

DEPARTMENTS OF THE AIR FORCE,
THE ARMY, AND THE NAVY
Washington DC 20330

AFR 55-14
AR 95-27
OPNAVINST 3170.31D
9 March 1984

Operations

OPERATIONAL PROCEDURES FOR AIRCRAFT CARRYING HAZARDOUS MATERIALS

This regulation explains policy and prescribes procedures to inform base support elements of arriving or departing aircraft carrying hazardous cargo. It specifies the special procedures that apply to aircraft carrying nuclear, chemical, or biological research materials, and lists actions to be taken by aircraft commanders, aircrew members, and technical escorts during in-flight emergencies that involve such materials. This regulation applies to nuclear weapons cargo, Department of Transportation (DOT) Class A poisons, etiological materials, biological research materials, Department of Defense (DOD) hazard class or division 1.1 through 1.4 explosives, and blasting agents. In addition, it applies to radioactive materials that require Yellow III labels, inert devices, irritating materials, compressed gases, flammable solids, flammable liquids, Class B poisons, and corrosives listed in AFR 71-4/TM 38-250/NAVSUP PUB 505(REV)/MCO P4030.190/DSAM 4145.3 when these items are shipped in quantities of 1,000 pounds or more (gross weight).

★Only commanders designated in paragraph 6 may supplement this regulation. Send each proposed supplement to the respective Service headquarters for review and approval as follows: Air Force: HQ USAF/XOOTA; Army: DAMO-FD; Navy: OP-554.

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Section A—General Information

1. References. Attachment 1 lists related Service directives.

2. Terms Explained. See attachment 2.

3. Background Information. The air transportation of hazardous cargo poses unique problems for military operators. Routine flights that carry hazardous cargo take on a special significance considering the possible repercussions of any mishap. Commanders, support agencies, and aircrews must make sure that the policies and procedures of this regulation are strictly enforced.

4. Cargo Classification. DOD and DOT classify identical types of cargo in different ways. Use DOD Class or Division in communications with military agencies and DOT Class at all other times (See AFTO 11A-1-46; NAVSEA OP 5, volume II; or AMCR 385-100).

5. Technical Escorts and Couriers. Certain types of hazardous cargo require the presence of a technical escort or courier during air shipment. The designated courier or technical escort is responsible for security, safety, and custody of the cargo movement. This individual has complete jurisdiction over the cargo concerning security safeguards, protection of personnel, and the repair or disposal of containers. The escort is subordinate to the aircraft commander only in matters that pertain to flight safety and operations.

Section B—Procedures and Responsibilities

★6. Command Responsibilities. US Air Force major command (MAJCOM) commanders; US Army major command (MACOM) commanders; Commander in Chief, Military Airlift Command (CINCMAC); Commander in Chief, Strategic Air Command (CINCSAC); Commander in Chief, US Atlantic Fleet (CINCLANTFLT); Commander in Chief, US Pacific Fleet (CINCPACFLT); Commander in Chief, US Naval

Forces Europe (CINCUSNAVEUR); Chief of Naval Education and Training (CNET); Commander Naval Air Systems Command (COMNAVAIR SYSCOM); and Chief of Naval Reserve (CNAVRES) are responsible for making sure that:

★a. Units send a hazardous cargo advisory message to all en-route, alternate, (if known in advance), and destination stations that are affected for each mission that carries the following hazardous cargo:

- (1) Nuclear weapons cargo.
- (2) DOT Class A poisons.
- (3) Etiological materials.
- (4) Biological materials.
- (5) DOD hazard class or division 1.1 through 1.3 explosives and blasting agents.
- (6) Inert devices.
- (7) Radioactive materials that require Yellow III labels, irritating materials, compressed gases, flammable solids, flammable liquids, Class B poisons, DOD hazard class or division 1.4 items, and corrosives listed in AFR 71-4/TM 38-250/NAVSUP PUB 505(REV)/MCO P4030.190/DSAM 4145.3 when these items are shipped in quantities of 1,000 pounds or more (gross weight).
- (8) DOD hazard class or division 1.4 explosives (regardless of weight) that transit the United Kingdom, Italy, or Hawaii.

b. Units sending hazardous cargo advisory messages must include the following information in the original message:

- (1) Mission number and type aircraft.
- (2) Arrival and departure date, including ZULU time.
- (3) Describe exact nature of hazardous cargo (that is, nuclear weapons, conventional munitions, chemical agents, etc.). Give DOT Class or DOD Hazard Class or Division, if applicable (including the net weight of DOT Class A or B poisons).
- (4) Net Explosive Weight (NEW)—from agency offering cargo for shipment—or Line Number (or numbers) from attachment 1, reference IA, for DOT hazard class or division 1.1 through 1.3 explosives, and the gross weight for blasting agents.

