

Department of Defense INSTRUCTION

NUMBER S-3150.07 December 21, 2010

USD(AT&L)

SUBJECT: Controlling the Use of Nuclear Weapons (U)

References: (a) (U) DoD Directive S-3150.7, "Controlling the Use of Nuclear Weapons (U)," June 20, 1994 (hereby cancelled)

(b) (U) DoD Directive 5134.01, "Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L))," December 9, 2005

(c) (U) DoD Directive 8500.01E, "Information Assurance (IA)," October 24, 2002

(d) (U) DoD Instruction 8500.2, "Information Assurance (IA) Implementation," February 6, 2003

(e) (U) DoD Instruction S-5200.16, "Objectives and Minimum Standards for Communications Security (COMSEC) Measures Used in Nuclear Commandand Control (NC2) Communications (U)," November 14, 2007

(f) (U) DoD Manual S-5210.41-M, Volume 2, "Nuclear Weapon Security Manual: General Nuclear Weapon Security Procedures (U)," July 13, 2009

- 1. (U) <u>PURPOSE</u>. This Instruction reissues Reference (a) as a DoD Instruction in accordance with the authority in Reference (b) to establish policy, assign responsibilities, and prescribe procedures for controlling the use of nuclear weapons and nuclear weapon systems.
- 2. (U) <u>APPLICABILITY</u>. This Instruction applies to OSD, the Military Departments, the Office of the Chairman of the Joint Chiefs of Staff and the Joint Staff, the Combatant Commands, the Office of the Inspector General of the Department of Defense, the Defense Agencies, the DoD Field Activities, and all other organizational entities within the Department of Defense (hereafter referred to collectively as the "DoD Components").

3. (U) <u>DEFINITIONS</u>. See Glossary.

FORMERLY RESTRICTED DATA

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- 4. (U) POLICY. It is DoD policy that:
- a. (U) The President, as Commander in Chief of the Armed Forces, is the sole authority for the employment and termination of U.S. nuclear weapons.
- b. (U) Protection for all nuclear weapon systems shall incorporate policies, procedures, and equipment in a layered approach of physical security, information assurance, personnel actions, procedures, and nuclear weapon design features.
- c. (U) Any and all lawful actions necessary shall be taken to prevent loss of control of a U.S. nuclear weapon. In the event unauthorized personnel do gain access, or if a weapon or warhead is lost or stolen, lawful measures must be in place to recover control and to prevent detonation of nuclear weapons.

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- 5. (U) RESPONSIBILITIES. See Enclosure 1.
- 6. (U) PROCEDURES. See Enclosure 2.
- 7. (U) <u>RELEASABILITY</u>. NOT RELEASABLE. The release and distribution of this Instruction shall be approved only by the Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs.
- 8. (U) EFFECTIVE DATE. This Instruction is effective immediately.

Ashton B. Carter

Under Secretary of Defense for Acquisition,

Technology and Logistics

Enclosures:

- 1. Responsibilities
- 2. Procedures

Glossary

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ENCLOSURE 1

RESPONSIBILITIES (U)

- 1. (U) ASSISTANT TO THE SECRETARY OF DEFENSE FOR NUCLEAR AND CHEMICAL AND BIOLOGICAL DEFENSE PROGRAMS (ATSD(NCB)). The ATSD(NCB), under the authority, direction, and control of the Under Secretary of Defense for Acquisition, Technology, and Logistics, shall:
- a. (U) Develop and promulgate use control standards and criteria for all nuclear weapons and nuclear weapon systems.
- b. (U) Review and evaluate programs for carrying out approved policy, standards, and criteria relating to use control.
- c. (U) Ensure use control is periodically assessed against operational requirements and emerging vulnerabilities and threats. The ATSD(NCB) shall periodically assess, direct assessment, or request assessment of available technology for potential application to use control.
- d. (U) Ensure unauthorized launch analyses and inadvertent launch analyses are conducted for all current and planned nuclear missiles and bombs as determined to be appropriate by the relevant Secretaries of the Military Departments.
- 2. (U) <u>DIRECTOR</u>, <u>NATIONAL SECURITY AGENCY/CHIEF</u>, <u>CENTRAL SECURITY SERVICE (DIRNSA/CHCSS)</u>. The DIRNSA/CHCSS, under the authority, direction, and control of the Under Secretary of Defense for Intelligence and in addition to the responsibilities in section 3 of this enclosure, shall:
- a. (U) Provide nuclear weapon-use control systems security design guidance and expertise to the Joint Staff, nuclear-capable Combatant Commands, and Military Departments.
- b. (U) Provide use control code materials for the President, the Chairman of the Joint Chiefs of Staff, and Commanders of nuclear capable Combatant Commands.
- c. (U) Provide information assurance products and services for those systems used to transmit, process, store, or display information related to the control and authorized use of nuclear weapons in accordance with DoD Directive 8500.01E (Reference (c)) and DoD Instruction 8500.2 (Reference (d)).
- d. (U) Evaluate, in coordination with the Military Departments and the Department of Energy, the information assurance posture for U.S. nuclear weapon-use control systems,

