsibilities: NASA Range Safety Manager. The NASA Range Safety Manager shall perform the following Headquarters-level functions: Coordinate activities and actions with NASA Center range safety personnel, Independent Technical Authority sponsored Warrant holders, and other entities, including the Federal Aviation Administration (FAA) and DoD, to formulate, recommend, and evaluate policies, procedures, and standards and to ensure that NASA programs use range safety practices that are consistent with applicable laws, national standards, and NASA requirements (Requirement 42635).	S	N	N	Safety
NPR 8715.5	1.3.2.h	42636	Roles and Responsibilities: NASA Range Safety Manager. The NASA Range Safety Manager shall perform the following Headquarters-level functions: Provide NASA programs with sources of range safety expertise to support independent process reviews, flight readiness reviews, and payload safety reviews (Requirement 42636).	S	N	N	Safety
NPR 8715.5	1.3.2.i	42637	Roles and Responsibilities: NASA Range Safety Manager. The NASA Range Safety Manager shall perform the following Headquarters-level functions: Provide input and recommendations to Headquarters review and approval processes when range safety is a consideration (Requirement 42637).	S	N	N	Safety
NPR 8715.5	1.3.2.j	42638	Roles and Responsibilities: NASA Range Safety Manager. The NASA Range Safety Manager shall perform the following Headquarters-level functions: Establish and maintain a range safety training program and generate NASA Range Safety Annual Reports for the Office of Safety and Mission Assurance (Requirement 42638).	S	N	N	Safety
NPR 8715.5	1.3.2.k	42639	Roles and Responsibilities: NASA Range Safety Manager. The NASA Range Safety Manager shall perform the following Headquarters-level functions: Facilitate the development of Agencywide tools for assessing range safety risks (Requirement 42639).	S	N	N	Safety
NPR 8715.5	1.3.2.L	42640	Roles and Responsibilities: NASA Range Safety Manager. The NASA Range Safety Manager shall perform the following Headquarters-level functions: For each NASA range operation that is not supported by a Center range safety organization, evaluate requests for tailoring, deviations, or waivers to this NPR and coordinate with the approval authorities per paragraph 1.4 of this NPR (Requirement 42640).	S	N	N	Safety
NPR 8715.5	1.3.2.m	42641	Roles and Responsibilities: NASA Range Safety Manager. The NASA Range Safety Manager shall perform the following Headquarters-level functions: For each vehicle program that is not supported by a Center range safety organization, evaluate the program's RSRMP per paragraphs 1.3.7.p and 3.2.4.4 of this NPR and coordinate with the approval authorities (Requirement 42641).	S	N	N	Safety
NPR 8715.5	1.3.4.1.a	42645	Roles and Responsibilities: Center Directors. A NASA Center may become involved in range safety activities through its assigned programs in a number of ways: such as a range, launch site, or landing site operator; range user; or as a range safety technology research and development site: The Center Director or NASA designee shall: Ensure the implementation of this NPR for each Center program that involves range operations (Requirement 42645).	S	N	N	Safety

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NPR 8715.5	1.3.4.1.b	42646	Roles and Responsibilities: Center Directors. A NASA Center may become involved in range safety activities through its assigned programs in a number of ways: such as a range, launch site, or landing site operator; range user; or as a range safety technology research and development site. The Center Director or NASA designee shall: Designate a Center Range Safety Representative (see paragraph 1.3.6) (Requirement 42646).	S	N	N	Safety
NPR 8715.5	1.3.4.1.c	42647	Roles and Responsibilities: Center Directors. A NASA Center may become involved in range safety activities through its assigned programs in a number of ways: such as a range, launch site, or landing site operator; range user; or as a range safety technology research and development site. The Center Director or NASA designee shall: Ensure coordination with all organizations that support a program's range operations (Requirement 42647).	S	N	N	Safety
NPR 8715.6A	1.3.01.1	56733	General Information: Roles and Responsibilities: Chief, Safety and Mission Assurance, Office of Safety and Mission Assurance (Chief/OSMA): The Chief/OSMA shall lead the NASA Orbital Debris Program. (Requirement 56733)	S	N	N	Mgmt
NPR 8715.6A	1.3.01.2	56734	General Information: Roles and Responsibilities: Chief, Safety and Mission Assurance, Office of Safety and Mission Assurance (Chief/OSMA): The Chief/OSMA shall establish requirements for limiting NASA's orbital debris generation from spacecraft, payloads, and launch vehicle components. (Requirement 56734)	S	N	N	Mgmt
NPR 8715.6A	1.3.01.3	56735	General Information: Roles and Responsibilities: Chief, Safety and Mission Assurance, Office of Safety and Mission Assurance (Chief/OSMA): The Chief/OSMA shall establish policies for the safe disposal of NASA's spacecraft, payloads, and launch vehicle components during all phases of space missions. (Requirement 56735)	S	N	N	Mgmt
NPR 8715.6A	1.3.01.4	56736	General Information: Roles and Responsibilities: Chief, Safety and Mission Assurance, Office of Safety and Mission Assurance (Chief/OSMA): The Chief/OSMA shall provide requirements and assessment procedures for orbital debris generation potential and associated risks. (Requirement 56736)	S	N	N	Mgmt
NPR 8715.6A	1.3.01.5	56737	General Information: Roles and Responsibilities: Chief, Safety and Mission Assurance, Office of Safety and Mission Assurance (Chief/OSMA): The Chief/OSMA shall provide, or make available, software tools, models, and their associated data bases to aid programs in orbital debris risk analysis and evaluation of mitigation options. (Requirement 56737)	S	N	N	Mgmt
NPR 8715.6A	1.3.01.6	56738	General Information: Roles and Responsibilities: Chief, Safety and Mission Assurance, Office of Safety and Mission Assurance (Chief/OSMA): The Chief/OSMA shall review all ODARs and all EOMPs (as defined in Chapter 2) to determine compliance with requirements and to review the level of associated risk. (Requirement 56738)	S	N	N	Mgmt
NPR 8715.6A	1.3.01.7	56739	General Information: Roles and Responsibilities: Chief, Safety and Mission Assurance, Office of Safety and Mission Assurance (Chief/OSMA): The Chief/OSMA shall promote the adoption and use of international orbital debris mitigation guidelines through international forums, such as the IADC and the ISO. (Requirement 56739)	S	N	N	Mgmt
NPR 8715.6A	1.3.02.1	56741	General Information: Roles and Responsibilities: Program's Mission Directorate Associate Administrator (MDAA) The MDAA shall be the NASA official accepting the orbital debris risk as determined by the SMA Technical Authority for Orbital Debris due to noncompliances to this NPR and NSS 1740.14 as documented in the ODAR and EOMP. (Requirement 56741)	S	N	N	Mgmt
NPR 8715.6A	1.3.02.2	57296	General Information: Roles and Responsibilities: Program's Mission Directorate Associate Administrator (MDAA) The MDAA shall ensure that a mission orbital debris assessment has been conducted in accordance with NSS 1740.14 or NASA-STD 8719.14, as applicable per paragraph P.2.4, to determine the potential for orbital debris generation from the launch vehicle and the payload (Requirement 57296)	S	N	N	Safety
NPR 8715.6A	1.3.02.3	56743	General Information: Roles and Responsibilities: Program's Mission Directorate Associate Administrator (MDAA) The MDAA shall ensure that orbital debris mitigation measures identified in the ODAR are implemented and included in the EOMP. (Requirement 56743)	S	N	N	Mgmt
NPR 8715.6A	1.3.02.4	56744	General Information: Roles and Responsibilities: Program's Mission Directorate Associate Administrator (MDAA) The MDAA shall ensure that a formal review of the potential to generate orbital debris is conducted before implementing the EOMP. (Requirement 56744)	S	N	N	Mgmt
NPR 8715.6A	1.3.02.5	56745	General Information: Roles and Responsibilities: Program's Mission Directorate Associate Administrator (MDAA) The program's MDAA shall provide to the Chief/OSMA, for Chief/OSMA concurrence, a phase-in plan and schedule for either development of new EOMPs, modification of existing EOMPs, or grandfathering of existing EOMPs within 4 months of the approval of this NPR. (Requirement 56745)	S	N	N	Mgmt
NPR 8715.6A	1.3.02.6	56746	General Information: Roles and Responsibilities: Program's Mission Directorate Associate Administrator (MDAA) The MDAA shall ensure that the orbital debris requirements of this NPR are included as an integral part of their program/project, to include proposals and Announcements of Opportunity for future missions. (Requirement 56746)	S	N	N	Mgmt