- (5) Inert devices (if any).
- (6) Special support requirements (security, isolated parking, etc.).
- (7) Request for prior permission required (PPR) number if already obtained as required by DOD flight information publication (FLIP).

NOTES:

1. Provide as much advance notice as possible. Address US tenants for bases not under US control.
2. Except for shipments of Class A poisons, radioactive materials, etioloical agents, nuclear cargo, and biological research material, the Military Airlift Command (MAC) Military Airlift Interim Reporting System (MAIRS) and Navy Quick Transportation (QUICKTRANS) or Air Force Logistics Airlift (LOGAIR) departure messages prescribed by governing directives fulfill the notification requirements of this regulation if the information requested in (1) through (5) above is in the message.

3. Organizations that take part in day-to-day flight operations that involve hazardous cargo (including ordnance-carrying training missions) do not require separate notification of departure or arrival if the standard operating procedures that apply are in effect at bases within their command. However, if these flights must divert to a base of another command or service, then paragraphs 8g and h apply.

c. Aircrews are instructed in hazardous cargo notification and emergency procedures, including jettison criteria and limitations.

d. Aircraft commanders and crews are briefed on:

(1) Special procedures and requirements for the hazardous cargo being airlifted.

(2) Operational mission requirements, including specific routes (if required).

e. Installation commanders are aware that nuclear airlift missions require support second only to presidential and Joint Chiefs of Staff-directed missions as shown in AFR 76-38/AR 59-8/OPNAVINST 4630.18E/MCO 4630.6D, attachment 6.

7. Installation Commanders. Installation commanders (or commanders of US tenant organizations at bases not under US control) are responsible for establishing a written plan to make sure that:

a. Parent command directives regarding movement of hazardous cargo are implemented.

b. Base support elements are proficient in precautionary measures associated with shipping hazardous cargo, and are aware of the support requirements of aircraft carrying hazardous cargo.

c. Priority support is provided to aircraft carrying nuclear cargo. This must include priority air traffic and ground handling (at airfields under US military control, and (where feasible) at civilian or non-US military airfields, during arrival and departure), ground servicing and maintenance, security support, aircrew transportation, billeting, and messing. This section also establishes the requirement for an on-scene coordinator who:

(1) Has the installation commander's authority to resolve problems, set priorities, and direct employment of resources.

(2) Has a direct means of communication with the base command post.

(3) Possesses an understanding of the mission sequence of events.

(4) Anticipates and corrects problems before they adversely impact the mission.

(5) Identifies himself or herself to the aircraft commander and courier as the on-scene coordinator and to local support element personnel (security police, munitions, maintenance, transient alert, command post, etc.).

(6) Has the single duty of on-scene coordinator (that is, does not perform other functions during the operation).

(7) Immediately elevates problems that he or she cannot resolve to the installation commander.

(8) Collects data and provides feedback to appropriate agencies in order to fine-tune the next operation and improve the written base plan.

d. A single point of contact is established as a focal point for information and to facilitate coordination of support efforts concerning nuclear weapons movements. This agency should be staffed 24 hours a day, be capable of contacting the coordinator and all other support agencies immediately, and possess (or have access to) an air or a ground radio capability.

★NOTE: Only those installations supporting nuclear logistics missions require paragraphs 7c and 7d be incorporated in a written support plan. Installations required to handle an emergency or weather divert will comply with the intent of paragraphs 7c and 7d.

e. Checklists are established so hazardous cargo information is passed by the base single point of contact to the coordinator and all affected base support agencies.

f. When aircraft carrying hazardous cargo are declared missing or overdue, the appropriate Rescue Coordination Center is informed of the nature of the hazardous cargo and of protective measures required to accomplish the rescue.

g. Suitable areas, adequate ground support equipment, and sufficient qualified personnel are provided for the security, parking, loading, and offloading of an aircraft carrying hazardous cargo.

h. Aircrews are briefed on and provided a properly completed DD Form 1387-2, Special Handling Data/Certification, for each type of hazardous cargo on board.