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including the cryptographic and positive control aspects of the systems in accordance with DoD Instruction S-5200.16 (Reference (e)).

- 3. (U) HEADS OF THE DoD COMPONENTS. The Heads of the DoD Components shall:
- a. (U) Implement positive control measures to prevent the loss of, and/or unauthorized use of, nuclear weapons under their physical and/or operational control.
- b. (U) Assess the effectiveness of appropriate control measures implemented within their Component and correct deficiencies as necessary.
- c. (U) Assist the Military Departments, as required, when unauthorized launch analyses or inadvertent launch analyses are being conducted.
- 4. (U) <u>SECRETARIES OF THE MILITARY DEPARTMENTS</u>. The Secretaries of the Military Departments, in addition to the responsibilities in section 3 of this enclosure, shall determine the appropriateness and conduct unauthorized launch analyses and inadvertent launch analyses for current and planned nuclear missiles and bombs (except jettisoning) within their areas of responsibility.
- 5. (C) COMMANDERS OF THE COMBATANT COMMANDS WITH NUCLEAR RESPONSIBILITIES. The Commanders of the Combatant Commands with nuclear responsibilities, in addition to the responsibilities in section 3 of this enclosure and through the Chairman of the Joint Chiefs of Staff, shall ensure that ((b)(1))

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ENCLOSURE 2

PROCEDURES (U)

1. (U) GENERAL PROCEDURES

- a. (U) Positive measures shall be taken to maintain control of all U.S. nuclear weapons during all phases of their life cycle. The implementation of such measures shall:
 - (1) (U) Prevent unauthorized access to nuclear weapons.
 - (2) (U) Prevent unauthorized use of nuclear weapons.
 - (3) (U) Counter threats to and vulnerabilities of the nuclear command and control system.
- (4) (U) Meet legal and policy requirements for Presidential control of U.S. nuclear weapons.
 - (5) (U) Not inhibit the authorized use of nuclear weapons in a timely fashion.

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accompanying the weapon in transit is delegated the authority when loss of a nuclear weapon is imminent and denial methods have failed. Disablement of nuclear weapons that would likely result in scattered nuclear material is not authorized. If available, nonviolent disablement is the preferred method. During peacetime, jettison of nuclear weapons may be performed for aircraft and submarine crew safety, if accomplished in accordance with established Military Department and technical order procedures.

f. (U) As determined to be appropriate by the Secretaries of the Military Departments, unauthorized launch analyses and inadvertent launch analyses shall be conducted for current and planned nuclear missiles and bombs (except jettisoning) to identify, evaluate, and mitigate risks. In the case of new systems, these analyses shall be completed before a nuclear weapon system is declared operational. These analyses shall be conducted periodically during the system's life cycle.

2. (U) SAFEGUARDS

- a. (U) In addition to procedural safeguards, all nuclear weapon systems shall be equipped with coded control devices that prevent unauthorized use, but do not inhibit use authorized by the President. Except for authorized maintenance, testing, and operations, a weapon system loaded with warheads shall have its coded control devices locked at all times until receipt of a valid nuclear control order. Procedural safeguards alone are acceptable until existing nuclear weapon systems are retrofitted with these devices.
- b. (U) While in storage or transit, individual weapons equipped with coded control devices, or multiple weapons loaded on launchers appropriately equipped for coded control, shall be locked at all times except for authorized maintenance, testing, and operations. For those weapons equipped with coded control, but loaded on pylons or launchers not so equipped, procedural safeguards alone are acceptable.

