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Safety

***SAFETY RULES FOR LONG-TERM STORAGE
AND MAINTENANCE OPERATIONS
FOR NUCLEAR WEAPONS***

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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OPR: HQ AFSC/SEWO (Maj Gilbert M. Baca)

Certified by: HQ USAF/SE
(MGen Maurice L. McFann, Jr.)

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This instruction implements AFD 91-1, *Nuclear Weapons and Systems Surety*. It applies to operations with long-term storage and maintenance operations for nuclear weapons. **Section A** assigns responsibilities. **Section B** contains each nuclear weapon systems' safety rules. The safety rules in **Section B** may only be changed or supplemented using procedures in AFI 91-102, *Nuclear Weapon System Safety Studies, Operational Safety Reviews, and Safety Rules*. See **Attachment 1** for abbreviations and acronyms used in this instruction. This instruction does not apply to the Air Force Reserve and Air National Guard. Records Disposition. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 37-123, (will convert to 33-363) Management of Records and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at <https://afrims.amc.af.mil>.

SUMMARY OF REVISIONS

Included general safety rules from DoD 3150.2-M, *DoD Nuclear Weapon System Safety Program Manual*. Name was changed to better reflect applicability. Airspace restrictions were added to be in line with other weapon system safety rules. Includes enhancements to nuclear surety based upon Operational Safety Group conducted by NWSSG 02-1.

Section A—Authority and Responsibilities

- 1. Secretary of Defense (SecDef) Direction.** The SecDef Directs the Secretary of the Air Force to implement the rules.
- 2. Temporary Limitations.** The Air Force may impose restrictions on application of safety rules.
- 3. Functional Responsibilities:**

- 3.1. The Commander, Air Force Safety Center, must ensure:
 - 3.1.1. Safety rules work, providing maximum safety consistent with operational requirements.
 - 3.1.2. Units follow the safety rules.
- 3.2. Using major commands:
 - 3.2.1. Ensure their units follow the safety rules.
 - 3.2.2. Ensure safety standards and procedures agree with the safety rules.
 - 3.2.3. Inspect for compliance.
- 3.3. Air Force Materiel Command ensures its manuals, checklists, and technical orders do not conflict with the safety rules.

Section B—Safety Rules

4. DoD General Nuclear Weapon System Safety Rules. General safety rules apply to all nuclear weapons and nuclear weapon systems. General safety rules primarily apply safety policy and shall be included as part of the military department's safety rules package. Safety rules always apply, even during war.

- 4.1. Nuclear weapons shall not be intentionally exposed to abnormal environments except in an emergency.
- 4.2. Nuclear weapons shall not be used for training or for troubleshooting (i.e., to confirm the existence of a fault, aid in fault isolation, or verify that a fault has been corrected except as explicitly allowed by a specific safety rule).
- 4.3. Nuclear weapons may be used for exercises except when explicitly prohibited by specific safety rules.
- 4.4. Only certified procedures, personnel, equipment, facilities, and organizations, authorized by the appropriate level of authority, shall be employed to conduct nuclear weapon system operations.
- 4.5. The total number of personnel performing nuclear weapon system operations shall be held to the minimum consistent with the operations performed.
- 4.6. At least two authorized persons must be present during any operation with a nuclear weapon, except when authorized by a specific safety rule; i.e., alert fly. They must be able to detect incorrect or unauthorized procedures in the task being performed. They must also have knowledge of and understand applicable safety and security requirements.
- 4.7. Personnel that have physical access to nuclear weapons must be qualified under the PRP, in accordance with DoD Directive 5210.42.
- 4.8. Physical security will be maintained, in accordance with DoD Directive 5210.41.
- 4.9. Nuclear weapons will be transported as determined by the Combatant Commander or the Military Department, in accordance with DoD Directive 4540.5. Additionally, the following safety guidance applies:
 - 4.9.1. Movement(s) will be kept to a minimum consistent with operational requirements.

4.9.2. Custody and accountability transfers during logistic movements shall be by courier receipt system to ensure positive control.

4.10. Permissive Action Link (PAL) operations shall be, in accordance with plans and procedures prescribed by the applicable Combatant Command and TPs.

4.11. Verification that a nuclear warhead is not present in a test assembly must be made utilizing non-nuclear assurance procedures at the last practical opportunity agreed on by the Department of Defense and/or DoE before the conduct of an operational test.

4.12. Deviations from safety rules are permitted in an emergency, except as follows:

4.12.1. U.S. custody must be maintained until receipt of a valid nuclear control order that permits transferring U.S. nuclear weapons to non-U.S. delivery forces.

4.12.2. Nuclear weapons shall not be expended unless a valid, properly authenticated nuclear control order conveying release or expenditure authority is received.

4.12.3. Jettisoning of nuclear weapons is permitted in the event of an emergency, and is to be accomplished according to plans and procedures prescribed for the area of operations.

5. Specific Guidance: These rules, weapon system design and security features, operational and administrative controls, and technical procedures ensure the nuclear weapons meet the Nuclear Weapon System Safety Standards in AFI 91-101, Air Force Nuclear Weapons Surety Program, and DoDD 3150.2.