★NOTE: See AFR 71-4/TM 38-250/NAVSUP Pub 505(Rev)/MCO P4030.19D for instructions on DD Form 1387-2.

i. When an aircraft carrying hazardous cargo lands without the proper advance notice as required by paragraphs 6a and 8g, the installation commander must notify his or her parent command and the pilot's parent command, with an information copy to the Service concerned. The installation commander must obtain and provide documented evidence of the violation of procedures, including (but not be limited to) tape transcript of controller's contact with the aircraft, depositions, and cargo manifests. (Air Force: HQ USAF/CC, IGDS, XOOT, or LETT Wash DC; Army: CSA (Army Operations Center); Navy: CNO (OP-544); Marine Corps: CMC (ASA).)

8. Aircraft Commanders. Aircraft commanders are responsible for:

a. Making sure all crewmembers thoroughly understand mission requirements and procedures that govern the hazardous cargo aboard.

b. Briefing all crewmembers, couriers, and technical escorts on notification requirements and emergency procedures (including jettison).

c. Entering "Hazardous Cargo," "Inert Devices" (or both), and the mission number and PPR number in the "Other Information" or "Remarks" section of the flight plan, unless prohibited by regulations that govern the area of operation.

d. Refusing to accept any clearance containing noise-abatement procedures that in the aircraft commander's judgment would interfere with flight safety.

e. Designating a crewmember (the navigator, if one is aboard) to record the coordinates, time, description, and location of abandoned or jettisoned cargo for later use by the proper authorities.

f. Providing the information in e above to the designated courier or technical escort.

g. Contacting the base of intended landing at least 30 minutes before arrival to:

(1) Announce that hazardous cargo is onboard.

(2) Verify base receipt of the hazardous cargo advisory message.

(3) Identify any change to the hazardous cargo information or, if notification has not been received, relay the information in paragraph 6b(1) through (6). Relay the information to one of the following, listed in order of priority:

(a) Base operations dispatcher.

(b) Command post or operations center.

(c) Control tower.

(d) Approach control.

NOTE: For civilian fields, relay hazardous cargo information to the airfield manager and request subsequent relay to the airfield fire department.

h. Relaying the hazardous cargo information to diversion base as soon as possible after the decision to divert is made.

i. Relaying the hazardous cargo information to the proper Air Traffic Control Agency when declaring an emergency. In cases where the aircraft commander must choose between communication security and flight safety, safety comes first. The disclosure of classified information, if necessary, to avoid endangering the flight must be accepted as a necessary aspect of military operations.

j. Differentiating between hazardous cargo and inert devices when relaying hazardous cargo information. Make sure that agencies receiving hazardous cargo information are aware of the appearance and location of inert devices aboard the aircraft, even when the entire load includes inert devices.

Section C—Nuclear Cargo

9. Priority Support. Flights carrying nuclear cargo must be given priority support at all command levels. The sensitivity of these missions makes it extremely important that both

ground and air operations be thoroughly coordinated and smoothly conducted.

10. Notification Requirements. Units that operate aircraft carrying nuclear cargo must comply with the advance notification requirements of paragraph 6 (the advisory message must include line numbers from attachment 1, reference IA). In addition, missions must not depart for a station until confirmation has been received from that station that support requested in the hazardous cargo advisory message will be provided.

11. Coordination by Base Central Point of Contact (See paragraph 7d). After a hazardous cargo advisory message for aircraft transporting nuclear cargo is received, the base central point of contact must notify the coordinator and all affected agencies and determine if support can be provided as requested. Inform the unit that sent the message of any activities or restrictions that would adversely impact the mission. Local activities will be rescheduled to avoid conflict with nuclear airlift operations and ground convoys. Installation commanders or their designated representative must meet nuclear airlift missions and personally monitor the support provided. Make sure that designated representatives have sufficient rank, knowledge, and authority to effect a safe and efficient operation.

12. US Air Force Special Weapons Overflight Guide (SWOG). Aircraft commanders (including commanders of tanker aircraft while air refueling nuclear-laden cargo aircraft) must comply with restrictions published in the US Air Force SWOG to fly over foreign areas with nuclear cargo onboard. In addition, instructions in the US Air Force SWOG regarding emergency procedures and cargo jettison must be carried out in case of emergency. Aircraft commanders must make sure that jettison coordinates are recorded and reported. (Army aircraft must not jettison nuclear weapons.)

