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

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This instruction implements Air Force Policy Directive (AFPD) 91-1, *Nuclear Weapons and Systems Surety*, provides safety rules for operation with Minuteman III (MMIII) Intercontinental Ballistic Missiles (ICBMs), and nuclear weapons (W87/Mk21, W78/Mk12A) dedicated for use with the MMIII ICBM system and is consistent with AFPD 13-5, *Air Force Nuclear Mission*. This publication applies to all civilian employees and uniformed members of the Regular Air Force, Air Force Reserve, Air National Guard and nuclear certified equipment, facilities involved with nuclear weapons, nuclear weapon systems, and radioactive materials-related program. This publication does not apply to the United States Space Force. Ensure all records generated as a result of processes prescribed in the publication adhere to Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and are disposed in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System. Refer recommended changes and questions about this publication to the office of primary responsibility (OPR) using Department of the Air Force (DAF) Form 847, *Recommendation for Change of Publication*; route DAF Forms 847 from the field through the appropriate functional chain of command. This publication may not be supplemented or further implemented/extended. 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 Department of the Air Force Manual (DAFMAN) 90-161, *Publishing Processes and Procedures*, 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, to the publication OPR for non-tiered compliance items. Compliance with the attachment references in this publication is mandatory.

SUMMARY OF CHANGES

This document has been revised and should be completely reviewed. Changes include incorporating clarification with current guarding requirements focused on compensatory measures at a launch facility (LF). Changing the Simulated Electronic Launch – Minuteman (SELM) rules based on the ICBM Cryptography Upgrade Program Increment II (ICU II) system upgrade; updating with minor administrative changes.

Section A—Roles and Responsibilities

1. Secretary of Defense (SECDEF) Direction. The SECDEF directs the Secretary of the Air Force to implement these safety rules, developed and approved consistent with Department of Defense Manual (DoDM) 3150.02, *DoD Nuclear Weapon System Safety Program Manual*, for operations with Minuteman III ICBMs and nuclear weapons (W87/Mk21, W78/Mk12A) dedicated for use with the MMIII ICBM system.

2. Secretary of the Air Force (SecAF). Per HAF MD 1-46, *Chief of Safety*, the SecAF designates the Chief of Safety (AF/SE) as being responsible for overseeing nuclear surety of nuclear weapons and weapon systems throughout the Air Force. This responsibility includes the authority to implement these safety rules for the MMIII ICBM and nuclear weapons dedicated for use with the MMIII ICBM system.

3. Additional Limitations. The Air Force cannot impose less restrictive guidance and policy than contained in safety rules and may not unilaterally change the safety rules.

4. Functional Responsibilities.

4.1. The Chief of Safety (AF/SE):

4.1.1. Ensures these safety rules work, providing maximum safety consistent with operational requirements. **(T-0)**

4.1.2. Ensures Major Commands follow the safety rules. **(T-0)**

4.1.3. Is responsible for interpretation and/or clarification of general and specific guidance in **Section B** and **C**. **(T-0)**

4.2. Major Commands (MAJCOMs):

4.2.1. Ensure their units follow the safety rules. **(T-0)**

4.2.2. Ensure all manuals, checklist, technical orders, and other publications do not conflict with the safety rules. **(T-0)**

4.2.3. Inspect for compliance. **(T-0)**

Section B—General Safety Rules

5. General Guidance. Per DoDM 3150.02, general safety rules apply to all nuclear weapons and nuclear weapon systems. **(T-0)** Safety rules always apply, even during war. **(T-0)**

5.1. Nuclear weapons shall not be intentionally exposed to abnormal environments except in an emergency. **(T-0)**

5.2. 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. **(T-0)**

5.3. Nuclear weapons may be used for exercises except when explicitly prohibited by specific safety rules. **(T-0)**

5.4. Only certified procedures, personnel, equipment, facilities, and organizations, authorized by the appropriate level of authority, shall be employed to conduct nuclear weapon system operations. **(T-0)**

5.5. The total number of personnel performing nuclear weapon system operations shall be held to the minimum consistent with the operations performed. **(T-0)**

