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JSC SAFETY AND HEALTH REQUIREMENTS

Revision M – September 2024

Responsible Office: Safety and Mission Assurance Directorate

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Change Record Log

Revision	Date	Originator	Description of Changes
Baseline, Revision G	8/1/1996	D. L. Clem, extension 34272	Change log was not maintained before Revision G
Change 1 to Rev G	11/14/1997	D. L. Clem, extension 34272	Adds process for reporting international mishaps, Chapter 106 Removes requirement for bicycle helmets, Chapter 203 Updates lifting requirements, Chapter 505
Administrative Changes	7/10/1998	D. L. Clem, extension 34272	Revises JSC Safety Policy per ESC direction
Change 2 to Rev G	8/6/1998	D. L. Clem, extension 34272	Updates safety committee structure, Changes time to serve on committees and allows for volunteer members, Chapter 114
Revision H	2/3/1999	D. L. Clem, extension 34272	Includes upgrades from comparing JPG 1700.1 with NASA requirements Includes upgrades from comparing JPG 1700.1 with 29 CFR 1960 requirements Includes upgrades from comparing JPG 1700.1 with VPP and PEP requirements Includes other changes suggested by various JSC organizations
Change 1 to Rev H	3/1/1999	D. L. Clem, extension 34272	Update URL to on- line version and paragraph 5 Include JSC Safety Policy and rearrange chapter Update cross references Clarify "enough time" to "3 - 5 days before TRR"
Administrative Changes	7/1/2000	D. L. Clem, extension 34272	Changed "Job Safety Analysis" to "Job Hazard Analysis" to be consistent with Chapter 111.
Revision I	7/1/2002	D. L. Clem, extension 34272	Reorganizes program requirements around VPP elements. New Lockout/Tagout and Chemical alarm chapters. Updates to other chapters.
Change 1 to Rev I	11/7/2002	D. L. Clem, extension 34272	Changes to medical exam requirements, Chapter 3.6. Clarifies storage requirements, Chapter 5.1. Clarifies requirements for space heaters, Chapter 5.2 New safe work practices and design requirements, Chapter 6.8. Added responsibility for radiation equipment, Chapter 7.3. Changed Oxygen Enriched Atmosphere definition.

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			Clarifies emergency number for the Sonny Carter Training Facility.
Change 2 to Rev I	5/11/2004	D. L. Clem, extension 34272	Changes to accommodate new Part 12, Chapter 5.7 Adds new Part 12, "Asbestos Control Requirements." This is a revision of the Asbestos Control Manual
Change 3 to Rev I	6/2/2005	D. L. Clem, extension 34272	Changed number to JPR 1700.1 New chapter on Weather Safety, Chapter 5.9 Updates emergency eyewash & shower requirements, Chapter 6.1 Updates emergency eyewash & shower requirements, Chapter 6.5 Updates emergency eyewash & shower requirements, Chapter 6.8 New chapter on breathing gases, Chapter 6.13 Adds inspection program for forklifts & slings, eliminates duplicate requirements, Chapter 8.5, Appendix 8B Adds inspection program for power tools, Chapter 8.6 Adds inspection program for ladders, Chapter 8.7 Updates several hazardous material requirements, Chapter 9.1 Updates several hazardous material requirements, Chapter 9.2 Updates emergency eyewash & shower requirements, Chapter 10.1 Clarifies applicability to JSC field sites, Part 12 Removes advisory language and updates organizational titles & document numbers in several other chapters, Part 12
Change 4 to Rev I	9/25/2006	D. L. Clem, extension 34272	Adds reference to NASA Facility System Safety Guidebook, Chapter 2.4 Updates mishap investigation products to reference NASA mishap reporting and investigation requirements, Chapter 2.7 Adds requirement not to wear jewelry during maintenance or troubleshooting on any electrical or mechanical system, Chapter 5.2 Revises processes for handling and disposing of batteries, Chapter 6.1 Revises food safety requirements, Chapter 6.4

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			<p>Adds a requirement to test oxygen and oxygen enriched gas systems with oxygen or oxygen-enriched gas before introducing a human into the loop, Chapter 6.11</p> <p>Adds requirement to allow the Safety and Test Operations Division to waive cleanliness requirements, Chapter 6.13</p> <p>Adds construction safety requirements as a result of a mishap investigation and updates requirements for construction barriers, Chapter 10.1</p> <p>Adds provisions for a less-rigorous Use Readiness Review, Chapter 10.3</p> <p>Adds requirements for construction contracts as a result of a mishap investigation, Chapter 11.2</p> <p>Updates the definition of “oxygen enriched” consistent with the changes to Chapter 6.11, Glossary</p> <p>Updates title of the Occupational Health Branch, several chapters</p>
Change 5 to Rev I	11/2/2007	D. L. Clem, extension 34272	Temporary change via JSC Announcement to update Lockout/Tagout requirements in Chapter 8.2, pending a complete revision of JPR 1700.1. Also deletes Attachment 8.2A and revises Attachment 8.2B of Appendix 8B.
Revision J	4/16/2008	D. L. Clem, extension 34272	Complete revision to several chapters
Change 1 to Rev J	6/1/2010	D. L. Clem, extension 34272	<p>Update process for getting prescription safety glasses.</p> <p>Updates to laser safety consistent with higher level requirements.</p> <p>Make physical exam requirements consistent with Chapter 3.6.</p> <p>Update to gas cylinder requirements</p>
Change 2 to Rev J	6/9/2011	D. L. Clem, extension 34272	<p>Change process for waivers and changing the handbook to be consistent with revised higher-level requirements, Chapter 1.4</p> <p>Revised list of required hazard analyses. Added clarification on verification methods. Clarified JHA content. Added list of approvals for hazard analyses. Clarified RAC criteria, Chapter 2.4</p> <p>Added reference to NPR 8705.6 for Headquarters audits, Chapter 2.5</p> <p>Added requirement to notify Headquarters of injury reports to OSHA, per NPR 8621.1 Made mishap levels consistent w/NPR 8621.1, Chapter 2.7</p>