13. Nuclear Cargo Couriers. Nuclear cargo must always be accompanied by a courier (who must be a commissioned or warrant officer). Couriers must be armed and appointed on orders (or otherwise designated in writing). Couriers must refuse to accept nuclear cargo without proper documentation (attachment 1, reference IB and C) and must only accept nuclear cargo or inert devices that have been identified in the hazardous cargo advisory message.

14. Nuclear Cargo Passengers. Passengers are not allowed on nuclear airlift missions except when:

a. Required in direct support of contingency or emergency plans;

b. Designated as official couriers or technical escorts; or

c. Authorized by parent command mission directives or regulations. (Permissive Action Link team transportation aboard nuclear airlift missions must be coordinated with the agency that provides airlift.)

15. Nuclear Cargo Mishaps. Accidents or significant incidents that involve nuclear cargo must be reported as required by AFR 127-4, AR 50-5, or OPNAVINST 3750.6P.

★**16. Two-Man Concept.** Aircrew and ground support personnel must observe the procedures and restrictions outlined in AFR 122-4, AR 385-40, or BUPERSINST 5510.11D regarding the Two-Man Concept when transporting nuclear cargo. MACOM commanders must make sure that MAJCOM directives concerning transportation of nuclear cargo incorporate procedures for implementing and enforcing the Two-Man Concept.

Section D—Hazardous Chemical/Radioactive Cargo

17. Notification Requirements. Units operating aircraft that carry hazardous chemical cargo must comply with paragraph 6 concerning advance notification. When shipping Class A poisons and radioactive material, consigning agencies are required to get cargo clearances according to attachment I, reference IF. Coordination and clearance must be accomplished before the aircraft leaves. In addition, operating units must comply with attachment I, reference IF.

18. Protective Measures:

a. Class A Poisons. Consigning agencies are required to provide protective clothing and equipment to aircrews when Class A poisons are shipped (unless supplied by the aircrew parent command). In addition, consigning agencies provide technical escorts and make sure such escorts are provided with protective clothing. Responsibilities of technical escorts are outlined in attachment I, reference IG, and include:

(1) Briefing the crew and advising them of protective measures and required equipment.

(2) Inspecting the cargo periodically during the flight and informing the aircraft commander of any hazardous condition.

(3) Controlling and neutralizing leaking material and, subject to the aircraft commander's approval, accomplishing emergency decontamination of the aircraft both inflight and after landing.

b. Class B Poisons. Class B poisons do not generally require a technical escort. However, protective masks and, if necessary, the proper protective clothing are required for all personnel aboard the aircraft. Procedures must be established to periodically inspect the cargo for damage and leakage.

19. Cargo Emergency. In a cargo emergency that involves chemical agents, all personnel onboard the aircraft must put on the protective equipment as quickly as possible. Eliminate smoke and fumes from the aircraft according to the Air Force or Navy Flight Manual that applies, or the Army Aircraft Operator's Manual. If exposure to any of the hazardous material is known or suspected, all aircraft personnel must report to the flight surgeon as soon as possible after landing. To stop the hazardous material involved from spreading and to limit exposure to it, personnel decontamination must be completed as close to the scene of exposure as possible. If available on

station, a flight surgeon should be requested to respond to the aircraft when it lands.

20. In-flight Emergency. In determining the course of action to take during a potential or actual in-flight emergency, the aircraft commander must:

a. Consider the appropriate guidance provided by the Air Force or Navy Flight Manual and the recommendations of the technical escort and the aircraft loadmaster, if one is assigned.

b. If the emergency warrants, arrange to land at the nearest suitable airfield (preferably military). Use the notification procedures given in paragraph 8g. Immediately after landing, the aircraft commander must:

(1) Contact the command post of the controlling MAJCOM or the proper Service command by the fastest possible means.

(2) Report location and provide all pertinent information regarding the emergency, including whether or not security was compromised.

NOTE: If called for, the command post initiates an OPREP-3/Pinnacle or other appropriate notification to higher headquarters.

21. Jettison Poisons:

a. Class A Poisons:

(1) Land. Not authorized.

(2) Water. Only if authorized in the movement plan that accompanies the shipment. If authorized, jettison must be at least 12 nautical miles offshore in an open ocean area, preferably beyond the continental shelf. Record the geographic coordinates of the jettison location, but do not transmit the coordinates by nonsecure means.

b. Class B Poisons. Class B poisons may be jettisoned over land or water if essential to flight safety. However, jettisoning Class B poisons over a congested area or water supply is prohibited. Geographical coordinates of jettisoned Class B poisons must be reported as soon as possible, so that the proper agency can maintain positive control over the area.

