

**BY ORDER OF THE  
SECRETARY OF THE AIR FORCE**

**AIR FORCE INSTRUCTION 91-114**



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*Safety*

**SAFETY RULES FOR THE  
INTERCONTINENTAL BALLISTIC MISSILE  
SYSTEM**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This instruction implements AFPD 91-1, *Nuclear Weapons and Systems Surety*. This publication is consistent with AFPD 13-5, *Air Force Nuclear Enterprise*. It applies to operations with Minuteman III ICBMs, nuclear weapons (W87/Mk21, W78/Mk12A) dedicated for use with the missile system, and assigns responsibilities. The safety rules 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 applies to all United States Air Force (USAF) personnel, including Air Force Reserve Command (AFRC) and Air National Guard (ANG) personnel, who have responsibilities with Minuteman III ICBMs and nuclear weapons dedicated for use with the missile system. Send major command (MAJCOM) supplements to this Instruction to AFSEC/SEW, 9700 G Avenue, Kirtland AFB NM 87117-5670 for review/coordination before publication. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using AF Form 847, *Recommendation for Change of Publication*; route AF Form 847s from the field through the appropriate functional manager's chain of command. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See AFI 33-360, *Publications and Forms Management*, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, top the Publication OPR for non-tiered compliance.

## ***SUMMARY OF CHANGES***

Incorporated AFI 91-114 AFGM 2 which added paragraphs 5.3 (AFI 91-102 requirements) and 6.6 (associated with Remote Visual Assessment); updated applicable references; changed to include the new tiering requirements per AFI 33-360; updated with minor administrative changes.

### ***Section A— Authority and Responsibilities***

**1. Secretary of Defense (SECDEF) Direction.** The SECDEF directs Secretary of the Air Force to implement the rules.

**2. Temporary Limitations.** The Air Force may impose more restrictive guidance/policy than contained in safety rules, but may not unilaterally change the safety rules.

### **3. Functional Responsibilities:**

3.1. The Commander, Air Force Safety Center:

3.1.1. Ensures safety rules work, providing maximum safety consistent with operational requirements.

3.1.2. Ensures MAJCOMs follow the safety rules.

3.1.3. Is responsible for interpretation/clarification of general and specific guidance in Section B.

3.2. Major Commands (MAJCOM):

3.2.1. Ensure their units follow the safety rules.

3.2.2. Ensure all supplemental guidance and procedures agree with the approved safety rules.

3.2.3. Inspect for compliance.

3.2.4. Ensure manuals, checklists, and technical orders do not conflict with the safety rules.

### ***Section B— Safety Rules***

**4. General Guidance.** Per DoDM 3150.02, *DoD Nuclear Weapon System Safety Program Manual*, 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 Air Force's safety rules package.

4.1. Safety rules always apply, even during war.

4.1.1. Nuclear weapons shall not be intentionally exposed to abnormal environments except in an emergency.

4.1.2. Nuclear weapons shall not be used for training or troubleshooting (e.g., 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).

4.1.3. Nuclear weapons may be used for exercises except when explicitly prohibited by specific safety rules.

4.1.4. Only certified procedures, personnel, equipment, facilities, and organizations, authorized by the appropriate level of authority, shall be employed to conduct nuclear weapon system operations.

4.1.5. The total number of personnel performing nuclear weapon system operations shall be held to the minimum consistent with the operations performed.

4.1.6. At least two authorized persons, who meet the requirements of the Two-Person Concept as defined in AFI 91-101, *Air Force Nuclear Weapons Surety Program*, must be present during any operation with a nuclear weapon, except when authorized by a specific safety rule (e.g., alert fly). They must be able to detect incorrect or unauthorized procedures in the task being performed and take appropriate action. They must also have knowledge of and understand applicable safety and security requirements.

4.1.7. Personnel that have physical access to nuclear weapons must be qualified under the Personnel Reliability Program (PRP), in accordance with DoD Instruction 5210.42, *Nuclear Weapons Personnel Reliability Program*. AF implementing publications may be more restrictive.

4.1.8. Physical security will be maintained in accordance with DoD Directive 5210.41, *Security Policy for Protecting Nuclear Weapons*, and DoD S-5210.41-M, *Nuclear Weapon Security Manual*. AF implementing publications may be more restrictive.