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			<p>Mishap levels consistent w/NPR 8621.1, Attachment 2.7D</p> <p>Added clarification to ensure feet are clear of floor obstacles and to contact Logistics for help with furniture, Chapter 5.2</p> <p>Updates to be consistent with NPR 8715.3. Includes hard requirement for written tests, adding SCBA certification, clarification of training for category III jobs, and clarification of work shift limitations, Chapter 5.8</p> <p>New chapter describing JSC Automatic External Defibrillator program, Chapter 5.10</p> <p>Removed requirement for eyewash & shower for cryogenic areas. Chapter 6.5</p> <p>Assigned responsibility for annual audits to the Safety & Test Operations Division. Changed Med Ops Branch to Space Medicine Division, removed redundant requirements, Chapter 6.6</p> <p>Clarified requirements for operating procedures. Clarified that tests may proceed after TRR action item are complete. Revised time frame for submitting test documentation to Safety. Clarified mishap reporting requirements. Removed requirements for safety to sign detailed test procedures and to monitor physiological training. Added requirement for biosafety. Added reference to paragraph 1.14.2.b of NPR 8715.3 for offsite tests. Updated organizational titles and document numbers, Chapter 6.9</p> <p>Added requirements for controlled areas. Clarified defining of JSC space. Added other clarifications, Chapter 6.10</p> <p>Added clarification for commercial off-the-shelf flex hoses. Added clarification to requirements for gas cylinders, Chapter 6.11</p> <p>Added JSC Form 1023, Appendix 6A</p> <p>Clarified LO/TO exception for plug and cord electrical equipment, Chapter 8.2</p> <p>Removed reference to JPD 8719.1, Chapter 8.5</p> <p>Added requirement for training in the manufacturer's instructions, Chapter 8.6</p> <p>Added clarification that fall protection is not required for small jobs from ladders, Chapter 8.7</p> <p>Added URL for JSC list of restricted and prohibited chemicals, Chapter 9.1</p> <p>Deleted due to on-line list, Attachment 9.1A</p> <p>Updated document references, Chapter 9.5</p>
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			<p>Clarified coverage of URRs and ORIs. Added flowchart for criteria on URRs and ORIs. Added other clarifications, Chapter 10.3</p> <p>Added clarification that Center-wide data is an acceptable means of maintaining facility baseline documentation, provided access methods are included in general operating procedures. Moved list in Attachment 10.4A to web page, Chapter 10.4</p> <p>Clarified protective clothing for asbestos work, Chapter 12.5</p> <p>Clarified definition of and added qualifications for a "competent person," Chapter 12.7</p> <p>Added requirements for negative pressure enclosures, Chapter 12.9</p> <p>Reclassified some spot removal of asbestos. Added requirements for removing plaster or sheetrock ceilings below ceiling plenum, Chapter 12.15</p> <p>Updated to be consistent with requirements changes in asbestos chapters, Attachment 12A, 12B, 12D, 12E</p> <p>Replaced "Variance" with "Waiver." Added definition of Test Equipment," Revised mishap levels to be consistent with NPR 8621, Glossary</p>
Administrative Changes	11/13/2011	D. L. Clem, extension 34272	Updated URL in paragraph 3.a.4 & made grammatical correction, Chapter 12.15
Administrative Changes	3/6/2012	D. L. Clem, extension 34272	Replace appendix forms with JSC form numbers, Chapter 5.9, Appendix 5A & 5B
Administrative Changes	4/25/2012	D. L. Clem, extension 34272	Replace obsolete Ellington Field emergency number (x44444) with new emergency number (x33333) to match the emergency number at JSC and SCTF, Chapters 2.7, 3.6, 3.8, 5.8, 5.10, 5.10, 6.1, 6.5, 6.8, 6.10, 7.4, 8.1, 9.1, 9.3, 9.5, 10.1, 12.3, 12.14, Appendix 2B & 3B
Change 3 to Rev J	4/26/2012	D. L. Clem, extension 34272	<p>Corrected outdated references, Preface</p> <p>Added policy paragraph for commercial activities, Chapter 1.0</p> <p>Added option for use readiness review and reference to checklists, Chapter 2.3</p> <p>Updated process for investigation boards and added references to checklists, Chapter 2.7</p> <p>Updated office titles, updated emergency numbers, revised requirement for medical exams, Chapter 3.6</p>

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			<p>Clarified SATERN record of evacuation drills and JF 2150, Chapter 4.4</p> <p>Added considerations for procedures and clarified certification card requirements. Removed limits to suited hard vacuum, Chapter 5.8</p> <p>Changed “chest pains” to “heart attack symptoms”, updated organization names and training requirements, Chapter 5.10</p> <p>Updated inspection schedules, Chapter 6.4</p> <p>Added considerations for handling process and references to checklists, Chapter 6.7</p> <p>Added visiting product vendors and requests for evaluation of radiation, Chapter 7.3</p> <p>Changed “Biosafety Control Board” to “Biosafety Review Board” and added requirements for the Board, Chapter 7.4</p> <p>Defined elements of JSC electrical safety program per NFPA 70E to address IFO audit findings. Added other references to NFPA 70E, Chapter 8.1</p> <p>Added “operational control” concept for non-LO/TO and referenced appendix. Added clarifications for tagout only, removing locks, group lockout, and training per IFO audit findings. Added provision for orange locks with red shrink wrap for high voltage, Chapter 8.2</p> <p>Clarified process for issuing locks and added attachment for Operational Control. Added prohibition against transporting hazardous materials in POVs or taking them into the office. Clarified transfer of hazardous materials. Added requirements for updating MSDSs and MSDS databases. Updated training requirements. Clarified responsibility for providing information, Appendix 8B</p> <p>Added requirement to ventilate pesticide areas for 10 minutes before entering, Chapter 9.3</p> <p>Changed Uniform Building Code to International Building Code. Clarified a “qualified electrical worker”, Chapter 10.1</p> <p>Updated planning and conduct of asbestos operations, Chapter 12.1</p> <p>Added project design, Chapter 12.2</p> <p>Updated sampling requirements, Chapter 12.3</p> <p>Deleted incorrect document reference, Chapter 12.4</p> <p>Updated training requirements, to include offsite contractors, Chapter 12.5</p>
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			<p>Added project design requirements, Chapter 12.6</p> <p>Added requirements for Class III & Class VI competent persons, Chapter 12.7</p> <p>Updated sampling requirements and CFR references, Chapter 12.8</p> <p>Updated barrier requirements, Chapter 12.9</p> <p>Updated disposal instructions, Chapter 12.13</p> <p>Updated contact information for emergencies, Chapter 12.14</p> <p>Added project design. Updated Job Performance Requirements, Chapter 12.15</p> <p>Updated Job Performance Requirements. Added Attachment 12H for Custodial Work, Appendix 12B</p>
Administrative Changes	5/31/2012	D. L. Clem, extension 34272	<p>Updated document number of the JSC Emergency Preparedness Plan, Chapters 2.7, 3.8, 6.12, Appendix 1</p> <p>Updated asbestos definitions, Appendix 12B</p>
Revision K	11/25/2013	D. L. Clem, extension 34272	<p>Revised entire document</p> <p>Distributed chapter 1.0 among JPD 1700.3, chapter 1.1, and chapter 1.6</p> <p>Combined chapters 1.2 and 1.5 into chapter 1.1</p> <p>Combined chapters 1.3 and 1.6 into chapter 1.2</p> <p>Combined chapters 2.1 and 2.3 into chapter 2.1</p> <p>Combined chapters 4.2, 4.3, and 4.6 into chapter 4.1</p> <p>Added requirement for safety review of educational products in chapter 2.1.</p> <p>Added new chapter 8.8, "JSC's Fall Protection Program"</p> <p>Added new chapter 9.6, "Reproductive and Developmental Hazards"</p> <p>Added new chapter 9.7, "Working Safely with Nanotoxicology"</p>
Change 1 to Rev K	4/18/2014	D. L. Clem, extension 34272	<p>Chapter 3.8 – Revised responsibilities and measurements for Emergency Action Plans.</p> <p>Chapter 6.1 – Rewritten to conform with current best practices.</p>
Administrative Changes	11/21/14	D. L. Clem, extension 34272	<p>Chapter 2.1 – Updated links to checklists</p> <p>Chapter 2.4 – Added link to inspection checklists</p> <p>Chapter 2.6 – Updated links to checklists and corrected cross references</p>