22. Passenger Limitation:

a. Class A Poisons. Limit passengers to technical escorts, authorized inspectors, and mission essential ground personnel.

b. Class B Poisons. Observe restrictions in attachment I, reference IF.

23. Buddy System. A single person is not given access to lethal and incapacitating (L&D chemical munitions or areas that have these munitions. Aircraft commanders must enforce this policy during flight.

Section E—Hazardous Biological Cargo

24. Notification Requirements. Units operating aircraft carrying hazardous biological cargo must comply with paragraph 6.

25. Degree of Hazard. There is no immediate in-flight hazard connected with biological research materials due to the incubation period involved. Plant quarantine materials are not directly dangerous to a person.

26. Protective Measures. As a rule, a technical escort must be with each shipment of biological research material. This is handled as stated in attachment 1, reference IG.

a. The technical escort must brief the aircrew and advise them of any requirements for protective equipment.

b. The aircraft commander must make sure that protective equipment is readily accessible to all personnel during flight.

27. Cargo Emergency. In a cargo emergency that involves biological research materials, all personnel must put on the prescribed protective masks (not necessary for plant quarantine material). The aircraft must not be ventilated under the usual emergency procedures. Instead, the aircraft should remain aloft (if possible) until the technical escort informs the

aircraft commander that the cargo has been secured and the aircraft decontaminated to the extent possible. If the leak is such that the technical escort cannot control or neutralize it, the aircraft commander must land at the nearest suitable airfield (preferably military).

28. Jettison Authorization:

a. **Etiologic Material.** Not authorized.

b. **Plant Quarantine Material.** Only over open water, at least 100 nautical miles from a major land mass with vegetation.

NOTE: Technical escorts may authorize jettison of plant quarantine material overland if the material is known to pose no threat to indigenous plants or crops and this action is essential to flight safety.

29. Passenger Limitation. Refer to attachment 1, reference IF.

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SUMMARY OF CHANGES

This revision adds information on DOD Hazard Class or Division and Technical Escorts or Couriers (paras 4 and 5); expands installation commanders responsibilities for nuclear movements (para 7); lists specific emergency procedures for nuclear, chemical, and biological cargo (sections C, D, and E); includes a Buddy System policy in the chemical section (para 23); and adds an explanation for the terms Biological Research Material, Chemical Agent, Class A and B Poisons, DOD Hazard Class or Division, Etiologic Material, Lethal and Incapacitating Munitions, Nuclear Cargo, and Plant Quarantine Material (atch 2).

Distribution:

Air Force: F

Army: Active Army, ARNG, USAR: To be distributed in accordance with DA Form 12-9A requirements for AR, Aviation—A.

Navy: SNDL A (Navy Department)
 B2 (Defense Agencies)
 21A (Fleet Commanders in Chief)
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 FB7 (Air Station PAC)
 FB10 (Station PAC)
 FB34 (Fleet Activities)
 FC1 (Fleet Operations Control Center NAVEUR)
 FC4 (Air Facility NAVEUR)
 FC5 (Support Activity NAVEUR)
 FC7 (Station NAVEUR)

FD2 (Naval Oceanographic Office)
 FF1 (Naval District, Washington, DC)
 FF5 (Safety Center)
 FF18 (Tactical Support Activity)
 FG2 (Communication Station)
 FH17 (Aerospace and Regional Medical Center)
 FH18 (Aerospace Medical Institute)
 FKA1A (Air Systems Command Hq.)
 FKA1G (Sea Systems Command Headquarters)
 FKA6A1 (Air Development Center)
 FKM15 (Aviation Supply Office)
 FKM27 (Publications and Printing Service Management Office)
 FKP14 (Fleet Combat Direction Systems Support Activity)
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 FR4 (Air Facility CNAVRES)
 FR5 (Air Reserve)
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 FT5 (Chief of Naval Technical Training)
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 V22 (4th Marine Aircraft Unit)

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BIBLIOGRAPHY

I. Related Directives (References):

A. DOE-DNA TP 20-11/Army TM 39-20-11/Navy SWOP 20-11/Air Force TO 11N-20-11. General Firefighting Guidance.

★B. DOE-DNA TP 45-51/Army TM 39-45-51/Navy SWOP 45-51/Air Force TO 11N-45-51. Transportation of Nuclear Weapons Material

★C. DOE-DNA TP 45-51C/Army TM 39-45-51C/Navy SWOP 45-51C/Air Force TO 11N-45-51C. Transportation of Nuclear Weapons Material (Military Criteria for Shipment)

D. DOE-DNA TP 45-51A/Army TM 39-45-51A/Navy SWOP 45-51A/Air Force TO 11N-45-51A. Transportation of Nuclear Weapons Material (Supplement), Shipping, and Identification Data for Stockpile Major Assemblies.