4.1.9. Nuclear weapons will be transported as determined by the Combatant Commander or the Military Department in accordance with DoD Instruction 4540.05, *DoD Transportation of U.S. Nuclear Weapons*. AF implementing publications may be more restrictive. Movement(s) will be kept to a minimum consistent with operational requirements.

4.1.10. Custody and accountability transfers during operational and logistic movements shall be by custody transfer system to ensure positive control.

4.1.11. Verification that a nuclear warhead is not present in a test assembly must be made utilizing nonnuclear assurance procedures at the last practical opportunity agreed upon by the Department of Defense (DoD) and/or Department of Energy (DOE) before conducting an operational test.

4.1.12. Deviations from safety rules are permitted in an emergency, except as follows: Nuclear weapons shall not be expended unless a valid, properly authenticated nuclear control order conveying release or expenditure authority is received.

**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 Surety Standards in AFI 91-101, and DoD Directive (DoDD) 3150.02, *DoD Nuclear Weapon System Surety Program*.

5.1. A commander may deviate from a specific rule in an emergency. DoDD 3150.02 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."

5.2. Violations of referenced instructions do not constitute Weapons System Safety Rules (WSSR) violations unless specifically identified in this document.

5.3. Any changes to hardware, software, or CONOPS/procedures that potentially impact nuclear *weapon system surety must meet requirements identified in AFI 91-102, Paragraph 8. (T-0).*

## 6. Security and Control Criteria.

6.1. DoD S-5210.41-M, *Nuclear Weapon Security Manual* (U), and Air Force Supplement, AFMAN 31-108, apply. (T-0).

6.2. A Security Forces Two-Person Concept team must continuously guard a launch facility (LF) with a reentry system (RS) present if any of the following conditions exist: (T-0).

6.2.1. LF status cannot be monitored (LF Down (LFDN)).

6.2.2. The B circuit combination has been compromised.

6.2.3. The secondary vault door (B-plug) cannot be fully raised and secured.

6.2.4. The launcher closure is not locked in the closed position.

6.2.5. Inner zone (IZ) and outer zone (OZ) security systems are not reporting true status\*.

6.2.6. An LF is not cryptographically authenticating (LF not authenticated (LFNA) indication received).

**\*Note:** True status is defined as status reported by the security system that accurately represents the security condition of the LF. The security system is assumed to be reporting proper functionality, confirmed with daily security Sensitive Command Network Test (SCNT), proper response to security system functional checks and/or security system reset procedures (i.e., SCNT). An improper system response to a security system functional check or SCNT is an indicator that the security system may be inoperative and /or not reporting true status and requires further maintenance troubleshooting.

6.3. A Two-Person Concept team must continuously guard an LF without an RS present, which contains operationally certified critical components, if any of the following conditions exist: (T-0).

6.3.1. LF status cannot be monitored (LFDN).

6.3.2. The B circuit combination has been compromised.

6.3.3. The secondary vault door (B-plug) cannot be fully raised and secured.

6.3.4. The launcher closure is not locked in the closed position.

6.3.5. IZ and OZ security systems are not reporting true status.

6.3.6. An LF is not cryptographically authenticating (LFNA indication received).

6.4. Two Security Forces individuals qualified under the Two-Person Concept, one of whom may be in rest status on site, must continuously guard an LF with an RS present, if any of the following conditions exist: (T-0).

6.4.1. The A circuit combination has been compromised.

6.4.2. The A circuit vault cannot be secured.

6.4.3. The IZ security system is not reporting true status. (OZ functional)

6.4.4. The OZ security system is not reporting true status. (IZ functional)

6.5. Two individuals qualified under the Two-Person Concept, one of whom may be in rest status on site, must continuously guard an LF without an RS present that contains operationally certified critical components, if any of the following conditions exist: (T-0).