NPR 8715.6A	1.3.03.1	56748	General Information: Roles and Responsibilities: Associate Administrator, Space Operations Mission Directorate (AA/SOMD): The AA/SOMD shall review ODARs and EOMPs, in conjunction with the responsible MDAA(s), that are associated with missions that could pose a risk to humans in space. (Requirement 56748)	S	N	N	Mgmt
NPR 8715.6A	1.3.04.1	56750	General Information: Roles and Responsibilities: Associate Administrator, Exploration Systems Mission Directorate (AA/ESMD): The AA/ESMD shall review ODARs and EOMPs, in conjunction with the responsible MDAA(s), to determine if each ESMD-procured/controlled launch vehicle is in compliance with Agency orbital debris policy and standards. (Requirement 56750)	S	N	N	Mgmt
NPR 8715.6A	1.3.04.2	57297	General Information: Roles and Responsibilities: Associate Administrator, Exploration Systems Mission Directorate (AA/ESMD): The AA/ESMD shall incorporate the requirements of this NPR and NSS 1740.14 or NASA-STD 8719.14, as applicable per paragraph P.2.4, into the development of new launch and space transportation vehicles (Requirement 57297)	S	N	N	Safety
NPR 8715.6A	1.3.05	56752	General Information: Roles and Responsibilities: Assistant Administrator, Office of External Relations (AA/OER)	S	N	N	Safety
NPR 8715.6A	1.3.05.1	57298	General Information: Roles and Responsibilities: Assistant Administrator, Office of External Relations (AA/OER): The AA/OER shall endeavor to incorporate the NASA debris mitigation defined in this NPR and NSS 1740.14 or NASA-STD 8719.14, as applicable per paragraph P.2.4, in negotiated international agreements for space activities and launch services (Requirement 57298)	S	N	N	Safety

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NPR 8715.6A	1.3.05.2	56754	General Information: Roles and Responsibilities: Assistant Administrator, Office of External Relations (AA/OER): To augment existing national procedures where the U.S. Department of Defense alerts Government agencies to the impending reentry of NASA-related space objects (See section P.2.2), the AA/OER shall, in consultation with the program's MDA, Chief/OSMA, Office of Public Affairs, and the Office of the General Counsel, coordinate amplifying information with other U.S. Government agencies. (Requirement 56754)	S	N	N	Mgmt
NPR 8715.6A	1.3.05.3	56755	General Information: Roles and Responsibilities: Assistant Administrator, Office of External Relations (AA/OER): The AA/OER shall coordinate all NASA pre-reentry press releases for reentries with the National Security Council and the Office of Science and Technology Policy. (Requirement 56755)	S	N	N	Mgmt
NPR 8715.6A	1.3.05.4	56756	General Information: Roles and Responsibilities: Assistant Administrator, Office of External Relations (AA/OER): The AA/OER shall review and provide comments on ODARs and EOMPs as required in paragraphs 2.2.1.5 and 2.2.2.6. (Requirement 56756)	S	N	N	Mgmt
NPR 8715.6A	1.3.06.1	56758	General Information: Roles and Responsibilities: Assistant Administrator, Office of Public Affairs: The Office of Public Affairs shall coordinate all NASA pre-reentry press releases with the United States Strategic Command (USSTRATCOM)(via Department of Defense Public Affairs), the Chief/OSMA, and the NASA AA/OER, and the U.S. Department of Homeland Security, as needed. (Requirement 56758)	S	N	N	Mgmt
NPR 8715.6A	1.3.07.1	56760	General Information: Roles and Responsibilities: NASA Office of the General Counsel: The NASA Office of the General Counsel shall review and provide comments on ODARs and EOMPs as required in paragraph 2.2.1.5 and 2.2.2.6. (Requirement 56760)	S	N	N	Mgmt
NPR 8715.6A	1.3.07.2	56761	General Information: Roles and Responsibilities: NASA Office of the General Counsel: The NASA Office of the General Counsel shall consider conducting a liability assessment upon learning of an impending Earth impact in a populated area. (Requirement 56761)	S	N	N	Mgmt
NPR 8715.6A	1.3.08.1	56763	General Information: Roles and Responsibilities: NASA Headquarters Environmental Management Division: The NASA Headquarters Environmental Management Division shall review and provide comments on ODARs and EOMPs as required in paragraphs 2.2.1.5 and 2.2.2.6. (Requirement 56763)	S	N	N	Mgmt
NPR 8715.6A	1.3.09.1	56765	General Information: Roles and Responsibilities: John F. Kennedy Space Center Launch Services Program Manager (KSC/LSPM): The KSC/LSPM shall incorporate program orbital debris requirements in launch service and launch operations planning activities and contracts unless a variance to the requirements has been granted per NPR 8715.3, paragraph 1.13. (Requirement 56765)	S	N	N	Mgmt
NPR 8715.6A	1.3.09.2	56766	General Information: Roles and Responsibilities: John F. Kennedy Space Center Launch Services Program Manager (KSC/LSPM): The KSC/LSPM shall provide debris assessment information for launch vehicles (and associated payload adapters) to the NASA spacecraft Program/Project Manager for integration into the mission ODAR. (Requirement 56766)	S	N	N	Mgmt
NPR 8715.6A	1.3.09.3	56767	General Information: Roles and Responsibilities: John F. Kennedy Space Center Launch Services Program Manager (KSC/LSPM): For launches under NASA management occurring outside of KSC/LSPM control, the NASA manager for the launch shall perform the requirements in paragraphs 1.3.9.1 and 1.3.9.2. (Requirement 56767)	S	N	N	Mgmt
NPR 8715.6A	1.3.10.1	56769	General Information: Roles and Responsibilities: NASA Center SMA Directors: NASA Center SMA Directors shall ensure spacecraft and launch vehicle program/project personnel incorporate applicable NASA orbital debris policies and requirements into their programs/projects. (Requirement 56769)	S	N	N	Mgmt
NPR 8715.6A	1.3.10.2	57299	General Information: Roles and Responsibilities: NASA Center SMA Directors: NASA Center SMA Directors shall provide assistance to the program/project by reviewing and providing comments to ODARs and EOMPs to assist in determining compliance with this NPR and NSS 1740.14 or NASA-STD 8719.14, as applicable per paragraph P.2.4, (Requirement 57299).	S	N	N	Safety
NPR 8715.6A	1.3.10.3	56771	General Information: Roles and Responsibilities: NASA Center SMA Directors: NASA Center SMA Directors shall ensure that orbital debris requirements are reviewed at each major Program/Project review such as the spacecraft or mission PDR, the Critical Design Review (CDR), and other Key Decision Points (KDP) as defined in NPR 7120.5. (Requirement 56771)	S	N	N	Mgmt
NPR 8715.6A	1.3.11.1	56773	General Information: Roles and Responsibilities: NASA Orbital Debris Program Office (NASA ODPO): The NASA ODPO shall maintain a list of predicted reentry dates for NASA spacecraft and their associated orbital stages and notify the OSMA at least 60 days prior to their reentry. (Requirement 56773)	S	N	N	Mgmt
NPR 8715.6A	1.3.11.2	56774	General Information: Roles and Responsibilities: NASA Orbital Debris Program Office (NASA ODPO): The NASA ODPO shall develop, maintain, and update the orbital debris environment models to support this NPR. (Requirement 56774)	S	N	N	Mgmt
NPR 8715.6A	1.3.11.3	56775	General Information: Roles and Responsibilities: NASA Orbital Debris Program Office (NASA ODPO): The NASA ODPO shall assist NASA mission program/project managers in technical orbital debris assessments by providing information and/or directing queries to the knowledgeable technical staff. (Requirement 56775)	S	N	N	Mgmt
NPR 8715.6A	1.3.11.4	56776	General Information: Roles and Responsibilities: NASA Orbital Debris Program Office (NASA ODPO): The NASA ODPO shall provide assistance to the Department of Defense and other U.S. Government departments and organizations on matters related to the characterization of the orbital debris environment and the application of orbital debris mitigation measures and policies for NASA space missions. (Requirement 56776)	S	N	N	Mgmt
NPR 8715.6A	1.3.11.5	56777	General Information: Roles and Responsibilities: NASA Orbital Debris Program Office (NASA ODPO): The NASA ODPO shall participate in the determination, adoption, and use of international orbital debris mitigation guidelines through international forums such as the United Nations Committee on the Peaceful Uses of Outer Space, the IADC, and the ISO. (Requirement 56777)	S	N	N	Mgmt
NPR 8715.6A	1.3.12.1	56779	General Information: Roles and Responsibilities: SMA Technical Authority for Orbital Debris: The SMA Technical Authority for Orbital Debris shall determine the risk associated with any noncompliances to this NPR as documented in the ODAR. (Requirement 56779)	S	N	N	Mgmt
NPR 8715.6A	1.3.12.2	56780	General Information: Roles and Responsibilities: SMA Technical Authority for Orbital Debris: The SMA Technical Authority for Orbital Debris shall provide a written determination of the risk associated with any noncompliances to this NPR as contained in the ODAR to the Program MDA prior to launch and within 30 days of receipt. (Requirement 56780)	S	N	N	Mgmt