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			<p>Chapter 3.5 – Corrected cross reference</p> <p>Chapter 6.2 – Corrected reference to NPR 8715.3</p> <p>Chapter 6.5 – Corrected cross reference</p> <p>Chapter 6.7 – Updated link to checklists</p> <p>Chapter 6.13 – Corrected cross reference & deleted outdated document reference</p> <p>Chapter 8.8 – Updated links to checklists</p> <p>Appendix A – Corrected mishap definitions to conform to NPR 8621.1</p> <p>Appendix F – Updated link to checklists in Attachment 2.6C</p>
Change 2 to Rev K	5/26/16	D. L. Clem, extension 34272	<p>Chapter 1.3 – Added requirement for the Director, Health and Human Performance to concur on health-related requirements and health-related waivers.</p> <p>Combined chapters 11.1 and 11.2 into chapter 1.5; Moved “how-to” material to a guidance document.</p> <p>Chapter 1.7 – Clarified JSC, SCTF, and Ellington Field as separate sites under OSHA VPP. Added responsibility for annual report to OSHA and NPR references.</p> <p>Chapter 2.6 – Added clarification on classifying mishaps; Changed reference to JF 1627.</p> <p>Chapter 3.4 – Removed audit requirement.</p> <p>Chapter 3.5 – Removed audit requirement.</p> <p>Chapter 5.2 – Clarified that power strips are only designed for use with a high concentration of low-powered loads.</p> <p>6.10 – Added reference to OSHA construction requirements (29 CFR 1926, Subpart AA).</p> <p>8.2 – Added requirement to test test equipment for proper operation immediately before and immediately after testing a circuit.</p> <p>8.8 – Added clarifications on fall protection equipment, training, and rescue.</p> <p>9.5 – Added exceptions to hazardous operations permits. Added requirements for inventory, compliance audits, unserviceable pyrotechnics, transportation, and certification. Added responsibilities for WSTF and pyrotechnic safety officers, and clarified other responsibilities.</p> <p>10.4 – Provided flexibility by requiring a readiness review (ORI or URR) to determine the baseline</p>

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			<p>documentation necessary for the facility. Changed “Baseline” to “Safety Management Process.”</p> <p>Chapters 11.1 & 11.2 – Marked reserved.</p> <p>Chapter 12.1 – Clarified asbestos activities; Updated cross-references; Updated link to JSC Asbestos Tool; Updated pickup information.</p> <p>Chapter 12.3 – Updated cross-references.</p> <p>Chapter 12.5 – Updated training requirements, Added requirement for JSC Specific training for Class I, II, & III asbestos work on site.</p> <p>Chapter 12.6 – Updated cross-references.</p> <p>Chapter 12.7 – Clarified requirements for JSC specific training; Updated cross-references.</p> <p>Chapter 12.8 – Updated cross-references.</p> <p>Chapter 12.13 – Updated the disposal process.</p> <p>Chapter 12.14 – Updated emergency contacts.</p> <p>Chapter 12.15 – Updated cross-references and links.</p> <p>Moved Job-Specific Performance Requirements from attachments 12A – 12G, Appendix F to new chapter 12.16. Attachments deleted from Appendix F.</p> <p>Appendix A – Added definitions for JSC Team Member, Line Manager, Line Organization, Supervisor.</p> <p>Appendix F, Attachment 8.2B – Removed audit requirement.</p> <p>Deleted Attachment 11.1A from Appendix F.</p>
Administrative Changes	5/30/17	D. L. Clem, extension 34272	<p>Updated links and forms references in the following:</p> <p>Chapters 1.4, 1.5, 2.1, 2.4, 2.5, 2.6, 3.2, 3.5, 3.7, 4.1, 5.1, 5.5, 5.7, 5.8, 5.9, 5.10, 6.4, 6.7, 6.12, 8.8, 9.1, 9.2, 9.6, 10.4</p> <p>Appendix D</p>
Administrative Changes	2/12/18	D. L. Clem, extension 34272	<p>Chapter 5.3 – Updated references.</p> <p>Appendix E – Updated chapter references in Subject Index.</p>
Change 3	3/12/18	D. L. Clem, extension 34272	<p>Chapter 1.5 – Added risk determination for S&H plan.</p> <p>Chapter 2.3 – Updated Job Hazard Analysis requirements. Established correlations between the risk matrices in JPR 1700.1 and JPR 8000.4. Deferred system safety program requirements to NPR 8715.3.</p> <p>Chapter 5.8 – Added physiological training requirements to replace JPR 1830.2.</p>

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			Chapter 10.3 – Streamlined ORI & URR process. Appendix K – Added Attachment 10.3A, Facility Readiness Review Process.
Change 4	5/25/18	D. L. Clem, extension 34272	Chapter 3.8 – Changed Fire Warden responsibilities to reduce burden on fire wardens. Chapter 6.2 – Marked “Reserved” – now in chapter 7.5. Chapter 7.3 – Updated to replace JPR 1860.2, Radiological Health Manual. Moved non-ionizing radiation requirements to new chapter 7.5. Chapter 7.5 – New chapter on non-ionizing Radiation, revision to chapter 6.2, laser safety. Added requirements for Radio frequency radiation, non-laser optical radiation, ultraviolet radiation, infrared radiation, and high intensity light to address Headquarters audit. Chapter 6.2 marked “Reserved.”
Administrative Change	6/6/18	D. L. Clem, extension 34272	Chapter 5.1 – Updated title and phone number in paragraph 5.1.12.1.f.
Change 5	8/3/18	D. L. Clem, extension 34272	Chapter 3.6 – Changed “Propellant Handler” to “Propellant and Ordnance Handler.” Chapter 10.4 – Clarified the intent that facilities must have the documentation on the checklist or have a tailored list approved. Added criteria for auditing documentation.
Revision L	12/20/2018	D. L. Clem, extension 34272	Changed the title to “JSC Safety and Health Requirements.” Numerous updates and editorial changes throughout the document. Chapter 2.3 – Changed risk assessment code matrix to match the matrix in JPR 8000.4. Chapter 5.1 - Added responsibility for Facility Managers to inspect fire extinguishers monthly. Chapter 5.3 – Emphasized the importance of deferring to Space Center Houston trams as they cannot stop quickly and sudden movements can cause injury to passengers. Added requirements for bicycles. Chapter 5.5 – Reorganized chapter and added requirements for non-standard furniture. Part 6 chapter numbers changed as Chapter 6.2 was marked “reserved” in change 4. Chapter 6.3 became 6.2, 6.4 became 6.3, etc. up to 6.13 became 6.12. Chapter 6.3 (now Chapter 6.2) Added requirements related to fire protection and stacking materials.

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			<p>Chapter 6.4 (now Chapter 6.3) – Streamlined general requirements for food handling and inspection requirements.</p> <p>Chapter 6.10 (now Chapter 6.9) – Reorganized chapter. Eliminated special requirements for JSC Permit spaces, which now follow the same requirements as OSHA Permit spaces, to include sewers and tunnel system. Streamlined requirements for equipment, duties, and training.</p> <p>Chapter 8.2 – Added clarifications on tags.</p> <p>Chapter 8.7 – Rearranged chapter. Added paragraph on safety nets.</p> <p>Chapter 8.8 – Added the difference between permanent and portable horizontal life lines.</p> <p>Part 12 became Part 11 as previous Part 11 was marked “reserved” in change 2. Chapter numbers changed accordingly.</p> <p>Chapter 12.3 (now Chapter 11.3) – Added paragraph on delimiting ACM from no –ACM.</p> <p>Chapter 12.15 (now Chapter 11.15) – Added condition for waivers to job performance requirements.</p>
Change 1	12/3/19	D. L. Clem, extension 34272	<p>Chapter 2.3 – Changed paragraph 2.3.8 to return to the Risk Assessment Code Matrix of Revision K.</p> <p>Chapters 3.5 – Changed “Hazard Abatement Tracking System (HATS)” to “SHETrak” and updated process.</p> <p>Chapters 3.2 and 10.4 – Changed “Hazard Abatement Tracking System (HATS)” to “SHETrak.”</p> <p>Chapter 3.6 – Changed paragraph 3.6.16 to revise the frequency of physical exams for Propellant and Ordnance handlers from yearly to every 2 years.</p> <p>Chapter 5.3 – Updated references to JPR 1600.3.</p> <p>Chapters 5.10 – Changed “Hazard Abatement Tracking System (HATS)” to “SHETrak,” updated training reference to match current practice, and updated web links.</p> <p>Chapter 6.1 – Clarified actions for secondary lithium-ion battery fire in paragraph 6.1.13.</p> <p>Appendix F – Changed “Hazard Abatement Tracking System (HATS)” to “SHETrak” in Attachments 1.1A and 10.3A.</p>
Administrative Change	6/2/2020	D. L. Clem, extension 34272	<p>Chapter 5.8: Changed table in paragraph 5.8.4 to show that “Handling or using explosives or pyrotechnics (ordnance category)” requires a physical exam per chapter 3.6. This is to make the table consistent with</p>