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- f. (U) The combination of positive measures (i.e., coded control devices, procedures, physical safeguards, information safeguards, and design features) shall meet the minimum standards and criteria determined by the responsible agents in Enclosure 1.
- g. (C) Theater nuclear forces require that multiple-code coded control devices be used in a manner that protects command unlock values under selective release scenarios.

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GLOSSARY

DEFINITIONS (U)

- (U) These terms and their definitions are for the purpose of this Instruction.
- (U) <u>access</u>. Close physical or electrical proximity to a nuclear weapon in such a manner as to allow the opportunity to tamper with or damage a nuclear weapon. For example, a person would not be considered to have access if an escort or a guard was provided for either the person or the weapon when the person is in close proximity to the weapon.
- (U) <u>coded control device</u>. A device, subsystem, or system included in or attached to a warhead, weapon, or weapon system to preclude or delay arming, launching, releasing, or nuclear detonation until after insertion of a discrete code or combination. Includes permissive action link, coded switch system, positive enable system, and similar coded devices requiring unlock values.
- (U) <u>disablement</u>. An action, such as damaging a component, that prevents a nuclear weapon from achieving a significant yield unless it is renovated.
- (U) <u>inadvertent launch analysis</u>. Methodology for analyzing technical malfunctions, acts of nature, and human errors that could result in an inadvertent use of a nuclear weapon. Usually based on a fault tree analysis or probabilistic risk analysis approach, it may or may not be quantitative, and it identifies what can go wrong, how likely it is to occur, and what will be the probable outcome.
- (U) <u>information assurance</u>. Measures that protect and defend information and information systems by ensuring their availability, integrity, authentication, confidentiality, and nonrepudiation. These measures include providing for restoration of information systems by incorporating protection, detection, and reaction capabilities.
- (U) <u>nonviolent disablement</u>. Nuclear weapons disablement that, through the destruction of disassociation of one or more key components, temporarily destroys a weapon's ability to be used in its intended mode. Nonviolent disablement may not preclude the weapon's use in other than intended mode. Its effects are confined to the weapon case or the weapon shipping and storage container. Methods include disassociation, destruction of components, and command disablement.
- (U) <u>nuclear control order</u>. A properly validated and authenticated emergency action message, in the proper format, properly authenticated, and containing information consistent with known preplanned data authorizing actions affecting nuclear weapons.

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- (U) <u>nuclear weapon</u>. A device in which the explosion results from the energy released by reactions involving fission or fusion of atomic nuclei.
- (U) <u>nuclear weapon system</u>. A nuclear weapon and a means for delivering it to the target with associated support equipment, noncombat delivery vehicles, facilities, procedures, and personnel.
- (U) <u>positive measures</u>. The combination of procedural and administrative actions, physical safeguards, and design features expressly for the purpose of ensuring security, safety, and control of nuclear weapons and systems, including associated personnel.
- (U) <u>termination (nuclear weapon)</u>. An action or order to terminate nuclear strikes previously authorized for execution. Inherent in the termination process is the relocking and/or recoding of applicable weapon systems by U.S. weapon custodians at the earliest opportunity.
- (U) <u>unauthorized launch analysis</u>. Methodology for analyzing elements that can lead to an unauthorized use of a nuclear weapon. It identifies what a cognizant agent, outsiders, or combination of the two can do to bypass or defeat elements, components, subsystems, or systems to achieve a deliberate detonation, launch, release, transfer, or termination. Methodology is also applied to study of security of nuclear weapon storage sites. An unauthorized launch analysis may use qualitative and/or quantitative methodologies.
- (U) <u>unauthorized use</u>. Any accidental, inadvertent, or deliberate unauthorized detonation, launch, or release of a nuclear weapon.
- (U) <u>use control</u>. The positive measures that allow the authorized use and prevent or delay unauthorized use of nuclear weapons, and is accomplished through a combination of weapon system design features, operational procedures, security, and system safety rules.