NPR 8715.6A	1.3.12.3	56781	General Information: Roles and Responsibilities: SMA Technical Authority for Orbital Debris: The SMA Technical Authority for Orbital Debris shall determine the risk associated with any noncompliances to this NPR as documented in the EOMP. (Requirement 56781)	S	N	N	Mgmt

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NPR 8715.6A	1.3.12.4	56782	General Information: Roles and Responsibilities: SMA Technical Authority for Orbital Debris: The SMA Technical Authority for Orbital Debris shall provide a written determination of the risk associated with any noncompliances to this NPR as contained in the EOMP to the Program MDAA prior to implementation of the EOMP and within 30 days of receipt. (Requirement 56782)	S	N	N	Mgmt
NPR 8715.6A	1.3.12.5	56783	General Information: Roles and Responsibilities: SMA Technical Authority for Orbital Debris: The SMA Technical Authority for Orbital Debris shall use the techniques and methods required in NPR 8000.4, Risk Management Procedural Requirements, and NPR 8705.5, Probabilistic Risk Assessment (PRA) Procedures for NASA Programs and Projects, for providing risk assessments. (Requirement 56783)	S	N	N	Mgmt
NPR 8715.6A	1.3.12.6	56784	General Information: Roles and Responsibilities: SMA Technical Authority for Orbital Debris: The SMA Technical Authority shall establish and implement a mechanism for soliciting, receiving, and dispositioning comments and resolving issues prior to the formal issuance of NASA-STD 8719.14 and any of its revisions (or the creation of any successor documents), such that proposed changes are appropriately staffed through and issues resolved with all affected Programs at NASA Headquarters and Centers. (Requirement 56784)	S	N	N	Mgmt
NPR 8715.6A	1.3.14.1	56790	General Information: Roles and Responsibilities: NASA Planetary Protection Officer (NASA PPO): The NASA PPO shall review and approve all plans for disposition of spacecraft on another solar system body. (Requirement 56790)	S	N	N	Mgmt
NPR 8715.6A	2.2.1.03	56806	Program/Project Development and Prelaunch Preparations: Orbital Debris Risk Assessments: Orbital Debris Assessment Report (ODAR): The MDAA shall submit each draft/final ODAR to the Chief/OSMA and AA/SOMD (for missions that could pose a risk to humans in space) for review. (Requirement 56806)	S	N	N	Safety
NPR 8715.6A	2.2.1.05	56808	Program/Project Development and Prelaunch Preparations: Orbital Debris Risk Assessments: Orbital Debris Assessment Report (ODAR): If orbital debris is assessed to impact the Earth's surface within 25 years, copies of the updated and final ODAR shall be submitted by the MDAA to the NASA Headquarters Environmental Management Division, the AA/OER, and the Office of the General Counsel. (Requirement 56808)	S	N	N	Mgmt
NPR 8715.6A	2.2.1.06	56809	Program/Project Development and Prelaunch Preparations: Orbital Debris Risk Assessments: Orbital Debris Assessment Report (ODAR): The cognizant MDAA shall approve the final ODAR after review by OSMA and SOMD (for missions that could pose a risk to humans in space) and, if required, the offices listed in paragraph 2.2.1.5 of this NPR. (Requirement 56809)	S	N	N	Safety
NPR 8715.6A	2.2.2.04	56818	Program/Project Development and Prelaunch Preparations: Orbital Debris Risk Assessments: End-of-Mission Plan (EOMP): For missions traveling beyond geosynchronous Earth orbit (GEO) disposal orbits, the MDAA shall submit each draft EOMP to the NASA Planetary Protection Office for review, subject to NPR 8020.12. (Requirement 56818)	S	N	N	Safety
NPR 8715.6A	2.2.2.06	56820	Program/Project Development and Prelaunch Preparations: Orbital Debris Risk Assessments: End-of-Mission Plan (EOMP): If the spacecraft or launch vehicle stages are designed for reentry at EOM and assessed to impact the Earth's surface, copies of the prelaunch and final EOMPs shall be submitted by the MDAA to the NASA Headquarters Environmental Management Division, the AA/OER, and the Office of the General Counsel. (Requirement 56820)	S	N	N	Safety
NPR 8715.6A	2.2.2.07	56821	Program/Project Development and Prelaunch Preparations: Orbital Debris Risk Assessments: End-of-Mission Plan (EOMP): The cognizant MDAA shall approve the prelaunch and final EOMPs after review by OSMA, SOMD (for missions that could pose a risk to humans in space), ESMD, and, if required, the offices listed in paragraph 2.2.2.6 of this NPR. (Requirement 56821)	S	N	N	Safety
NPR 8715.6A	2.2.2.10(1)	56824	Program/Project Development and Prelaunch Preparations: Orbital Debris Risk Assessments: End-of-Mission Plan (EOMP): The MDAA shall ensure the EOMP is periodically (annually at a minimum) reviewed and updated throughout the life of the program/project per the schedule in the EOMP. (Requirement 56824)	S	N	N	Mgmt
NPR 8715.6A	2.2.2.11	56826	Program/Project Development and Prelaunch Preparations: Orbital Debris Risk Assessments: End-of-Mission Plan (EOMP): The MDAA shall approve the EOMP no later than 30 days prior to the submission of the EOM notification per NPD 8010.3 or 30 days prior to the commencement of EOM maneuvers or passivation, whichever comes first. (Requirement 56826)	S	N	N	Mgmt
NPR 8715.6A	2.2.3.1	57310	Program/Project Development and Prelaunch Preparations: Orbital Debris Risk Assessments: NASA ODPO Review: The NASA ODPO shall provide technical review of each ODAR and EOMP to assist in determination of compliance with this NPR and NASA-STD 8719.14 (with allowances for formatting differences if NSS 1740.14 is being used per Paragraph P.2.4) (Requirement 57310).	S	N	N	Safety
NPR 8715.6A	2.2.3.2	57311	Program/Project Development and Prelaunch Preparations: Orbital Debris Risk Assessments: NASA ODPO Review: The NASA ODPO shall provide reviews of ODARs and EOMPs to OSMA using the formats specified in NASA-STD 8719.14, Appendices A and B (with allowances for formatting differences if NSS 1740.14 is being used per Paragraph P.2.4) (Requirement 57311).	S	N	N	Safety
NPR 8715.6A	2.2.3.3	56832	Program/Project Development and Prelaunch Preparations: Orbital Debris Risk Assessments: NASA ODPO Review: OSMA shall provide the results of the technical reviews of ODARs and EOMPs to the MDAA, the Headquarters Program Executive, and the Program/Project Manager within 30 days of receipt of the ODAR or EOMP. (Requirement 56832)	S	N	N	Mgmt
NPR 8715.6A	2.2.4.1	57312	Program/Project Development and Prelaunch Preparations: Orbital Debris Risk Assessments: Risk Acceptance: The MDAA shall review all noncompliances identified in ODARs and EOMPs and perform a risk tradeoff on meeting the requirements stated in this NPR and NSS 1740.14 or NASA-STD 8719.14, as applicable per paragraph P.2.4, with other programmatic restrictions such as cost, schedule, and launch constraints (Requirement 57312).	S	N	N	Safety
NPR 8715.6A	2.2.4.2	56835	Program/Project Development and Prelaunch Preparations: Orbital Debris Risk Assessments: Risk Acceptance: For any noncompliances to these requirements, the MDAA shall submit a memorandum to the Chief/OSMA, with a copy to the NASA Chief Engineer and AA/SOMD (for missions that could pose a risk to humans in space), stating the acceptance of the risk with the reasons and justification for the noncompliance as a part of the final ODAR and as a part of the final EOMP. (Requirement 56835)	S	N	N	Mgmt
NPR 8715.6A	2.2.4.4	56838	Program/Project Development and Prelaunch Preparations: Orbital Debris Risk Assessments: Risk Acceptance: MDAA memoranda accepting orbital debris risk associated with launch and flight operations shall be provided a minimum of 30 days prior to launch or prior to the pre-launch Safety and Mission Success Review, whichever is earlier. (Requirement 56838)	S	N	N	Mgmt

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NPR 8715.6A	2.2.4.5	56839	Program/Project Development and Prelaunch Preparations: Orbital Debris Risk Assessments: Risk Acceptance: MDAAs memoranda accepting orbital debris risk associated with EOM shall be provided a minimum of 4 weeks prior to commencement of the EOM maneuvers or passivation launch or prior to the EOM Safety and Mission Success Review, whichever is earlier. (Requirement 56839)	S	N	N	Mgmt
NPR 8715.6A	2.2.4.6	56840	Program/Project Development and Prelaunch Preparations: Orbital Debris Risk Assessments: Risk Acceptance: Any decision to deviate from the mitigation requirements shall be reviewed and concurred in by the Chief/OSMA prior to launch and/or commencement of EOM maneuvers or passivation. (Requirement 56840)	S	N	N	Mgmt
NPR 8715.6A	3.2.04	57316	Program/Project Operations: Monitoring During Spaceflight: If analyses determines that orbital debris in orbit around the Earth or the Moon will pose a risk of occurrence greater than one in a thousand to another uninhabited spacecraft in a similar or crossing orbit for the three months after generation or decommissioning, then the MDAAs shall notify the Chief/OSMA within 48 hours of completion of the analysis. Should the other spacecraft be inhabited (or inhabitable) and the risk of occurrence exceeds one in one million, then the MDAAs shall notify the Chief/OSMA within 48 hours of completion of the analysis (Requirement 57316).	S	N	N	Safety