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			chapter 3.6, which requires a physical exam for these employees.
Change 2	2/9/22	D. L. Clem, extension 34272	<p>Changed SHETrak (Safety, Health, and Environmental Tracking) to STAR (System for Tracking Audits, Assessments, and Reviews) in Chapters 3.2, 3.5, and 10.4.</p> <p>Chapter 9.4 – Revised paragraph 9.4.10 to require signs per the appropriate OSHA standard.</p> <p>Chapter 9.5 – Total revision. Modified title. Revised applicability, purpose, responsibilities, training, storage, and transportation requirements. Added requirements for Operational Explosive Limits, Identifying Live and Inert Hardware, Explosive Facility Licensed Locations, and Shipping and Receiving. Revised and added requirements for working with explosives safely.</p> <p>Appendix A – Added definitions for chapter 9.5.</p> <p>Appendix B – Added acronym definitions.</p> <p>Appendix C – Updated titles of referenced documents.</p> <p>Appendix D – Added NASA Form 1791</p> <p>Appendix F – Added attachment 9.5A, Closed Bomb Design, Testing and Operational Safety Requirements.</p>
Administrative Change	5/12/2022	D. L. Clem, extension 34272	Change “Asbestos Program Manager” and “APM” to “JP/Environmental Office and SD/Occupational Health” in chapters 5.7, 11.1, .11.3, 11.6, 11.9, 11.10, 11.11, 11.12, 11.14, 11.15. Remove APM/Asbestos Program Manager from Appendices A and B. Occupational Health and the Environmental Office have replaced this position with designating these organizations as overseeing asbestos work.
Change 3	6/28/2022	D. L. Clem, extension 34272	<p>Chapter 5.10 – Changed inspection frequency for AEDs from weekly to “per the frequency noted on the inspection checklist for the model in your facility” in 5.10.9.b(1). Changed SHETrak to STAR in paragraph 5.10.9.a(6).</p> <p>Chapter 6.8 – Removed the requirement against suited subjects walking, paragraph 6.8.18.1.c(4).</p> <p>Chapter 8.8 – Added “and JSC Fall Protection Program Administrators” to 8.8.15.e(4). Added reference to NPR 8715.1B , Chapter 9 in 8.8.16.1.</p>
Change 4	4/17/2023	D. L. Clem, extension 34272	Chapter 3.6 – Revised the physical exam requirements in paragraph 3.6.16 for Test Subjects and NBL divers.

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			Updated Occupational Health links in chapters 5.2, 5.5, 6.9, 6.11, 9.1, 9.2, 9.3, 10.2, 11.5, 11.6, 11.15, 11.16, Appendix A, and Appendix D.
Revision M	5/3/2024	S.J.Slutz extension 34049	<p>Removed or replaced outdated references to NPR 8715.3 throughout the document, as well as other editorial corrections.</p> <p>Chapter 1.1 – Added requirement for Institutional Safety Authority per NPR 8715.1 and updated references.</p> <p>Section 1.1.2.1.e – Added Safety to “Institutional Authority...”. Corrected “...fullfull...” to fulfill.</p> <p>Chapter 1.3 – Added clarification note on waivers and updated references.</p> <p>Chapter 1.5 – Added contractor responsibilities for employee exposure and medical records and updated references.</p> <p>Chapter 3.2 – Updated hierarchy of hazard controls.</p> <p>Sections 3.2.6.1.b and c – Bolded titles of section.</p> <p>Chapter 3.4 – Added manufacturer’s specifications.</p> <p>Chapter 3.6 – Updated to be consistent with current JPR 1040.4.</p> <p>Section 3.6.5 – Deleted stray t at end of sentence.</p> <p>Section 3.6.13.1.c – Added space between “...Healthdecides...”.</p> <p>Chapter 3.8 – Changed title to Emergency Management and added elements of emergency preparedness.</p> <p>Section 3.8.5.f – Changed “Fire extinguisher training is recommended...” to required.</p> <p>Section 4.1.5 - Changed “Fire extinguisher training is recommended...” to required.</p> <p>Chapter 4.2 – Added alternate fire drill records for employees without access to SATERN</p> <p>Section 4.2.2.1 NOTE – Changed “...inspectores...” to inspectors.</p> <p>Chapter 5.1.21.c – Updated responsibilities for the Authority Having Jurisdiction consistent with NPR 8715.1. Corrected spelling of qualifications.</p> <p>Chapter 5.2 – Added requirement for electrical equipment and appliances and clarified power strip requirements.</p> <p>Section 5.2.7.1.b.(5) – Removed extra paragraph sign at beginning of sentence.</p>

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			<p>Chapter 5.4 – Revised indoor air quality and comfort standards.</p> <p>Chapter 5.5 – Revised contacts for ergonomic evaluations.</p> <p>Chapter 5.8 – Revised work-shift limits to be consistent with new revision of NPR 1800.1. Listed exclusions formerly in NPR 8715.3.</p> <p>Chapter 5.9 – Revised excessive heat requirements.</p> <p>Chapter 6.1 – Revised environmental process for battery disposal.</p> <p>Chapter 6.3 - Streamlined food safety requirements to follow NPR 1800.1.</p> <p>Chapter 6.8 – Added requirements for “Human in the Loop” and timetable for scheduling TRRs. Updated contacts for test safety and occupational health. Revised requirements for TSO monitoring.</p> <p>Chapter 6.9 – Streamlined requirements to reduce classifications of confined spaces. Added certificates to enter non-permit spaces.</p> <p>Chapter 6.10 – Added responsibilities related to the Pressure Systems Manager, referencing NPR 8715.1.</p> <p>Chapter 6.11 – Removed requirement for portable alarms to be registered.</p> <p>Chapter 6.12 – Revised breathing gas standards and frequency of analysis.</p> <p>Chapter 7.1 – Updated controls for noise hazards.</p> <p>Chapter 7.2 – Updated requirements and responsibilities for organizations using respirators.</p> <p>Chapter 7.4 – Revised requirements for precautions, labeling, protective equipment, vaccinations, and training.</p> <p>Chapter 7.5 – Revised requirements for laser pointers and ultraviolet radiation.</p> <p>Chapter 8.1 – Revised referenced requirements and standards.</p> <p>Chapter 8.5 – Added references to responsibilities from NPR 8715.1.</p> <p>Chapter 8.7 – Updated requirements for ladder inspections.</p> <p>Chapter 8.8 – Revised fall protection requirements and added references to responsibilities in NPR 8715.1.</p>
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			<p>Chapter 9.1 – Added potential hazardous waste and removed requirement for hard copy of SDS. Referenced NID 8715.140 for chemical storage.</p> <p>Chapter 9.2 – Removed requirement for hard copy of SDS.</p> <p>Chapter 9.5 – Added references for qualifications and responsibilities from NPR 8715.1.</p> <p>Chapter 10.1 – Added training for construction workers and updated excavation requirements.</p> <p>Chapter 10.2 – Added “Human in the Loop” to human subjects.</p> <p>Chapter 11.3 – Updated process for asbestos waste pickup.</p> <p>Chapter 11.4 – Added reference to JPR 8550.1.</p> <p>Chapter 11.5 – Revised list of tasks for Class III asbestos work.</p>
Revision M	5/27/2024	S.J.Slutz extension 34049	<p>Removed “...Retention Schedules.” from title of NPR 1441.1 throughout document.</p> <p>Added “NASA...” to title of NRRS 1441.1 throughout document.</p> <p>Added “NASA’s...” to title of NPR 3792.1 throughout document.</p> <p>Changed title of NPR 4100.1 to “NASA Supply Support and Materiel Management”.</p> <p>Changed “...Preparedness...” to “...Management...” in title of JPR 1040.4 throughout document.</p> <p>Added “...Ground-Based...” to title of JPR 1710.13 throughout document.</p> <p>Changed all references from JPR 1830.3 to JPR 1830.6 throughout document.</p> <p>Removed extraneous “????” from title of JPR 1860.2 and added “JSC...” throughout document.</p> <p>Changed all references from JPD 8080.4 to JPR 1830.6 throughout document.</p> <p>Section 1.1.2.1.e – Added Safety to “Institutional Authority...”. Corrected “...fullfull...” to fulfill.</p> <p>Section 1.1.9.b – Removed reference to Rev. A of JWI8831.1. Changed reference paragraph to 1.6.7, and added, “...as a Facility Manager.” at the end of the first sentence.</p> <p>Section 2.3.7.1.e – Added, “...unless exempt from IRB review.” to the end of the sentence.</p>