6.5.1. The A circuit combination has been compromised.

6.5.2. The A circuit vault cannot be secured.

6.5.3. The IZ security system is not reporting true status. (OZ functional)

6.5.4. The OZ security system is not reporting true status. (IZ functional)

6.6. Remote Visual Assessment (RVA) technology may not be used to satisfy guarding requirements. (T-0).

**7. Tamper Control and Detection.** AFI 91-104, *Nuclear Surety Tamper Control and Detection Programs* and USSTRATCOM EAP-STRAT Volume 16, *ICBM Code Component Control Policy and Procedures* apply.

7.1. Controls must prevent unauthorized seal use and handling. (T-0).

7.2. A Two-Person Concept team must install the seals. (T-0).

7.3. A Two-Person Concept team must inspect the seals on the following components at each crew changeover. (T-0).

7.3.1. Launch control panel (LCP).

7.3.2. Launch enable panel (LEP).

7.3.3. Coder-decoder assembly (CDA) drawer.

7.3.4. CDA secure data unit door.

7.3.5. Weapon system processor (WSP) drawer.

7.3.6. Diagnostic port access panel.

7.3.7. Diagnostic port access door.

7.3.8. Right voice control panel.

7.3.9. Console power control and distribution unit.

7.3.10. Rapid message processor.

7.3.11. Additionally, one operationally coded LCP and LEP (see note) temporarily stored in the LCC (N/A during Emergency Combat Capability (ECC) operations) for which the equipment is intended when: (T-0).

7.3.11.1. Squadron code change is in progress.

7.3.11.2. Reposturing is in progress, following simulated electronic launch testing or category B operations.

**Note:** In these instances, seal the carrying case that stores the item with at least one seal on each of the case's sides adjacent to the hinged side.

7.4. If the integrity of all seals on any of the above components is lost or in doubt:

7.4.1. Maintain continuous Two-Person Concept control of the protected item until the seal Integrity is restored or replaced. (T-0).

7.4.2. Investigate according to AFI 91-204, *Safety Investigations and Reports* and USSTRATCOM EAP-STRAT Vol 16. (T-0).

**8. Handling and Storage of Critical Components and Certified Software.** AFI 91-105, *Critical Components* and USSTRATCOM EAP-STRAT Vol 16, applies. (T-0).

**9. Operational Code Control.** CJCSI 3260.01 C, *Joint Policy for Positive Control Material*, and USSTRATCOM EAP-STRAT Volume 16 apply. (T-0).

9.1. Do not let an individual, a code courier team, or an installation team handle, have access to, or have any combination of codes or encoder or decoder devices, at the same time that reveals the information needed to enable or launch a nuclear weapon. A Two-Person Concept team must control any device containing operational code data until the data is overwritten, superseded, or destroyed. (T-0).

9.2. Deny LF entry to an individual who had access to a Computer Memory Security Check (CMSC) number the Wing Code Processing System (WCPS) calculated for that LF until the LF's missile guidance computer calculates the CMSC number and the number is verified. (T-0).

9.3. Before using a squadron's data set to prepare operational code materials for the assembled weapon system, ensure the unit WCPS computer verifies the Squadron Code Sum Check (SCSC) and G-Code Sum Check (GCSC) numbers that the USSTRATCOM Code Processing System (SCPS) computer calculated. (T-0).

9.4. Ensure proper escort for an individual who seeks entry to an LCC or LF containing operational codes if the individual has had access to: (T-0).

9.4.1. The current operational code values, or

9.4.2. The SCPS or WCPS during preparation of current operational code data.

9.5. Do not store USWAC-401 or USWAC-4900 documents in an LCC. (T-0).

9.6. Ensure following LCC items, if installed, have at least one independently numbered seal, of a type that AFI 91-104 identifies: (T-0).

9.6.1. Launch control panel (LCP).

9.6.2. Launch enable panel (LEP).

- 9.6.3. Coder-decoder assembly (CDA) drawer.
- 9.6.4. CDA secure data unit door.
- 9.6.5. Weapon system processor (WSP) drawer.
- 9.6.6. Diagnostic port access panel.
- 9.6.7. Diagnostic port access door.
- 9.6.8. Right voice control panel.
- 9.6.9. Console power control and distribution unit.
- 9.6.10. Rapid message processor.

9.7. Additionally, one operationally coded LCP and LEP (see note) may be temporarily stored in the LCC (N/A during ECC operations) for which the equipment is intended when: (T-0).