5.6. At least two authorized persons must be present during any operation with a nuclear weapon, and certain designated components as defined by the Military Departments, except when authorized by a specific safety rule. 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. **(T-0)**

5.7. Personnel that have physical access to nuclear weapons must be qualified under the Personnel Reliability Assurance Program (PRAP), in accordance with Department of Defense Instruction (DoDI) 5210.42, *Nuclear Weapon Personnel Reliability Assurance.* **(T-0)**

5.8. Physical security will be maintained, in accordance with DoD Directive (DoDD) 5210.41, *Security Policy for Protecting Nuclear Weapons*. **(T-0)**

5.9. Nuclear weapons will be transported as determined by the Combatant Commander or the custodial Military Department, in accordance with DoDI 4540.05, *DoD Transportation of U.S. Nuclear Weapons.* **(T-0)** Additionally, custody and accountability transfers during logistic movements shall be by courier receipt system to ensure positive control **(T-0)**

5.10. Use control operations shall be in accordance with plans and procedures prescribed by the applicable Combatant Command and technical publications. **(T-0)**

5.11. 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 upon by the Department of Defense and/or Department of Energy before the conduct of an operational test. **(T-0)**

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

5.12.1. 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. **(T-0)**

5.12.2. Nuclear weapons shall not be expended unless a valid, properly authenticated nuclear control order conveying release or expenditure authority is received. **(T-0)**

5.12.3. 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 (Not applicable for MMIII ICBM and nuclear weapons dedicated for use with the MMIII ICBM system). **(T-0)**

Section C—Specific Safety Rules

6. 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 Department of the Air Force Instruction (DAFI) 91-101, *Air Force Nuclear Weapons Surety Program* and DoDD 3150.02, *DoD Nuclear Weapons Surety Program.* **(T-0)**

6.1. 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, hostile act, or combat, may demand immediate action that may require extraordinary measures to protect, handle, service, secure, transport, jettison, or to employ nuclear weapons."

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

6.3. Any changes to hardware, software, or concept of operations/procedures that potentially impact nuclear weapon system surety must meet requirements identified in AFI 91-102, *Nuclear Weapon System Safety Studies, Operational Safety Reviews, and Safety Rules*. **(T-0)**

7. Security and Control Criteria.

7.1. DoDM S-5210.41_AFMAN 31-108, Volume 1, (U) *Nuclear Weapon Security Manual: The Air Force Nuclear Weapons Security Manual*, applies to all Forces providing security for the ICBM weapon system and/or custody of nuclear weapons. **(T-0)**

7.2. At a minimum, a Security Forces Two-Person Concept team must continuously guard a launch facility (LF) with a reentry system (RS) present or that contains operational codes, if any of the following conditions exist. **Note**: if the RS is present refer to DoDM S-5210.41_AFMAN 31-108, Volume 1 for additional requirements. **(T-0)**

7.2.1. LF status cannot be monitored (Launch Facility Down (LFDN)). **(T-0)**

7.2.2. The B circuit combination has been compromised. **(T-0)**

7.2.3. The secondary vault door (B-plug) cannot be fully raised and secured. **(T-0)**

7.2.4. The launcher closure is not locked in the closed position. **(T-0)**

7.2.5. Inner zone (IZ) and outer zone (OZ) security systems are not reporting true status (refer to **Attachment 1**). **(T-0)**

7.2.6. An LF is not cryptographically authenticating (LF Not Authenticated (LFNA)) indication received. **(T-0)**

7.3. At a minimum, a Security Forces Two-Person Concept team must continuously guard a LF if any of the following conditions exist. **(T-0)** One member of the team may be in rest status on site:

7.3.1. The A circuit combination has been compromised. **(T-0)**

7.3.2. The A circuit vault cannot be secured. **(T-0)**

7.3.3. The IZ security system is not reporting true status (refer to **Attachment 1**) (OZ functional). **(T-0)**

7.3.4. The OZ security system is not reporting true status (refer to **Attachment 1**) and compensatory measures yielding equivalent detection capability (ref DoDM S-5210.41_AFMAN 31-108) are not available (IZ functional). **(T-0)**