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			<p>Section 2.4.9.1.i – Changed references from HATS system to STAR system for hazard tracking.</p> <p>Chapter 2.6 – Replaced references to “JSC Legal Office” with “JSC Office of the General Counsel”.</p> <p>Replaced “Sensitive but Unclassified Information” with “Controlled Unclassified Information”.</p> <p>Sections 3.2.6.1.b and c – Bolded titles of section.</p> <p>Section 3.6.5 – Deleted stray t at end of sentence.</p> <p>Section 3.6.13.1.c – Added space between “...Healthdecides...”.</p> <p>Section 3.6.16 – In Table added, “Forklift Operator”, with “yes” for Baseline, Periodic, and Term Exams, along with “every 2 years” for How Often.</p> <p>Section 3.8.5.f – Changed “Fire extinguisher training is recommended...” to required.</p> <p>Section 4.1.5 - Changed “Fire extinguisher training is recommended...” to required.</p> <p>Chapter 4.1 – Changed “JSC Human Resources Office” to “JSC Human Capital Office” throughout.</p> <p>Changed “employes” to employees” throughout.</p> <p>Section 4.2.2.1 NOTE – Changed “...inspectores...” to inspectors.</p> <p>Section 5.1.10.1.c.(4) – Changed “...JSC Facility Manager Coordinator...” to “...JSC Lead Facility Manager...”.</p> <p>Chapter 5.1.21.c – Added qualifications for the Authority Having Jurisdiction. Corrected spelling of qualifications.</p> <p>Section 5.2.7.1.b.(5) – Removed extra paragraph sign at beginning of sentence.</p> <p>5.3.3.c.(2-4) – Replaced commas at end of sentences with periods.</p> <p>Section 5.4.3.1.a – Replaced paragraph.</p> <p>Section 5.8.3.1.c – Reworded sentence.</p> <p>Section 5.8.4 – Added sentence, “Chapter numbers given are for this JPR.”</p> <p>Section 5.8.12 – Changed reference to “5.8.13.1.c through 5.8.13.1.e”</p> <p>Section 6.1.14.1 – Changed grammar in sentence to “...shall follow JPR 8550.1, “JSC...”.</p> <p>Section 6.3.3.b – Removed superfluous b at beginning of sentence.</p>
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			<p>Section 6.8.2.a – Modified middle of sentence to read as follows, “...includes activities of various degrees of hazard...”.</p> <p>Section 6.8.2.b – Replaced paragraph with, “This includes Human-in-the-loop (HITL). Human-in-the-loop (HITL) studies are part of an iterative process conducted for the purposes of evaluation or research. HITL studies involve realistic task scenarios, operational or analog participants, and system fidelity that increases over time. HITLs are used to reveal HSI problems; demonstrate that the operational concept meets system requirements for effectiveness, efficiency, acceptability, and safety; and/or create generalizable knowledge about humans and their interactions with and within the other elements of the system.”</p> <p>person TSO monitoring per 6.8.6.1.d...” to the middle of the sentence.</p> <p>Section 6.8.6.1.b.(3) – Changed value from “...2.0...” to “...8.8...” for suit pressure.</p> <p>Section 6.8.6.1.d.(4) – Changed suit pressure value from “...5.0...” to “...8.8...”.</p> <p>Modified 6.8.9.1.e – The front part of the sentence to read as follows, “Test systems are approved for testing after the Test Readiness Review Board (TRRB) approval sheet is signed by all mandatory TRRB participants defined in 6.8.13.c,...”.</p> <p>Section 6.8.13.1.a – Change “...four weeks...” to “...one week...” for TRR advanced scheduling notice. Add this sentence at the end, “TRR products shall be provided for review to the board and stakeholders at least two weeks before the TRR to allow for adequate review time and comment disposition.”</p> <p>Section 6.8.13.1.c.(2) – Replaced paragraph with, “An Occupational Health, (Industrial Hygiene Radiation Safety) representative, as appropriate to assess exposures. A Space Medicine Operations Division Medical representative for tests and hardware evaluations involving HITL. Separated “An Occupational Health...” and “A Space Medicine Operations Division Medical...” into separate entities (2) and (3).</p> <p>Added Sections 6.8.13.1.c.(6) and (7).</p> <p>Section 6.8.17.1.g – Added, “...and agreed to during planning and TRR.” to the end of the sentence.</p> <p>Section 6.8.17.i – Replaced paragraph with, “Inform Human In The Loop (HITL) test subjects (volunteers), of the specific test hazards, S&H requirements and hazard controls during the TRR or review process.”</p>
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		<p>Section 6.8.18.1.b.(2) – Modified the end of the sentence with, “...in accordance with JPR 1830.6.”.</p> <p>Section 6.10.7.1.b – Modified last part of sentence to read, “...JSC Warehouse Supply Requisition, by email to “JSC-Supply-Requisitions”.</p> <p>Section 6.10.7.1.c – Modified sentence as follows, “...x36545, or by email at “JSC-Supply-Requisitions”...”.</p> <p>Section 8.6.7.1.(a) – Changed form to “...JSC Form 19A, Warning Do Not Operate...”.</p> <p>Section 8.7.4.b.(2) – Reworded sentence as follows, “Written approval for the system or plan from the company Fall Protection Program Administrator and concurrence from the JSC Fall Protection Program Administrator.”</p> <p>Section 8.7.5.1 NOTE – Modified first part of sentence as follows, “Organizations/facilities with existing fixed ladders extending more than 24 feet and having only cages or wells, have until November of 2036...”.</p> <p>Section 8.7.6.1 – Added “...or removing it from service.” to the end of the second sentence.</p> <p>Section 8.7.6.1.a.(2) – Modified last part of sentence to read “...a “Warning Do Not Operate” tag (JSC Form 19A).</p> <p>Section 8.7.8 – Removed extraneous “...make...” and “...with...” from first sentence.</p> <p>Section 9.1.4.1.k – Added “Storage of hazardous chemicals shall comply with the requirement of NASA Interim Directive (NID) 8715.140, “NASA Hazardous Chemical Storage Requirements”, and any follow-on policy once this directive becomes incorporated into existing NASA policy.” To the end of the paragraph.</p> <p>Section 9.6.8.b.8 – Changed “JSC Human Resources Office” to “JSC Human Capital Office”.</p> <p>Sections 10.2.4 and 10.2.4.1 – Changed “HIL” to “HITL”.</p> <p>Section 10.2.4.1.e – Changed wording to, “Submit an engineering evaluation or research protocol for facilities using human test subjects to the JSC institutional review board, IRB or to the Exempt Determination Review Official (EDRO), for medical support determination.”</p> <p>Review Official”. “</p> <p>Added “HITL, Human In The Loop”.</p> <p>Appendix D – Removed “Form 1243” which is no longer used.</p> <p>Added “JSC Form 1926, JSC Excavation Competent Person Inspection”</p>
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Revision M	9/18/2024	K.R. Glenn, extension 31743	<p>Numerous updates and editorial changes throughout the document.</p> <p>Change Log title update to “JSC Emergency Management Plan”.</p> <p>Removed entire anecdote section from the following chapters: 5.1 5.2 5.3 5.4 5.5 5.6 5.7 5.7 5.8 5.9 5.10 6.1 6.2 6.3 6.4 6.5 6.6 6.7 6.9 6.10 6.11 7.1 7.2 7.3 7.4 7.5 8.1 8.2 8.3 8.4 8.5 8.6 8.7 8.8 9.1 9.2 9.3 9.5 9.6 9.7.</p> <p>Appendix C updated to display in table format, to include links and as follows:</p> <ul style="list-style-type: none"> - Changed “Records Retention Schedules” to “NASA Records Retention Schedules”. - Changed “Plan for a Drug-Free Workplace” to “NASA’s Plan for a Drug-Free Workplace”. - Changed “NASA Materials Inventory Management Manual” to “NASA Supply Support and Materiel Management” - Removed non-existing JDMS reference to JPD 8080.4, “Exposure to Reduced Atmospheric Pressure” - Changed “JSC Emergency Preparedness Plan” to “JSC Emergency Management Plan” - Changed “Design, Inspection, and Certification of Pressure Vessels and Pressurized Systems” to “Design, Inspection, and Certification of Ground-Based Pressure Vessels and Pressurized Systems - Changed “Limitations Applicable to Personnel Exposed to Diving” to “Requirements Applicable to Personnel Participating in Diving, Hyper/Hypobaric Chambers, and Pressurized Suit Operations” - Changed “Radiological Health Manual” to “JSC Radiological Health Manual” <p>Change the following sections from “JSC Human Resources Office” to “JSC Human Capital Office”:</p> <ul style="list-style-type: none"> - Section 3.6.11.1(b) - Section 4.1.1 - Section 4.1.9(b) - Section 4.1.9(c) - Section 9.6.9.(b)(8) <p>Changed the following sections from “JSC Office of the Chief Counsel” to “JSC Office of the General Counsel”:</p> <ul style="list-style-type: none"> - Section 2.6.20.(g)(3) - Section 2.6.21(e) - Section 2.6.21.(f)(3) - Section 2.6.21.(f)(4)
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			<p>Changed “Sensitive But Unclassified” to “Controlled Unclassified Information”.</p> <ul style="list-style-type: none"> - Section 2.6.21.(e)(2) - Section 2.6.21.(f)(4) <p>Updated to clarify required representatives for the following:</p> <ul style="list-style-type: none"> - Section 6.8.13.1(c)(2) - Section 6.8.13.1(c)(3) <p>Updated JPR reference from 1830.3 to 1830.6 for the following:</p> <ul style="list-style-type: none"> - Section 6.8.18.1(b)(2) - Section 6.8.18.1(b)(3) - Section 6.8.18.1(c)(3) <p>Updated requirement to include email address for the following:</p> <ul style="list-style-type: none"> - Section 6.10.7.1(b) - Section 6.10.7.1(c) <p>Section 1.1.9(b) update link and requirement reference.</p> <p>Section 2.3.7 changed to also include “...or research, unless exempt from IRB review.”</p> <p>Section 2.4.9.1(i) replaced Hazard Abatement Tracking System with STAR system and link.</p> <p>Section 2.6.1.1(c) changed to a NOTE section and “JSC Human Resources Office” was changed to “JSC Human Capital Office”.</p> <p>Section 3.6.16 table update to include Forklift Operator row.</p> <p>Section 3.8.13.1 broken link to the EAP page has been fixed.</p> <p>Section 5.1.10.1(c)(4) update from JSC Facility Manager Coordinator to JSC Lead Facility Manager.</p> <p>Section 6.8.2(a) removed the word ‘hazardous’.</p> <p>Section 6.8.2(b) requirement update.</p> <p>Section 6.8.4.1.(a) updated Support Request link from www6 to www9 server.</p> <p>Section 6.8.4.1(b) updated requirement to notify Space Medicine of planned HITL activities and support needs. Updated requirement to address encryption requirement.</p>
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			<p>Section 6.8.6.1 was completely reworded to clarify how MO will certify fitness of a team and under what conditions.</p> <p>Section 6.8.6.1(b)(3) updated to state 8.8 psid instead of 2.0.</p> <p>Section 6.8.6.1(d)(3) updated to state 8.8 psid instead of 5.0.</p> <p>Section 6.8.9.1.(e) updated requirement to add more details.</p> <p>Section 6.8.10.1(c) updated requirement to provide more details.</p> <p>Section 6.8.10.1(c)(6) requirement added.</p> <p>Section 6.8.10.1(c)(7) requirement added.</p> <p>Section 6.8.13.1 updated to state schedule TRRs at least 1 week in advance instead of 4 weeks in advance.</p> <p>Section 6.8.13.1(c)(2) requirement updated.</p> <p>Section 6.8.13.1(c)(3) requirement updated.</p> <p>Section 6.8.13.1(b) requirement updated.</p> <p>Section 6.8.17.1(i) updated requirement and IRB link.</p> <p>Section 6.8.18.1(b)(3) simplified requirement by removing content.</p> <p>Section 8.6.7.1(a) updated to JSC Form 19A.</p> <p>Section 8.7.4.1(b) remove 'JSC or' from requirement.</p> <p>Section 8.7.5.1(f) updated requirement.</p> <p>Section 8.7.6.1 updated requirement.</p> <p>Section 8.7.6.1(a)(2) changed JSC Form 1243 to JSC Form 19A.</p> <p>Section 8.7.8 requirement update.</p> <p>Section 9.1.4.1(k) update requirement to provide more details.</p> <p>Section 10.2.4 change abbreviation from HIL to HITL.</p>
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			<p>Section 10.2.4(e) updated requirement to provide more details.</p> <p>Chapter 11.16 tables were updated to adequately correspond with sections.</p> <p>Appendix B updates as follows: - Add the EDRO abbreviation - Add the HITL abbreviation</p> <p>Appendix D updated as follows: - Removed JSC Form 1243 - Add 8.6 under Chapters - Add JSC Form 1926 with 10.1 under Chapters</p> <p>Appendix F updated from "JSC Human Resources Office" to "JSC Human Capital Office".</p>
Administrative Change	1/6/2025	Katrina Glenn	8.7.6.1a(1): Changed wording from "date inspected" to "date for next inspection".
Administrative Change 2	4/15/2025	Katrina Glenn	<p>6.8.13.1.a: Add requirement stating 'TRR products shall be provided for review to the Board and stakeholders at least two weeks before the TRR to allow for adequate review time and comment disposition.'</p> <p>6.8.17.1d (2): Update requirement to read as 'site pressure' and add (14.7 psia at sea level).</p> <p>6.8.18.1a: Remove wording stating, 'at pressures below normal atmospheric pressure'.</p> <p>6.8.23a(4): Update requirement to remove hyphens from high dollar value hardware.</p> <p>6.8.23e: Update wording from Resident Safety to Site Specific Safety</p> <p>6.9.23.1c: Update wording to include 'reference' after training completion card.</p> <p>8.1.3.1a(4): Update wording so that 'safety critical' is not displayed in all uppercase letters.</p> <p>8.1.4 Table (2nd row): Update wording 'on site' so that it includes a hyphen to read as 'on-site'.</p> <p>8.5.15d(8): Change 'Get input from' to 'Obtaining input from'. Change 'Document the results' to 'Documenting the results'. Change '...have it approved as a minimum' to '...having it approved as a minimum'.</p> <p>8.7.4.1(l): Remove 's' from slippery surfaces.</p>