- 9.7.1. Squadron code change is in progress.
- 9.7.2. Reposturing is in progress, following simulated electronic launch testing or category B operations.

**Note:** In these instances, seal the carrying case that stores the item with at least one seal on each of the case's sides adjacent to the hinged side (Paragraph 7. describes other requirements).

**10. Personnel Reliability.** DoDM 5210.42 and AFMAN 13-501 *Nuclear Weapons Personnel Reliability Program*, apply. (T-0).

**11. Troubleshooting, Modifications and Use of Procedures and Checklists.**

- 11.1. Do not use nuclear weapons to troubleshoot equipment faults. (T-0).
- 11.2. Use only equipment, procedures, or checklists that are consistent with US Air Force approved publications for any operation directly associated with nuclear weapons or nuclear weapon systems. (T-0).
- 11.3. The MAJCOM must approve all ICBM publications and modifications and these publications and modifications must conform to the safety rules and the DoD Nuclear Weapon System Safety Standards. (T-0).

**12. Warhead Storage and Transportation.** Warheads will be stored and transported using DoD-approved facilities, methods and configurations. (T-0).

**13. Nuclear Identification.** Provide positive means of distinguishing:

- 13.1. Nuclear warheads from test and training shapes.
- 13.2. Warhead shipping and storage containers that contain nuclear warheads from those containers without nuclear warheads.
- 13.3. Reentry systems, reentry vehicles, and components from their respective trainers/simulators.

**14. Logistics Movement of Nuclear Weapons by Cargo Aircraft.** AFI 91-115, *Safety Rules for Nuclear Logistics Transport by Prime Nuclear Airlift Force* and DoD S-5210.41-M\_AFMAN 31-108, Vol I-III, applies. (T-0).

**15. Operations Involving an Assembled Weapon System.** These rules apply when an RS containing a nuclear warhead is mated to a missile:

15.1. Except during emergency combat capability (ECC) operations or simulated electronic launch tests, at least two LCCs in a squadron must monitor the status of, and be able to inhibit, each operational LF in the squadron. (T-0). If only one LCC can monitor and inhibit, crews must begin single LCC operations in accordance with paragraph 17 or have affected LFs safed in accordance with paragraph 15.2. (T-0).

15.2. If any of the conditions in subparagraphs 15.2.1 through 15.2.4 exist, manually lock the affected LFs Safety Control Switch (SCS) in the SAFE position or install the missile sating pins until Emergency Action Procedures (EAP) direct return to a normal configuration. (T-0).

15.2.1. An LCC can insert a launch command, the LF can process the command, and no other LCC can inhibit and monitor the LF.

15.2.2. No LCC can prevent Airborne Launch Control System (ALCS) aircraft access (the ability to insert enable or launch commands) while ALCS access is not authorized.

15.2.3. A missile cannot respond to an inhibit launch command and the missile is not in the standby NO-GO mode or LF NO-GO mode.

15.2.4. LF status cannot be monitored (LFDN) unless the LF NO-GO mode occurred first.

15.3. These crewmember procedures apply while on duty in the LCC:

15.3.1. Two certified Missile Combat Crew (MCC) officers must be on duty at the same time, one of which must be the Missile Combat Crew Commander. (T-0).

15.3.2. One crewmember at a time may sleep on duty. However, when the following conditions exist both must remain awake and be capable of detecting an unauthorized act: (T-0).

15.3.2.1. The sealed authenticator container is unlocked and authenticators are present.

15.3.2.2. Translate cards (USWAC-410) are opened or code values inserted.

15.3.2.3. A possible or confirmed code compromise affects the LCC, flight area, or squadron.

15.3.2.4. The integrity of all seals on a component identified in paragraph 9.6 and 9.7 is lost or in doubt.

15.3.2.5. The LCC blast door is not secured by at least one of the following methods:

15.3.2.5.1. Blast door pins extended.

15.3.2.5.2. Blast door latch engaged.

15.3.2.6. The LCC is operating in a single LCC configuration.

15.3.2.7. Someone other than the crew is in the LCC. *EXCEPTIONS:* The wing commander, vice commander, operations group commander, deputy operations group commander, the commander of the squadron, or the director of operations of the

squadron to which the LCC belongs when the non-crewmember meets all of the below criteria:

15.3.2.7.1. Has had no access to either the Minuteman and/or ALCS unauthorized launch or launch action studies.

15.3.2.7.2. Has no knowledge of the current worldwide unlock values or secure selective unlock values.

15.3.2.7.3. Is PRP certified.

15.3.2.7.4. Is the squadron's only visitor.

15.3.3. Both crewmembers must authenticate an execution order before initiating an enable or execute launch command. (T-0).