8. Tamper Control and Detection. DAFI 91-101 and United States Strategic Command (USSTRATCOM) Emergency Action Procedures (EAP)-STRAT Volume 16, *ICBM Code Component Control Policy and Procedures* apply. **(T-0)**

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

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

8.3. A Two-Person Concept team must inspect the seals on the following components at each crew changeover, every 24-hour period if a crew change has not occurred, or when possible damage is suspected or detected. **(T-0)**

8.3.1. Launch control panel (LCP).

8.3.2. Launch enable panel (LEP).

8.3.3. Coder-decoder assembly drawer.

8.3.4. Coder-decoder assembly secure data unit door.

8.3.5. Weapon system processor drawer.

8.3.6. Diagnostic port access panel.

8.3.7. Diagnostic port access door.

8.3.8. Right voice control panel.

8.3.9. Console power control and distribution unit.

8.3.10. Rapid message processor.

8.3.11. One operationally coded LCP and LEP when temporarily stored in accordance with **paragraph 10.8**. **(T-0)**

8.4. If the integrity of all seals on any of the components listed in paragraphs **8.3.1** through **8.3.11** is lost or in doubt:

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

8.4.2. Investigate according to DAFI 91-204, *Safety Investigations and Reports*, and USSTRATCOM EAP-STRAT, Volume 16. **(T-0)**

9. Handling and Storage of Critical Components and Certified Software. DAFI 91-101 and USSTRATCOM EAP-STRAT, Volume 16, requirements apply to all handling and storage of critical components and certified software. **(T-0)**

10. Operational Code Control. Chairman of the Joint Chiefs of Staff Instruction **(**CJCSI) 3260.01 series, *Joint Policy Governing Positive Control Material and Coded Control Devices,* and USSTRATCOM EAP-STRAT, Volume 16, apply. **(T-0)**

10.1. 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. **(T-0)**

10.2. A Two-Person Concept team must control any device containing clear-text operational code data until the data is overwritten, superseded, or destroyed. **(T-0)**

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

10.4. 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 and G-Code Sum Check (GCSC) numbers that the Strategic Air Command Code Processing System (SCPS) (residing at USSTRATCOM) computer calculated. GCSC numbers are not required for ICU II coding. **(T-0)**

10.5. Ensure proper escort for an individual who seeks entry to a Launch Control Center (LCC) or LF containing operational codes if the individual has had access to:

10.5.1. The current operational code values **(T-0)**, or

10.5.2. The SCPS or WCPS during preparation of current operational code data. **(T-0)**

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

10.7. Ensure the LCC items listed in paragraphs **8.3.1**-**8.3.11**, if installed, have at least one independently numbered seal of a type that DAFI 91-101 identifies. **(T-0)** If not, investigate according to DAFI 91-204 and USSTRATCOM EAP-STRAT Volume 16. **(T-0)**

10.8. One operationally coded LCP and LEP (see paragraphs **10.9** and **10.10**) may be temporarily stored in the LCC for which the equipment is intended when: **(T-0)**

10.8.1. Squadron code change is in progress. **(T-0)**

10.8.2. Reposturing is in progress, following simulated electronic launch testing or other special tests or maintenance programs. **(T-0)**

10.9. 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 8** describes other requirements). **(T-0)**

10.10. Restrictions in **paragraph 10.8** do not apply for Emergency Combat Capability (ECC) operations. See **paragraph 20**. **(T-0)**

11. Personnel Reliability. DoDM 5210.42_AFMAN 13-501 *Nuclear Weapons Personnel Reliability Program,* and AFI 31-117, A*rming and Use of Force by Air Force Personnel*, apply. **(T-0)**

12. Troubleshooting, Modifications and Use of Procedures and Checklists.

12.1. Do not use nuclear weapons to troubleshoot equipment faults. **(T-0)**

12.2. Use only equipment (e.g., hardware, software, etc.), procedures, or checklists that comply with US Air Force approved publications for nuclear weapons or nuclear weapon systems. **(T-0)**

12.3. The OPR for publications must ensure applicable publications and modifications conform to these Weapons System Safety Rules and the DoD Nuclear Weapon System Surety Standards. **(T-0)**