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			<p>8.7.13.1a: Remove comma between 'erect' and 'or' included from the 1st sentence. Remove comma between 'of' and 'suspended' included from the 1st sentence.</p> <p>9.1.15.1: Add URL for the NASA Electronic Forms (NEF) system.</p> <p>10.1.12.1f(3): Add 's' to 'action' from take necessary actions.</p> <p>10.1.14a(2): Replace 'done' with 'performed'</p> <p>10.1.14a(3): Replace 'done' with 'performed'</p> <p>10.1.14b(2): Replace 'done' with 'performed'</p>
PCN-1	6/2/2026	Katrina Glenn	<p>Table Of Contents – Header style update from page 1. JPR No header update from all pages to '1700.1M'.</p> <p>2.3.4.1.b(1) – Change JHA form link from a Word document to the JF2114 form.</p> <p>2.3.4.1.b(2) – Change Safety Plan of Action link from a Word document to the JF2113 form.</p> <p>3.6.16 – Table update: Change 'OSHA Permitted Spaces Only' to 'Permit Required Spaces Only'.</p> <p>5.1.15 – Change '...most recent version of NFPA 30' to '...2024 edition of NFPA 30'. Change '...Chapter 4. Subsection 4.3' to '...Chapter 3. Subsection 4.2'.</p> <p>5.1.16.1 – Change '...NFPA 30, subsection 4.7' to '...NFPA 30, Chapters 14 and 15'.</p> <p>5.1.16.1.b – Change '...NFPA 30, subsection 4.6' to '...NFPA 30, subsection 14.5.2'.</p> <p>5.1.16.1.c(2) – Change '...NFPA 30, subsection 4.7.2' to '...NFPA 30, subsection 15.4'.</p> <p>5.1.17.1.a – Change '...NFPA 30, subsection 4.3' to '...NFPA 30, subsection 9.5'.</p> <p>5.1.17.1.b – Rewrite sentence from 'Never include...' to 'The volume of...'.</p> <p>5.1.18.1.b – Change '...NFPA 30, chapters 9 - 14' to '...NFPA 30, Chapter 12'.</p> <p>5.1.18.1.c – Change '...NFPA 30, chapters 9 - 14' to '...NFPA 30, Chapters 12 and 18'.</p>