15.3.4. When in receipt of unauthorized enable or execute launch command indications the crew must immediately begin Inhibit procedures. (T-0).

15.3.5. Initiate the remote data change halt command immediately after receiving indications of unauthorized sole-survivor retargeting actions. (T-0).

15.4. Keep these LCC switches positioned as listed until an authenticated execution order directs otherwise: (T-0).

15.4.1. Enable switch in the SET position.

15.4.2. Launch switch in the SET position.

15.5. Do not allow ALCS access to LFs until EAP authorizes access. (T-0).

15.6. Do not allow the Airborne Launch Control Center (ALCC) hold-off timer to reach zero until authorized by EAP. (T-0).

15.7. Maximum setting for Cooperative Enable Timers:

15.7.1. Display timer is 1 second.

15.7.2. Entry timer is 4 seconds.

15.8. In order to provide sufficient time for monitoring LCCs to recognize and inhibit a single execute launch command, the minimum time for the one-vote timer will be 30 minutes.

## **16. Operations Involving Maintenance on an Assembled Weapon System:**

16.1. As soon as possible after personnel enter the launcher, manually safe the LF's SCS and remove the SCS key from the lock pin assembly. The SCS must stay in the SAFE position when personnel occupy the launcher, except when the only maintenance being done is observing the SCS indications during SCS tests. (T-0).

16.2. Pin all safe and arm devices and arm/disarm devices in the SAFE position before (T-0):

16.2.1. Removing the SCS lock pin during maintenance (except as noted above for SCS tests).

16.2.2. Conducting D-Box maintenance.

16.2.3. Personnel enter the launch tube to:

16.2.3.1. Connect, disconnect, or troubleshoot the upper or lower umbilical.

16.2.3.2. Weld.

16.2.3.3. Remove or replace the RS.

16.2.3.4. Remove, replace, or perform maintenance on the:

16.2.3.4.1. Missile.

16.2.3.4.2. Missile guidance set or propulsion system rocket engine.

16.3. Remove the RS from the missile for: (T-0).

16.3.1. Missile recycle.

16.3.2. RS or warhead maintenance.

16.3.3. Missile guidance set or propulsion system maintenance except as authorized by AFSEC/SEW.

16.3.4. Requirements identified in technical order 21M-LGM30F-12.

16.4. Do not install a RS on the missile until an operational code has been inserted into the Command Signal Decoder (Missile) (CSD (M)) and a valid Verification Number (VN) has been obtained and matches the VN computed by the WCPS. For downstages with an error in the reverify mode, procedures in the 21M series technical order may be used in lieu of a VN. (T-0).

16.5. Do not remove the operational code in the CSD (M) until the RS has been removed from the missile or mechanically and electrically isolated via a Simulated Electronic Launch Minuteman (SELM) test wafer. (T-0).

16.6. Maintenance during hours of darkness is not prohibited. However, maintenance requiring a penetrated LF, occurring after official sunset or before official sunrise must be approved by the Maintenance Group Commander or higher. (T-0).

## **17. Single Launch Control Center Operations.**

17.1. The installed LCP must be coded only with the operational inhibit code. (T-0). Dissipate all operational launch code data from Mechanical Code Units (MCU). *EXCEPTION:* During advanced state of readiness conditions, as specified by EAP or higher headquarters directives, MCCs need not dissipate operational codes in the single LCC. However, begin ECC operations according to paragraph 18 as soon as situation permits. (T-0).

17.2. Keep all operational LCPs for the affected squadron under Two-Person Concept control or in a secured area requiring Two-Person Concept team access. Keep these LCPs at the missile support base until predetermined levels of advanced readiness when EAP or higher headquarters directives authorize delivery to the LCC to support ECC operations. (T-0).

