

CHAPTER 11

NUCLEAR WEAPON LOGISTIC SAFETY

A. GENERAL

Nuclear weapon logistic activities are important aspects of the DoD Nuclear Weapon System Safety Program because it is during storage, maintenance, and transport activities that the handling of nuclear weapons takes place. Additionally, we constantly are striving to prevent nuclear weapon accidents and incidents. The use of safe and approved procedures is vital to the overall safety of the stockpile. This Chapter provides an overview of the safety concerns that may occur during those activities and that regularly are reviewed by Service NWSSGS. JNWPS publications, Military Department publications, and the safety rules are the primary sources for those procedures.

B. JOINT NUCLEAR WEAPON PUBLICATION SYSTEM

1. The Services and the DSWA shall maintain the JNWPS publications on nuclear weapons, associated materiel, and related components. The JNWPS also includes supplemental information and data considered applicable by the DoE and the Military Departments. It provides authoritative policy, procedures, information, and data for nuclear weapon operations, maintenance, support, and management to the DoE, the DSWA, and the Military Departments.

2. The JNWPS operates under a MOU (reference (t)). Under JNWPS, individual Military Departments and the DoE authenticate JNWPS publications for which they have an application. TP O-1 (reference (u)) lists, defines, and indicates the status of JNWPS publications.

3. Each JNWPS publication contains applicable safety precautions, warnings, and notes.

C. JNWPS SAFETY-RELATED PUBLICATIONS

1. TP 20-5 (reference (v)) prescribes joint DoD and DoE guidelines on decontamination when an environment is contaminated by plutonium as a result of an accident involving a nuclear weapon.

2. TP 20-7 (reference (w)) establishes nuclear and explosive safety criteria relative to the transportation, storage, handling, and processing of nuclear weapons. It also provides criticality and popcorn safety, tritium safety and monitoring requirements, and procedures for plutonium safety criteria waivers.

3. TP 20-11 (reference (x)) provides technical guidance and information for firefighting operations that involve nuclear weapons. It includes information to help identify nuclear weapons and determine hazards, and guidance for initiating, continuing, or discontinuing firefighting efforts.

4. Technical Publication 45 Series. That series of TPs outlines guidance on transportation operations with nuclear weapons including the shipment of nuclear weapons materiel by safe-secure trailer or air, the military criteria for shipment, the transport of hazardous nuclear ordnance materiel, and shipping and identification data for stockpile major assemblies.

5. JNWPS publications applicable to specific weapons address assembly, testing, mainte-

nance, and storage procedures and provide the baseline for safety considerations in various storage facilities. JNWPS publications that have particular applicability to storage operations include the following TPs:

a. TP 20-7 (reference (w)), as described in subsection C.2. above, the TP 100 series which address general supply and supply management procedures, and TPs promulgated by Military Departments technical manuals contain additional storage requirements for specific nuclear weapon systems.

b. The TP 40 series provides general maintenance and modernization procedures. Each of those publications has a preface that lists safety precautions, warnings, and notes. Those publications provide explicit detail in both words and pictures on weapon maintenance and operations.

6. TP 5-1 (reference (y)) provides guidance on the Unsatisfactory Reports (UR) System. URS are submitted by operational units to report any conditions that could cause system failures, radiation exposure of personnel, or deterioration of nuclear weapon material. They can be designated as "priority" or "routine." Safety and operational matters requiring an immediate response are handled as priority URS, with responses provided in 72 hours by the most expeditious means. URS for Military Department-designed weapon lifting devices and test and handling equipment are acted on as stipulated by the applicable Military Department publications.

7. The TP 60 Series provides explosive ordnance disposal procedures.

D. NUCLEAR WEAPON TRANSPORTATION

1. Transportation of nuclear weapons is an integral part of the STS. The application of safety rules, technical and operational procedures, and other positive measures minimize weapon vulnerabilities during transport operations. The process for developing those rules, procedures, and measures includes the conduct of a TSS by a NWSSG, as outlined in Chapter 5 and Appendix B of this Manual.

2. DoD Directive 4540.5 (reference (a)) provides policies and responsibilities for the transport of nuclear weapons. It provides guidance for the safe movement of nuclear weapons by U.S. transport aircraft, barges, and by ground transport carriers (including trucks and DoE-owned safe-secure trailers).

3. The requirements of the DoD Nuclear Weapon System Safety Program apply to all nuclear weapon transport carriers, including Prime Nuclear Airlift Force(PNAF) aircraft.

4. Safety rules will be applied to nuclear weapon transport operations through all approved modes.

a. General safety rules, as outlined in Appendix A, shall apply when nuclear weapons are transported.

b. Specific safety rules will be developed for each aircraft used for transportation of nuclear weapons.

c. Specific safety rules for other than air transport carriers (e.g., barge and flat bed truck) will be incorporated in nuclear weapon system specific safety rules, as determined by the Military Department.

5. Procedures, personnel, equipment, facilities, and organizations involved in the transport of nuclear weapons shall be certified before conducting operations.

E. ACCIDENT AND/OR INCIDENT RESPONSE

1. The Department of Defense is responsible for safely storing, securing, maintaining, transporting, and handling nuclear weapons in its custody. The requirement to protect personnel and property from health or safety hazards in the event of an accident or significant incident involving a nuclear weapon is inherent in those responsibilities.

2. To minimize the possibility of a nuclear weapon accident (or significant incident), the Department of Defense and the DoE direct that safety should be an integral part of a nuclear weapon system's life-cycle. Safety policy and responsibilities identified in DoD Directive 3150.2 (reference (c)) and this Manual are aimed at preventing or limiting the hazardous effects of a nuclear weapon system accident or significant incident.

3. DoD Directive 5100.52 and DoD 51 OO.52-M (references (g) and (h)) guide DoD functions, responsibilities, and procedures for accidents and significant incidents. Those documents provide policies and procedures to help limit the effects of an accident or significant incident and to protect personnel responding to the accident or significant incident.

4. In the event of an accident or significant incident, every effort must be made to determine the cause(s) and to identify actions that can be taken to prevent a future occurrence. A post-accident SSS will be conducted, if appropriate (not in conjunction with the official accident investigation), to address nuclear weapon system safety concerns. The NWSSG will provide applicable findings, recommendations and safety rules, in accordance with the procedures described in Chapter 5.