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		<p>5.1.20.1.d – Change ‘...NFPA 30, subsection 4.5.2’ to ‘...NFPA 30, Chapter 12’.</p> <p>5.2.6.1 – Paragraph rewrite from ‘Use only...’ to ‘Only UL listed...’. Verify FM spells out Factory Mutual.</p> <p>5.8.4.1.f – Table update: Under Column 1, Change ‘Working in confined spaces’ to ‘Working in Permit Required Confined Spaces’. Under Column 2, Change ‘CSE’ to ‘CSE Procedure and Permit’. Under table footer Change ‘...into OSHA -permitted’ to ‘...into Permit-Required’.</p> <p>5.8.7 – Table update: under Column 1, Change ‘Working in a controlled area’ to ‘Working in a non-permit confined space or controlled area’.</p> <p>5.8.8 – Replace entire table and footnotes due to numerous edits. Update Note #7 from ‘Personal’ to ‘Personnel’.</p> <p>5.8.9.a - Change ‘current Category I or II’ to ‘current Chamber Operations’.</p> <p>5.8.9.b – Replace entire section from ‘Contact Human Test Support Group...’ to ‘Schedulers or Applicant should contact...’.</p> <p>Figure 5.10.1 – Figure was moved downward so that all of Section 5.10.3 is visible.</p> <p>5.10.5.1 – Section was deleted and is now Section 5.10.4.1.</p> <p>5.10.4.1.a - Reworded and reformatted to exclude (1) and (2) subsections.</p> <p>5.10.6 - Titled ‘Who may perform CPR and use an AED’ was deleted and subsequent paragraphs were renumbered.</p> <p>6.8.2.a – Paragraph rewrite from ‘This chapter covers...or acceptance.’ to ‘This chapter outlines...loop (HITL) activities.’</p> <p>6.8.2.b - Paragraph rewrite from ‘This includes...being tested.’ to ‘HITL activities are...qualification, or acceptance’. Previously approved and now implemented.</p> <p>6.8.5 – Test team members table update from the Medical Representative (MR) row. Add Medical Monitor (MM) row.</p>
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		<p>6.8.6.1.a - Removed 'MO' to add 'MM and'. Paragraph rewrite from MO to MM.</p> <p>6.8.6.1.b - Changed from 'MR' TO 'MM'.</p> <p>6.8.6.1.c - Section update from 'The R and TSO...' to 'The MM and TSO...'. Section update from '...when your presence...' to '...when their presence...'.</p> <p>6.8.10.c - Paragraph rewrite from 'Be assessed...' to 'Either be approved...'.</p> <p>6.8.11.1.c - Add 'Space and Occupational Medicine Branch' before Occupational Health.</p> <p>6.8.11.1.d - Add 'Space and Occupational Medicine Branch' before Occupational Health.</p> <p>6.8.12.1 - Replace '72 hours' with 'two weeks' to correct the conflict from 6.8.13.1 which states two weeks. Reword entire paragraph.</p> <p>6.8.12.1.c - Remove 'as well as the Space Medicine Operations Division (for HITL)' as they do not need to sign the HA.</p> <p>6.8.12 – Add footnote from the end of section 6.8.12.</p> <p>6.8.13.1.a - Change from '...1 week' to '...one week'. Replace 'TRR products shall...' with 'Refer to sections...for submitting test documentation'.</p> <p>6.8.13.1.b - Add (#7) requirement starting with 'Confirmation of either IRB...'.</p> <p>6.8.17.1.a - Paragraph rewrite from 'Be assessed...' to 'Either be approved...'.</p> <p>6.8.17.1.i - Paragraph rewrite from 'Use a form...' to 'Inform Human...' This was previously approved and now implemented.</p> <p>6.8.18.1.a(1) – Paragraph rewrite from 'Follow JPD 8080.4...' to 'Follow JPR 1830.6...'.</p> <p>6.8.18.1.l - Paragraph rewrite from 'Tests involving...' to 'Ground-based tests involving...'.</p> <p>6.9.11.1.c - Add line item for 'Carbon Monoxide (CO)' stated before 'Potential toxic air contaminants'.</p> <p>6.9.14.1 - Change 'JSC Form [tbd], "Non-Confined Space Certification' to 'JSC Form 1477, JSC Non-Permit Confined Space Certification'.</p>
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			<p>7.2.11.k – Change broken link to the National Personal Protective Equipment Laboratory.</p> <p>7.2.11.l – Change broken link to the NIOSH Certified Equipment List.</p> <p>7.4.5.a - Paragraph rewrite from ‘JSC Human Health...’ to ‘JSC will evaluate...’.</p> <p>7.4.5.b - Change from ‘...evaluate all areas’ to ‘...evaluate all areas and duties’. Change from ‘...where civil service’ to ‘...where civil servant’. Change from ‘...could be exposed’ to ‘...could be occupationally exposed’.</p> <p>7.4.6.1.a - Change from ‘...approval of the Biosafety Review Board’ to ‘...approval of JSC Occupational Health (Ground-based) or Environmental Sciences Branch (Flight-based).’</p> <p>9.6.10.d – Fix broken link to the NIOSH Publication Number 96-132 to place in archives.</p> <p>9.6.10.e – Fix broken link to the NIOSH Publication Number 96-104 to place in archives.</p> <p>8.4.2.1.d - Change from ‘...an OSHA OSHA-permitted’ to ‘...a permit-required’.</p> <p>10.2.4.1.e - Paragraph rewrite from ‘Per SD-WI-008...’ to ‘Submit an engineering evaluation...in Section 6.8.10.1.c’.</p> <p>10.2.12.1.a - Change from ‘...Emergency Preparedness’ to ‘...Emergency Management’.</p> <p>Appendix C – Removed all broken link references to the https://doclinkonline.com sites. Update the JSC Personnel Handbook link. Update the Vacuum Stability Requirements link. Update the NIOSH 78-138 link. Update the Texas Asbestos Health Protection link. Update the Municipal Solid Waste link. Update the Industrial Solid Waste and Municipal Solid Waste link. Update the Energy Systems Test Branch’s General Operating Procedure Manual link. Update the Primary Lithium Battery Handler Training link. Delete broken link to the Safe Use of Lasers. Delete broken link to the Safe Use of Lasers in Health Care. Update the Criteria for a Recommended Standard: Working in Confined Spaces link. Update the Effects of Workplace Hazards on Female Reproductive Health link. Delete broken link to Recommended Work Practices for Removal of Resilient Floor Coverings. Delete broken link to International</p>
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			<p>Building Codes.</p> <p>Appendix D - Add JSC Form 1477 after JSC Form 1476. Fix broken link to JSC Form 1104. Add JSC Form 2114. Add JSC Form 2113 after JSC Form 1944.</p> <p>Appendix F – Update link reference from page 21 bullet #3 from Word file to a JSC Form link.</p>
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PREFACE