17.3. A fully programmed spare Head Disk Assembly (HDA) must be available in case of failure. (T-0).

17.4. The LCC requires continuous Two-Person Concept control (paragraph 15.3.2.6). (T-0).

**18. Emergency Combat Capability Operations:** During ECC operations, the rules in paragraphs 4 through 16 apply. These rules also apply:

18.1. Operational LCPs may be taken to, and stored in, the LCC. (T-0).

18.2. When operational LCPs are present, two MCCs (four crewmembers in all) must have concurrent duty within the LCC. (T-0). At least two crewmembers must be awake at all times. (T-0).

18.3. The installed LCP must be coded only with the operational inhibit code. (T-0). LCPs with operationally coded, launch code MCUs may be installed at predetermined levels of advanced readiness as directed by higher headquarters or EAP. (T-0).

18.4. Both MCCs must authenticate an execution order before initiating an enable or an execute launch command. (T-0).

18.5. A fully programmed spare HDA must be available in case of failure. (T-0).

**19. Simulated Electronic Launch-Minuteman Tests:** During SELM tests, the rules in paragraph 4 through 16 apply except those in paragraph 15.1. These rules also apply:

19.1. RS Removal. Remove the RS from the test LF(s) when: (T-0).

19.1.1. Any ordnance item will be expended.

19.1.2. Only one LCC is used in the test configuration.

19.1.3. An anomaly occurs that is nuclear safety related or increases the possibility of an abnormal environment.

19.2. Isolation Procedures.

19.2.1. Cable interconnectivity between operational flights must be such that a single fault will not result in single LCC control of an operational flight or LF(s). (T-0).

19.2.2. Electrically disconnect test LFs and test LCCs from the nontest LFs and LCCs on the command circuits of the hardened intersite cable network: (T-0).

19.2.2.1. Isolate LCC command lines by removing the corresponding connecting links in the LF interconnecting box and installing command-line isolators.

19.2.3. Verify inhibit command isolation immediately before airborne and ground tests. (T-0).

19.3. Codes.

19.3.1. Administrative controls and procedures must positively distinguish code media and devices containing test codes from those with operational codes. (T-0).

19.3.2. Operationally keyed SDUs must be used during SELM tests. (T-0). Replace all other operational codes at test LFs and test LCCs with test codes before SELM testing. (T-0).

19.3.3. Install test-coded LCPs in the test LCCs before the last-look inspection. (T-0).

19.3.4. For SELM tests involving ALCS use excluded test "X," "Y," and "L" code files to generate codes installed in test LFs and test LCCs. (T-0).

#### 19.4. Commands.

19.4.1. After the test ALCS aircraft issues the first enable command, determine the status of each LF in the MAJCOM. After verifying the nontest LFs did not process the enable command, the ALCS aircraft must transmit the inhibit launch command and poll the test squadron to ensure that no nontest facility received the inhibit launch command. (T-0).

19.4.2. If nontest facilities in the MAJCOM respond to test commands, proceed only after determining cause and completing necessary corrective actions. (T-0).

#### 19.5. Safing Actions.

19.5.1. Missile safing pins will be installed in all test LFs from SELM posture until Emergency War Orders (EWO) reposture. (T-0).

19.5.2. During the ground test, manually safe any nontest LF in the same squadron for which status monitoring is lost. (T-0).

19.5.3. Before or during the ALCS test, if status monitoring is lost for any nontest LF in the same wing, manually safe that LF. Stop the test until safing is completed. (T-0).

#### 19.6. Airborne Launch Control System (ALCS).

19.6.1. Make sure the test ALCS aircraft transmits only proper commands by verifying: (T-0).

19.6.1.1. The coded portable storage unit and volatile keying assemblies (VKA) on board the test ALCS aircraft contain only test data.

19.6.1.2. All commands transmitted from the ALCS aircraft to the test LFs are on the frequencies and tones designated for the SELM tests.

#### 19.7. Status Monitoring.

19.7.1. For test LF s with an RS, two LCCs in the test squadron must monitor the status of and be able to inhibit each such test-configured LF. (T-0). If less than two LCCs retain the ability to monitor or inhibit, stop the test until the condition is corrected. (T-0).