NPR 8715.6A	3.2.08	56858	Program/Project Operations: Monitoring During Spaceflight: The Chief/OSMA and the NASA Chief Engineer shall be notified by the MDAAs within one week when any of the following conditions occur: (Requirement 56858)	S	N	N	Mgmt
NPR 8715.6A	3.3.2.2	56879	Program/Project Operations: EOM Actions: EOM Requirements for Spacecraft and Launch Vehicles Planned for Reentry Into Earth's Atmosphere or Remaining in Orbit About the Earth or the Moon: For controlled, commanded or targeted reentries into Earth's atmosphere, the MDAAs shall ensure that the OER notifies appropriate authorities for warnings to shipping lanes and airline routes in the area of the reentry a minimum of 1 week prior to reentry. (Requirement 56879)	S	N	N	Safety
NPR 8715.6A	3.3.3.6	56889	Program/Project Operations: EOM Actions: EOM Requirements While in Orbit About the Moon: The Chief/OSMA, working with the MDAAs or their designee, shall establish an advisory mechanism to assist in evaluating potential crash sites for such spacecraft. (Requirement 56889)	S	N	N	Mgmt
NPR 8715.6A	3.5.1	56895	Program/Project Operations: Special Requirements for Spacecraft Carrying Humans: Items being disposed of from the International Space Station or the Space Shuttle shall either be returned to Earth in the Space Shuttle (or another returning spacecraft) or jettisoned per International Space Station policy. (Requirement 56895)	S	N	N	Mgmt
NPR 8735.1B	1.2.1.a	57132	General Requirements: Responsibilities: The Chief, Safety and Mission Assurance, shall: Establish Agency-wide requirements for the exchange of significant problem and nonconforming item data among NASA activities and with GIDEP (Requirement 57132).	S	N	N	Safety
NPR 8735.1B	1.2.1.b	57133	General Requirements: Responsibilities: The Chief, Safety and Mission Assurance, shall: Exchange significant problem and nonconforming item data identified by Headquarters among NASA activities and with GIDEP (Requirement 57133).	S	N	N	Safety
NPR 8735.1B	1.2.1.c	57134	General Requirements: Responsibilities: The Chief, Safety and Mission Assurance, shall: Designate an Agency ALERT Coordinator who serves as the NASA representative to the GIDEP (Requirement 57134).	S	N	N	Safety
NPR 8735.1B	1.2.2	57135	General Requirements: Responsibilities: The NASA Mission Directorate Associate Administrators and Center Directors shall maintain continuous oversight of their organization's processing of GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories (Requirement 57135).	S	N	N	Safety
NPR 8735.1B	1.2.3.a	57137	General Requirements: Responsibilities: Center Directors and the Assistant Administrator for Infrastructure and Administration shall: Participate in GIDEP (Requirement 57137).	S	N	N	Safety
NPR 8735.1B	1.2.3.b	57138	General Requirements: Responsibilities: Center Directors and the Assistant Administrator for Infrastructure and Administration shall: Designate a civil service employee as the Center/Headquarters GIDEP ALERT and NASA Advisory Coordinator (with the exception of the Jet Propulsion Laboratory where a non-civil service employee may be appointed) (Requirement 31834).	S	N	N	Safety
NPR 8735.1B	1.2.3.c.1	57140	General Requirements: Responsibilities: Center Directors and the Assistant Administrator for Infrastructure and Administration shall: Develop, document, and implement Center processes for: The identification, control, and correction of problems and nonconforming items (Requirement 57140).	S	N	N	Safety
NPR 8735.1B	1.2.3.c.2	57141	General Requirements: Responsibilities: Center Directors and the Assistant Administrator for Infrastructure and Administration shall: Develop, document, and implement Center processes for: The exchange of significant problem and nonconforming item data identified by their Center with other NASA Centers and with GIDEP (Requirement 57141).	S	N	N	Safety
NPR 8735.1B	1.2.3.c.3	57142	General Requirements: Responsibilities: Center Directors and the Assistant Administrator for Infrastructure and Administration shall: Develop, document, and implement Center processes for: The evaluation and disposition of GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories (Requirement 57142).	S	N	N	Safety
NPR 8735.1B	1.2.5.a	57149	General Requirements: Responsibilities: The Headquarters and Center GIDEP ALERT and NASA Advisory Coordinators shall: Review all GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories from their respective facilities for adequacy before release (Requirement 57149).	S	N	N	RMS
NPR 8735.1B	1.2.5.b	57150	General Requirements: Responsibilities: The Headquarters and Center GIDEP ALERT and NASA Advisory Coordinators shall: Sign and release all GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories from their respective facilities (Requirement 57150).	S	N	N	RMS
NPR 8735.1B	2.1	57152	Documenting GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories: The Headquarters and Center GIDEP ALERT and NASA Advisory Coordinators shall document significant problem and nonconforming item data for exchange among NASA Centers and GIDEP using the following decision criteria (Requirement 57152):	S	N	N	RMS

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NPR 8735.1B	2.1.a	57153	Documenting GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories: The Headquarters and Center GIDEP ALERT and NASA Advisory Coordinators shall document significant problem and nonconforming item data for exchange among NASA Centers and GIDEP using the following decision criteria: Significant problem and nonconforming item data shall be documented and exchanged using the GIDEP unless the GIDEP reporting criteria contained in GIDEP S0300-BU-GYD-010, GIDEP Requirements Guide, Chapter 7, cannot be met, or there are restrictions on release and distribution of the information (Requirement 57153).	S	N	N	RMS
NPR 8735.1B	2.1.b	57154	Documenting GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories: The Headquarters and Center GIDEP ALERT and NASA Advisory Coordinators shall document significant problem and nonconforming item data for exchange among NASA Centers and GIDEP using the following decision criteria: GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, and GIDEP Agency Action Notices shall be documented in accordance with the requirements of GIDEP S0300-BT-PRO-010, GIDEP Operations Manual (Requirement 57154).	S	N	N	RMS
NPR 8735.1B	2.1.c(1)	57155	Documenting GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories: The Headquarters and Center GIDEP ALERT and NASA Advisory Coordinators shall document significant problem and nonconforming item data for exchange among NASA Centers and GIDEP using the following decision criteria: If the data cannot be released via GIDEP, a NASA Advisory shall be used (Requirement 57155).	S	N	N	RMS
NPR 8735.1B	2.2	57157	Documenting GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories: The Headquarters and Center GIDEP ALERT and NASA Advisory Coordinators shall document NASA Advisories using the approved format available in the NASA Community Information Exchange System (CIES) forum in GIDEP, or using a Center-unique form, incorporating the following information at a minimum (Requirement 57157):	S	N	N	RMS
NPR 8735.1B	3.1.a	57175	Release and Distribution of GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories: For the release and distribution of GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, or GIDEP Agency Action Notices, the Center/Headquarters GIDEP ALERT and NASA Advisory Coordinator shall, in the following sequence: Coordinate with the Center/Headquarters Office of Chief Counsel and Center/Headquarters Export Control Official (Requirement 57175).	S	N	N	RMS
NPR 8735.1B	3.1.b	57176	Release and Distribution of GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories: For the release and distribution of GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, or GIDEP Agency Action Notices, the Center/Headquarters GIDEP ALERT and NASA Advisory Coordinator shall, in the following sequence: Release GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, and GIDEP Agency Action Notices to the GIDEP Operations Center for distribution in accordance with the GIDEP requirements of S0300-BT-PRO-010, GIDEP Operations Manual (Requirement 57176).	S	N	N	RMS
NPR 8735.1B	3.2.a	57178	Release and Distribution of GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories: For the release and distribution of NASA Advisories, the Center/Headquarters GIDEP ALERT and NASA Advisory Coordinator shall, in the following sequence: Certify that the notice was classified as a NASA Advisory because it did not meet GIDEP release requirements (Requirement 57178).	S	N	N	RMS