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

14. Nuclear Identification. Provide positive means of distinguishing:

14.1. Nuclear warheads from test and training shapes. **(T-0)**

14.2. Warhead shipping and storage containers that contain nuclear warheads from those containers without nuclear warheads. **(T-0)**

14.3. Reentry systems, reentry vehicles, and components from their respective trainers/simulators. **(T-0)**

15. Logistics Movement of Nuclear Weapons by Cargo Aircraft. AFI 91-115, *Safety Rules for Nuclear Airlift Operations,* and DoDM S-5210.41_AFMAN 31-108, apply. **(T-0)**

16. Airborne Launch Control System (ALCS). AFI 91-117, *Safety Rules for the Airborne Launch Control System,* applies. **(T-0)**

17. Operations Involving an Assembled Weapon System. These rules apply when an RS containing a nuclear warhead is mated to a missile: **(T-0)**

17.1. Except during ECC operations or simulated electronic launch tests, at least two Launch Control Centers (LCCs) in a squadron must monitor the status of, and be able to inhibit, each operational launch facility (LF) in the squadron. **(T-0)** If only one LCC can monitor and inhibit, crews must begin single LCC operations in accordance with **paragraph 19** or have affected LFs safed in accordance with **paragraph 17.2**. **(T-0)**

17.2. If any of the conditions in subparagraphs **17.2.1** through **17.2.4** exist, manually lock the affected LF's Safety Control Switch (SCS) in the SAFE position or install the missile safing pins until Emergency Action Procedures (EAP) direct return to a normal configuration. **(T-0)**

17.2.1. An LCC can insert a launch command, the LF can process the command, and no other LCC can inhibit and monitor the LF. **(T-0)**

17.2.2. No LCC can prevent ALCS aircraft access (the ability to insert enable or launch commands) while ALCS access is not authorized. **(T-0)**

17.2.3. 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. **(T-0)**

17.2.4. LF status cannot be monitored (LFDN) unless the LF NO-GO mode occurred first. **(T-0)**

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

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

17.3.2. One crewmember at a time may sleep on duty. However, when any of the following conditions exist, both must remain awake and be capable of detecting an unauthorized act:

17.3.2.1. The sealed authenticator container is unlocked, and authenticators are present. **(T-0)**

17.3.2.2. Translate cards (USWAC-410) are opened or code values inserted. **(T-0)**

17.3.2.3. A possible or confirmed code compromise affects the LCC, flight area, or squadron. **(T-0)**

17.3.2.4. The integrity of all seals on a component identified in paragraph **10.7** or **10.8** is lost or in doubt. **(T-0)**

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

17.3.2.5.1. Blast door pins extended. **(T-0)**

17.3.2.5.2. Blast door latch engaged. **(T-0)**

17.3.2.6. The LCC is operating in a single LCC configuration. **(T-0)**

17.3.2.7. Someone other than the crew is in the Launch Control Center (LCC). **(T-0)** **Exception:** When the non-crewmember is the wing commander, vice wing 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, and all of the following criteria are met:

17.3.2.7.1. Has had no access to either the Minuteman III ICBM and/or ALCS unauthorized launch or launch action studies. **(T-0)**

17.3.2.7.2. Has no knowledge of the current worldwide unlock values or secure selective unlock values. **(T-0)**

17.3.2.7.3. Is PRAP certified. **(T-0)**

17.3.2.7.4. Is the squadron's only visitor. **(T-0)**

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

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

17.3.5. Initiate the remote data change halt command immediately after receiving indications of unauthorized sole-survivor retargeting actions or unauthorized code and/or key change. **(T-0)**

17.4. Keep LCC switches positioned as listed in the following subparagraphs until an authenticated execution order directs otherwise:

17.4.1. Enable switch in the SET position. **(T-0)**

17.4.2. Launch switch in the SET position. **(T-0)**

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

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

17.7. Maximum setting for Cooperative Enable Timers: **(T-0)**

17.7.1. Display timer is 1 second. **(T-0)**

17.7.2. Entry timer is 4 seconds. **(T-0)**

17.8. 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. **(T-0)**

18. Operations Involving Maintenance on an Assembled Weapon System:

18.1. 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. **(T-0)** 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)**