19.7.2. For nontest LFs at least two nontest LCCs in the test squadron must be operational and able to monitor the status of and inhibit nontest LFs. If less than two nontest LCCs retain the ability to monitor or inhibit, stop the test. The remaining nontest LCC must begin single LCC operations (paragraph 17.). (T-0).

19.7.3. Do not start testing again until the proper number of LCCs are available to monitor the status of and inhibit test and nontest LFs. (T-0).

19.8. Last-Look Inspection. Before testing, a Two-Person Concept team composed of individuals who were not on the maintenance team that configured the test LF must conduct a last-look inspection. (T-0).

19.8.1. The last-look inspection must physically verify that personnel: (T-0).

19.8.1.1. Disconnected the first-stage ignition branch of the lower umbilical cable from the D-Box and capped the branch.

- 19.8.1.2. Properly pinned all safe and arm devices and arm/disarm devices, and disconnected and capped the RS cable.
  - 19.8.1.3. Configured the test LF(s) properly.
  - 19.8.1.4. Removed the missile guidance set battery from the missile.
  - 19.8.1.5. Installed all command-line isolators properly.
- 19.8.2. The last-look inspection must be performed again if the launch tube is subsequently entered. (T-0).
- 19.8.3. If only the Launcher Equipment Room (LER) is entered (launch tube is not entered) after the last-look inspection, another inspection must be accomplished to verify that personnel: (T-0).
- 19.8.3.1. Configured the test LF(s) properly.
  - 19.8.3.2. Installed all command-line isolators properly.

KURT F. NEUBAUER, Major General, USAF  
Chief of Safety

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

- DoD Directive 3150.02, *DoD Nuclear Weapon Surety Program*, 24 Apr 2013
- DoD Manual 3150.02, *DoD Nuclear Weapons System Safety Program Manual*, 31 January 2014
- DoD Instruction 4540.05, *DoD Transportation of U.S. Nuclear Weapons*, 23 June 2011
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*Abbreviations and Acronyms*

**AFI**—Air Force Instruction  
**AFMAN**—Air Force Manual  
**AFPD**—Air Force Policy Document  
**AFSEC**—Air Force Safety Center  
**ALCC**—Airborne Launch Control Center  
**ALCS**—Airborne Launch Control System  
**ANG**—Air National Guard  
**CDA**—Coder-Decoder Assembly  
**CJCSI**—Chairman of the Joint Chiefs of Staff Instruction  
**CMSC**—Computer Memory Security Check  
**CSD**—Command Signal Decoder  
**D-BOX**—Distribution Box  
**DoD**—Department of Defense  
**DoDD**—DoD Directive  
**DoDM**—DoD Manual  
**DOE**—Department of Energy  
**EAP**—Emergency Action Procedures  
**ECC**—Emergency Combat Capability  
**EWO**—Emergency War Orders  
**GCSC**—G - Code Sum Check  
**HDA**—Head Disk Assembly  
**ICBM**—Intercontinental Ballistic Missile  
**IZ**—Inner Zone  
**LCC**—Launch Control Center  
**LCP**—Launch Control Panel  
**LEP**—Launch Enable Panel  
**LER**—Launcher Equipment Room  
**LF**—Launch Facility  
**LFDN**—LF Down  
**LFNA**—Launch Facility Not Authenticated  
**MAJCOM**—Major Command

**MCC**—Missile Combat Crew  
**MCU**—Mechanical Code Unit  
**OPR**—Office of Primary Responsibility  
**OZ**—Outer Zone  
**PRP**—Personnel Reliability Program  
**RDS**—Records Disposition Schedule  
**RS**—Reentry System  
**SCPS**—USSTRATCOM Code Processing System  
**SCS**—Safety Control Switch  
**SCSC**—Squadron Code Sumcheck  
**SDU**—Secure Data Unit  
**SECDEF**—Secretary of Defense  
**SELM**—Simulated Electronic Launch--Minuteman  
**VKA**—Volatile Keying Assembly  
**VN**—Verification Number  
**WCPS**—Wing Code Processing System  
**WSP**—Weapon System Processor