NPR 8735.1B	3.2.b(1)	57179	Release and Distribution of GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories: For the release and distribution of NASA Advisories, the Center/Headquarters GIDEP ALERT and NASA Advisory Coordinator shall, in the following sequence: Coordinate with the Center Office of Chief Counsel and Center Export Control Official (Requirement 57179).	S	N	N	RMS
NPR 8735.1B	3.2.c	57181	Release and Distribution of GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories: For the release and distribution of NASA Advisories, the Center/Headquarters GIDEP ALERT and NASA Advisory Coordinator shall, in the following sequence: Release and distribute the NASA Advisory to the other Center and Headquarters GIDEP ALERT and NASA Advisory Coordinators through the NASA CIES Forum in GIDEP and/or by fax or e-mail (Requirement 57181).	S	N	N	RMS
NPR 8735.1B	3.2.d	57182	Release and Distribution of GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories: For the release and distribution of NASA Advisories, the Center/Headquarters GIDEP ALERT and NASA Advisory Coordinator shall, in the following sequence: Provide a copy of the NASA Advisory to the Deputy Assistant Inspector General in the NASA Headquarters Office of the Inspector General (Requirement 57182).	S	N	N	RMS
NPR 8735.1B	3.3.1	57184	Release and Distribution of GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories: The NASA Office of the Inspector General or another Government agency might identify situations potentially involving fraud, waste, and abuse which could also impact safety and mission assurance. When this information is provided by the Office of the Inspector General or other Government agency to the Office of Safety and Mission Assurance, the Agency ALERT Coordinator shall convert the information into a NASA Advisory (Requirement 57184).	S	N	N	RMS
NPR 8735.1B	3.3.2	57185	Release and Distribution of GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories: The NASA Office of the Inspector General or another Government agency might identify situations potentially involving fraud, waste, and abuse which could also impact safety and mission assurance. The Center/Headquarters GIDEP ALERT and NASA Advisory Coordinators shall exercise caution in processing and distributing these NASA Advisories to ensure distribution only to those people with a need to know the information, as this information is usually associated with an ongoing investigation (Requirement 57185).	S	N	N	RMS
NPR 8735.1B	3.4.1.a	57188	Release and Distribution of GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories: For distribution to the international partner, the Center/Headquarters GIDEP ALERT and NASA Advisory Coordinator or the Program, Project, or Operations/Institutional Manager shall: Release information excerpted from GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories in accordance with NPD 2110.1, Foreign Access to NASA Technology Transfer Materials (Requirement 57188).	S	N	N	RMS

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NPR 8735.1B	3.4.1.b(1)	57189	Release and Distribution of GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories: For distribution to the international partner, the Center/Headquarters GIDEP ALERT and NASA Advisory Coordinator or the Program, Project, or Operations/Institutional Manager shall: Ensure that only GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisory information that apply to the international partner's participation in a joint NASA/international partner program is released (Requirement 57189).	S	N	N	RMS
NPR 8735.1B	4.1.c(03)	57198	Evaluation and Disposition of GIDEP ALERTS, GIDEP SAFE-ALERTS, GIDEP Problem Advisories, GIDEP Agency Action Notices, and NASA Advisories: Upon receipt of a GIDEP ALERT, GIDEP SAFE-ALERT, GIDEP Problem Advisory, GIDEP Agency Action Notice, or NASA Advisory, all Program, Project, and Operations/Institutional Managers shall evaluate and disposition the GIDEP ALERT, GIDEP SAFE-ALERT, GIDEP Problem Advisory, GIDEP Agency Action Notice, or NASA Advisory by: The Center/Headquarters GIDEP ALERT and NASA Advisory Coordinator shall ensure that these documents are maintained for a minimum of five years following the end of operations (Requirement 57198).	S	N	N	RMS
NPR 8735.2A	1.2.01	43038	Introduction: Roles and Responsibilities: The Chief, Safety and Mission Assurance, provides policy direction for all NASA quality assurance matters. Included in this role are technical guidance on the type and extent of quality assurance requirements appropriate for NASA acquisitions; functional oversight relative to Contract Administration and Audit Service (CAAS) quality assurance delegations; functional oversight relative to the adequacy of quality assurance personnel staffing and training; and independent assurance of the adequacy of program/project office quality assurance surveillance functions per NPR 8705.6. (Requirement 43038)	S	N	N	Quality
NPR 8735.2A	1.2.02	43039	Introduction: Roles and Responsibilities: The NASA Contract Administration Services and Audit Policy Group (NCASPG) provides oversight and policy determination for Contract Administration Services provided by non-NASA Federal agencies and NASA support contractors. The membership and responsibilities of the NCASPG are provided in NPD 7410.1.	S	N	N	Quality
NPR 8735.2A	1.2.03	43040	Introduction: Roles and Responsibilities: NASA Center Directors are responsible for providing quality assurance services for all projects and programs hosted by, or assigned to, their Center, including the implementation of management controls to ensure proper performance of Government contract quality assurance functions. These responsibilities are typically delegated to the Safety and Mission Assurance (SMA) office (see paragraph 1.2.6 below).	S	N	N	Quality
NPR 8735.2A	1.2.06.a	43052	Introduction: Roles and Responsibilities: NASA Center SMA Directors, as assigned by the Center Director, shall Implement Government contract quality assurance functions that are performed directly by NASA Center civil service personnel and their delegates and support contractors. (Requirement 43052)	S	N	N	Quality
NPR 8735.2A	1.2.06.b.1	43054	Introduction: Roles and Responsibilities: NASA Center SMA Directors, as assigned by the Center Director, shall Provide support to contracting officers and program/project managers in the: Selection of acquisition sources that present acceptable quality risk. (Requirement 43054)	S	N	N	Quality
NPR 8735.2A	1.2.06.b.2	43055	Introduction: Roles and Responsibilities: NASA Center SMA Directors, as assigned by the Center Director, shall Provide support to contracting officers and program/project managers in the: Contracting of competent quality assurance support contractors (see NPD 8730.5, paragraph 1.b(10)). (Requirement 43055)	S	N	N	Quality
NPR 8735.2A	1.2.06.b.3	43056	Introduction: Roles and Responsibilities: NASA Center SMA Directors, as assigned by the Center Director, shall Provide support to contracting officers and program/project managers in the: Selection and assignment of competent civil service quality assurance professionals, including the NASA SMA Lead, when requested by the program/project manager (see NPD 8730.5, paragraph 1.b(10)). (Requirement 43056)	S	N	N	Quality
NPR 8735.2A	1.2.06.b.4	43057	Introduction: Roles and Responsibilities: NASA Center SMA Directors, as assigned by the Center Director, shall Provide support to contracting officers and program/project managers in the: Development of Government contract quality assurance requirements to be incorporated into PQASPs, quality assurance LODs, or support contracts. (Requirement 43057)	S	N	N	Quality
NPR 8735.2A	1.2.06.b.5	43058	Introduction: Roles and Responsibilities: NASA Center SMA Directors, as assigned by the Center Director, shall Provide support to contracting officers and program/project managers in the: Performance of contractor pre-award surveys, post-award surveys, quality audits, inspections, or other quality assurance functions considered necessary. (Requirement 43058)	S	N	N	Quality
NPR 8735.2A	4.6.1(1)	43271	Performance of Quality Assurance Functions by Non-NASA Organizations: Management of Delegated Functions NASA Center Directors shall develop and implement procedures to monitor and control hours associated with the performance of delegated/assigned functions. (Requirement 43271)	S	N	N	Quality
NPR 8735.2A	4.6.2	43273	Performance of Quality Assurance Functions by Non-NASA Organizations: Management of Delegated Functions The National Contract Administration Services and Audit Policy Group (NCASPG) shall agree in advance to the planned level of CAAS support and shall examine for reasonableness the hours reported and charged. (Requirement 43273)	S	N	N	Quality
NPR 8735.2A	4.6.3	43274	Performance of Quality Assurance Functions by Non-NASA Organizations: Management of Delegated Functions NASA Center Directors shall report any significant changes in the overall estimate (a variation of more than 15 percent) to the NASA Headquarters Office of the Chief Financial Officer and to the NASA Headquarters Office of Safety and Mission Assurance. (Requirement 43274)	S	N	N	Quality
