

CHAPTER 8

NUCLEAR WEAPON USE CONTROL

A. GENERAL

The second DoD nuclear weapon system safety standard refers to positive measures to prevent the deliberate prearming, launching, or releasing of nuclear weapons except when directed by competent authority. The positive measures that allow the authorized use and prevent or delay unauthorized use of nuclear weapons are referred to as “use control”. Use control is accomplished through a combination of weapon system design features, operational procedures, security, and system safety rules.

B. USE CONTROL MEASURES

1. Use control features may be included in the warhead or weapon system, and may be complemented by system operation. Warhead design features usually include a coded control device such as permissive action links (PAL), which require coded inputs to enable prearming circuitry and delay deliberate unauthorized human acts from achieving a nuclear detonation while facilitating authorized use; command disablement, which, when activated, disables critical warhead components; and active protection systems, which may detect attempts to tamper with the warhead and initiate actions that disable critical warhead components.

2. Weapon system features include the Code Enable System, which requires specific coded inputs to enable prearming circuitry for bombs, cruise missiles aboard strategic bombers and submarines, and the Positive Enable System, which requires specific coded inputs before launch of intercontinental ballistic missiles. System operation design features involve the removal and separate secure storage of critical weapon or weapon system components until after receipt of an Emergency Action Message (EAM) authorizing use.

3. The requirement to maintain positive control of nuclear weapons does not change during advanced conditions of readiness or war. In NATO, major NATO commanders convey mission authority to non-U.S. delivery units and U.S. Commanders convey transfer and release authority to U.S. custodial units. On receipt of a valid nuclear control order through both venues, the U.S. custodial unit will transfer the weapon(s) to the applicable Allied employment unit. The U.S. custodial unit retains custody and responsibility for accountability until a nuclear control order authorizing release is received. (Normally, transfer and release are received simultaneously). When release for use or expenditure is authorized, the custodial unit retains responsibility for accountability.

4. Use control and safety are inseparable. Nuclear weapon system design for use control purposes must be assessed for its ability to satisfy safety requirements consistent with operational requirements. DoD Directives S-5200.16, S-5210.81, and S-3150.7 (references (k) through (m)) also apply.