5.1. A commander may deviate from a specific rule in an emergency. DoD Directive (DoDD) 3150.2, *Safety Studies and Reviews of Nuclear Weapon Systems*, defines an emergency as "an unexpected occurrence or set of circumstances in which personnel or equipment unavailability, due to accident, natural event, or combat, may demand immediate action that may require extraordinary measures to protect, handle, service, transport, jettison, or employ a nuclear weapon."

6. Troubleshooting and Use of Equipment, Procedures, Checklists, and Modifications. The following items apply to anyone working with or controlling nuclear weapons:

6.1. Do not use nuclear weapons to troubleshoot equipment faults.

6.2. Use only equipment, procedures, and checklists that are consistent with US Air Force-approved publications for any operation directly associated with nuclear weapons.

6.3. Approved publications and modifications must conform to the safety rules in this instruction and the DoD Nuclear Weapon System Safety Standards.

7. Security Criteria. AFI 31-101, The Air Force Installation Security Program, and DoD C-5210.41-M/Air Force Supplement, Nuclear Weapon Security Manual (U), apply.

8. Tamper Control and Detection. AFI 91-104, *Nuclear Surety Tamper Control and Detection Programs*, which defines the Two-Person Concept and sealing requirements, applies.

9. Personnel Reliability. AFI 36-2104, *Nuclear Weapons Personnel Reliability Program*, applies.

10. Nuclear Identification. Establish administrative controls and procedures to provide positive means of distinguishing:

10.1. Nuclear bombs and warheads from test and training shapes.

10.2. Warhead shipping and storage containers that contain nuclear warheads from those containers without nuclear warheads.

11. Basic Weapon Configuration:

11.1. Verify nuclear weapons are safe using applicable technical orders.

11.2. Perform alterations according to applicable technical orders.

12. Storage, Maintenance, Testing, and Ground Transportation. As appropriate for the activity:

12.1. Place nuclear weapons in their basic configurations (paragraph 11.).

12.2. Store nuclear weapons in USAF-approved, locked, and secured facilities.

12.3. Lightning Protection. Maintain at least seven feet of dead space between the nuclear weapon and the facility structural members (walls, ceiling, columns), metallic attachments and objects during major maintenance (major maintenance is the disassembly or performance of maintenance operations which could result in exposure of the weapons internal components to electrical energy) unless:

12.3.1. Weapon electrical/lightning isolation design features are intact IAW the applicable 11N series technical orders or,

12.3.2. Facility design features, combined with specific maintenance procedures, provide appropriate electrical energy isolation as determined by technical evaluation and approval by the AFSC.

13. Permissive Action Link (PAL) Procedures. Use PAL codes and PAL devices only as directed by appropriate authority.

14. Storage and Transport. Do not store or transport any B53 bombs with PU bearing weapons.

15. Airspace Restrictions. Implement local procedures within the airspace controlled by the base to:

15.1. Prohibit overflight of weapons movement, nuclear loaded aircraft, and nuclear weapons storage/maintenance facilities.

15.2. Prohibit direct overflight of primary nuclear airlift force aircraft operations.

16. Nuclear weapons may not be used for exercises.

17. Logistics Movement of Nuclear Weapons by Cargo Aircraft. AFI 91-115, *Safety Rules for Nuclear Logistics Transport by Prime Nuclear Airlift Force*, applies.

18. Do not store nuclear weapons and conventional munitions together in the same facilities.

MAURICE L. MCFANN, JR. Major General
Chief of Safety

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFMC—Air Force Materiel Command

ALCC—Airborne Launch Control Center

ALCS—Airborne Launch Control System

CD—Command Disable

CSRL—Common Strategic Rotary Launcher

D-BOX—Distribution Box

DoD—Department of Defense

EWO—Emergency War Orders

ICBM—Intercontinental Ballistic Missile

IMF—Integrated Maintenance Facility

JCS—Joint Chiefs of Staff

JS—Joint Staff

LF—Launch Facility

MAJCOM—Major Command

MF—Medium Frequency

MK—Mark

PAL—Permissive Action Link

RADMO—Radio Mode

RLA—Rotary Launcher Assembly

RS—Reentry System

RV—Reentry Vehicle

SDU—Secure Data Unit

SecDef—Secretary of Defense

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HQ AFMC/SE
4375 Chidlaw Rd, Ste 6
Wright-Patterson AFB OH 45433-5006

DOE/AL/WSD
PO Box 5400
Albuquerque, NM 87185-5400

Director of Operations (J-3)
Attn: NOB
3000 Joint Staff Pentagon
Washington DC 20318-3000

Lawrence Livermore National Lab
Attn: L.P. Altbaum, L-125
PO Box 808
Livermore CA 94551

Associate Director for Weapon
Safety, DP-21
US Department of Energy
Washington DC 20585

Los Alamos National Lab
Attn: J. Bowden, ESA-WE
PO Box 1663
Los Alamos, NM 87545