NSS-1740.14	0	57094	NASA Safety Standard 1740.14 is represented by this single entry. If this entry is being viewed from a filter, list, or traceability report, then the metadata applies to the document as a whole.	S	N	N	Safety
OSMA FLP	0.1.0.b	18003	The Office of Safety and Mission Assurance (OSMA) is the focal point and functional leader for the safety, reliability, maintainability, and quality assurance (SRM&QA) of all NASA programs. The principal responsibilities of the OSMA may be found in Section 4.17 of NPR 1000.3, The NASA Organization. This Functional Leadership Plan describes the approach the OSMA and the SMA organization at each of NASA's Centers is taking to fulfill its role within NASA. The Center SMA organizations work closely with the OSMA in pursuing the strategies and objectives of this functional plan. The plan is presented in four parts. Part 1: Mission, Goals, and Strategies (Objectives) Part 2: Organization and Interfaces Part 3: Metrics Part 4: Major Functional Initiatives A. Agency Safety Program Implementation (also known as the Agency Safety Initiative), Appendix Center SMA Director Concurrence	S	N	N	Mgmt

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OSMA FLP	1.1.a	18006	OSMA Goal: Early integration and life-cycle implementation of safety, reliability, maintainability, and quality assurance (SRM&QA) into NASA's programs and operations.	S	N	N	Mgmt
OSMA FLP	1.1.b	18007	OSMA Goal: Thorough and expeditious independent assessments (IA's) of program/project safety, reliability, maintainability, and quality.	S	N	N	Mgmt
OSMA FLP	1.1.c	18008	OSMA Goal: Innovation and rapid transfer of SRM&QA technologies, processes, and techniques to help program/project managers improve the likelihood of mission success while reducing overall costs.	S	N	N	Mgmt
OSMA FLP	1.1.d	18009	OSMA Goal: Development and application of risk management methodologies to provide relevant, practical, and timely contributions to NASA's management of risk.	S	N	N	Mgmt
OSMA FLP	1.1.e	18010	OSMA Goal: Deployment of an Agencywide Safety and Mission Assurance (SMA) Team that is highly motivated, trained, and properly equipped.	S	N	N	Mgmt
OSMA FLP	1.2.a.1	18013	OSMA Objective: Independently assess NASA programs, projects, and facilities by: Reviewing and evaluating the risk management processes of developmental and operational programs/projects at milestone reviews and in support of Program Management Council (PMC) meetings at both Headquarters and Centers.	S	N	N	Mgmt
OSMA FLP	1.2.a.2	18014	OSMA Objective: Independently assess NASA programs, projects, and facilities by: Expanding the SMA Pre-launch Assessment Review (PAR) process across the Human Exploration and Development of Space (HEDS) Enterprise to include International Space Station (ISS) launch, assembly, and on-orbit operations.	S	N	N	Mgmt
OSMA FLP	1.2.a.3	18015	OSMA Objective: Independently assess NASA programs, projects, and facilities by: Independently reviewing and evaluating the SRM&QA processes within the Strategic Enterprises.	S	N	N	Mgmt
OSMA FLP	1.2.a.4	18016	OSMA Objective: Independently assess NASA programs, projects, and facilities by: Reviewing Center SMA organizations and evaluating the robustness of their processes.	S	N	N	Mgmt
OSMA FLP	1.2.a.5	18017	OSMA Objective: Independently assess NASA programs, projects, and facilities by: Developing and implementing the Integrated Mission Assurance Review (IMAR) a PAR-like process to assure readiness of expendable launch vehicles and science and payload missions using expendable launch vehicles.	S	N	N	Mgmt
OSMA FLP	1.2.b.1	18019	OSMA Objective: Effectively communicate risk issues by: Improving channels for risk communication between SMA and program management.	S	N	N	Mgmt
OSMA FLP	1.2.b.3	18021	OSMA Objective: Effectively communicate risk issues by: Establishing SMA personnel as highly respected risk management consultants to program and project management.	S	N	N	Mgmt
OSMA FLP	1.2.b.4	18022	OSMA Objective: Effectively communicate risk issues by: Maintaining the direct access of Center SMA Directors to their Center Directors.	S	N	N	Mgmt
OSMA FLP	1.2.b.5	18023	OSMA Objective: Effectively communicate risk issues by: Maintaining effective communications between the AA/SMA and Center SMA Directors.	S	N	N	Mgmt
OSMA FLP	1.2.b.6	18024	OSMA Objective: Effectively communicate risk issues by: Maintaining independent access of Center SMA Directors to the AA/SMA, and subsequent access to the Administrator.	S	N	N	Mgmt
OSMA FLP	1.2.b.7	18025	OSMA Objective: Effectively communicate risk issues by: Maintaining an anonymous safety reporting process (the NASA Safety Reporting System) while promoting cultural changes that will reduce the need for anonymous reporting in the future.	S	N	N	Mgmt
OSMA FLP	1.2.c.1	18027	OSMA Objective: Assist the Enterprises in the effective design, development, production, and operation of aerospace systems by: Establishing policies that define the minimum set of SMA requirements applicable to Centers and programs/projects.	S	N	N	Mgmt
OSMA FLP	1.2.c.2	18028	OSMA Objective: Assist the Enterprises in the effective design, development, production, and operation of aerospace systems by: More effectively executing the SRM&QA disciplines in the systems engineering process (which includes treatment of both hardware and software in an integrated manner).	S	N	N	Mgmt
OSMA FLP	1.2.c.3	18029	OSMA Objective: Assist the Enterprises in the effective design, development, production, and operation of aerospace systems by: Promoting the application of innovative, tailored, results-oriented SRM&QA approaches versus rigid standards.	S	N	N	Mgmt
OSMA FLP	1.2.c.4	18030	OSMA Objective: Assist the Enterprises in the effective design, development, production, and operation of aerospace systems by: Establishing methods for formal risk assessment for use by program/project managers.	S	N	N	Mgmt
OSMA FLP	1.2.c.5	18031	OSMA Objective: Assist the Enterprises in the effective design, development, production, and operation of aerospace systems by: Partnering with the Chief Engineer to develop criteria for governing risk acceptance by decision makers presiding over Program Management Council's conducted at critical life-cycle milestones.	S	N	N	Mgmt
OSMA FLP	1.2.c.6	18032	OSMA Objective: Assist the Enterprises in the effective design, development, production, and operation of aerospace systems by: Assisting program management in benchmarking and applying lessons learned and best practices to programs and projects.	S	N	N	Mgmt
OSMA FLP	1.2.c.7	18033	OSMA Objective: Assist the Enterprises in the effective design, development, production, and operation of aerospace systems by: Ensuring the proper documentation of new lessons learned and best practices.	S	N	N	Mgmt
OSMA FLP	1.2.c.8	18034	OSMA Objective: Assist the Enterprises in the effective design, development, production, and operation of aerospace systems by: Implementing advanced quality concepts and concurrent engineering techniques to effectively integrate safety, reliability, maintainability, and quality into all phases of a product's life cycle.	S	N	N	Mgmt
OSMA FLP	1.2.c.9	18035	OSMA Objective: Assist the Enterprises in the effective design, development, production, and operation of aerospace systems by: Promoting sustained excellence in technical performance, customer satisfaction, and quality and productivity by supporting programs such as the George M. Low Award and the annual NASA/Contractors' Conference on Continual Improvement and Reinvention.	S	N	N	Mgmt
OSMA FLP	1.2.d	18036	OSMA Objective: Identify and sponsor the development of new and innovative SRM&QA technologies and transfer those technologies by:	S	N	N	Mgmt
OSMA FLP	1.2.d.1	18037	OSMA Objective: Identify and sponsor the development of new and innovative SRM&QA technologies and transfer those technologies by: Working with NASA Strategic Enterprises for the acceptance or more effective use of SRM&QA technologies, tools, and techniques.	S	N	N	Mgmt
OSMA FLP	1.2.d.2	18038	OSMA Objective: Identify and sponsor the development of new and innovative SRM&QA technologies and transfer those technologies by: Working with other government agencies, academia, and the commercial sector for the exchange of SRM&QA technologies, tools, and techniques.	S	N	N	Mgmt

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OSMA FLP	1.2.e.1	18040	OSMA Objective: Improve program/contractor problem reporting and data integrity (accuracy, completeness, and security) by: Analyzing and streamlining the problem reporting process.	S	N	N	Mgmt
OSMA FLP	1.2.e.2	18041	OSMA Objective: Improve program/contractor problem reporting and data integrity (accuracy, completeness, and security) by: Establishing criteria and methods for effective and efficient problem documentation, analysis, and resolution by program management.	S	N	N	Mgmt