E. DOE-DNA TP 45-51B/Army TM-39-45-51B/Navy SWOP 45-51B/Air Force TO 11N-45-51B. Transportation of Nuclear Weapons Material (Supplement), Palletized Cargo.

F. AFR 71-4/TM 38 250/NAVSUP PUB 505 (Rev)/MCO P4030.19D/DSAM 4145.3. Preparation of Hazardous Materials for Military Air Shipment.

G. AR 740-32/OPNAVINST 8070.1B/AFR 136-4/MCO 4030.25. Responsibilities for Technical Escorts of Chemical, Biological, and Etiological Agents.

II. Air Force:**A. Regulations:**

19-1, Pollution Abatement and Environmental Quality

55-48, Airfield Management and Base Operation

76-1, USAF LOGAIR Airlift (LOGAIR) Traffic Regulation

76-38, Department of Defense (DOD) Common User Airlift Transportation

112-1, Claims and Tort Litigation

★122-1, The Air Force Nuclear Surety Program

122-4, The Two-Man Concept

127-4, Investigating and Reporting US Air Force Mishaps

136-2, The Logistic Movement and Handling of Nuclear Cargo

136-4, Responsibilities for Technical Escorts of Dangerous Materials

160-132, Control of Radiological Health Hazards

161-18, Use of Potentially Toxic Agents and Hazardous Materials

190-Series, (Public Affairs)

207-1, (C) The Air Force Physical Security Program (U)

207-3, (C) Aircraft Systems Security Standards (U)

207-10, (C) Nuclear Weapons in Storage and Surface Movement (U)

355-1, Planning and Operations

400-21, Retrograde Materiel Preclearance Program

B. Manuals:

★75-2, Defense Traffic Management Regulation

C. Miscellaneous:

USAF Foreign Clearance Guide

USAF Special Weapons Overflight Guide

PS 8X-1, USAF Program, Nuclear Weapons Capability and Equipage

D. Technical Orders:

11A-1-33, Handling and Maintenance of Explosive Loaded Aircraft

11A-1-46, Firefighting Guidance Transportation and Storage Management Data and Ammunition Complete Round Chart

11C2-1-7, Chemical/Warfare Bombs

11N-4-1, Glossary of Nuclear Weapons Materiel and Related Terms

11N-20-7, (S) Nuclear Safety Criteria

III. Army:**A. Regulations:**

50-4, Safety Studies and Reviews of Nuclear Weapon Systems

50-5, Nuclear and Chemical Weapons Material Nuclear Surety

50-6, Chemical Surety Program

55-203, Movement of Nuclear Weapons, Nuclear Components, and Related Classified Nonnuclear Materiel

55-355, Military Traffic Management Regulation

59-8, Department of Defense (DOD) Common User Airlift Transportation

75-15, Responsibilities and Procedures for Explosive Ordnance Disposal

95-5, Aircraft Accident Investigating and Reporting

385-11, Ionizing Radiation Protection

385-40, Accident Reporting and Records

★385-95, Army Aircraft Prevention

★420-90, Fire Protection

★700-65, Nuclear Weapons and Nuclear Weapons Materiel

B. Miscellaneous:

TB 385-2, Nuclear Weapons Firefighting Procedures

TM 5-315, Firefighting and Rescue Procedures in Theaters of Operations

TM 39-20-7, (S) Nuclear Safety Criteria

TM 55-1100 Series/FM 55 Series, Nuclear Cargo

Loading Manual

★DA Pam 385-95, Aircraft Accident Investigating and Reporting

IV. Navy:

OP-4 (Vol 2), Ammunition Afloat

OP-5 (Vol 1), Ammunition and Explosives Ashore:

Safety Regulations for Handling, Storing, Production, Renovation and Shipping

OP 2165 (Vol 1 and Vol 2), Navy Transportation Safety Handbook

BUPERSINST 5510.11D Nuclear Weapon Personnel Reliability Program

NAVSUP Instruction 4600.7D, Military Traffic Management Regulation

MCO 4630.6D/OPNAVINST 4630.18E, Department of Defense (DOD) Common User Airlift Transportation

★OPNAVINST 3750.6P Naval Aviation Safety Program

★OPNAVINST C8126.1(c), Navy Nuclear Weapon Security Manual
SWOP 20-7, (S) Nuclear Safety Criteria

V. Department of Defense

DOD Directive 4540.5, Movement of Nuclear Weapons by Noncombat Delivery Vehicles (AE)
DOD Manual 5210.41M (C) Nuclear Weapons Security Manual

TERMS EXPLAINED

Base Support Elements—Fire Department, base security force, medical service, explosive ordnance disposal (EOD), disaster response force (DRF), aerial port activity, and other base elements that would be involved in supporting aircraft that carry hazardous materials.

Biological Research Material—Material generally transported only for defensive laboratory research studies or for captured enemy munitions. Research material usually include tissue samples, sera, and related material. The United States does not maintain a biological weapon capability.

★**Cargo Emergency**—Any condition involving hazardous materials in transit that would endanger personnel or property (see MILSTD-444).

Chemical Agent—A chemical (liquid, solid, or gas) used to attack personnel, animals, plants, or materiel. Chemical agents may be lethal, incapacitating, or irritating to personnel or animals or destructive to plants and materiel. Incendiaries, smokes, fuel-air explosives, riot control agents, and chemical herbicides are not considered to be chemical agents.

Class A Poison—A gas or liquid of such a nature that even a small amount of the gas or vapor of the liquid mixed with air is dangerous to life. (DOT classification.)

Class B Poison—Poisons not so dangerous as Class A, but still toxic enough to afford a hazard to health. (DOT classification.)

Courier or Technical Escorts—An authorized person designated in writing to accompany a specific shipment of hazardous material and who has in-transit custodial safety and security responsibility for shipment.

Department of Defense (DOD) Hazard Class or Division—Explosives separated (Class I) into four divisions designated 1.1 through 1.4 (for example; Bomb, GP, MK117 would have a DOD Class or Division of 1.1) by DOD. For specific definitions of each division, see AFR 127-100, TM 9-1300-206, or NAVSEA OP-5, volume I.

Department of Transportation (DOT) Classification—Classifications of hazardous materials established by the DOT (for example; Class A and B explosives, Class A poisons,

irritants, corrosives, flammable gas, etc.). A list of materials and classifications is in attachment 1, reference IF.

Etiologic Material—Agents that cause or may cause disease in humans and the toxins of such agents.

Hazardous Materials—Any material that is flammable, corrosive, an oxidizing agent, explosive, toxic, poisonous, etiological, radioactive, nuclear, unduly magnetic, a chemical agent, biological research material, compressed gases, or any other material that, because of its quantity, properties, or packaging, may endanger human life or property. This does not include explosives or other hazardous materials that are integral parts of the aircraft (for example, ejection devices, fuel, including that carried for inflight refueling, or ammunition when it is loaded in aircraft gun systems). See attachment 1, references IA and IF.

★**Inert Devices**—Devices not containing hazardous materials, but closely resembling nuclear items or explosive items that are classified as hazardous. Such inert items include those used primarily for testing, demonstrating, or training. (Certain non-WR bombs, warheads, and developmental test units have a permanent marking on an exterior surface denoting "HIGH EXPLOSIVE" or "INERT." Permanent marking is not intended to describe hazards to personnel who are handling or working on the weapon. Explosive charges, or other hazardous components or materials, may be present in weapons marked "INERT." Verify hazardous materials with the shipper.)

Lethal and Incapacitating Munitions—Munitions which contain chemical agents as fillers, including nerve, blister, and psychological agents.

Net Explosive Weight (NEW)—The actual or high-explosive weight equivalent of substances contained within a munition, weapon, component, or device. (These weights are used for quantity-distance purposes and are contained in documents available to munitions and transport personnel.)

Nuclear Cargo—Nuclear weapons, nuclear warheads, and Class II nuclear components prepared for logistics movement.

Plant Quarantine Material—Infected plant material which requires safeguarding to prevent exposure and spread of the disease to noninfected areas.