P.1 PURPOSE

This JPR defines JSC’s Safety and Health Program and provides basic safety and health requirements for the Johnson Space Center (JSC) and for other locations under JSC’s jurisdiction. It is important that you follow the safety and health requirements that apply to your job.]

P.2 APPLICABILITY

This JPR applies to anyone at JSC or JSC field sites, unless exempted in a specific chapter. For this JPR, “JSC” includes all JSC sites in the Houston area such as Ellington Field and the Sonny Carter Training Facility. “JSC field sites” are sites under JSC control outside the Houston area, such as the White Sands Test Facility and El Paso Forward Operating Location. The JPR applies to operations involving JSC personnel or equipment at non-JSC locations, including foreign countries. See Chapter 1.3, paragraph 6, for more information on following standards at non-JSC locations. This JPR applies to other contractors, grant recipients, or parties to agreements only to the extent specified or referenced in the appropriate contracts, grants, or agreements.

- a. In this directive, all mandatory actions (i.e., requirements) are denoted by statements containing the term "shall." The terms: "may" or “can” denote discretionary privilege or permission, “should” denotes a good practice and is recommended, but not required, “will” denotes expected outcome, and “are/is” denotes descriptive material.
- b. In this directive, all document citations are assumed to be the latest version unless otherwise noted.
- c. The following table tells you who must follow this JPR:

<i>If you . . .</i>	<i>Then you shall follow . . .</i>
Are a NASA civil service employee	This JPR unless you work at a site that involves unique military equipment and operations
Are a contractor at JSC	This JPR as called out in your contract. Prime contractors must flow down these requirements to subcontractors
Work at a JSC field site as a civil service employee or contractor employee	All chapters that don’t exempt you and local requirements that meet the intent of any chapter that exempts you If a chapter exempts you, develop your own requirements that meet the intent of that chapter The local Safety and Mission Assurance Office or equivalent carries out the responsibilities of the Safety and Test Operations Division at your site
Are a non-NASA or non-contract employee	This JPR while you are on JSC property

The following further describes how this JPR applies:

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- d. If you are a federal employee working in a private employer’s facility, you are covered by the JSC safety and health program. Although NASA may not have the authority to correct hazardous conditions in a private sector workplace, NASA makes sure your working conditions are safe and healthful. NASA does this by administrative controls or personal protective equipment, or your withdrawal from the private employer’s facility.
- e. If you are a private employer, neither Executive Order 12196, “Occupational Safety and Health Programs for Federal Employees,” nor this JPR relieves you or your employees of any rights or responsibilities under the Occupational Safety and Health Administration (OSHA).
- f. This JPR takes precedence over all other JSC documentation in safety and health, except for more stringent requirements that individual JSC organizations develop. The following requirements apply:
 - (1) If your organization has more stringent requirements than are in this JPR, you shall follow them.
 - (2) In the case of differences between the requirements of this JPR and other NASA, federal, state, or local requirements, you shall follow the more stringent requirements.
 - (3) If you find any less stringent JSC requirements than are in this JPR, or any differences between the requirements of this JPR and other NASA, federal, state, or local requirements, bring them to the immediate attention of the JSC Director, the Safety and Mission Assurance Directorate, or the Human Health and Performance Directorate.
- g. You don’t need to read this entire JPR. You need to be familiar with the elements of JSC’s safety and health program, and the requirements that apply to your job. Use the JPR to find specific requirements, as you need them. This JPR contains several features to help you find the requirements you need:
 - (1) Table of contents
 - (2) Subject index
 - (3) Chapter titles
 - (4) Chapter introductions that tell you who has to follow that chapter
 - (5) The table below tells you which parts apply to what jobs:

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<i>If your job or facility operations involve . . .</i>	<i>Then you shall follow . . .</i>
Any work at JSC or JSC field sites	Part 5, Safety and health practices for everyone
Working with batteries Working in warehouses Preparing or serving food Working with cryogenic liquids or gases Handling new or unique hardware Working in chemical or research laboratories Doing test operations Entering confined spaces or controlled areas Working with compressed gases or breathing gases Use chemical alarms in your work area	Part 6, Safety and health requirements for certain hazardous tasks
Working in noisy areas Wearing a respirator Working with ionizing or nonionizing radiation Working with lasers Coming in contact with biohazards, blood, or body fluids	Part 7, Health protection practices
Working in machine shops Working with electricity Welding, cutting, or brazing Lifting materials Working with hand or power tools Working on ladders, scaffolds, or elevated platforms Working where fall protection is required	Part 8, Safety and health practices for manufacturing, installation, repair, and maintenance
Working with or transporting hazardous materials	Part 9, Safety and health practices for hazardous materials
Designing or constructing JSC facilities Operating hazardous or complex facilities	Part 10, Safety and health practices for JSC facilities and facility systems
Working near or with asbestos-containing materials	Part 11, Asbestos Control Requirements

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P.3 AUTHORITY

JPD 1700.3, "JSC Safety and Health Policy"

P.4 APPLICABLE DOCUMENTS AND FORMS

The numerous references cited throughout the JPR are listed in Appendix C. The numerous forms referenced are listed in Appendix D.

P.4 MEASUREMENT/VERIFICATION

Measurements of various items addressed in the JPR are listed in individual chapters.

P.5 CANCELLATION

This JPR replaces JPR 1700.1L.

Approved:
Original Signed by

Willie Lyles
Director, Safety and Mission Assurance

Distribution:
JDMS