OSMA FLP	1.2.e.3	18042	OSMA Objective: Improve program/contractor problem reporting and data integrity (accuracy, completeness, and security) by: Enhancing the capability for problem reporting to support quantitative risk assessment.	S	N	N	Mgmt
OSMA FLP	1.2.f	18043	OSMA Objective: Enhance the SRM&QA skills, knowledge, and abilities of NASA personnel by:	S	N	N	Mgmt
OSMA FLP	1.2.f.1	18044	OSMA Objective: Enhance the SRM&QA skills, knowledge, and abilities of NASA personnel by: Developing, institutionalizing, and continually improving a comprehensive training and career development program for NASA SMA professionals. (The Professional Development Initiative (PDI), including the use of the web training capabilities of the Site for On-line Learning and Resources (SOLAR), are intended to facilitate this strategy.)	S	N	N	Mgmt
OSMA FLP	1.2.f.2	18045	OSMA Objective: Enhance the SRM&QA skills, knowledge, and abilities of NASA personnel by: Providing for training in safety, reliability, maintainability, and quality disciplines and associated tools to program, project, and functional management.	S	N	N	Mgmt
OSMA FLP	1.2.f.3	18046	OSMA Objective: Enhance the SRM&QA skills, knowledge, and abilities of NASA personnel by: Assisting program, project, and functional management personnel in the correct application of safety, reliability, maintainability, and quality tools.	S	N	N	Mgmt
OSMA FLP	1.2.f.4	18047	OSMA Objective: Enhance the SRM&QA skills, knowledge, and abilities of NASA personnel by: Committing SMA organizational resources for SMA skills training and career development.	S	N	N	Mgmt
OSMA FLP	1.2.g.2	18050	OSMA Objective: Implement an integrated SMA management process (i.e., Enterprise Agreements, self-assessments, Annual Operating Agreement (AOA's), Process Verification (PV), and metrics) for: Selectively assessing program/contractor processes as they relate to safety, reliability, maintainability, and quality for hardware, software, and people.	S	N	N	Mgmt
OSMA FLP	2.1.a	18053	OSMA has functional responsibility for the proper application of SRM&QA processes for all NASA programs. OSMA reports directly to the NASA Administrator. By design, this office is independent of the NASA program offices, thus able to provide non-advocate assessments of safety and effectiveness of NASA programs.	S	N	N	Mgmt
OSMA FLP	2.1.b.2	18056	The Enterprise Safety and Mission Assurance Division provides the primary interface with the customers of the OSMA, the NASA Enterprises and the Center SMA organizations. This Division assists its customers in understanding and implementing SMA policy and guidelines and monitors compliance.	S	N	N	Mgmt
OSMA FLP	2.1.b.3	18057	The HEDS Independent Assurance Office provides senior NASA management with timely, objective, non-advocacy assessments of program technical integrity and status of the HEDS Enterprise, identifies deficiencies, and makes recommendations for correction.	S	N	N	Mgmt
OSMA FLP	2.1.b.4	18058	The Executive Director, Aerospace Safety Advisory Panel, provides staff support for the Aerospace Safety Advisory Panel. As an independent safety review body, the mission of the Aerospace Safety Advisory Panel is to advise the NASA Administrator and Congress on all safety-related issues concerning NASA's aeronautics, robotic, and human operated space flight programs.	S	N	N	Mgmt
OSMA FLP	2.1.b.5	18059	In support of the Center Director, Center SMA offices use SMA tools and techniques to provide assistance, guidance, and assessment of Center-based programs and operations.	S	N	N	Mgmt
OSMA FLP	2.2	18062	OSMA Support to the Enterprises: OSMA has in place, with each Enterprise, an Enterprise SMA Agreement. This agreement specifies the overall approach by which OSMA will implement its responsibility for top-level independent review, oversight, and evaluation of the SMA functions that support the Enterprise. The agreement explains that overall program assurance activity for the Enterprise will focus on the health, capability, and implementation of an effective SMA program that includes the application of SRM&QA and risk management principles and requirements tailored to individual Enterprise programs and projects. For each Enterprise and the Administrator, OSMA provides an independent perspective and assessment of the program activities at both the Center and the Agency level. OSMA uses independent assessments and process verifications to determine whether the Enterprise possesses the effective processes needed to achieve its safety and mission success objectives. The Center SMA organizations provide program/project technical insight and independent assessment support to both the Center Director and program/project managers located at the Center. In addition	S	N	N	Mgmt
OSMA FLP	2.2(1)	18064	OSMA provides the following support to the Enterprises: Policy, guidelines, and standards, and assistance in interpreting and tailoring these documents to meet Enterprise needs.	S	N	N	Mgmt
OSMA FLP	2.2(3)	18066	OSMA provides the following support to the Enterprises: Assurance for the proper implementation and application of continuous risk management.	S	N	N	Mgmt
OSMA FLP	2.2(4)	18067	OSMA provides the following support to the Enterprises: Tools for safety and reliability risk assessment (fault tree analysis, failure modes and effects analysis, probabilistic risk assessment, and others).	S	N	N	Mgmt
OSMA FLP	2.2(5)	18068	OSMA provides the following support to the Enterprises: Training in SMA and safety management system topics.	S	N	N	Mgmt
OSMA FLP	2.2(6)	18069	OSMA provides the following support to the Enterprises: Support for mishap investigations.	S	N	N	Mgmt
OSMA FLP	2.3.a	18071	OSMA Interface with Center SMA Organizations: Each NASA Center has an independent SMA office, which interfaces with OSMA. OSMA works through the Center SMA offices to accomplish much of its mission. OSMA holds quarterly face-to-face meetings with all the Center SMA directors, disseminates information to the Centers on a regular basis, maintains open communications with all Center SMA offices, and provides easy access to Agency SMA information via its website.	S	N	N	Mgmt
OSMA FLP	2.3.b	18072	OSMA Interface with Center SMA Organizations: The OSMA AOA and PV activity assures that Centers have the proper focus and resources to perform their assurance role. AOA's are Center SMA management plans, focused on customers for SMA products and services. AOA's establish the planning and execution processes to assure available SMA resources are allocated to optimize risk reduction. Each NASA Center SMA office must develop an AOA that spells out, in detail, the SMA products and services that will be provided by the Center SMA office, and what resources will be necessary to provide the products and services. AOA's are considered to be a negotiated agreement among Center SMA customers, other Center organizations responsible for performing the safety compliance functions, the SMA organization, and the Center Director. They are approved and signed by the Center SMA Director, the Center Director, and the E/AA, and are concurred on by the AA/SMA. To ensure the effective application of SMA functions that serve the Enterprises, OSMA conducts a PV to analyze Center SMA functions against the Center AOA. Reports documenting the results of PV reviews at each Center are provided	S	N	N	Mgmt

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OSMA FLP	2.4.b	18076	The Space Flight Safety Panel ensures that safety issues and recommendations are (1) identified and assessed during the development and implementation of NASA space flight programs, and (2) addressed in subsequent technical and management decisions. The Panel independently assesses the NASA space flight safety program, conducts panel (or independent member) reviews of selected issues or concerns, solicits and responds to space flight safety concerns, and provides an independent assessment of safety issues at each Level 1 Flight Readiness Review.	S	N	N	Mgmt
OSMA FLP	2.4.d	18078	The HEDS Assurance Board (HAB) provides senior NASA management with timely, objective, non-advocacy assessments of program health and status, and the relative safety posture of the HEDS Enterprise. It is to remain in place only during the HEDS management transition to the Space Flight Operations Contract. The HAB (1) assesses the work processes of the SMA community, (2) reviews HEDS programs to ensure that proper attention is being paid to risk, and (3) reviews the overall effectiveness of the hardware, software, and operational aspects of HEDS programs to assure safety and mission integrity. The HAB places special emphasis on the status and efficiency of the transition of day-to-day management from NASA to the Space Flight Operations Contractor and the surveillance focus from NASA "oversight" to "insight."	S	N	N	Mgmt