18.2. Pin all safe and arm devices and arm/disarm devices in the SAFE position before:

18.2.1. Removing the SCS lock pin during maintenance (except as noted in **paragraph 18.1** above for SCS tests). **(T-0)**

18.2.2. Conducting Distribution Box maintenance. **(T-0)**

18.2.3. Personnel enter the launch tube to:

18.2.3.1. Connect, disconnect, or troubleshoot the upper or lower umbilical. **(T-0)**

18.2.3.2. Weld. **(T-0)**

18.2.3.3. Remove or replace the RS. **(T-0)**

18.2.3.4. Remove, replace, or performing maintenance on the:

18.2.3.4.1. Missile. **(T-0)**

18.2.3.4.2. Missile guidance set or propulsion system rocket engine. **(T-0)**

18.3. Remove the RS from the missile for:

18.3.1. Missile recycle. **(T-0)**

18.3.2. RS or warhead maintenance. **(T-0)**

18.3.3. Missile guidance set or propulsion system maintenance except as authorized by AF/SE. **(T-0)**

18.3.4. Requirements identified in Technical Order 21M-LGM30G-l 2. **(T-0)**

18.4. Do not install a RS on the missile until an operational code has been inserted into the Command Signal Decoder-Missile 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)**

18.5. Do not remove the operational code in the Command Signal Decoder-Missile 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)**

18.6. 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 authority. **(T-0)**

19. Single Launch Control Center Operations.

19.1. The installed Launch Control Panel (LCP) must be coded only with the operational inhibit code. **(T-0)** Dissipate all operational launch code data from Mechanical Code Units. **(T-0)**

Exception: During advanced state of readiness conditions, as specified by EAP or higher headquarters directives, Missile Combat Crews need not dissipate operational codes in the single Launch Control Center (LCC). However, begin ECC operations according to **paragraph 20** as soon as situation permits. **(T-0)**

19.2. Keep all operational LCPs for the affected squadron under Two-Person Concept control or in a secured area requiring Two-Person Concept team access. **(T-0)** 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)**

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

19.4. The LCC requires continuous Two-Person Concept control (**paragraph 17.3.2.6**). **(T-0)**

20. Emergency Combat Capability Operations: During ECC operations, the rules in paragraphs 5 through 17 apply. **(T-0)** These rules also apply:

20.1. Operational Launch Control Panels (LCPs) may be taken to, and stored in, the Launch Control Center (LCC). **(T-0)**

20.2. When operational LCPs are present, two Missile Combat Crews (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)**

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

20.4. Both Missile Combat Crews must authenticate an execution order before initiating an enable or an execute launch command. **(T-0)**

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

21. Simulated Electronic Launch-Minuteman Tests: During SELM tests, the rules in paragraph 5 through 17 apply except those in **paragraph 17.1**. **(T-0)** These rules also apply:

21.1. RS Removal. Remove the RS from the test LF(s) when:

21.1.1. Any ordnance item will be expended. **(T-0)**

21.1.2. Only one LCC is used in the test configuration. **(T-0)**

21.1.3. An anomaly occurs that is nuclear safety related or increases the possibility of an abnormal environment. **(T-0)**

21.2. Isolation Procedures.

21.2.1. 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)**

21.2.2. 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)** Isolate LCC command lines by removing the corresponding connecting links in the LF interconnecting box and installing command-line isolators. **(T-0)**

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

21.3. Codes.

21.3.1. Administrative controls and procedures must positively distinguish code media and devices containing test codes from those with operational codes. SELM media and devices may contain a combination of operational keys with test keys and test codes. **(T-0)**

21.3.2. Secure Data Units (KS-60) may be loaded with operational or test Key Encryption Keys (KEKs), Bulk Storage/Loader (BS/L) keys, and Hardened Intersite Cable System (HICS) keys during SELM tests. **(T-0)** Replace all other operational codes and keys at test LFs and test LCCs with test codes before SELM testing. **(T-0)**

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

21.3.4. For SELM tests involving ALCS use excluded test X, Y**,** and L (L-Double Prime for squadrons in ICU II configuration) code files to generate codes installed in test LFs and test LCCs. **(T-0)** See USSTRATCOM EAP-STRAT Volume 16.