OSMA FLP	2.4.e	18079	The NASA Operations and Engineering Board (OEB) supports the AA/SMA and the Office of Management Systems (Code J) on special assignments related to facilities operations and engineering activities. The OEB evaluates processes and systems for assuring the continuing operational integrity of NASA test facilities, operations and engineering technical support systems, and problems and issues at Centers, and provides recommendations to management in these areas. The OEB also studies technical support system problem areas and develops alternate solutions or methods for arriving at a solution. The OEB is comprised of NASA employees.	S	N	N	Mgmt
OSMA FLP	2.4.f	18080	As an independent safety review body, the mission of the Aerospace Safety Advisory Panel (ASAP) is to advise the NASA Administrator and Congress on all safety-related issues--design, development, manufacturing, flight preparation, and missions operations--concerning NASA's human space flight programs. These issues encompass both systems and operational safety. The Panel works closely with the NASA OSMA and SMA organizations and contractors at all levels to achieve its mission.	S	N	N	Mgmt
OSMA FLP	2.4.g	18081	Aviation Safety Board per NPR 1000.3	S	N	N	Mgmt
OSMA FLP	2.4a	18075	The Interagency Nuclear Safety Review Panel provides an independent evaluation of the radiological risks associated with the launch of a nuclear power system. The Panel members, or coordinators, representing the Department of Defense, Department of Energy, U.S. Environmental Protection Agency, U.S. Nuclear Regulatory Commission, and NASA, are independent of the program under review.	S	N	N	Mgmt
OSMA FLP	3.1(1)	18084	Lost Time Injury Rate Metric, Objective: NASA will increase the emphasis on the implementation of its safety program and its ultimate goal of becoming the Nation's leader in safety. We will aggressively work to significantly reduce our lost time injury rate. The chart below shows the outcomes that we defined in February 1999 as goals for the next 2 fiscal years. We intend to adjust these each year to drive our mishap rate towards the zero goal. Indicators: Lost time injury data are collected in NASA's Incident Reporting and Information System (IRIS).	S	N	N	Mgmt
OSMA FLP	3.1(2)	18098	Lost Time Injury Rate Metric: Indicators: Lost Time injury data are collected in NASA's Incident Reporting and Information System (IRIS).	S	N	N	Mgmt
OSMA FLP	3.1(3)	18085	Lost Time Injury Rate Metric, Validation: IRIS data are periodically audited. IRIS data can be compared to the Office of Workers' Compensation Programs (OWCP) case data, which are collected independent of IRIS. OWCP incidents are defined differently than NASA-defined incidents, but the differences are well understood, and OWCP data and NASA-defined incident rates are closely parallel and statistically can be shown to be "in control."	S	N	N	Mgmt
OSMA FLP	3.2(1)	18087	Center Performance Evaluation Profile (PEP): Assessment of safety and health conditions in the workplace depends on a clear understanding by management and employees of the programs and management systems that an employer uses for safety and health compliance. NASA places a high priority on safety and health programs and wishes to encourage the implementation of those programs by all.	S	N	N	Mgmt
OSMA FLP	3.2(2)	18088	In the past, safety professionals have evaluated the organization's safety and health programs, but those evaluations have not always required complete documentation or been systematically thorough. Unbiased evaluation that is more detailed and better documented can satisfy the Agency's need for program assessment and can accurately gauge the coverage and efficacy of the program. Further, it can be used to provide critical information on areas needing improvement.	S	N	N	Mgmt
OSMA FLP	3.2(3)	18089	In the early 1990's, representatives of the Occupational Safety and Health Administration and field staff developed the fundamental concept of the PEP in a cooperative effort with the National Council of Field Labor Locals (NCFLL). NASA took those concepts and expanded them to cover the evaluation of the occupational safety and health program and later, by Administrator request, the system safety management processes. The PEP was instituted in 1999 as a new program assessment instrument and as an adjunct to other tools to be used to perfect the implementation of the Agency Safety Program.	S	N	N	Mgmt
OSMA FLP	3.2(4)	18090	The results from PEP are presented in a format that enables the manager to graphically view information about the effectiveness and degree of implementation of the safety program. The PEP is compatible with other evaluation tools and is not the only such tool that will be used to evaluate the program. It is not a substitute for other program and process evaluations conducted by NASA SMA during process verifications. The PEP for system safety management differs from the general safety PEP in that it focuses specifically on the processes we use to design safety into our programs and projects from the very start. The system safety PEP instrument profiles the attitudes and methods within a program or project that affect how well safety is built into systems. It is primarily used to support program/project managers. It can detect potential management problems or weaknesses, enabling supporting SMA activities to identify specific actions that the program manager could use to avoid future safety risks to the program. This PEP also generates information involving the Agency's overall system safety posture, identifying areas where new policies or Administrator action might be warranted.	S	N	N	Mgmt
OSMA FLP	3.2(5)	18091	The PEP will be used as a source of safety and health program evaluation information for the manager, the employees, and the Administrator and will allow managers to make information-based decisions on allocating resources to improve the safety and health programs.	S	N	N	Mgmt

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OSMA FLP	4.A.1	18094	Agency Safety Program Implementation "Mission Success Starts with Safety": Safety plays an integral role in NASA's quest to expand frontiers in aeronautics and space. At the start of the 21st Century, NASA has designated safety and health as one of our principal values. We will not compromise the safety and health of our people and property nor harm the environment. The Agency is working to achieve zero mishaps in the NASA workplace, keeping in mind that every employee's safety and health, both on and off the job, is our concern. NASA intends to become the Nation's leader in the safety and occupational health of our work force and the safety of the products and services we provide. Our strategy is aimed at strengthening NASA's capabilities so that safety permeates every aspect of NASA work, and we routinely incorporate safety and health principles and practices into our daily decision making processes and lives. It is important that management and employees alike are committed to identifying and eliminating hazards in the Agency's workplaces including the unsafe acts and behaviors of workers when performing work tasks. With a change in the culture to one where the precursors to m	S	N	N	Mgmt
OSMA FLP	4.A.2	18095	NASA has established an order that can guide or prioritize Agency safety efforts. First, safety of the public. We absolutely must protect the public from any harm that may result from the conduct of the NASA mission. Second safety of astronauts and pilots, because these individuals are exposed to higher levels of potential mishap resulting from hazardous flight regimes. Third, safety of our working employees, because NASA performs many operations that are hazardous and it is our obligation to provide our employees with a safe and healthful workplace and the necessary training to recognize and control those hazards. Fourth, safety of high value equipment because we are stewards of the public's trust and the loss of some of this equipment would have serious ramifications on the future viability of NASA.	S	N	N	Mgmt
OSMA FLP	4.A.3	18096	We will achieve our goal through actions that can be categorized into four Core Process Requirements (CPR's). These CPR's are considered to be standard in a world-class safety and health program. The four CPR's are: - Management commitment and employee involvement. -System and worksite hazard analysis. -Hazard prevention and control. -Safety and health training. By focusing on the safety of NASA's mission and operations, we will improve quality and decrease cost and schedule.	S	N	N	Mgmt

Opinion/Impl'n Key: Y = Yes, N = No, U = Unassigned, F = Future, C = Conditional, O = Other, D = Program Disagrees, I = Institutional, X = Not SMA Requirement, R = Resolve, P = Partial Implementation, V = Variance Approved

Tech Auth Key: S = SMA, E = Engineering, A = Administrator, H = Health, I = Information, P = Planet Protection, F = Facility Admin, U = Unassigned