21.4. Weapon System Commands.

21.4.1. After the test ALCS aircraft issues the first enable command, determine the status of each launch facility (LF) in the MAJCOM. **(T-0)** 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)**

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

21.5. Safing Actions.

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

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

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

21.6. ALCS.

21.6.1. Make sure the test ALCS aircraft transmits only proper commands by verifying:

21.6.1.1. The coded portable storage unit and volatile keying assemblies on board the test ALCS aircraft contain only test data. **(T-0)**

21.6.1.2. All commands transmitted from the ALCS aircraft to the test LFs are on the frequencies and tones designated for the SELM tests. **(T-0)**

21.7. Status Monitoring.

21.7.1. For test LFs with an RS, two Launch Control Centers (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)**

21.7.2. 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. **(T-0)** If less than two nontest LCCs retain the ability to monitor or inhibit, stop the test. **(T-0)** The remaining nontest LCC must begin single LCC operations (**paragraph 19**). **(T-0)**

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

21.8. 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)**

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

21.8.1.1. Disconnected the first-stage ignition branch of the lower umbilical cable from the Distribution Box and capped the branch. **(T-0)**

21.8.1.2. Properly pinned all safe and arm devices and arm/disarm devices, and disconnected and capped the RS cable. **(T-0)**

21.8.1.3. Configured the test LF(s) properly. **(T-0)**

21.8.1.4. Removed the missile guidance set battery from the missile. **(T-0)**

21.8.1.5. Installed all command-line isolators properly. **(T-0)**

21.8.2. The last-look inspection must be performed again if the launch tube is subsequently entered. **(T-0)**

21.8.3. If only the Launcher Equipment Room is entered (launch tube is not entered) after the last-look inspection, another inspection must be accomplished to verify that personnel: **(T-0)**

21.8.3.1. Configured the test LF(s) properly. **(T-0)**

21.8.3.2. Installed all command-line isolators properly. **(T-0)**

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Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

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Abbreviations and Acronyms

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFSEC—Air Force Safety Center

ALCS—Airborne Launch Control System

BS/L—Bulk Storage/Loader

CJCSI—Chairman of the Joint Chiefs of Staff Instruction

DAF—Department of the Air Force

DAFI—Department of the Air Force Instruction

DAFMAN—Department of the Air Force Manual

DoD—Department of Defense

DoDD—DoD Directive

DoDI—DoD Instruction

DoDM—DoD Manual

EAP—Emergency Action Procedures

ECC—Emergency Combat Capability

GCSC - G—Code Sum Check

HICS—Hardened Intersite Cable System

ICBM—Intercontinental Ballistic Missile

ICU II—Intercontinental Ballistic Missile Cryptography Upgrade Program Increment II

IZ—Inner Zone

KEK—Key Encryption Key

LCC—Launch Control Center

LCP—Launch Control Panel

LEP—Launch Enable Panel

LF—Launch Facility

LFDN—Launch Facility Down

LFNA—Launch Facility Not Authenticated

MAJCOM—Major Command

MMIII—Minuteman III

OPR—Office of Primary Responsibility

OZ—Outer Zone

PRAP—Personnel Reliability Assurance Program

RS—Reentry System

SCS—Safety Control Switch

SCNT—Sensitive Command Network Test

SCPS—Strategic Air Command Code Processing System

SELM—Simulated Electronic Launch Minuteman

US—United States

USAF—United States Air Force

USWAC—United States Only (Sovereign), Two-Man Control Split Knowledge, Operational, Code or Cipher System

USSTRATCOM—United States Strategic Command

VN—Verification Number

WCPS—Wing Code Processing System

WSSR—Weapon System Safety Rule

Office Symbols

AF/SE—Air Force Chief of Safety

AF/SEI—Air Force Chief of Safety, Safety Issues Division

AFSEC/SEW—Air Force Safety Center, Chief of Weapons Safety

SecAF—Secretary of the Air Force

SECDEF—Secretary of Defense

Terms

True Status—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.